

University of Plymouth Teaching Fellowship Report

**What is the Impact of Social Anxiety on Student Well-Being and Learning?**

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**Introduction**

This project is designed to provide information about the prevalence of social anxiety in University of Plymouth students and to throw light on the potential impact of social anxiety on well-being and learning.

The report draws on a review of the literature and on the findings of a prevalence survey of 1007 students who completed the Liebowitz Social Anxiety Scale.

The data show that social anxiety is relatively common in students with 10% of the sample reporting marked or severe social anxiety. These findings are broadly in line with prevalence rates obtained in community epidemiological studies carried out in Europe and Northern America. The research literature reviewed suggests that social anxiety is likely to have pronounced, negative impact on students that have the generalised form, which tends to be chronic in nature. The implications of these and other findings are explored in the following report.

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**Executive Summary**

Social anxiety is a debilitating, chronic condition that is characterised by anxiety and avoidance, which is triggered by intense fear of negative criticism in performance and social interaction situations.

There has been no available data on the prevalence of social anxiety in UK university students although there is a wealth of evidence indicating that people with social anxiety fail to meet their full potential in education, career development and interpersonal relationships. Despite the distress and dysfunction associated with social anxiety, the condition is not well known and sufferers are typically reluctant to seek help. Hence, we suspect that social anxiety has remained a hidden problem with few students venturing to seek help from their peers, tutors or formal university services, such as learning support, counselling and disability assist.

The Liebowitz social anxiety scale is widely regarded as the gold standard in social anxiety research and it was administered to a total of 1007 students drawn from seven University of Plymouth Faculties, including the Partnership Colleges. The scale was administered during lectures and seminars and an overall response rate of 86% was achieved.

The findings suggest that social anxiety is prevalent in the University of Plymouth student population with approximately 10% of the sample reporting marked to very severe social anxiety. Using clinical cut-off scores for discriminating generalised and non-generalised social anxiety, 12% of students were found to have generalised type, which is likely to significantly impair the student’s performance in seminars and presentation and his or her motivation to seek and share information from peers, tutors, library services, etc.

Women scored higher than men on all sub-scales and social anxiety increased rather than decreased with age with the highest scores found in arts and technology students. Significant differences in social anxiety and ethnicity were found for Black and Chinese students, who scored higher than white and other ethnic groups on the total Liebowitz Social Anxiety Scale score, avoidance and fear of performance sub-scales.

A series of outline recommendations are made, which include the need to develop best-practice guidelines for staff involved in leading small groups and presentations. Additional recommendations include the need to develop a stepped approach to student support, as research suggests that students with mental health problems tend to perceive formal university support systems as ineffective, preferring instead, to seek help from family and friends. A greater emphasis, therefore, needs to be placed upon sustainable modes of support to include the provision of student and staff information about the nature and consequences of social anxiety and the use of bibliotherapy and peer-support networks that utilise contemporary means of communication such as ‘texting’ and web-communities.

**Overview**

Social anxiety is a chronic, disabling condition that is characterised by intense fear of being embarrassed or looking foolish in social situations that necessitate social interaction or performance activities, such as public speaking. Although poorly recognised, recent epidemiological studies show that social anxiety is highly prevalent and ranks as the third most common mental health problem after major depression and alcohol abuse (Furmark 2002). Furthermore social anxiety is associated with poor attainment in school, problems forming relationships and low socio-economic status (Stein, et al 1999; Turner et al 1986). People with social anxiety fear common situations such as participating in small groups, eating or writing in public places, working whilst being observed, talking to people in authority, going to social events, such as parties, meeting or talking to strangers, being the centre of attention, entering a room when other people are present, talking or giving a presentation to a group, dating someone of the opposite sex, maintaining eye contact with strangers (Safren et al 1999)

Social anxiety and shyness acts as a barrier to social communication because of negative self-beliefs, shyness and embarrassment (Crozier 2003). In addition, high levels of anxiety and arousal typically have an adverse effect on memory and the ability to concentrate effectively (Wells and Mathews1994). There is, thus, very is good reason to believe that students with social anxiety may be disadvantaged when exposed to modes of teaching and learning that require them to speak out and become of the centre of others’ attentions.

**Classification and Epidemiology**

Social anxiety is referred to variously in the literature as social phobia, social anxiety disorder and social anxiety. These differences in nomenclature appear to be largely historical rather than qualitative. To aid clarity this report will adopt the preferred term ‘social anxiety’ throughout and will avoid the use of the term ‘social phobia’ because it does not adequately describe social anxiety’s complex characteristics. Similarly the term ‘social anxiety disorder’ will be avoided given that social anxiety spans a continuum of distress rather than a discrete, severe condition.

In addition, it is important to note that there is a considerable degree of overlap between the constructs shyness and social anxiety. This relationship will be explored later in this report.

*Diagnostic Classification and Description*

There are two principal diagnostic guides that are used to determine social anxiety: The International Classification of Diseases or ICD (WHO 1994) and the Diagnostic and Statistical Manual or DSM (American Psychiatric Association 1994).

DSM is the most widely referred diagnostic system in the research literature on social anxiety. The ICD takes a more restricted approach than DSM in defining and characterising social anxiety and is cited less frequently in the research literature.

The diagnosis of social anxiety was first introduced into the Diagnostic and Statistical Manual Version Three (DSM-III) in 1980 and is defined in DSM-IV published in 1994 as a ‘marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or possible scrutiny by others’ (p486). Barlow and Liebowitz (2005) state that the following criteria as used to classify and define social anxiety in DMS-IV:

* The individual must have a marked and persistent fear of social situations involving unfamiliar people and potential scrutiny.
* Exposure to such situations must invariably evoke fear, which may be associated with situationally-bound panic attack.
* The individual recognises that the fear is excessive and irrational (this insight may be absent in children).
* The feared social or performance situations are avoided or endured with intense anxiety and distress.
* The avoidance and anticipatory distress results in marked impairment in routine occupational activities and social relationships.
* The fear or avoidance must not be due to the effects of substance or drug abuse or better accounted for by some other mental health problem such as agoraphobia.

An earlier revision to the Diagnostic and Statistical Manual, DSM-IIIR (1987), distinguished between two sub-types of social anxiety; generalised social anxiety (GSA) and non-generalised or specific social anxiety (NGSA). Menin et al (2002) report that GSA is associated with a pervasive fear of most social situations, whilst people with NGSA tend to fear a limited number of specific social situations, the most common of which is public speaking. The authors also state that GSA is associated with earlier onset and significant familial transmission.

In practice, individuals with social anxiety frequently experience embarrassment and nervousness across a range of situations that include public speaking, writing, eating or drinking and they experience considerable anxiety in situations that necessitate social interaction such as parties, public speaking, formal meetings and conversations with strangers and members of the opposite sex (Safren et al 1999; Furmark et al 2002;). The fear associated with social anxiety often leads sufferers to avoid social situations that may involve social interaction or performance activity (Liebowitz 2003). This can lead to a demoralising cycle where fear generates avoidance and the individual misses out on opportunities to develop social skills and challenge their fears (Bruce and Atezaza Saeed 1999). In addition, individuals may develop superstitious ‘safety behaviours’ that are ritually used to reduce anxiety and/or avoid imagined or feared catastrophic outcomes (Veale 2003). Physical reactions associated with social anxiety include heightened autonomic nervous system arousal with increased heart rate, dizziness, dry mouth, excessive blushing and/or feelings of nausea (Muzina and El-Sayegh 2001). Paradoxically, the safety behaviours may increase the individual’s problems. For example, keeping one’s arms close to the body may inadvertently increase sweating, whilst holding a hand over the mouth to reduce speech volume may result in others’ increased attentions as they struggle to hear the mumbled words (Veale 2003).

*Epidemiology*

Furmark (2002) carried out a review of forty two published epidemiological studies. The lifetime prevalence rate using DSMIII-R criteria, which includes both GSA and NGSA, was 13.3% in the United States based on data from the National Co morbidity Study (Kessler, McGonagle, Zhao, et al 1994) with reported rates in Canada and Sweden of 10% and 15% respectively. In addition, Merikangas et al (2002) report lifetime prevalence rates of 16% for Switzerland, but, like Furmark, note that rates in Korea south east Asian countries such as Japan, China and Korea are markedly lower with the lowest (0.5%) obtained in Taiwan. Kessler et al (1994) found an 8.5% lifetime prevalence rate for GSA in the United States.

Furmark states that these prevalence data rank social anxiety as the third most common mental heath problem in the western world after depression and alcohol abuse and renders it the most common anxiety problem.

In terms of prevalence rates for fear of specific situations the National Co Morbidity study data ranked fear of public speaking as the most common at 30%, followed by fear of talking to strangers 13%, fear of going to a party or social outing a 10% and fear of eating and drinking at 4.6%.

