An Investigation of Social Anxiety and Stigma amongst Adolescents with Mild Intellectual Disabilities

And Research Portfolio

Part One (Part Two Bound Separately)

Shelagh Morrison, MA (Hons)

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Small Scale Service Related Project

An Exploratory Analysis Of Referrals To A Self-Help Service, Referral Pathways And Implications For Integration Within Existing Tiered Services

An Exploratory Analysis Of Referrals To A Self Help Service, Referral Pathways
And Implications For Integration Within Existing Tiered Services

Running Title: Audit of Self Help Service

Shelagh Morrison, * Ian Hancock, Carole Allan

* Address For Correspondence:

Shelagh Morrison,

University of Glasgow

Gartnavel Royal Hospital

1055 Great Western Rd

Glasgow G12 0XH

Email: shelaghmorrison@yahoo.co.uk

Telephone: 0141-2110607

Abstract

Background and aims: A retrospective audit of patients referred to the Self Help Service was conducted. This aimed to provide an exploratory analysis of these patients' characteristics and their attendance patterns, in addition to referral pathways between Self-Help, GPs, Clinical Psychology, Community Mental Health Teams (CMHTs) and voluntary organisations. It was hoped that this would also have implications regarding the integration of the Self-Help Service with other services, as integration was a key aim of the Self-Help Service.

Method: All patients referred into Self-Help between 1st October 2004 and 31st March 2005 were included in the audit. Age, gender, pre-treatment HADS and WSAS scores (measuring severity of psychological problems), referral sources, attendance patterns, and onwards referrals were identified from the Self-Help database. *Results:* Findings indicate that all referral pathways were used. Onwards referrals were made for 12.8% of the sample, and this was most frequently to voluntary organisations. Onwards referrals were made in some cases, where the patient did not attend. Small sample sizes prevented comparison of severity of psychological problems. *Conclusions:* The present audit provides descriptive baseline data, used in a recently compiled evaluation of the service, and which may be valuable for future audits. The audit suggests a degree of integration with other services, and close links particularly with Voluntary Organisations and Clinical Psychology, however future evaluations could further address this issue.

Key Words: adult mental health, referral, self-help, stepped care, integration

<u>Introduction</u>

Guided Self-Help is a recently emerging intervention for patients with mild to moderate mental health problems, often delivered within primary care settings as part of a model of stepped care (NICE, 2004). The stepped care approach entails referring the client to tiered services according to need; progressing to more complex treatments should less intensive interventions prove unsuccessful. Stepped care underlies the latest NICE guidelines for depression, which recommend Self-Help for patients with mild depression, psychological interventions for patients with moderate to severe depression, and the introduction of medication for those with severe and enduring presentations.

Guided Self-Help involves the client working through CBT based bibliotherapy materials with brief supportive input from mental health workers. In the UK there is now an emerging evidence base for the clinical effectiveness of Self-Help for patients presenting with mild to moderate depression or anxiety (Bower et al., 2001; Whitfield & Williams, 2003). In line with this, the Scottish Office are currently funding and implementing "Doing Well by People with Depression" a nationwide initiative which aims to build capacity for Self-Help interventions. As discussed, recent NICE guidelines (2004) advocate Self-Help interventions for mild to moderate depression or anxiety.

Whilst there is growing evidence for the clinical effectiveness of these interventions, there is, as yet, no established evidence base examining how self-help services integrate within other tiered services, the appropriateness of referrals into Self-Help and how inappropriate referrals are managed.

The Guided Self Help Service was initially established in October 2001, as a pilot project in Dumfries, and has since expanded to cover all four NHS localities in Dumfries and Galloway since June 2004, with the aid of Scottish Office funding.

The Self-Help Service was established with eight local aims, summarized in a recent evaluation report for Dumfries and Galloway Health Board (Hancock, 2005, see Appendix I). These aims include offering an acceptable and available service, within a tiered approach, which demonstrably reduces the levels of psychopathology, whilst promoting personal responsibility for managing psychosocial problem and reducing the use of psychotropic medications amongst these patients. This recent evaluation report (Hancock, 2005), examined each of these aims and was able to largely support these, which has resulted in further funding for the Self Help Service to continue.

One of these aims is to be "the first tier of an integrated service" and Self-Help is therefore a separate service from Adult Mental Health Clinical Psychology, accepting direct GP referrals for those over 18 presenting with mild to moderate psychosocial problems of recent onset, excluding those patients with comorbid substance abuse, self-harm and suicide ideation (See Appendix II for referral criteria). More recently the service has begun to accept referrals from other primary care workers, Clinical Psychology (Department of Psychological Services and Research, DPSR), and Community Mental Health Teams (CMHTs). The service is currently staffed by a team of eight self-help workers (SHW's) based in GP practices. SHW's are from a range of mental health backgrounds, such as support worker and community psychiatric nursing. They receive induction and ongoing training in CBT techniques, and weekly group supervision from a qualified CBT Therapist. Patients referred into

Self-Help are given CBT based bibliotherapy materials, produced by the department, and offered up to three sessions from a SHW, negotiated according to need. (See Operational Policy).

