



Development of a striving to avoid inferiority scale

Paul Gilbert*, Claire Broomhead, Chris Irons, Kirsten McEwan,
 Rebecca Bellew, Alison Mills, Corinne Gale and Rebecca Knibb

Mental Health Research Unit, Kingsway Hospital, Derby, UK

Social rank theory suggests that mood variation is linked to the security a person feels in his/her social domain and the extent to which they are sensitive to involuntary subordination (e.g. feeling defeated and feeling inferior). Previous studies looking at rank-related and competitive behaviour have often focused on striving for dominance, whereas social rank theory has focused on striving to avoid inferiority. This study set out to develop a measure of 'Striving to Avoid Inferiority' (SAIS) and assess its relationship to other rank and mood-related variables. We hypothesized two factors: one we called insecure striving, relating to fear of rejection/criticism for 'not keeping up', and the second we called secure non-striving, relating to feeling socially acceptable and valued regardless of whether one succeeds or not. This scale was given to 207 undergraduates. The SAIS had good psychometric properties, with the two factors of *insecure striving* and *secure non-striving* strongly supported by exploratory factor analysis. Both factors were significantly (though contrastingly) related to various fears of rejection, need for validation, hypercompetitive attitudes, feeling inferior to others, submissive behaviour and indicators of stress, anxiety and depression. Striving to avoid inferiority was a significant predictor of psychopathologies, especially where individuals perceived themselves to have low social rank.

The World Health Organization has drawn attention to the increasing rates of various forms of psychopathology (Murray & Lopez, 1996). This is noted particularly in the Western World and in younger cohorts (Fombonne, 1999) including students (Andrews & Wilding, 2004). It has been suggested that rising rates might be linked to: increases in competitive behaviour, with pressure to strive to impress others; concern with appearances and self-presentations; and fear of rejection if viewed by others as inferior (Gilbert, 1989, 1992, 1995, 2005a; Leary, 1995, 2001a; Wilkinson, 1996). Recent research suggests that rates of mental ill-health and crime are higher in competitive rather than caring societies (Arrindell, Steptoe, & Wardle, 2003) and are higher in materialistic societies (Kasser, 2002). Recently, Arrindell *et al.* (2004) also demonstrated a link between competitive/masculine cultures (in contrast to caring/feminine cultures) with specific forms of fear such as agoraphobia. These were

*Correspondence should be addressed to Professor Paul Gilbert FBPsS, Mental Health Research Unit, Kingsway Hospital, Derby DE22 3LZ, UK (e-mail: p.gilbert@derby.ac.uk).

related even after controlling for stress/anxiety across nations. Their work demonstrates cultural effects on competitive attitudes and behaviour, and vulnerabilities to psychopathologies. Research on stress in hierarchical and competitive interactions in monkeys also suggests that the social style and nature of the group affects various indicators of stress (e.g. cortisol). These are elevated when social groups are unstable and/or competitive behaviour between individuals increases, while stable social groups tend to be less stressful (Leviton, Hasey, & Sloman, 2000; Sapolsky, 1989, 1994). Although humans compete in different ways in comparison with other primates (Gilbert & McGuire, 1998), feeling 'looked down on', shame and evaluative threats (feeling negatively judged or compared with others) are among the most powerful stimulators of the cortisol-stress response (Dickerson & Kemeny, 2004).

Internally competitive social groups have a major impact on shame-proneness, impression-management and self-identity (Gilbert, 1989, 1995, 2003; Kemper, 1990). Competitive environments focus people on the competitive nature of their social relationship (Lasch, 1979), which can activate a rank-focused, social mentality related to heightened social comparison, concerns with inferiority and consequent rejection (Gilbert, 1989, 1992, 2005b). These may stimulate fears which invigorate 'striving' to win a place in the social domain, to avoid rejection, criticism and being overlooked by others.

The idea that feeling under pressure to strive and compete to earn one's place and avoid inferiority is not newly related to psychopathology. Alfred Adler (1870–1937) suggested that such striving could develop to compensate for an inferiority complex. More recently, Dykman (1998) suggested that there are two main motivations behind achievement, which he calls *growth-seeking* vs. *validation-seeking*. Growth seekers enjoy challenges and their ability to learn and mature through challenges/mistakes. Validation seekers, however, feel under constant pressure to prove themselves as likable and acceptable to others. He also suggests that validation-seeking is a defensive coping strategy that develops in the context of critical and perfectionistic parenting. In a series of studies, Dunkley and colleagues (e.g. Dunkley, Zuroff, & Blankstein, 2006) explored various measures of perfectionism and suggested two underlying factors: the first is setting and striving for personal standards; the other is striving to avoid criticism/rejection from others, labelled 'evaluative concerns'. Dunkley *et al.* found that it is the evaluative concerns dimension that is linked to various psychopathological indicators. Research has also shown that self-beliefs of inferiority, behaving submissively and believing that others look down on the self are highly associated with depression in clinical and non-clinical populations (Allan & Gilbert, 1997; Gilbert & Allan, 1998; Gilbert, Allan, Brough, Melley, & Miles, 2002). A number of authors have suggested that early criticism from parents and/or peers, and/or sensitivity to the competitive dynamics of social life through peer group competition or media exposure, could sensitise people to fears of inferiority (Dykman, 1998; Gilbert, 1992; McKinley, 1999).