The average female/male ratio for social anxiety in community studies is 1.5:1, which is considerably lower than gender ratios for other mental health problems (Merikangas et al. 2002). In an earlier literature review carried out by Merikangas and Angst (1995) an average of 80% of adults with social phobia were identified as meeting the criteria for a co morbid lifetime disorder, such as depression. In the majority of cases social phobia precedes co morbidity for other mental health problems (Rapee and Spence 2004).

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*Social and Occupational effects of Social Anxiety*

Although Furmark (2002) reports that urbanicity has only a small effect on social anxiety prevalence rates, Merikangas et al (2002) report that several studies show that social anxiety is associated with poor school work and increased likelihood of school drop-out, dissatisfaction with friends and leisure activities, lower occupational status and income. For example, using the Liebowtiz self-rated Disability Scale, Schneier et al (1994) found that half of their sample of 32 patients with social anxiety reported at least moderate impairment in areas of education, employment, family relationships, marriage/romantic relationships and social networks.

**Aetiology of Social Anxiety**

*Biological Disposition*

There is a lack of clarity concerning the point at which social anxiety emerges during childhood. Lewis (2005) states that embarrassment of being observed (termed exposure embarrassment) can be reliably observed in children as young as two years of age. However, Buss (1980) argues that true self-conscious emotion does not appear before eight years of age, being predicated upon the development of a cognitive awareness of self as an object of others’ critical attentions. This position is supported by Hudson and Rapee (2000) who state that several studies have shown that self-conscious concerns about others’ negative evaluation first occur around this time. Notably, Schneier et al (1992) report that the lower age range for a formal diagnosis of social anxiety in children’s anxiety clinics is around age eight.

There is evidence, however, that the biological seeds of social anxiety are sown much earlier in childhood. For example, a prospective adopted twin study conducted by Kendler et al (1992) found a small, but significant genetic component associated with anxiety. Hudson and Rapee (2000) however, suggest that what is transmitted is a not a social anxiety specific gene, but rather an inherited temperament or disposition that predisposes children towards the development of anxiety disorders later in life.

Buss and Plomin (1984) describe temperament as comprising three factors; sociability, activity and emotionality. In this model, the child’s biological temperament causes an inherent wariness of novel situations and strangers. This, together with an innate emotional lability and high levels of autonomic nervous system arousal, leads to frequent stress and alarm reactions that trigger inhibited responses to strangers and novel events. Over time this temperament or disposition may combine with adverse environmental factors to create a negative view of self and others, leading ultimately to excessive self-consciousness and social anxiety.

Kagan et al (1988) have coined the phrase *behavioural inhibition* to describe the consistently inhibited responses of a small proportion of young infants to the so-called *strange situation* experiment in which infants are separated from their mothers and introduced to strangers in an unfamiliar environment. This concept has been the subject of considerable research. For example, Kashdan and Herbert (2001) report that children who are inhibited have been variously described by parents as being anxiety-prone, hypervigilent, sleepless and withdrawn as toddlers. Rapee and Spence (2004) note that these characteristics are associated with an increased risk of children developing social anxiety.Turner, Beidel and Wolff (1996) found a link between behaviour inhibition, social phobia and panic disorder and Biederman et al (1993) found that over a three year period behaviourally inhibited children were significantly more likely to develop avoidant disorder and separation anxiety.

*Environmental factors in childhood*

Hudson and Rapee (1992) suggest caution in inferring causal links between behavioural inhibition and the development of social anxiety, stating that the evidence is inconclusive. However, pointing to three factors, parenting style, exposure and modelling, they argue that the evidence for familial transmission of social anxiety is more robust. The authors also report that adults with social anxiety were more likely to recall their parents as being rejecting, lacking in warmth and more likely than non-anxious parents to use shame tactics to control behaviour. Furthermore, socially anxious parents may avoid social encounters, restricting the child’s opportunities for developing social skills and may inadvertently overemphasise the importance of others’ opinions, which can result in excessive preoccupation with the social self.

Kashdam and Herbert (2001) suggest that traumatic experiences in childhood may also contribute to the development of social anxiety. Such experiences include being laughed at or bring teased or making a mistake in social situations, such as saying something foolish in class. However, Hudson and Rapee report that only around a half of adults with social phobia can recall specific traumatic events, though they state that this may be attributable to problems with recall.

In retrospective studies (e.g. Bruch and Heimberg 1994) adults with social anxiety typically rated themselves as more shy and anxious as children. Furthermore, Vernberg et al (1992), in a prospective study, found that anxious adolescents relocated to a new school had more difficulty making new friends than non-anxious control and high social anxiety was predictive of fewer social interactions and lower levels of intimacy.

**Shyness**

Although shyness is generally treated in the literature as qualitatively distinct from social anxiety there is a clear overlap with both constructs centring on varying levels of acute self-consciousness, embarrassment, interpersonal inhibition and negative self-beliefs, depending on whether the condition is mild or severe (e.g. Pilkonis and Zimbardo 1979; Leary 1986; Schlenker and Leary 1982; Henderson and Zimbardo 2003). However, the rates for reported shyness in young people typically exceed those of social anxiety. For example, Henderson and Zimbardo surveyed 1642 North American university students between 1979 and 1991 using the Stanford Shyness Inventory and found that 40% of respondents rated themselves as mild to moderately shy with 5% rating themselves chronically shy. Zimbardo claims that these data are troubling because shyness is associated with a range of negative consequences, including: excessive preoccupation with self during social encounters, showing less interest in others, frequent and painful self-consciousness, a predominance of negative thoughts about the self and others, including viewing the self as socially incompetent, awkward and inhibited, particularly with strangers and members of the opposite sex. In addition, Zimbardo found that shy people are less likely to seek help and more likely to experience loneliness. In a reversal of the data for cultural differences in the prevalence of social anxiety, however, Zimbardo found the rates of shyness to be highest in Asian populations suggesting that there are qualitative differences between shyness and social anxiety.

Zimbardo’s survey data suggests that there is a spectrum of distress associated with social anxiety and shyness which ranges from mild to severe, a point reflected in research carried out by Cheek and Melchoir (1990). They found that shyness is a three component syndrome, comprising acute public self-consciousness, global feelings of emotional and physiological arousal and concern about social competence. Notably, only 12% of their sample reported all three elements as characterising their experience of shyness. It may be coincidental, but this figure lies close to the community prevalence rates for social anxiety reported by Furmark (2002).

The notion of a spectrum of what may be broadly termed social-evaluative distress is also posited by other investigators. Rapee and Spence (2004), for example, propose a model wherein social anxiety spans a continuum ranging from mild shyness and inhibition through to severe social anxiety with extreme and generalised social fear and avoidance. Furthermore, Merikangas et al (2002) report on the findings of a prospective study following a sub-sample of 591 male and female subjects over 21 years. Using a specially developed interview schedule for measuring social anxiety they found that 5.6% of their sample met the criteria for severe social anxiety (two social anxiety symptoms, plus avoidance and subjective distress). 11% met the criteria for moderate (one social anxiety symptom plus avoidance) and 23.7% met the criteria for mild (one social anxiety symptom). The authors argue that the rates for severe and moderate are broadly in line with community epidemiological studies for social anxiety, whist the rates for mild social anxiety are in line with reports of specific social fears such as public speaking. This view is broadly supported by Liebowitz (2003) who argues that most people experience social anxiety when exposed or called or upon to perform in novel situations or with an audience of strangers. The difference, he asserts, is that people with (generalised) social anxiety frequently engage in avoidance behaviour.

**Cognitive Approaches to Social Anxiety**

Cognitive models of social anxiety are based on the premise that individuals with social anxiety develop a distorted self-image in which their imagined public image is associated with a general inability to present themselves effectively in social interactions (Clark and McManus 2002). These negative beliefs lead to high levels of anxiety and excessive self-preoccupation with self in social interactions, which hinders the individual’s ability to function effectively (Hambrick et al 2003).

Veale (2003) reports that the most popular explanative cognitive model is that devised by Clarke and Wells (1995)/Clarke (2001).

The Clarke and Wells model proposes a number of key elements in the maintenance of social anxiety.

* When the anxious individual enters social situations a number of rules and unconditional, negative beliefs are activated. For example, the rule ‘I must appear intelligent and witty’ interacts with the core belief ‘I am foolish and boring’ to create self-doubt and anxiety.
* On entering a social situation that may involve evaluation an attentional shift occurs towards detailed self-observation and monitoring of internal (physical and emotional) sensations and images. This information is used to evaluate how others are responding.
* Safety behaviours are adopted in feared situations in order to prevent an anticipated catastrophe. The non-occurrence of the catastrophe is then attributed not to any successful element of personal behaviour, but is attributed to the safety behaviour. So that talking too quietly to avoid drawing others’ attention to the self has the unwanted effect of increasing it.
* Post-event processing enhances anxiety and reinforces negative self-beliefs by selectively focussing on feelings and constructed images of self that are associated with past failures. Similar processes may also occur in anticipation of threatening social events.