A further aim of Self-Help is to "demonstrably reduce the level of depression and anxiety and increase the level of functioning of those patients who use it" (Hancock, 2005). Patients' psychological outcomes are monitored, before treatment and at one month and six month follow-ups, using the Hospital Anxiety and Depression Scale (HADS – Zigmond & Snaith,1983) and the Work and Social Adjustment Scale (WSAS - Marks et al., 1986). According to Hancock's (2005) evaluation of service, this aim has been well supported in that statistically significant improvements in HADs scores and the majority of WSAS items were observed.

As discussed, Self-Help accepts referrals from various referrers (Primary Care, Clinical Psychology, CMHT). SHW's can also refer cases on to these services, if considered appropriate. In addition SHW's can recommend (but not refer) patients to a range of voluntary organizations (See Appendix III for referral pathways). Onwards referrals are made in accordance with Operational Policy Guidelines and following supervision with the supervising CBT Therapist.

It is hoped that this broad referral pathway will facilitate the integration of Self-Help into a tiered approach to mental health problems, one of the stated aims of Self-Help (Hancock, 2005). However, as this aim has not yet been evaluated, it required evaluation, partly to contribute to Hancock's (2005) evaluation report. There is also a lack of research on how to measure integration of a Self Help service within a stepped

care model. Integration of Self-Help may be evaluated by an exploratory analysis of the quantity and types of referrals into and out of Self-Help. For instance Hancock (2002) has suggested that an increase in referrals, from a variety of sources may be expected over time in an integrated service. As referral pathways have only recently opened up, and data collection on this begun, it would be valuable to establish baseline data for future audit and evaluation.

The present audit aims to explore how the Self-Help Service is integrated within other tiered services, via the following aims:

1) To provide a description of attenders at the Self Help Service in terms of demographic information, attendance patterns and pretreatment HADs & WSAS scores.

2) To describe which referral sources the cases were referred from, including whether referrals were made from CMHT's via the GP.

3) To describe the number of onwards referrals and which referral sources the cases were referred on to.

4) To explore features of the cases referred on:

(a) where they were initially referred from,

(b) their attendance patterns,

(c) whether they differed in pretreatment severity of psychological problems as measured by the HADs and the WSAS .

Methodology

This is a retrospective audit of patient data extracted from an existing Self-Help database. All patients referred to Self-Help between October 2004 and April 2005 were included in the sample. This rationale for choosing this time period was twofold:

(i)   Self-Help had only been integrated in all four localities since June2004 and it was hypothesized that by October 2004 the referral rates may have increased due to increased local knowledge.

(ii)   An updated version of the Self-Help database was implemented from October 2004. This updated version included data on onwards referrals.

The database contains demographic information (age, gender), information as rated by the referrer on the standard referral proforma (see Appendix IV), including presenting problems). The database records attendance data. Self report data on mood and functioning were available at pretreatment, one month post treatment and 6 month follow-ups, using the Hospital Anxiety and Depression Scale (HADS - Zigmond & Snaith, 1983) and the Work and Social Adjustment Scale (WSAS - Marks et al., 1986).

The HADS yields subscores for anxiety and depression severity ranging from 0-21. A score of 8-10 indicates borderline clinically significant depression or anxiety and scores of 10 and above indicate a clinically significant presence of depression and anxiety.

The WSAS (Marks et al., 1986) comprises five items measuring impairment in functioning, with scores ranging from 0-40. Mundt et al., (2002) have suggested that scores below ten are associated with sub-clinical populations whilst scores between ten and twenty are associated with significant functional impairment and less severe clinical symptomatology. Scores over twenty suggest moderately severe or worse psychopathology.

The database also contains information about which services the patients were referred onto, and whether recommendations were made to voluntary organizations.

Data were collected from the Self-Help database and from written records in Dumfries and Nithsdale CMHTs, and was tabulated and presented graphically. Data were not statistically analysed as this is an exploratory analysis, and descriptive statistics are more appropriate. Moreover for the two questions specifically related to comparison of means (on psychometric measures), the discrepancy in sample size between cases referred on and those who attended, was too large to justify using formal, inferential statistical tests.

Results

1. Demographic information, attendance data & pretreatment psychometric scores

A total of 624 cases was referred into Self-Help between 1st October 2004 and 31st March 2005. Of these, 455 patients (73%) were female and 169 (27%) were male. The patients' ages ranged between eighteen and ninety-one, with both a mean and median age of 39.