Whatever their source, when people fear the consequences of being inferior or subordinate to others (e.g. when they fear that they will be rejected or vulnerable to criticism, rather than helped or accepted) they can become 'driven' to compete to avoid both self and others making evaluations of self 'as inferior' (Gilbert, 1992, 2003). Self-other relationship can be construed as competitive rather than care-focused or cooperative, and people can be highly oriented to social comparison and shame sensitivities. This striving can be a source of stress and individuals may find it hard to feel content, socially accepted and safe in their social networks (Gilbert, 1989, 1995, 2005b).

Aims

To date, there is no measure that looks specifically at striving to avoid inferiority, or the possible fears behind this striving, such as 'being overlooked', 'missing out on opportunities to get on in life' and 'active rejection'. Thus, this study set out to develop a measure of people's beliefs that they have to 'strive to avoid inferiority' and explore its connection to fears of non-acceptance/rejection, needs for self-validation, competitiveness, judgments of being relatively low rank compared with others, and psychopathological indicators of stress, anxiety and depression.

It was hypothesized that the new scale would form two factors tapping: insecure striving, related to fear-linked pressures to strive and prove self; and secure non-striving related to feeling accepted whether one succeeds or fails. We hypothesized that insecure striving would be positively associated with low rank and psychopathology, while secure non-striving would be negatively associated with low rank and psychopathology.

Method

Participants

Two hundred and seven undergraduate psychology students (27 male, 174 female, 6 unrecorded) from the University of Derby and the University of Nottingham completed six self-report measures. The age range was 18–51 years (mean = 21.77 years, $SD = 9.47$). Out of these, 39 participants (5 male, 34 female, mean age = 22.00, $SD = 7.14$) undertook a retest of the new scales developed here after a four-week interval. All of the participants were volunteers.

Measures

In order to explore the relationship of the new striving to avoid inferiority scale to issues of inferiority and competitiveness, a series of self-report scales were chosen. Concerns with low social rank were measured with the social comparison and submissive behaviour scales (Allan & Gilbert, 1995, 1997). Competitiveness was measured by the Hypercompetitive Attitudes Scale (Ryckman, Hammer, Kaczor, & Gold, 1990) and, since striving to avoid inferiority may also be linked to the need for validation, we also used the Goal Orientation Inventory (Dykman, 1998). Finally, because we were interested in how these variables are linked to stress, depression and anxiety we used the Depression, Anxiety and Stress scale (Lovibond & Lovibond, 1995).

Striving to Avoid Inferiority Scale (SAIS)

This new scale was designed to measure the strength of 'pressure to compete to avoid inferiority'. The scale has two parts:

SAIS Part One

Two sets of items were generated by the researchers to measure: (a) beliefs about striving to compete to avoid inferiority and (b) feelings of acceptance by others whether one succeeds or fails and not having to compete. Items were selected during a research meeting where the basic idea of the research was presented and five researchers were asked to generate items that would tap each construct. In addition, the first author

suggested items based on clinical experience. We then collated these and chose the highest scored items for each construct. This resulted in a pool of 32 items. The first author also discussed the project with three previously depressed patients who had spent a lot of their lives trying to prove themselves, and asked if the items reflected the pressures they had felt under; they thought they did. During analysis one item loaded poorly and was subsequently deleted (thus making the SAIS a 31-item scale). Instructions ask participants to rate statements describing how they think and feel about the need to strive and compete in life. Each item is answered using a five point Likert scale of 0 = never to 4 = always. The full scale is presented in Table 1. The Cronbach's alpha for this scale is shown in Table 2.

SAIS Part Two

The second part of the SAIS focused on the *reasons and insecurities* for people feeling under pressure to compete and avoid inferiority. We hypothesized three possible reasons: *fear of losing out* (not advancing in life, missing opportunities and falling behind); *being overlooked*, which we regarded as a form of passive exclusion; and *active rejection*, involving being shamed and pushed away. As noted by Leary (2001a, 2001b) social inclusion-exclusion is a key concern for people, with degrees of inclusion-exclusion ranging from maximal inclusion, through to passive inclusion (toleration), passive exclusion (such as not being chosen, being ignored) through to active exclusion and ostracism/persecution. Clearly, however, vulnerabilities to rejection interact with appraisals of where one stands in the hierarchy, and the degree to which one thinks others value the self. Although there is considerable work on the fear of active rejection (Leary, 2001a), there has been less research on passive exclusion. See Appendix A for full scale.

Goal Orientation Inventory (GOI)

Dykman (1998) developed this scale to measure *attitudes* towards 'personal strivings'. There are two subscales each containing 18 items. 'Validation-Seeking' (e.g. 'I feel like I'm constantly trying to prove that I'm a worthwhile, competent or likable person') and 'Growth-Seeking' (e.g. 'I look upon potential problems in life as opportunities for growth rather than as threats to my self-esteem'). Individuals who are 'Validation-Seeking' are 'those who are striving to prove or establish their basic worth, competence and likeability' (Dykman, 1998, p. 141), whilst 'Goal-Seeking' individuals are 'those whose strivings centre on learning, growth, self-improvement, and reaching their fullest potential' (Dykman, 1998, p. 142). Items are scored using a 7-point scale (from 1 = strongly disagree to 7 = strongly agree).