Hambrick et al (2003) state that the use of Cognitive Behavioural Therapy or CBT has been shown, via a plethora of robust control trials, to be effective in managing social anxiety. A typical CBT programme would contain the following key elements:

* The client is exposed to feared social situations so that negative self-beliefs can be challenged and new social skills developed. Exposure is often graded so that fearful events are rank ordered and the client starts with the least anxiety-evoking situation.
* Relaxation techniques are taught in conjunction; the aim being that the client learns to master the situation without excessive anxiety.
* The therapist works with the client to identify negative patterns of thoughts and core beliefs associated with the feared social situations. The aim being to challenge and replace faulty cognitions with more realistic and healthy thoughts. This may be achieved via ‘behavioural experiments’ where faulty beliefs are challenged via exposure to the feared situations.
* Safety behaviours are identified and challenged via exposure. The principle being that the individual learns that catastrophic outcomes do not occur in the absence of ritualistic safety behaviour.
* Social skills training focuses on identifying and correcting deficits in basic social skills, such as maintaining eye contact with others, talking too quietly, etc. Video training may be used to aid this process.

This type of package typically takes place over twelve, two hour sessions. Sometimes this is done in groups with four to seven group members.

Hambrick et al (2003) report that meta analyses of CBT trials conducted over two decades show good treatment efficacy. Meta analyses reduce the results of each study to an *effect size* or ES. The within groups or uncontrolled ES denotes the number of standard deviations (SD) of average improvement within a given treatment group. An average ES of 1 signifies a mean group improvement of one SD. The between groups or controlled ES provides a measure of average improvement relative to a control group. The authors state that effect sizes .20, .50 and .80 correspond to small, medium and large treatment improvements. In meta analyses of CBT treatments for social anxiety Gould et al (1997) obtained a mean controlled ES of 0.74 and Chambless and Hope (1996) found a mean within group ES of 0.94.

**Student Adjustment and Mental Health**

The transition from home to university can be stressful and McInnis (1998) argues that it is during the first year that outlooks, values and patterns of behaviour are determined with respect to higher education. Pascarella and Terenzini (1991) found that college environments which are perceived by students as supportive are associated with high levels of adjustment and achievment.

In the stress literature, social support has consistently been found to be an important mediating factor in the individual’s ability to deal with stressful situations (Cohen and Wills 1985). However, for students leaving home to enter university, immediate, personal support may be difficult to achieve. Indeed, loneliness has been identified a significant problem for many first year students (Cutrona 1982). Furthermore, Rich and Scovel (1987) found, via a longitudinal study of freshmen (1st year students) that loneliness at the start of a semester was predictive of higher rates of depression later in the academic year.

Student mental health has been the focus of attention from various quarters in recent years. A recent review paper by the Royal College of Psychiatrists (2003) concluded that students are subject to increasing stressors that pose risks for their psychological well-being. Data from surveys in other countries also support mental health concerns. The previously mentioned shyness survey conducted by Henderson and Zimbardo (2003) revealed high levels of shyness in student populations. Voitkane (2004) surveyed 600 Latvian students using the Gallagher Survey of Student needs inventory (Gallagher 1992) and the Beck Depression Inventory (Beck et al 1979) and found evidence of significant distress in students, including depression (63%) loneliness (55%), difficulty in forming relationships (53%), shyness (63%), discomfort in social settings (39%), test anxiety (69%), public speaking anxiety (65%). A survey of 200 Canadian students carried out by Coletti et al (2004) found that stress became a frequent experience as the academic year progressed. The most frequently reported stressors were exam and coursework preparation, relationships, parental expectations, career planning and finances. Colleti et al also surveyed the views of university counsellors who estimated that 25% of students that sought help for study skills were clinically depressed and 10% had a diagnosis of anxiety disorder.

A report published by the Mental Health Foundation (2001) asserted that the severity of mental health issues in UK university students is increasing with higher levels of morbidity than found in the general population. In addition, the report cited evidence of clinical anxiety in 46% of male students and 64% of females. The report also found that students tended to perceive university support systems as ineffective in solving practical problems and there was general reluctance to seek support from mental health professionals. The report stressed the importance of developing primary prevention strategies to deal with student mental health issues.

A HEFCE funded report conducted by the University of Leicester (2004) revealed a similar pattern. In the study 1600 students were surveyed in 1998 followed by a further 1100 in 2001. The data revealed that between 38-35% of students (1998 and 2001 respectively) reported marked concern about adjusting to university life. 23-20% reported problems managing vague anxieties and panic, 39-35% problems with sadness, depression or mood changes, 50-40% problems being assertive, 49-41% problems with self-esteem and confidence, 31-31% problems with loneliness, 49-44% problems developing trusting relationships, 46-36% concern about improving communication with friends. As in the Mental Health Foundation report students seldom sought help from counselling services with most help being sought from family and friends followed by the personal tutor (the data do not distinguish between help-seeking for practical help and for personal or mental health issues).

The University of Leicester findings also reveal significant student concern around issues of anxiety, self-esteem, confidence, assertiveness, communication and loneliness. In the absence of robust student social anxiety survey data it is appropriate to draw parallels with Henderson and Zimbardo’s survey of student shyness that found similar problems with social confidence, self-image and skills.

In a recent study, Crozier (2003) explored the relationship between shyness and student participation in seminars. Using a specially constructed questionnaire, together with the Cheek and Buss Shyness Scale (Cheek and Buss 1981), Crozier sampled 181 undergraduate students and found that the mean shyness rating was 35.10 (SD 9.18) out of a possible range of 16 (mild) to 56 (severe). Shyness was found to be a significant contributory factor in reluctance to speak out during seminars. Crozier’s analyses identified that a

lack of confidence and inhibition were key elements of the students’ shyness (inhibition was defined as motivation to contribute, but perceived inability to do so). In concluding, he recommended that more research is needed to identify methods of helping students overcome their lack of confidence in seminars.

**Summary**

Community prevalence surveys suggest that social anxiety is the third most common mental health problem after depression and alcohol abuse. Despite this, rates of detection are low, not least because many non-mental health professionals lack knowledge of this condition and because sufferers are frequently reluctant to seek professional help.

Social anxiety is associated with distorted, negative beliefs about the self that lead to excessive self-focus in social situations, inhibition, impairment of cognitive functioning and reluctance to take part in activities that involve speaking out in front of others due to fear of negative evaluation. In addition, suffers may avoid socially threatening situations and/or engage in safety behaviours that may further impede their performance.

Social anxiety can have a negative effect on a range of social functioning and evidence suggests that sufferers do less well than their non-anxious counterparts in education, work and personal relationships.

Students may enter university with latent social anxiety that has been present since late primary school. However, the stresses involved in forming new relationships and meeting academic obligations may combine with low self-esteem and a deficit of social skills and social support mechanisms to exacerbate and amplify their social anxiety.

The literature points towards the existence of a spectrum of social anxiety in UK universities with many or the majority of students experiencing situationally-bound anxiety, particularly around public speaking activities. A smaller proportion of students, however, are likely to suffer from generalised social anxiety expressed across a wide range of social interaction and performance situations.

**Implications**

Seminar methods of teaching and the use of presentations in assessment have become increasingly common modes of teaching and learning in UK universities (Bennet, Howe, Truswell 2002). These methods require social interaction and require students to feel confident in speaking out and communicating their ideas to their peers and tutors. It seems likely that students with moderate to severe social anxiety will endure these modes of teaching and learning only with significant levels of distress. Ultimately, they may seek to avoid the activity altogether. There is also a not insignificant risk that inhibited students may be regarded by their peers and tutors as lacking in motivation, intelligence or knowledge.

**Project Aims**

The aim of this project is to conduct a prevalence survey of University of Plymouth students as a first step to gaining a clear understanding of the nature of social anxiety and its potential impact on students’ well-being and learning in UK universities.

**Methodology**

*Measurement of Social Anxiety*

The Liebowitz Social Anxiety Scale (LSAS) was developed in the 1980’s to facilitate the measurement of distress and impairment caused by social anxiety (Liebowitz 1987).The LSAS possesses excellent psychometric properties (Heimberg et al 1999) and is one of the most detailed scales available, affording comprehensive coverage of situations that are commonly experienced by people with social anxiety. Liebowitz asserts that this is important because people with social anxiety are often unaware of the extent of problems associated with the condition. The LSAS also discriminates between experiential fear and functional limitation. This is important because people with marked social anxiety are more likely to experience fear *and* avoidance of social situations involving performance and social interaction activities. This was deemed an important distinction for exploring the effects of social anxiety in student populations. In addition, the LSAS item content was deemed to be relevant to student populations.