Of these 624 patients, 434 patients(69.5%) attended at least one session of Self Help, 154 patients (24.7%) did not attend/DNA, and 36 (5.8%) patients cancelled.

HADS scores at the point of referral (i.e. pretreatment) was available for those patients who attended at least one session (n=434). The mean HADS score for all

patients in the sample was 13.06 (s.d 3.85) for anxiety (HADS-A), and 8.86 (s.d 3.97) for depression (HADS-D).

The mean WSAS score of the 417 patients for whom data are available (data were missing for the remaining 17 who attended) was 20.39 (s.d 8.85).

2. Where were the cases referred from?

Referral sources, and the numbers and percentages from each are shown in Table 1

Insert Table 1 here

The number of cases referred from the CMHTs to the GP with the intention of referral to Self-Help during the same time period was also explored. In the Dumfries CMHT, three cases were referred directly to Self-Help and two cases were referred to the patient's GP with a letter recommending Self-Help. In Nithsdale, one patient was referred directly to Self-Help, and none were referred via the GP.

3. How many patients were referred onwards from Self-Help and which services and organizations were they referred on to?

For the purposes of this audit, onwards referrals will include recommendations to voluntary organisations, although as noted these are only recommendations. In total, 78 "actual cases" were referred on (12.8% of the whole sample), and in five of these cases multiple referrals were also made, yielding 83 separate referrals or "referral events". Of the five cases referred to multiple services, two were referred to the GP

and Clinical Psychology, two were referred to Clinical Psychology and a voluntary organisation and one was referred to a CMHT and a voluntary organisation.

Data were described both in terms of actual referrals and referral events (Table 2). In the summary of actual referrals these cases are described by primary referral with the highest tiered service taking precedence, for instance if the case is referred to Clinical Psychology and the GP, Clinical Psychology is assumed to be the primary referral.. Table 2 depicts overall onwards referral data both in terms of actual referrals (n=78) and referral events (n=83)

Insert Table 2 here

Figure 1 illustrates the number and type of onwards referral events from the Self-Help.

Insert Figure 1 here

Fifty clients were referred to voluntary organisations. Four of these clients were referred to two or more voluntary organisations. Of the fifty-four referral events to voluntary orgnaisations, the organisations most frequently referred to were CRUSE (28%), Couples Counselling (19%), Youth Enquiry Service (10%) and Citizens Advice Bureau (10%). See Appendix V.

4. (a) Who had referred these patients on initially?

For those patients referred on to GP's (*n*=17), one patient was initially referred from the Practice Nurse and three from a CMHT. For those patients referred on to Clinical Psychology (*n*=14), three patients were referred from Clinical Psychology, and one from a CMHT. From the 47 actual cases recommended to a voluntary organisation (excluding three cases who were referred to voluntary organisations and another (primary) referral source), 42 were initially referred from the GP, 2 from the Practice Nurse, 2 from Clinical Psychology and 1 from a CMHT

4 (b) When were the cases referred on?

Of the 78 actual cases who were referred on, 59 (76%) of these attended at least one session, 16 patients (20%) did not attend, and three patients (4%) cancelled. 14 of the 16 patients who did not attend were referred on the GP, and two referred to Clinical Psychology. The three patients who cancelled were all referred on to Clinical Psychology.

Table 3 depicts how many sessions the 434 attending patients attended, and describes when onwards referrals are made.

Insert Table 3 here

A general trend towards attending three sessions can be observed in both those cases referred on and those cases not referred on.

4 (c) Were there any differences in initial HADs & WSAS scores between those who attended and those who attended and were referred onwards?

Table 4 shows the mean pretreatment HADs scores for both samples, for those who attended (n=434).

Insert Table 4 here

Due to the small sample sizes for attenders referred on to Clinical Psychology (n=8), CMHTs (n=2) and GPs (n=2), these data were collapsed into one onwards referral category (n=12). Data for patients referred to voluntary organisations (n=47) were both included in this onwards referral category (n=59) and considered separately, as it is possible that those referred to voluntary organisations may vary in psychological severity to those referred to other services. Mean HADS-A scores were around thirteen and HADS-D scores were nine irrespective of whether attending patients were discharged or referred on. This suggests that these patients were experiencing mild to moderate anxiety and depression.

Table 5 shows the mean pre-treatment WSAS scores for those referred onwards and the rest of the sample. 417 cases who attended had complete WSAS data and were included in the analysis. Generally the mean WSAS scores were observed to be around twenty.