This scale has good reliability with Cronbach's alphas of .97 for the Validation-seeking subscale and .96 for the Growth-seeking subscale and an overall alpha of .96. Test-retest reliability at ten weeks was between $r = .78$ and $r = .82$. The Cronbach's alphas for this study are shown in Table 2.

Hypercompetitive Attitudes (HCA) Scale

Ryckman *et al.* (1990) constructed the 26-item HCA scale from an original set of 90 items that were based on Horney's (1930's) definition of hypercompetitiveness. Ryckman *et al.* suggested that Horney saw hypercompetitiveness as 'an indiscriminate need by individuals to compete and win (and avoid losing) at any cost as a means

of maintaining or enhancing feelings of self-worth, with an attendant orientation of manipulation, aggressiveness, exploitation and denigration of others across a myriad of situations' (p. 630).

The items are designed to assess differences in hypercompetitive attitudes between individuals and are rated on a 5-point scale (from 1 = Never true of me to 5 = Always true of me). There are no subscales, simply hypercompetitive items (e.g. 'Winning in competition makes me feel more powerful as a person') and reverse-scored non-hypercompetitive items (e.g. 'I do not see my opponents in competition as my enemies').

This scale has good reliability with a Cronbach's alpha of .91 (Ryckman *et al.*, 1990). A six-week test-retest found satisfactory reliability at $r(99) = .81, p < .001$. The scale was also found to have convergent validity as it correlated with other competitive measures such as the Competitive-Cooperative Attitude Scale at $r(47) = .48, p < .001$ (Ryckman *et al.*, 1990). The Cronbach's alpha for this study is shown in Table 2.

Social comparison rating scale

This scale was developed by Allan and Gilbert (1995) to measure self-perceptions of social rank and relative social standing. This scale uses a semantic differential methodology and consists of 11 bipolar constructs. Participants are required to make a global comparison of themselves in relation to other people and to rate themselves along a 10-point scale. For example, the scale asks:

In relationship to others I feel:

Incompetent 1 2 3 4 5 6 7 8 9 10 More competent.

The 11 items cover judgments concerned with rank, attractiveness and how well the person thinks they 'fit in' with others in society. Low scores point to feelings of inferiority and general low rank self-perceptions.

The Social Comparison Rating Scale has good reliability, with Cronbach's alphas of .88 and .96 with clinical populations and .91 and .90 with student populations (Allan & Gilbert, 1995, 1997). The Cronbach's alpha for this study is shown in Table 2.

Submissive behaviour scale

Derived from the work of Buss and Craik (1986), the Submissive Behaviour Scale was developed by Gilbert and Allan (1994) and refined by Allan and Gilbert (1997). It consists of 16 examples of submissive behaviour (e.g. 'I agree that I am wrong even though I know I'm not') which people rate as a behavioural frequency (from 0 = Never to 4 = Always).

The scale has good reliability, with a Cronbach's alpha of .89 and four-month test-retest reliability of $r = .84, p < .001$ with a student population (Gilbert, Allan, & Trent, 1996). The Cronbach's alpha for this study is shown in Table 2.

Depression, Anxiety and Stress Scale (DASS21)

This is a shortened version of the DASS42 (Lovibond & Lovibond, 1995). It consists of 21 items: seven each from three subscales designed to measure levels of depression (e.g. 'I couldn't seem to experience any positive feelings at all'), anxiety (e.g. 'I was aware of dryness of my mouth') and stress (e.g. 'I found it hard to wind down'). Subjects are asked to rate how much each statement applied to them over the past week, on a

4-point scale (from 0 = Did not apply to me at all, to 4 = Applied to me very much, or most of the time).

The DASS21 subscales have satisfactory internal reliability, with Cronbach's alphas of .94 for Depression, .87 for Anxiety and .91 for Stress (Antony, Bieing, Cox, Enns, & Swinson, 1998). The Cronbach's alphas for this study are shown in Table 2.

Results

Analysis was conducted using SPSS version 11.5 for PCs. The data were screened for normality of the distributions and for outliers. Skewness values ranged from 0.04 to 1.07 and Kurtosis values from 0.17 to 0.74.

SAIS Part One

The newly developed Striving to Avoid Inferiority Scale was subjected to exploratory factor analysis (Maximum Likelihood extraction). Promax (oblique) rotation was conducted in order to allow the factors to correlate with one another, and delineate a clear factor structure (Norman & Streiner, 2000). As hypothesized, analysis revealed two factors with eigenvalues greater than one. Table 1 gives the items and factor loadings from the structure matrix.

The first factor consisted of 20 items. It focuses on items related to beliefs that one must avoid being seen as inferior if one is to keep up with others and be accepted. The highest loading item was 'If I don't strive to achieve I'll be seen as inferior to other people.' Thus, this factor captures *striving* to keep up and is labelled 'Insecure Striving' (IS). All items loaded onto this factor with factor loadings of 0.46 or above, except item 29 ('I sometimes compete with myself to drive myself onwards'), which only loaded at .27 and was excluded from further analysis. This item appears unrelated to the fear of other people's evaluation in striving to compete. Thus, Table 1 gives the 19 items of this factor included in the data analysis, with adjustment for item numbering.