The scale is comprised of 13 items that measure fear of performance situations and 11 items that measure fear of social interaction. For each of these 24 items avoidance is also measured. This affords six sub-scales in addition to a total fear and avoidance (total LSAS score):

* Fear of social interaction
* Avoidance of social interaction
* Fear of performance
* Avoidance of performance
* Total Fear Score
* Total Avoidance Score
* Total LSAS Score

Each fear and avoidance item is measured on a Likert-type scale, where 0 = no fear or avoidance and 3= severe fear or avoidance. Liebowitz states that total LSAS scores may be interpreted as follow:

55-65 = moderate social anxiety

65-80 = marked social anxiety

80-95 = severe social anxiety

95+ = very severe social anxiety.

The abbreviated performance and social interaction items are shown in Table 1 with the scale item order employed in this survey.

**Performance Items**  **Social Interaction Items**

Telephoning in public 1 Talking to people in authority 9

Participating in small groups 3 Going to a party 13

Eating in public places 5 Calling someone you don’t know very well 19

Drinking with others in public 7 Talking with people you don’t know very well 21

Talking to a large audience 11 Meeting strangers 23

Working whilst being observed 15 Being the centre of others’ attention 29

Writing whilst being observed 17 Expressing disagreement or disapproval

Urinating in a public bathroom 25 to people you don’t know very well 35

Entering a room when others Looking at people you don’t know very well in

are already seated 27 the eyes 37

Speaking up at a meeting 31 Returning goods to a store 43

Taking written tests 33 Giving a party for people you generally know 45

Giving a report to a small group 39 Resisting a high pressure salesman 47

Trying to date a stranger 41

Table 1. Performance and Social Interaction LSAS Scale Items

Liebowitz (2003) states that the fear and avoidance sub-scales are highly correlated in clinical populations, but only moderately correlated in non-clinical populations, where uncomfortable situations are more likely to be endured than avoided. For the purpose of this study, we have defined clinical populations as people who exhibit generalised social anxiety (GSA) and non-clinical populations as people with non-generalised social anxiety (NGSA). This distinction represents the divide between people who have mild-moderate social anxiety that is limited to specific social situations (e.g. fear of public speaking) and people who have moderate to severe social anxiety that is generalised across a wide range of social interactions.

Liebowitz states that the fear and avoidance sub-scales of the LSAS have been shown to be highly correlated in clinical samples (GSA), whilst the scales are less strongly correlated in non clinical sample (NGSA). He suggests this is because people with mild-moderate social anxiety are more likely to endure social anxiety rather than avoid it.

Normally the LSAS is administered by a clinician who uses examples to guide the client through the scale items using illustrative examples where necessary. However, Fresco et al (2001) found no significant differences in the mean LSAS total scores for self-report versus clinician administered versions of the scale when tested with anxious and non-anxious controls.

In order to enhance the sensitivity of the self-report format for social anxiety we provided brief, student-relevant prompts for each scale item. For example, with the scale item *‘Do you experience fear or anxiety when giving a spoken report to a small group of people?*’ the prompt offered referred to *‘a class presentation, report on project work or other’.* In all instances, we endeavoured to ensure that these prompts faithfully reflected Liebowitz’s original guidance to clinicians on scale use (Liebowitz 2003). For example, with the item *‘Do you avoid eye contact with people you don’t know very well?’* the prompt was *‘excludes situations where the person in angry or hostile’.*

This adapted self-report format was piloted using a ‘live protocol’ on two volunteers who had social anxiety and one non-socially anxious control. Following minor revisions, the scale was successfully re-piloted with 30 first year health studies students.

*Ethical Issues*

Prior to administration of the LSAS participants were advised that the data they supplied would be used in statistical form only and that confidentiality was assured. They were also advised that the questionnaires would be destroyed once the data was entered onto a data base and reliability checks had been carried out.

Participants were advised about the aims of the survey and were asked to give honest and considered responses. They were also advised of their right to decline or to withdraw without personal disadvantage from the survey at any point in time.

*Administration Protocol*

The aims of the survey were verbally described to participants together with a brief description of social anxiety. This was written into a protocol to ensure that the same information was afforded to each sample. In a short, written preamble to the main LSAS, participants were instructed to think of recent event or events when responding to scale items or if unable to think of a recent event, to imagine one that might feasibly have occurred based on prior experiences. Further advice orientating participants to social anxiety suggested that it might be manifest as a feeling of emotional unease and or avoidance of certain events and situations and that this might be accompanied by physical symptoms such as ‘butterflies’ in the stomach, dry mouth, dizziness and a ‘racing’ heart (these being colloquial terms which are commonly associated with fear reactions).

On completion of the scale, participants were debriefed and given the opportunity to raise any questions. They were also asked to consider supplying their student registration details if interested in volunteering to take part in further research. In addition, a handout was given that provided links to rapid professional support in order to deal with any personal issues or distress that might arise in connection with completing the questionnaire.

The process of administration and collection of the LSAS questionnaires took approximately fifteen minutes.

**Sampling**

A report by the Royal College of Psychiatrists (2003) suggested that certain groups of undergraduate students were more vulnerable to mental health problems than others and two groups were singled out; arts and medical students. In order to detect differences in social anxiety across student groups the sampling method embraced 1007 undergraduate students from seven different university faculties; including science, business and social science, arts, technology, health and social care, medicine and university partnership colleges. For reasons of time post graduate students were not included in the survey.

**Raw Data Checks**

The data base was subject to checks of a random sample of 10% of the data to ensure accuracy of data entry. No major errors were found.

**Statistical analysis**

A total of 1007 students from 7 different faculties, including partner colleges, were surveyed for this study. Of these, 864 (85.8%) gave complete replies to the Liebowitz questionnaire. Statistical analysis involved non-parametric tests, including Kruskal-Wallis and Mann-Whitney, as there was evidence of non-normality for the scores based on Kolmogorov-Smirnov tests.

**Overall Liebowitz Social Anxiety Scores**

The overall LSAS mean score, based on completed replies, was 34.7 (SD 20.4) with a median of 32.0 (range 0 to 114). In all, 28 respondents (3.2%) had overall scores of 80 or over, putting them into the severe or very severe category (see table 1a). A further 58 (6.7%) had marked overall anxiety and 56 (6.5%) moderate anxiety leaving 83.6% with no overall anxiety. So, overall, almost 10% of respondents had marked or worse social anxiety. If this figure is extrapolated to the population of 20,000 students at the University of Plymouth, this suggests around 2000 have marked or severe social anxiety.

|  |  |
| --- | --- |
| **Category of Social Anxiety** | **Overall Score** |
| None (<55) | 83.6 |
| Moderate (55-64) | 6.5 |
| Marked (65-79) | 6.7 |
| Severe (80-95) | 2.5 |
| Very severe | 0.7 |

Table 1a. Percentage scores using the Liebowitz Social Anxiety Categories

Scores were also computed for generalised and non-generalised social anxiety, using cut-off scores derived by Menin et al (2002), where a total score between 30 and 59 represents NGSA, and where a score of 60 or more represents GSA. The percentages of scores in each category are shown in table 1b.

|  |  |
| --- | --- |
| Category of Social Anxiety | **Overall Score** |
| Mild-no social anxiety (<30) | 44.8 |
| Non-generalised social anxiety (30-59) | 43.2 |
| Generalised social anxiety (60+) | 12.0 |

Table 1b. Percentage scores using GSA/NGSA Categories

**Age, Gender and Faculty Scores**

There was strong evidence of differences between the total scores for age groups (Kruskal-Wallis test, p = .001). The median total score tended to increase with age up to age 40, then *decrease* for those aged 40-49 and *increase* sharply again for those aged 50 and over. (See Table 2)

|  |  |  |  |
| --- | --- | --- | --- |
| **Age (years)** | **Median (range)** | **Mean (SD)** | **n** |
| Under 21 | 30 (0-92) | 32.4 (18.0) | 404 |
| 21-29 | 33 (1-109) | 36.6 (21.5) | 311 |
| 30-39 | 34 (2-114) | 38.0 (23.1) | 87 |
| 40-49 | 27 (1-104) | 32.4 (23.4) | 47 |
| 50 and over | 56 (47-81) | 60.9 (11.6) | 7 |

Table 2: Descriptive statistics for total score by age group

There was also strong evidence of differences in total score due to gender (Mann-Whitney test, p = .001), with females having the higher median score (34 compared to 27 for males).

There was little evidence of difference between faculties in total score (Kruskal-Wallis test, p=.10). Note the partner colleges and CFE were combined here.

**Sub-scales**

Four (overlapping) sub-scales were calculated and analysed. These were fear, avoidance, fear of social interaction and fear of performance situations.