Twelve items loaded onto the second factor with factor loadings of 0.35 or above. This factor focuses on feeling *secure* with one's social position and acceptance from others, and *not* feeling under pressure to strive to keep up or compete (e.g. 'Win or lose, people accept me anyway'). Thus, we have labelled this factor 'Secure Non-Striving' (SNS).

SAIS Part Two

The second part of the SAIS focused on the reasons people may feel under pressure to compete: *fear of losing out* (not advancing in life, missing opportunities and falling behind); *being overlooked*, which we regarded as a form of passive exclusion; and active rejection, involving being shamed and *pushed away* (Leary, 2001a, 2001b). SAIS part two was not designed to be a factor analysed but to be used as a series of subscales with face validity (see Appendix). Cronbach's alphas are given in Table 2.

Retest Reliability: thirty-nine participants completed a retest of part one and two after a four-week interval. The reliabilities coefficients are given in Table 2, demonstrating that both parts of the scale had acceptable to good test-retest reliability.

Descriptives:

The means and standard deviations of all measures are given in table 2. The means and *SD* for the GOI are similar to those obtained by Dykman (1998). The means and *SD* of the HCA Scale are similar to those obtained by Ryckman *et al.* (1990), and the

Table 1. Factor analysis – SAIS Part One

Item		Factor 1 IS	Factor 2 SNS
20	If I don't strive to achieve, I'll be seen as inferior to other people	.79	–.39
15	I struggle to achieve things so that other people will not look down on me	.71	–.43
14	I worry about failure because it means you can't keep up and compete with other people in life	.70	–.46
31	Unless you can compete and keep up you get left behind	.70	–.32
11	If I don't strive to succeed, I'll be left behind everyone else	.70	–.34
9	I need to match what other people achieve	.67	–.39
18	To get on in the world, you have to compete with others	.64	–.27
13	People compare me to others to see if I match up	.64	–.39
19	If you don't keep up in looks or achievements others won't bother with you	.62	–.40
1	To be valued by others I have to strive to succeed	.61	–.33
17	Acceptance is something you have to earn and compete with others for	.59	–.29
7	I never feel my place in society is secure but have to strive to prove myself worthy of it	.56	–.44
23	Even if I do succeed, others will not believe it's enough	.56	–.34
30	You earn respect by out-performing others	.54	–.20
22	People who can't compete are seen as weak	.53	–.36
5	People judge you by how well you perform in comparison to others	.51	–.25
3	Life is a competition	.50	–.21
25	Being competitive gives me a right to life	.46	–.24
27	Others have to see me succeed otherwise it's worthless	.46	–.39
8	Others will accept me even if I fail	–.37	.79
12	Whether I succeed or fail, people value me as a person	–.46	.77
6	Win or lose, people accept me anyway	–.36	.76
2	If I make mistakes, I know other people will still like me	–.37	.74
24	People accept me whether I'm successful or not	–.41	.74
10	People are accepting of me without comparing me with others	–.39	.65
16	If I fail at something, I know others will help me try again	–.26	.60
29	You are loved for what you are, not for what you achieve	–.51	.60
26	I don't have to be the best in life to feel wanted	–.31	.49
21	I don't feel under pressure to prove myself to others	–.27	.42
4	People don't have to succeed to prove themselves to others	–.22	.38
28	I don't have to prove myself to feel part of a group	–.11	.35

IS, insecure striving; SNS, secure non-striving.

rank variables (social comparison and submissive behaviour) are also similar to those found in previous student studies (e.g. Gilbert *et al.*, 2002). However, the DASS scores appear to be slightly elevated in comparison to other non-clinical studies (e.g. Crawford & Henry, 2003).

SAIS in relation to other measures

Given the factor structure of the SAIS, we explored how 'insecure striving' and 'secure non-striving' are related to other measures. We were interested in its relationship to

Table 2. Means, SD and reliability for all scales

		All participants (N = 207)			
		Mean	SD	α	Test-retest (<i>r</i>)
Striving to Avoid Inferiority Scale	Insecure striving	34.71	11.67	.92	.84**
	Secure non-striving	31.70	7.40	.87	.69**
	Losing-out	17.01	5.83	.88	.84**
	Overlooked	17.80	7.73	.92	.80**
	Rejection	12.41	7.08	.94	.79**
Goal Orientation Inventory	Validation-seeking	63.25	25.73	.97	—
	Growth-seeking	78.23	23.19	.97	—
Hypercompetitive Attitudes Scale	HCA	68.44	12.47	.85	—
Rank variables	Social comparison	61.79	14.23	.91	—
	Submissive behaviour	26.32	9.03	.85	—
Depression, Anxiety and Stress scales	Stress	16.74	9.48	.84	—
	Anxiety	9.77	8.72	.83	—
	Depression	12.30	10.03	.89	—

** $p < .01$.

measures of rank self-perception (social comparison and submissive behaviour), competitiveness, need for self-validation and stress, anxiety and depression. The new scale was highly correlated with the HCA scale and the GOI, but still showed differential correlations with other scales thus indicating good concurrent and discriminant validity.

Correlation analysis

Pearson Product Moment Correlation Coefficients for the subscales of all measures are given in Table 3.

SAIS

The insecure striving and secure non-striving subscales were negatively correlated ($r = -.51$). Insecure striving was significantly related to fear of losing out and being overlooked, and to a slightly lesser extent, active rejection. In contrast, secure non-striving was negatively associated with these concerns. This is not surprising because there is some item similarity but it should be noted that the first part of the SAIS is focused on beliefs and contingencies and not on the *fears* that may drive striving. These fears are located in the second part of the SAIS.