There were 13 items for performance and 11 for social interaction. The fear and avoidance sub-scales each consisted of a total of 24 questions, so the maximum possible score was 72. All the four sub-scales were categorised in a similar way to the overall score, adjusted for the number of questions as shown in table 3. The percentages in each category are shown in table 4.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Fear** | **Avoidance** | **Social interaction** | **Performance** |
| None | <28 | <28 | <25 | <29 |
| Moderate | 28-32 | 28-32 | 25-29 | 30-34 |
| Marked | 33-39 | 33-39 | 30-36 | 35-42 |
| Severe | 40-47 | 40-47 | 37-44 | 43-52 |
| Very severe | 48+ | 48+ | 45+ | 53+ |

Table 3. Score categories for main sub-scales

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Fear** | **Avoidance** | **Social interaction** | **Performance** |
| None | 77.6 | 89.8 | 83.1 | 83.6 |
| Moderate | 9.6 | 3.2 | 7.3 | 6.3 |
| Marked | 6.2 | 4.2 | 5.3 | 6.6 |
| Severe | 4.8 | 2.0 | 3.7 | 2.7 |
| Very severe | 1.8 | 0.8 | 0.6 | 0.8 |

Table 4. Percentage scores in each category for main sub-scales

**Age**

All four sub-scales differed significantly by age category (p<.01), with the biggest differences obtained for avoidance (P<.001). The pattern was similar to that for the total score. Avoidance was low for the younger groups (e.g. median of 12 for those aged 20 or less) but high for the over 50’s (median 27). The mean scores are shown in table 5 with standard deviations in parentheses.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Age** | **Total Fear** | **Total Avoidance** | **Total Performance Anxiety** | **Total Social Interaction Anxiety** |
| 20 or less | 19.24 (10.21) | 13.14 (8.88) | 18.21 (9.78) | 14.07 (9.11) |
| 21-29 | 20.96 (11.20) | 15.50 (11.15) | 20.50 (11.37) | 15.96 (10.82) |
| 30-39 | 21.63 (11.78) | 15.79 (11.29) | 21.09 (12.27) | 15.86 (10.91) |
| 40-49 | 19.54 (12.51) | 12.22 (11.17) | 18.42 (13.00) | 15.23 (11.37) |
| 50 plus | 29.78 (9.89) | 27.00 (7.76) | 29.87 (10.32) | 24.56 (9.49) |
| Total | 20.24 (10.90) | 14.33 (10.27) | 19.44 (10.92) | 15.15 (10.20) |

Table 5. Differences in scores on sub-scales by age

**Gender**

All of the four sub-scales also differed significantly by gender (p<=.001). The female average score was higher for females than males in all cases, although the difference was less pronounced for avoidance. The mean scores as shown in table 6 with standard deviations in parentheses.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Gender** | **Total Fear** | **Total Avoidance** | **Total Performance Anxiety** | **Total Social Interaction Anxiety** |
| Male | 17.90 (10.82) | 13.23 (10.51) | 17.27 (11.08) | 13.70 (10.23) |
| Female | 21.70 (10.56) | 14.92 (9.87) | 20.75 (10.47) | 15.93 (9.92) |
| Total | 20.16 (10.82) | 14.25 (10.16) | 19.38 (10.84) | 15.08 (10.10) |

Table 6. Differences in scores on sub-scales by gender

**Faculty**

Total fear (p=.013) and fear of social interaction (p=.022) differed significantly by faculty. Both were highest, on average, for Technology and Arts and lowest for PMS (see table 7). The small numbers in some faculties, particularly PMS, should be noted. There were no differences between faculties for total avoidance of fear of performance situations.

|  |  |  |
| --- | --- | --- |
| **Faculty** | **Total Fear** | **Total fear of social interaction** |
| Arts | 22.87 (11.75) | 17.84 (11.20) |
| Business and social sciences | 19.20 (10.90) | 14.60 (10.27) |
| Faculty of Health and Social Work | 20.69 (11.03) | 14.94 (10.07) |
| Peninsula medical school | 15.16 (10.19) | 8.66 (11.80) |
| Plymouth partnership colleges | 18.84 (9.60) | 14.26 (8.73) |
| Science | 21.49 (9.99) | 15.80 (9.53) |
| Technology | 24.95 (11.40) | 19.73 (11.24) |
| Total | 20.23 (10.92) | 15.13 (10.20) |

Table 7. Differences in Scores on Sub-Scales by Faculty

**Other Demographic Variables**

No significant differences in total scale or sub-scale responses were found for year of study, marital status, entry qualifications, mode of study, whether an international, UK or European Union student and whether or not the student had a disability.

However, significant differences were found for ethnicity on the total score (p = .02) and for avoidance (p = .001) and for performance (p = .04). The highest average scores were for Black and Chinese students and for ‘do not wish to answer’ and the lowest scores were for Asian and mixed groups.

**Comparisons of Norms for Self-Report use of the LSAS Questionnaire**

Given that this study employed an adapted self-report version of the Liebowitz scale comparisons were made with data published by Fresco *et al* (2001) who reported mean total social anxiety scores for the questionnaire both when self reported (SR) and clinician administered (CA). These means were given separately for both anxious and non-anxious respondents. The results are presented in table 8. One-sample t-tests were used for these comparisons.

There were significant differences between the means of the Plymouth study and Fresco’s means for the total score and all the sub-scales (p<.001) except Total Fear and Avoidance of Performance for the Anxious respondents. For the anxious respondents, the Plymouth means tended to be lower than the Fresco ‘norms’, whereas for the non-anxious respondents the formers’ means were significantly higher.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Anxious (score>=55)** | | | **Non-anxious** | | |
| **Scale/subscale** | **Fresco (SR)** | **Plym. study** | **p-value** | **Fresco (SR)** | **Plym. study** | **p-value** |
| Fear of Performance | 19.2 | 20.9 | <.001 | 4.2 | 9.9 | <.001 |
| Avoidance of Performance | 17.1 | 16.9 | >.10 | 3.1 | 6.1 | <.001 |
| Fear of Social Interaction | 19.5 | 17.0 | <.001 | 3.3 | 7.0 | <.001 |
| Avoidance of Social Interaction | 18.7 | 15.0 | <.001 | 2.9 | 4.8 | <.001 |
| Total Fear | 38.7 | 38.0 | >.10 | 7.5 | 16.9 | <.001 |
| Total Avoidance | 35.9 | 31.9 | <.001 | 6.0 | 11.0 | <.001 |
| Total Score | 74.5 | 69.9 | <.001 | 13.5 | 27.8 | <.001 |

Table 8: Means for total score and subscales for Plymouth Study Vs Fresco *et al* (2001) self-report, together with p-values

**Student Responses to LSAS Items of Relevance to Learning Settings**

Given the context of this study, of particular interest were the students’ responses to certain LSAS items that are likely to relate to common learning activities such as giving presentations, working in small groups and participating in seminars. The data is presented as the percentage scores for both fear and avoidance on individual performance situation and social interaction situation items (see tables 9 and 10). Note: the item descriptors have been abbreviated.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Performance Items: Fear** | **None** | **Mild** | **Mod.** | **Severe** | **Total** |
| Participating in small groups | 40.3 | 45.4 | 12.3 | 2.0 | 100 |
| Talking to a large audience | 6.2 | 26.8 | 40.4 | 26.5 | 100 |
| Giving a report to small group | 20.4 | 47.3 | 22.6 | 9.6 | 100 |
| Speaking out a meeting | 21.3 | 49.3 | 21.3 | 7.9 | 100 |
| Being observed whilst working | 22.0 | 54.3 | 19.8 | 3.9 | 100 |
| Writing whilst being observed | 53.2 | 35.2 | 8.8 | 2.9 | 100 |
| Doing written tests | 26.3 | 39.8 | 24.6 | 9.4 | 100 |
| Entering room where others are seated | 31.6 | 51.8 | 13.6 | 3.0 | 100 |

Table 9a. Percentage scores for Fear of Performance Situations

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Performance Items: Avoidance** | **Never** | **Occ.** | **Often** | **Usually** | **Total** |
| Participating in small groups | 66.9 | 28.0 | 4.2 | .9 | 100 |
| Talking to a large audience | 20.4 | 47.3 | 22.6 | 9.6 | 100 |
| Giving a report to small group | 51.3 | 33.8 | 9.3 | 5.6 | 100 |
| Speaking out a meeting | 32.4 | 45.0 | 15.2 | 7.5 | 100 |
| Being observed whilst working | 53.8 | 37.3 | 7.2 | 1.6 | 100 |
| Writing whilst being observed | 69.4 | 23.2 | 5.8 | 1.6 | 100 |
| Doing written tests | 81.3 | 12.8 | 3.7 | 2.2 | 100 |
| Entering room where others are seated | 58.9 | 32.5 | 6.6 | 2.0 | 100 |

Table 9b. Percentage scores for Avoidance of Performance Situations

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Social Interaction Items: Fear** | **None** | **Mild** | **Mod.** | **Severe** | **Total** |
| Being the centre of others’ attentions | 32.8 | 44.9 | 18.1 | 4.2 | 100 |
| Talking to someone in authority | 29.4 | 53.3 | 15.8 | 1.5 | 100 |
| Talking to people you don’t know well | 32.3 | 53.8 | 11.5 | 2.4 | 100 |
| Looking directly at unfamiliar people | 44.6 | 42.9 | 10.9 | 1.7 | 100 |
| Meeting strangers | 29.5 | 54.5 | 13.7 | 2.4 | 100 |

Table 10a. Percentage scores for Fear of Social Interaction Situations

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Social Interaction Items: Avoidance** | **Never** | **Occ.** | **Often** | **Usually** | **Total** |
| Being the centre of others’ attentions | 47.1 | 40.2 | 9.4 | 3.4 | 100 |
| Talking to someone in authority | 52.5 | 40.2 | 5.7 | 1.7 | 100 |
| Talking to people you don’t know well | 42.9 | 46.1 | 8.4 | 2.5 | 100 |
| Looking directly at unfamiliar people | 48.6 | 40.0 | 8.4 | 3.0 | 100 |
| Meeting strangers | 56.7 | 35.8 | 6.0 | 1.5 | 100 |

Table 10b. Percentage scores for Avoidance of Social Interaction Situations

**Discussion**

**Key findings**

Social anxiety is prevalent in our sample of 1007 students with approximately 10% reporting marked to very severe social anxiety. Using clinical cut-off scores for discriminating generalised and non-generalised social anxiety, we found that 12% of students had generalised social anxiety, a condition which is regarded as clinically significant. Women scored higher than men on all sub-scales and social anxiety increased rather than decreased with age with the highest scores found in arts and technology students. Significant differences in social anxiety and ethnicity were found for Black and Chinese students, who scored higher on the total LSAS score, avoidance and fear of performance, but not on fear of social-interactions.

**Methodological Issues**

The prevalence rates for social anxiety found in University of Plymouth students are broadly in line with data reported by Furmark (2002) in a review of community epidemiological surveys. In our study, approximately 10% of students had marked to severe social anxiety, whilst Furmark documents lifetime prevalence rates for social anxiety of 13% in the United States, 10% in Canada and 15% in Sweden. Caution, however, must be exercised in drawing comparisons between these sets of survey data due to differences in the way that social anxiety is categorised and differences that may result from the survey tools employed. Attention is drawn, for example, to the significantly higher prevalence rates for social anxiety obtained in community studies following revisions to DSM-III (Furmark 2002). In addition, it should be noted that whereas the Liebowitz scale scores are commonly rated as moderate, marked, severe and very severe, many of the community surveys cited by Furmark employed a framework that categorised social anxiety as mild, moderate and severe based on DSM criteria for diagnosis and classification. Similarly, whereas Kessler et al (1998) found prevalence rates of 8.5% for generalised social anxiety (GSA), our estimated rate was higher at 12%. Whilst this may well be due to differences inherent in our student sample, it may also relate to our use of the more recent GSA cut-off scores constructed by Menin et al (2002). It should, however, be noted that methodological issues of this nature are common in epidemiological research and not restricted to this study.

Attention is also drawn to potential skewing of data related to our use of an adapted, self-report version of the Liebowitz scale. However, we refer the reader to the study by Fresco et al (2001), which demonstrated that the LSAS can be successfully used in self-report form. In addition, it should be noted that although there were significant differences in the total LSAS scores for anxious and non-anxious respondents, visual inspection of the total fear, total avoidance and total LSAS scores for the anxious group (see table 8) shows that the Plymouth and Fresco et al mean scores were very similar. Indeed, the total LSAS Plymouth score is slightly lower overall (69.9 Vs 74.5), suggesting that the use of the adapted scale did not inflate overall scores for anxious respondents. However, the mean total LSAS score for non-anxious respondents is notably higher for Plymouth students (27.8 Vs 13.5). This will be revisited later in this discussion when examining the students’ responses to individual scale items within the context of higher education.

A further methodological issue relates to weaknesses in the sampling method: Purposive sampling was employed to achieve a uniform spread of students by age and faculty. However, due to difficulties in procuring time to administer the LSAS in lectures and seminars, smaller than anticipated numbers of students were obtained in those over the age of 50 and in respect of students several of the university faculties, most notably the Peninsula Medical School. Particular care should, thus, be taken in extrapolating from the data relating to this group.

**Social Anxiety and Differences by Age**

Studies have suggested that first year students are at greatest risk of developing mental health problems (e.g. Adalf et al 2001). However, in this study we found that social anxiety was least prevalent in younger students aged 20 or less. This was contrary to our expectations, wherein we reasoned that social anxiety would be most common in young people due to typical onset in adolescence and an absence of social support networks on entering university. Conversely, we conjectured that rates would be lower in older people as they would reap the benefits of time and experience to cope with their social anxiety. In fact, the means for the total LSAS scores show a fair measure of consistency in the rates of social anxiety over time with the exception of the small number of students aged 50 plus who scored highly on both total fear and total avoidance (see table 5). In retrospect, our findings support the premise that social anxiety is a chronic, unremitting condition.

Our data for the over 50’s is interesting and it is tempting to speculate that older students entering university experience increased evaluation anxiety, perhaps judging themselves to be less competent and or well prepared than their younger counterparts. It is also possible, however, that the findings are merely spurious and drawn from an unrepresentative sample.

**Social Anxiety and Differences by Gender**

There were significant gender differences on the sub-scales and on the total LSAS scale, though the gender differences in our study were least pronounced for the mean scores on the total avoidance sub-scale. This finding fits with general literature on gender differences and mental health issues (e.g. Horwath and Weissman 1995). Two prominent and conflicting theories are used to explain such differences. The first being that women are more sensitive and vulnerable due to socialisation processes, the second being that women do not experience more mental health problems than men, but are simply more willing to report distress.

**Social Anxiety and Differences by Faculty**

The highest rates of social anxiety were obtained from students in Technology and Arts with the lowest rates in medical students followed by students in the Partnership Colleges, which include students in Further Education. These differences were statistically significant. The finding that art students score highly is in line with prior reports on student mental health reviewed by the Royal College of Psychiatrists in 2003. No data were found in the literature relating to social anxiety and technology students.

**Social Anxiety and Differences by Ethnicity**

The Royal College of Psychiatrists (2003) reports some evidence that international students are at increased risk of mental health problems, with the risks cited as greatest in young, single students, married students living away from their spouses and females, particularly of Asian or Arabic origin. In addition, the University of Leicester study showed that ethnic minorities scored significantly higher on all sub-scales of the Brief Symptom Inventory. In our study students were requested to provide information about whether they were UK, European Union or International students. No significant differences were found for these criteria. Similarly, no differences were found for religious background. However, significant differences were obtained for ethnicity on total avoidance, total performance and total LSAS score. In this category, Black students, Chinese students and those responding to the item ‘do not wish to answer’ had the highest mean scores. The lowest scores obtained were for students of Asian origin (e.g. Indian, Pakistani or Bangladeshi).

**Non Generalised Social Anxiety**

Our data together with the research literature suggest that we should consider the impact of generalised and non generalised social anxiety on students’ learning and well-being separately.

Nearly a half (43%) of the University of Plymouth students sampled experienced non-generalised social anxiety or NGSA. This transient form of social anxiety is generated by fear of negative evaluation in specific types of social interaction and performance situations. Students who experience NGSA are unlikely to develop any long term mental health problems, although the short terms effects of high anxiety may be distressing and could generate avoidance behaviour.

The means for NGSA in our survey were significantly higher than those reported by Fresco’s data for non-anxious controls. We suggest that this may be due to two factors; namely the characteristics of the student population, being predominantly young and inexperienced, but more importantly the higher education context where performance and social interaction situations play a significant role in student life. In support of this proposition, the data show that the majority of students sampled reported mild to moderate anxiety and fear in performance situations that involved being observed whilst working, participating in small groups, giving a speech or presentation and giving a spoken report to a small group of people. In addition, a range of social interaction situations also generated reported fear including; being the centre of attention, talking to an authority figure or unfamiliar person, entering a room where others are already and meeting strangers or having eye contact with unfamiliar people.

Viewed from an educational perspective these data make interesting reading, particularly in respect of the ratings of moderate anxiety reported. Public speaking in both small and large groups and being the centre of others’ attention is a source of anxiety for a significant number of students and even seemingly commonplace social interactions with strangers and authority figures generates moderate anxiety in about 1/10th of the students sampled.

Liebowitz asserts that avoidance of feared social situations frequently accompanies the more severe rather than mild forms of social anxiety and our data generally supports this assertion. For example, only 4.2% of students reported often avoiding small group work. Similarly, although talking to authority figures is a common source of anxiety, only 1.7% of students reported that they usually avoid doing so. The main exceptions centre on situations that involve speaking in public and being the centre of others’ attentions where avoidance is more commonplace. Here, about 1/5th of students reported frequent avoidance of situations that involve giving a speech or presentation to an audience of 50 or more people, whilst giving a spoken report to a small group of people and being the centre of attention is reported by just under a 1/10th of our sample.