SAIS and Hypercompetitiveness

Hypercompetitive attitudes were highly correlated with *insecure* striving, fears of losing out, being overlooked and being rejected. However, hypercompetitiveness was not found to be related to elevated social comparison. Hence, these attitudes are not related to feelings of superiority. Hypercompetitiveness had a weak but significant relationship to stress, anxiety and depression.

Table 3. Correlation matrix of study variables

	Insecure striving	Secure non-striving	Losing out	Being overlooked	Active rejection	Validation- seeking	Growth- seeking	Hypercompetitive attitudes	Social comparison	Submissive behaviour	Stress	Anxiety
Secure non-striving	-.51**											
Losing out	.63**	-.21**										
Being overlooked	.64**	-.31**	.57**									
Active rejection	.54**	-.33**	.33**	.60**								
Validation-Seeking	.58**	-.47**	.36**	.42**	.36**							
Growth-Seeking	-.28**	.40**	-.12	-.14	-.14*	-.39**						
Hypercompetitive attitudes	.57**	-.41**	.44**	.41**	.42**	.40**	-.27**					
Social comparison	-.27**	.40**	-.11	-.10	-.23**	-.53**	.39**	-.06				
Submissive behaviour	.32**	-.33**	.15*	.19**	.27**	.51**	-.37**	.13	-.59**			
Stress	.31**	-.37**	.10	.20**	.17*	.47**	-.32**	.18*	-.37**	.35**		
Anxiety	.27**	-.31**	.06	.16*	.32**	.42**	-.27**	.17*	-.41**	.46**	.71**	
Depression	.42**	-.42**	.19**	.30**	.32**	.55**	-.39**	.19**	-.47**	.44**	.72**	.68**

* $p < .05$; ** $p < .01$.

SAIS and Validation/Growth-Seeking

Insecure striving was highly related to the need for self-validation, but negatively related to Growth-Seeking. Fears of losing out, being overlooked and being rejected were also associated with Validation-Seeking. In contrast, secure non-striving showed the opposite relationship, being positively linked to Growth-Seeking and negatively to Validation-Seeking. Validation-Seeking was also associated with submissive behaviour and unfavourable social comparisons (feeling relatively inferior).

SAIS and social rank variables

Insecure striving had a small but significant correlation with unfavourable social comparison (feeling inferior), while feeling secure and not needing to strive was significantly associated with making favourable social comparisons of self with others. Interestingly, social comparison was not associated with fears of losing out and being overlooked. Also, it was weakly associated with active rejection. Clearly, more work is needed to tease out the issues linking fear of inferiority, current feelings of self as inferior and fears of active and passive rejection.

The data for submissive behaviour suggest that insecure striving to avoid inferiority, and fears of losing out, being overlooked and being rejected are associated with submissiveness, with secure non-striving being negatively related to submissiveness.

SAIS and stress, anxiety and depression

Insecure striving and secure non-striving are associated with these psychopathology variables in the predicted direction. Fear of being overlooked and active rejection were especially associated with depression.

Multiple regressions

Standard multiple regression analyses were conducted to explore the relative contribution of insecure striving to avoid inferiority, secure non-striving, social comparison, submissive behaviour and hypercompetitive attitudes to the prediction of validation-seeking, stress, anxiety and depression. We kept validation-seeking as a dependent variable because it is a complex measure that involves a number of different elements such as 'need to prove worth to self *and* others,' and concerns with social comparison. Our striving to avoid inferiority measure focuses on *fears* of what others might do if one is not being good enough. There are two factors: 'insecure striving' and 'secure non-striving'. Thus in a sense validation-seeking may be a higher order construct that is underpinned by concerns with inferiority. Indeed, it has the highest correlation with depression.

Validation-seeking

The regression equation accounted for 55% ($R^2 = .55$) of the variance in the prediction of validation-seeking ($F_{(5, 190)} = 46.43$; $p < .001$). With the exception of secure non-striving, all variables significantly contributed to the variance. Insecure striving yielded the highest β value ($\beta = 0.36$, $p < .001$), with social comparison obtaining the next highest ($\beta = -0.26$, $p < .001$), then submissive behaviour ($\beta = 0.19$, $p < .05$) and finally hypercompetitive attitudes ($\beta = -0.14$, $p < .05$). Thus, validation-seeking may

be partly explained by this sense of having to compete for one's social place, feeling lower rank (inferior) compared with others and a tendency to be submissive.

Stress

The regression equation accounted for 23% of the variance in the prediction of stress ($F_{(5, 191)} = 11.69$; $p < .001$). Submissive behaviour yielded the highest β value ($\beta = 0.23$, $p = .004$), with secure non-striving obtaining the next highest ($\beta = -0.20$, $p = .012$).

Anxiety

The regression equation accounted for 28% of the variance in the prediction of anxiety ($F_{(5, 191)} = 14.61$; $p < .001$). Only submissive behaviour ($\beta = 0.40$, $p < .001$) was significant.