Again these data are of significant interest when placed in the context of teaching and learning. Whilst, it seems plausible to argue that students are seldom required to make formal presentations to large groups of people, small group presentations and talks are common modes of learning and assessment. Thus, the finding that approximately 10% of students reported often avoiding such activities is concerning. Similarly, many learning activities may inadvertently place students in a central sphere of others’ attentions, such as may occur when a student is asked to respond to a tutor’s question in a seminar. Furthermore, it seems likely that students experiencing social anxiety will avoid speaking out to avoid drawing attention to themselves, as suggested by Crozier (2003).

We suggest that these data for non generalised social anxiety should stimulate debate about preparation of students and teaching staff for modes of learning where performance and social interaction are involved.

**Generalised Social Anxiety**

Our data shows that approximately 12% of students have generalised social anxiety or GSA, whilst a smaller number of students, in the range of 2-3%, reported severe anxiety across the range of performance and social interaction situations. In both cases, this level of anxiety is likely to impact seriously on well-being and learning as this type of social anxiety is chronic and intrusive and is associated with anxiety and avoidance relating to a wide range of social situations.

In the population of 20000 University of Plymouth students circa 2200 students are likely to have GSA. This finding is a considerable cause for concern given that individuals with this chronic condition have fewer friends and are significantly more likely to report impairment in social relationships than their non-anxious counterparts (Hambrick et al 2004; Heckelman 1994). This is clearly an important issue, because students need to build and maintain effective social networks as a means of sharing and gaining advice and information and for protecting against loneliness and the general stresses of university life, which include worry about meeting academic goals, career concerns and interpersonal relationships (Voitkane 2004; Coletti et al 2004; University of Leicester 1998/2001). Furthermore, the literature clearly indicates that problems with self-esteem, confidence and loneliness are commonplace in student populations and this is likely to contribute to the high rates of depression and alcohol abuse that frequently accompany social anxiety (Rapee and Spence 2004; Merikangas and Angst 1995).

Individuals with GSA are also less likely that their non-anxious peers to succeed in education (Merikangas et al 2002). A plausible reason for this may be drawn from our survey’s fear and avoidance data. For example, a little under 10% of our sample reported severe social anxiety in respect of giving a report to a small group of people and speaking out a public meeting. Whilst 6-7% of students reported that they usually avoid activities such as these. In practice, we suggest this may be associated with regular avoidance of learning activities such as seminars and presentations where students are expected or required to speak out in front of peers and tutors, although this may feasibly extend to any learning activity in which the socially anxious student becomes the (unwilling) centre of others’ attentions.

Despite the distress and dysfunction associated with severe social anxiety, however, sufferers are generally reluctant to report their feelings, fearing that others will view their admission as a sign of weakness or incompetence (Purdon et al 2001). Hence, we suspect that social anxiety has remained a hidden problem with few students venturing to seek help from their peers, tutors or formal university support services, such as learning support services, counselling and disability assist.

**Key Issues and Recommendations**

**Methodological**

This study employed an adapted, self-report version of the Liebowitz Social Anxiety Scale and although care was taken to faithfully reproduce the guidance offered by Liebowitz to clinicians by way of prompts given to students, the possibility remains that psychometric characteristics of the scale were altered. Similarly although the prevalence rate for social anxiety found in our study is close to recently reported populations for Western Europe and the USA, our means for non-anxious students were higher than the reported norm for a non-clinical population. There is, therefore, a need to replicate this study in similar higher education settings, possibly using both the adapted scale and alternative social anxiety measurements.

**Age, Gender, Faculty and Ethnicity**

Our study found high rates of self-reported social anxiety in students aged fifty and over. However, the sample size for this age group was small and the results may be spurious. Nevertheless, the general pattern obtained in this study was one of stability in social anxiety across age groups and, therefore, we would suggest that pedagogic and health support services need to consider the needs of socially anxious students of all ages. There is also a need to explore the needs of these groups in more detail as the causes and consequences of social anxiety in younger and older students may differ substantially.

Women scored more highly on all of the sub-scales as is consistent with the clinical and research and literature on gender differences and mental health.

It may be that males are particularly reluctant to seek help for social anxiety, perceiving as it as sign of weakness. There is also some, limited evidence that social anxiety may be overtly expressed differentially as anger in males (Russell 1996). Indeed, the latter (unpublished) study found that anger was the dominant response of males to perceived negative evaluation. There is, therefore, a need to explore the causes and consequences and behavioural sequalea of social anxiety in males and females.

Students studying on arts and technology programmes had the highest rates when scores were examined across the university faculties. Art students are routinely required to present their works in public and often highly personal way (e.g. an artists’ work is often taken to be symbolic of some internal state). There is no information relating to social anxiety and technology students that the authors are aware of. However, one may speculate that some students enter the world of technology precisely because they believe they can escape from social interactions that expose them to public scrutiny. What ever the case may be, we recommend that further studies examine the needs of particular groups of students in respect of common performance and social interactions situations in higher education.

The literature on social anxiety reveals clear differences in relation to ethnicity. In general terms, social anxiety is lowest in Asian groups and most prevalent in highly developed, western societies, presumably because the pressures on people to perform increase the likelihood of a perceived gulf between the ideal and actual self, leading to internal angst and fear of others’ negative evaluation. Whilst at least one study found that social anxiety was higher in Black African American Vs White American students, Plymouth, is not a cross-culturally rich university and the finding that Black and Chinese students report higher levels of social anxiety may be a function of their feeling different (and hence a focus for others’ attentions) in an establishment were most people are white. We suggest that similar studies are replicated in higher education establishments that have a high mix of ethnic cultures to see whether our data is reproduced.

**Well-Being and Mental Health**

Social anxiety is a chronic condition that is associated with failure to achieve ones’ full potential in respect of education, career development and personal relationships. There is also strong co-morbidity with other mental health problems including depression and alcohol abuse. There is, therefore, a strong onus on education establishments to support students who have or are likely to develop social anxiety in order to prevent or minimise distress and to create optimal conditions for personal growth.

We would point to a number of things that universities can readily do to support students with social anxiety. These include raising awareness of social anxiety in both students and staff, including lecturers, librarians, learning support services, disability services and health and welfare personnel. In addition, social anxiety clearly operates on a continuum of distress with mild anxiety at one end and significant distress and dysfunction at the other. Recent advances in mental health treatments in primary care advocate a stepped approach with mild to moderate social anxiety being helped by the provision of self-help information (e.g. see NICE guidelines for anxiety 2005). Many NHS Trust are currently implementing the *Book Prescription Scheme* (ala Farrand and Frude), where self-help books are prescribed by General Practitioners or Primary Care Graduate Mental Health Workers. Such texts are readily available for social anxiety, general anxiety issues, depression and phobias and could be stocked by university libraries.

The literature suggests that students with mental health problems turn to peers first and then on a rapidly diminishing scale; personal tutors and counselling services. Hence, we recommend that universities consider the use of peer support networks and the use of technologies such as ‘texting’ to provide ongoing information and support. In addition, we advocate sign-posting to existing voluntary sector resources such as the National Phobics Society via the student intranet and Students’ Union web-site.

Clearly some students will require additional help with their social anxiety, particularly if it is severe. Referral to disability assist services may be warranted and we envisage there may be instances were students are so distressed that they are simply unable to cope with assessed presentations. However, we also note that exposure and rehearsal are key elements in CBT approaches for social anxiety and an ideal approach for students presenting with marked to severe social anxiety would consist of personal and pedagogic support for presentations and small group work rather than outright abstention, which may simply reinforce negative self-beliefs.

**Teaching and Learning**

Gradual changes in teaching and learning methods have resulted in a strong emphasis on achievement of social interaction and presentation skills in many university programmes. In addition, common sense dictates that students do best when they have the skills and motivation to seek and share information and advice from staff and peers. Although there is little research into the effects of social anxiety on learning that we are aware of\*, socially anxious individuals are likely to miss out on opportunities for sharing and acquiring information, because of their anxiety and inhibition in social situations. Indeed, given that students with social anxiety fear social interaction situations, it is likely they may be disadvantaged in many other ways. For example, they may avoid library and shared IT facilities. Similarly, they may avoid presentations and small group work and it is likely that some socially anxious students simply drop out of university during the first few weeks or months of study if they are unable to muster adequate support for their condition.

We, therefore, recommend that pedagogic guidelines need to be developed in conjunction with socially anxious students. Such guidelines will need to consider issues such preparation, rehearsal in safe settings, the development of peer-support, the setting of clear, attainable goals and avoidance of ‘unknown variables’ that will increase anxiety. These guidelines will also need to address issues of a spectrum of severity and, as previously mentioned, should provide advice on the costs and benefits of exposure versus avoidance were students are required to ‘perform’ in group situations.