Depression

The regression equation accounted for 34% of the variance in the prediction of depression ($F_{(5, 191)} = 19.63$; $p < .001$). In this model with the exception of hypercompetitive attitudes, all variables significantly contributed to the variance. Submissive behaviour yielded the highest β value ($\beta = 0.24$, $p = .002$), with insecure striving obtaining the next highest ($\beta = 0.23$, $p = .003$), then social comparison ($\beta = -0.18$, $p < .05$) and finally secure non-striving ($\beta = -0.17$, $p < .05$). This data suggest that even after controlling for the rank variables (social comparison and submissive behaviour) insecure striving still makes an independent contribution to depression.

We note that striving to avoid inferiority was a stronger predictor of validation-seeking than hypercompetitive attitudes. In addition, striving to avoid inferiority was a key predictor of depression but hypercompetitiveness was not. Hence, it is not so much just being competitive, but it is the fearful, striving to avoid inferiority type of competitiveness that is key to depression.

Moderator analysis

The regression analysis suggested that aspects of competing and social comparison might be differentially related to depression. To explore this, we tested for a moderator effect of social comparison on insecure striving and their joint impact on depression. We used the product of the Z scores of the insecure striving and social comparison variables to create interaction terms between them and used regression analysis to see if the interaction between these variables significantly contributed to depression. These relationships were significant ($F_{(3, 200)} = 16.15$, $p < .001$, R^2 change = .03), with insecure striving ($\beta = 0.36$, $p < .001$), social comparison ($\beta = -0.19$, $p = .005$) and the interaction term ($\beta = -0.16$, $p = .014$) predicting depression. This suggests that those who see themselves as inferior (lower scores on social comparison) will score higher on depression if they also score higher on insecure striving. The key finding is that for each score obtained on the social comparison scale, those higher on insecure striving will have higher depression. In other words, striving to avoid inferiority may be an important element to depressive vulnerability. Nonetheless a combination of striving and feeling inferior seems particularly linked to depression.

Discussion

This study set out to develop a measure of competitive striving and explore whether insecure striving (to avoid inferiority) is linked to a need for validation from others, stress, anxiety and depression. These concerns are important in the context of societal competitive dynamics and their link to individual psychopathology (e.g. Arrindell *et al.*, 2003). The data generally confirm our hypotheses. The data suggest that insecure striving is strongly linked to a number of fears (e.g. losing out, being overlooked and active rejection); it is strongly linked to validation-seeking and inversely associated with growth-seeking; it is associated with hyper competitive attitudes, feeling inferior and submissive behaviour. Insecure striving is also linked to stress, anxiety and depression.

We also explored the interaction between feeling inferior (unfavourable social comparison) and insecure striving. This link is potentially important, because activation of 'pressure to compete' and 'striving' may be linked to increased arousal in various stress systems (Gilbert, 2004). This is particularly so when failures in competition are associated with missing out and various forms of rejection. Data from the moderator analysis suggests that there is an interaction between feeling inferior (unfavourable social comparison) and insecure striving. For each score on the social comparison scale, those higher on insecure striving have higher depression scores. Thus, a combination of striving and feeling inferior seems particularly linked to depression.

There is a political perception that competitiveness increases efficiency and the attainment of goods and services, which can increase people's welfare. However, this view is increasingly contested once poverty is addressed (Nettle, 2005). This is because competitive behaviour has psychological and social costs (Gilbert, 1989, 1992). Our data show that hyper competitiveness is associated with fear of inferiority and that fear is linked to validation-seeking and vulnerability to psychopathology. Given the concern with the rising rates of depression and other pathologies in Western societies (Fombonne, 1999) it is interesting to note that a number of authors have suggested that various forms of competitiveness have intensified within the last few decades (Kasser, 2002). Arrindell *et al.* (2003) found that masculine societies (i.e. those focused on competing, performing and attaining material success) had higher rates of depression than feminine/caring ones. Competitiveness can be associated with insecure early life experiences but there are also cultural aspects that can drive it. These may include the rise of consumerism and expectations, job insecurity, media focused attention on status models, accentuation of academic assessments from an early age and various ranking/assessment systems of institutions (James, 1998). This study suggests that whatever the sources of competitive behaviour, individuals who feel inferior, vulnerable to being overlooked or rejected, and feel under pressure to strive to keep up, are at risk of increased depressive symptoms. One cannot make statements about causality because it is also possible that people who are depressed become more vulnerable to these anxieties, or at least these are interactive processes.

What about secure non-striving? In general, secure non-striving (presumably related to people feeling safe and valued whether they succeed or fail) has negative correlations with fears of rejection and missing out, validation-seeking, hypercompetitive attitudes unfavourable social comparison and submissive behaviour. In addition, secure non-striving is significantly negatively related to stress, anxiety and depression. We also found that individuals who are secure are able to approach achievement tasks as growth-seeking opportunities. Secure non-striving was also linked to lower hyper competitive attitudes. We take this to indicate that these individuals are more orientated to a

cooperative, socially affiliative and accepting environment (Gilbert, 1989). Thus the urgency and vigour of competitive behaviour may be linked to peoples' relative sense of security in their social domain (Gilbert, 1989, 2005a).

The findings of this study are in line with an earlier study (Bellew, Gilbert, Mills, McEwan, & Gale, 2006) using this scale and exploring attitudes associated with eating disorders. Insecure striving was associated with dysfunctional eating attitudes and appearance anxiety, whereas secure non-striving was negatively related to eating attitudes and appearance anxiety. As in this study, Bellew *et al.* found that insecure striving was associated with making inferior social comparisons and (a different measure of) depression, whilst secure non-striving was associated with more favourable social comparison and lower depression.

It is likely that individual differences exist with regard to motivations for competing. Clearly, the relationship between these variables remains complex and subject to further study. For example, one reviewer to this paper asked 'Could it be that striving to avoid inferiority is a natural concern for individuals who are experiencing involuntary subordination and secure striving is found in confident and successful individuals'. This is a good question that we would probably answer in the affirmative but our data cannot answer that question here. What our data does show is that insecure striving was highly related to the need for self-validation. Dykman (1998) suggests validation seekers have had a more difficult background as children and are more vulnerable to anxiety and depressive disorders, and indeed in this study validation-seeking is significantly correlated with the indicators of psychopathology. In contrast, Ryckman *et al.* (1990) suggest that highly competitive individuals may be striving to be better than others, rather than avoiding rejection. Our data suggest this may not be the case, and that behind hypercompetitive attitudes may lurk the fear of inferiority and rejection. We found that hypercompetitive attitudes are correlated with a fear of losing out ($r = .44$), being overlooked ($r = .41$), active rejection ($r = .42$) and with insecure striving ($r = .57$). Thus, hypercompetitiveness may be a threat-focused, defensive motivation. Future work should include a measure of social desirability as a measure of defensiveness to assess this issue.

This study used a student population who have had to be competitive to some degree to win their place, which may accentuate competitiveness are all of similar age and mostly women. It is unclear how this data will pertain to clinical and non-student samples or other pathology indicators such as perfectionism (Dunkley *et al.*, 2006). Further work is needed to validate the scale using general population samples, and confirmatory factor analysis to investigate whether the factor structure identified using exploratory factor analysis is stable. For now, however, we hope to have raised the issue of 'striving to avoid inferiority' as a potentially useful concept that may bridge between studies of cultural pressures, social behaviour and personal vulnerabilities to psychopathologies. It is clearly linked to the need for validation but, in addition, the focus on inferiority links the processes to evolved and innate social rank related concerns.

Acknowledgements

We would like to acknowledge the assistance of Jeremy Miles for his help with the statistical analysis. This work was undertaken by the Mental Health Research Unit who received a proportion of its funding from the Department of Health. The views expressed in this publication are those of the authors and not necessarily those of the Department of Health.

References

- Allan, S., & Gilbert, P. (1995). A social comparison scale: Psychometric properties and relationship to psychopathology. *Personality and Individual Differences*, 19, 293-299.
- Allan, S., & Gilbert, P. (1997). Submissive behaviour and psychopathology. *British Journal of Clinical Psychology*, 36, 467-488.
- Andrews, B., & Wilding, J. M. (2004). The relation of depression, and anxiety to life-stress and achievement in students. *British Journal of Psychology*, 95, 509-521.
- Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the depression, anxiety and stress scales in clinical groups and a community sample. *Psychological Assessment*, 10, 176-181.
- Arrindell, W. A., Eisemann, M., Oei, T. P. S., Caballo, V. E., Sanavio, E., Sica, C., et al. (2004). Phobic anxiety in 11 nations: Part II. Hofstede's dimensions of national cultures predict national-level variations. *Personality and Individual Differences*, 37, 627-643.
- Arrindell, W. A., Steptoe, A., & Wardle, J. (2003). Higher levels of depression in masculine than in feminine nations. *Behaviour Research and Therapy*, 41, 809-881.
- Bellew, R., Gilbert, P., Mills, A., McEwan, K., & Gale, C. (2006). Eating attitudes and striving to avoid inferiority. *Eating Disorders*, 14, 313-322.
- Buss, D. M., & Craik, K. H. (1986). Acts, dispositions and clinical assessment: The psychopathology of everyday conduct. *Clinical Psychology Review*, 6, 387-406.
- Crawford, J. R., & Henry, J. D. (2003). The depression, anxiety stress scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology*, 42, 111-131.
- Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol response: A theoretical integration and synthesis of laboratory research. *Psychological Bulletin*, 130, 335-391.
- Dunkley, D. M., Zuroff, D. C., & Blankstein, K. R. (2006). Specific perfectionism components versus self-criticism in predicting maladjustment. *Personality and Individual Differences*, 40, 665-676.
- Dykman, B. M. (1998). Integrating cognitive and motivational factors in depression: Initial tests of a goal orientation approach. *Journal of Personality and Social Psychology*, 74, 139-158.
- Fombonne, E. (1999). Time trends in affective disorders. In P. Cohen, C. Slomkowski, & L. Robins (Eds.), *Historical and Geographical influences on psychopathology* (pp. 115-140). Mahwah, NJ: Erlbaum.
- Gilbert, P. (1989). *Human nature and suffering*. Hove: Lawrence Erlbaum.
- Gilbert, P. (1992). *Depression: The evolution of powerlessness*. Hove: Lawrence Erlbaum.
- Gilbert, P. (1995). Biopsychosocial approaches and evolutionary theory as aids to integration in clinical psychology and psychotherapy. *Clinical Psychology and Psychotherapy*, 2, 135-156.
- Gilbert, P. (2003). Evolution, social roles and the differences in shame and guilt. *Social Research*, 70, 401-426.
- Gilbert, P. (2004). Depression: A biopsychosocial, integrative and evolutionary approach. In M. Power (Ed.), *Mood disorders: A handbook of science and practice* (pp. 99-142). Chichester: J Wiley.
- Gilbert, P. (2005a). Compassion and cruelty: A biopsychosocial approach. In P. Gilbert (Ed.), *Compassion: Conceptualisations, research and use in psychotherapy* (pp. 3-74). London: Routledge.
- Gilbert, P. (2005b). Social mentalities: A biopsychosocial and evolutionary reflection on social relationships. In M. W. Baldwin (Ed.), *Interpersonal cognition* (pp. 299-335). New York: Guilford.
- Gilbert, P., & Allan, S. (1994). Assertiveness, submissive behaviour and social comparison. *British Journal of Clinical Psychology*, 33, 295-306.
- Gilbert, P., & Allan, S. (1998). The role of defeat and entrapment (arrested flight) in depression: An exploration of an evolutionary view. *Psychological Medicine*, 28, 585-598.