Finally, given the general lack of awareness of social anxiety we recommend that information is included in new lecturer’s induction programmes with emphasis placed on recognising social anxiety so that it is not conflated with ‘social loafing’ or lack of intelligence.

\*We would, however, draw the readers’ attention to work relating to students and shyness conducted by Zimbardo and Henderson in the USA and Crozier in the UK,

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**Appendix One, Liebowitz Social Anxiety Scale**

 **Please respond to the following questions and place a tick in the box that best describes you**

** Most items include an illustrative example, though these are not intended to be exhaustive**

** Where possible think of recent events and the emotions and behaviours that typically accompany them. If you cannot think of an event please imagine one that may have happened within the last week**

** When considering the events described below, please be aware that social anxiety may be manifest as a feeling of emotional unease accompanied by physical symptoms, such as ‘butterflies’, dry mouth, dizziness, racing heart, and avoidance of certain events and situations**

** Please answer all questions accurately and honestly**

1. Do you experience fear or anxiety using the telephone, where your conversation can be overheard by others?

*(refers to using a mobile or public pay-phone)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

2. Do you avoid using the telephone in a public place where your conversation can be heard by others?

*(not returning a call or texting or using email instead because you feel anxious)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

3. Do you experience fear or anxiety when participating in small groups?

*(refers to formal; as in the university, at work or informal; as in going out socially*)

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

4. Do you avoid participating in small groups?

*(refers to making an excuse not to participate, feigning illness, finding other things to do because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

5. Do you experience fear or anxiety when eating in public places?

*(refers to eating at the university, at work or going out socially)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

6. Do you avoid eating in public places?

*(making an excuse not to eat out, feigning illness, finding other things to do because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

7. Do you experience fear or anxiety when drinking in public places?

*(refers to university, work or going out socially)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

8. Do you avoid drinking in public places?

*(making an excuse not to go to the pub, feigning illness finding other things to do because of anxiety)\_*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

9. Do you experience fear or anxiety when talking to someone in authority?

*(refers to class lecturer at university, administration staff, boss at work or other)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

10. Do you avoid talking to people in authority?

*(not taking the lift, turning the corridor, avoiding meetings because of anxiety)?*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

11. Do you experience fear or anxiety when talking to a large audience?

*(refers to presentations, giving a speech or acting in front of fifty or more people)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

12. Do you avoid talking to a large audience?

*(feigning illness, finding an excuse to do something else because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

13. Do you experience fear or anxiety when going to a party?

*(where you know some, but not all of the people)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

14. Do you avoid going to parties?

*(feigning illness, finding an excuse to do something else because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

15. Do you experience fear or anxiety when working and being observed

by others?

(refers to situations at university, work, home or other)

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

16. Do you avoid work activities where you might be observed by others?

*(feigning illness, finding an excuse to do something else because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

17. Do you experience fear or anxiety when writing and being observed?

*(refers to writing a check or signing a credit at the bank or supermarket, writing on the whiteboard in class or other situation)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

18. Do you avoid writing where you might be observed by others?

*(writing all checks at home, always using a cash point, avoiding writing on the whiteboard because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

19. Do you experience fear or anxiety when calling someone you don’t know very well on the phone?

*(refers to a person that is of average importance to you)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

20. Do you avoid using the phone to call people you don’t know very well ?

*(not returning a call during office hours, texting or using e-mail, because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

21. Do you experience fear or anxiety when talking to people you don’t

know very well?

*(refers to face to face contact with people of average importance to you)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

22. Do you avoid talking to people you don’t know very well?

(staying quiet even when there is question you want an answer to)

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

23. Do you experience fear or anxiety when meeting strangers?

*(refers to face to face contact with people of average importance to you)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

24. Do you avoid meeting strangers?

*(avoiding places and events where there is a high likelihood of having to engage with strangers)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

25. Do you experience fear or anxiety when using a public toilet or urinal?

*(refers to a pub, student union, café or other)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

26. Do you avoid using a public toilet or urinal?

*(waiting until you get home even when desperate, using the cubicle rather than the urinal because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

27. Do you experience fear or anxiety when entering a room where others are already seated?

*(refers to small group or meeting rather than a large one)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

28. Do you avoid entering a room where others are already seated?

*(arriving early to avoid this or not entering the room when arriving late because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

29. Do you experience fear or anxiety when finding yourself the centre of others’ attention?

*(refers to telling a story to others, people singing ‘happy birthday’ to you or other situations)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

30. Do you avoid situations where you might be the centre of others’ attentions?

*(making an excuse, feigning illness, finding other things to do because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

31. Do you experience fear or anxiety when speaking up at a meeting?

*(refers to speaking from your seat in a small meeting or standing up in a large one)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

32. Do you avoid speaking out at meetings?

*(staying silent when you have a point to make because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

33. Do you experience fear or anxiety when doing written tests?

*(refers to examinations or class tests that will be graded)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

34. Do you avoid taking written tests?

*(making an excuse, feigning illness, finding other things to do because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

35. Do you experience fear or anxiety expressing disagreement or disapproval to people you don’t know very well?

*(exclude situations where you are very angry and enraged)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

36. Do you avoid expressing disagreement or disapproval to people you don’t know very well?

(*even when you feel it is justified because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

37. Do you experience fear or anxiety when looking directly at people you don’t know very well?

*(refers to making appropriate eye contact to engage their attention)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

38. Do you avoid eye contact with people you don’t know very well?

(*exclude situations where person is difficult or hostile)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

39. Do you experience fear or anxiety when giving a spoken report to a small group of people?

*(refers to class presentation, report on project work or other)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

40. Do you avoid situations where you have to verbally present to a small group of people?

*(making an excuse, feigning illness, finding other things to do because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

41. Do you experience fear or anxiety when trying to date a stranger?

*(refers to making a pass at someone for sexual or romantic liaison)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

42. Do you avoid making passes or dating strangers?

*(staying silent when attracted to the person in an appropriate situation)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

43. Do you experience fear or anxiety when returning faulty or unwanted goods to a shop?

*(refers to returning goods to a shop or store that normally accepts returns)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

44. Do you avoid returning faulty or unwanted goods to shops?

*(keeping the goods or throwing them away, because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

45. Do you experience fear or anxiety when putting on a party for people

you generally know?

*(refers to an average party of no special importance)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

46. Do you avoid putting on parties for people you generally know because of anxiety?

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

47. Do you experience fear or anxiety when resisting a sales pitch?

*(refers to sales pitch from a call centre or sales person in the street or at your door)*

|  |  |  |  |
| --- | --- | --- | --- |
| Not at all | Mild | Moderate | Severe |

48. Do you avoid resisting the sales pitch?

*(listening for too long and/or caving in and buying an unwanted product or service because of anxiety)*

|  |  |  |  |
| --- | --- | --- | --- |
| Never | Occasionally | Often | Usually |

**Please consider the following statement and tick the box that best describes you**

When I experience social anxiety it is most likely to be triggered by:

Concern about others ridiculing what I do or say 

Concern about others ridiculing some aspect of my appearance 

Concern about them both 

**Thank you very much for completing this questionnaire**

During the second phase of the project we will be seeking a small number of volunteers to take part in Focus Groups that will explore the impact of social anxiety on aspects of learning, such as giving presentations and taking part in small group work. If you are interested in taking part, please enter your student registration number in the box below. Volunteers will be selected at random and contacted by the project lead.

Student Registration Number

**Appendix 2, Demographic Data**

**Social Anxiety and Learning Project**

Participant Information

Please provide the following information, by ticking or filling in the appropriate boxes.

Age 17 - 20  21 - 29 30 - 39 40- 49 50 - 59

Entry Qualifications A/AS level Other (NVQ, Access) 

Faculty

Year of Study 1 2 3 4

Gender Male  Female 

Marital Status Married  Single  Divorced 

Do you have a disability? Yes  No 

*(Under the Disability Discrimination Act (DDA) a disability is defined as physical or mental impairment which has a substantial and long term effect on a person’s ability to carry out normal day to day activities)*

Religion

Choose one of the following to indicate your religious background

None 

Buddhist 

Christian\* 

Hindu 

Jewish 

Muslim 

Sikh 

Any other religion 

Do not wish to answer 

\**includes Church of England, Catholic, Protestant and all other Christian denominations.*

Choose one of the following to indicate your cultural background

**White**

 British

 Irish

 Any other white background

**Mixed**

 White and Black Caribbean

 White and Black African

 White and Asian

 Any other mixed background

**Asian or Asian British**

 Indian

 Pakistani

 Bangladeshi

 Any other Asian background

**Black or Black British**

 Caribbean

 African

 Any other black background

**Chinese or other ethnic group**

 Chinese

 Any other background

 Do not wish to answer