- Gilbert, P., Allan, S., Brough, S., Melley, S., & Miles, J. (2002). Anhedonia and positive affect: Relationship to social rank, defeat and entrapment. *Journal of Affective Disorders*, 71, 141-151.
- Gilbert, P., Allan, S., & Trent, D. (1996). A short measure of social and separation anxiety. *British Journal of Medical Psychology*, 69, 155-161.
- Gilbert, P., & McGuire, M. (1998). Shame, social roles and status: The psychobiological continuum from monkey to human. In P. Gilbert, & B. Andrews (Eds.), *Shame: Interpersonal behavior, psychopathology and culture* (pp. 99-125). New York: Oxford University Press.
- Horney, K. (1937). *The neurotic personality of our time*: New York: Norton.
- James, O. (1998). *Britain on the couch: A treatment for the low serotonin society*. London: Century.
- Kasser, T. (2002). *The high price of materialism*. Massachusetts: MIT Press.
- Kemper, T. D. (1990). *Social structure and testosterone: Explorations of the socio-bio-social chain*. New Brunswick: Rutgers University Press.
- Lasch, C. (1979). *The culture of Narcissism: American life in an age of diminishing expectations*. New York: Norton.
- Leary, M. R. (1995). *Self-presentation: Impression-management and interpersonal behavior*. Madison, WI: Brown & Benchmark's.
- Leary, M. R. (2001a). Towards a conceptualisation of interpersonal rejection. In M. Leary (Ed.), *Interpersonal rejection* (pp. 3-20). New York, NY: Oxford University Press.
- Leary, M. R. (Ed.), (2001b). *Interpersonal rejection*. New York, NY: Oxford University Press.
- Leviton, R., Hasey, G., & Sloman, L. (2000). Major depression and the involuntary defeat strategy: Biological correlates. In L. Sloman & P. Gilbert (Eds.), *Subordination and defeat: An evolutionary approach to mood disorders and their therapy* (pp. 95-114). Mahwah: Erlbaum.
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the depression, anxiety and stress scales (DASS) with the Beck depression and anxiety inventories. *Behaviour Research and Therapy*, 33, 335-343.
- McKinley, N. M. (1999). Women and objectified body consciousness: Mothers' and daughters' body experience in cultural, developmental and familial context. *Developmental Psychology*, 35, 760-769.
- Murray, C. J. L., & Lopez, A. D. (1996). *The global burden of disease: A comprehensive assessment of mortality and disability from diseases. Injuries and risk factors in 1990 and projected to 2020*. Cambridge: Harvard University Press.
- Nettle, D. (2005). *Happiness: The science behind your smile*. Oxford: Oxford University Press.
- Norman, G. R., & Streiner, D. L. (2000). *Biostatistics The bare essentials* (2nd ed.). London: Hamilton.
- Ryckman, R. M., Hammer, M., Kaczor, L. M., & Gold, J. A. (1990). Construction of a hypercompetitive attitude scale. *Journal of Personality Assessment*, 55, 630-639.
- Sapolsky, R. M. (1989). Hypercortisolism among socially subordinate wild baboons originates at the CNS level. *Archives of General Psychiatry*, 46, 1047-1051.
- Sapolsky, R. M. (1994). *Why Zebras Don't Get Ulcer's: An updated guide to stress, stress-related disease, and coping*. New York: Freeman.
- Wilkinson, R. G. (1996). *Unhealthy societies: The afflictions of inequality*. London: Routledge.

Appendix: SAIS part two.

We are interested in the reasons people feel under pressure to compete. Below are a series of questions which tap this, each beginning with 'If you don't compete with others and succeed.....'. Please circle the number, which best describes how much you agree or disagree with each statement.

1. LOSING OUT

If you don't compete with others and succeed...

You will not advance in life

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

You will miss out on opportunities

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

You will fall behind others

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

2. OVERLOOKED

If you don't compete with others and succeed...

People will overlook you

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

People will not take much interest in you

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

People will pass you over

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

People will forget about you

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

3. ACTIVE REJECTION

If you don't compete with others and succeed...

Others will actively reject you

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

Others will push you away

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

Others will be critical and shame you

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree

Others will go out of their way to actively exclude you

Don't agree 1 2 3 4 5 6 7 8 9 10 Completely agree