Insert Table 5 here

Discussion

An exploratory analysis of attendance data, measures of mood and functioning prior to treatment, and referral pathways between Self-Help, GP, Psychology and CMHTs, and voluntary organisations was conducted. The aim of this was to describe the sample and to consider the implications for how integrated the Self-Help Service is with other mental health services and voluntary organisations in Dumfries and Galloway. As there is a lack of data to establish what one would expect from an "integrated" service in terms of referral pathways into and out of the service, the current data set could serve as baseline data for future audits. Given that the recent Self Help Service Evaluation report (Hancock, 2005) has now resulted in securing funding for the Self-Help Service to continue running for at least a further two years, this is particularly pertinent. Data from the current audit were also used in Hancock's (2005) Evaluation Report.

Demographic data of patients referred to Self-Help may reflect general adult mental health prevalence rates with a tendency for females to present more frequently than males for mood and anxiety disorders (DSM-IV, APA 1994). The attendance rates for Self-Help, with 69.5% attending at least one session, are comparable to local Adult Mental Health Clinical Psychology attendance rates of 74% (DPSR Annual report, April 2005).

 On the HADS, patients' mean depression scores were in the borderline clinical range, and their mean anxiety scores were slightly higher in the mild anxiety range. These were reflective of scores observed in non-psychiatric populations (Bjelland et al.,2002; Herrmann, 1997; Zigmond & Snaith, 1983   ). There was no available

literature on expected mean scores in patients attending Self-Help services, nor on mean HADS scores for those attending Primary Care Clinical Psychology Adult Mental Health so comparison was not possible. However the scores suggest that these cases presented with mild psychopathology, therefore appropriate for Self-Help services. Similarly on the WSAS, the mean score of twenty suggests significant functional impairment and less severe clinical symptomatology (Mundt et al., 2002).

The patients in the Self-Help sample were referred from a number of sources with GPs, health visitors and practice nurses referring the majority (94%) of cases. As the Self Help Service initially accepted only GP referrals, this may be expected. In addition, the Self Help Service is designed as a Tier 1 Mental Health service, aimed at serving those with milder psychosocial problems (Hancock, 2005) , therefore increased referrals from Primary Care compared to the other services may be predicted.

The results highlighted a higher rate of referrals from Clinical Psychology (4%) than CMHTs (2%), to the Self Help Service. This would be expected, as CMHTs are designed to work with more severe and enduring mental health problems, unsuited to self-help intervention (eg NICE, 2005). The limited sample size of referrals from these sources and a lack of comparable baseline measures prevent further interpretation of these results, and it is not possible to establish whether this data suggests that Clinical Psychology is under-referring cases, or if it is that GP's are effective in directly allocating these cases to appropriate services. However as three of the 23 cases (13%) initially referred from Clinical Psychology, were re-referred back

to Clinical Psychology, it may be less likely that Clinical Psychology is under-referring.

Seventy-eight (12.8%) cases referred to Self-Help were referred on. The majority (61%) of these onwards referrals were made to voluntary organisations rather than to other mental health services. This highlights the strong links between Self-Help and voluntary organisations. This may also suggest that cases referred into the Self-Help are generally appropriate (i.e. mild to moderate mental health problems), as onwards referrals are more frequently for supportive input from voluntary organisations, than for increased input from other services.

Limitations and future directions

In the present descriptive analysis, there were insufficient data to allow formal comparison of samples and their characteristics to be made and trends can only be noted. It was not possible to formally compare pretreatment psychopathology scores of those referred on and the rest of the sample, although small trends towards slightly higher psychometric scores could be observed in the onwards referral sample. This would be of interest in future audits. Larger sample sizes would also allow comparisons of pretreatment psychopathology scores between the different services referred on to, such as comparing those referred to voluntary organisations to those referred on to a CMHT.

The relatively small sample size of 12.8% of patients being referred on may in itself be of interest. Whilst the present audit provides baseline data on these referral pathways, it is hard to comment conclusively on how well the Self-Help Service is

integrated as there is no baseline data on this. As previously mentioned, integration may be defined as an increase in referral sources over time and the current data set may provide information for future audits addressing this.

However, the current data may imply a degree of integration in that all referral pathways were utilised over the 6 month period of analysis. In addition Hancock (2005) has commented that this data set suggests that, for Clinical Psychology "the Self Help Service is integrated operationally within the wider DPSR services in terms of willingness to receive and make referrals….where required". Conclusions about links with the CMHT are less clear. Examining referrals from two local CMHT's suggests that referrals may also be made indirectly, via the GP. Data on referral pathways from the other CMHTs would therefore also be of value.

The reasons for onwards referrals are not noted in the current database. This may be of interest, and may explain why some cases (24%) were referred onwards without being seen. Whether the patient goes on to attend the services referred into, was not explored in the current evaluation but may a fruitful area of future evaluation.

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List of Tables & Figures

Table I: Number ,percentages and source of referrals October 2004-April 2005

	Number of referrals (n=624)	Percentage of total sample
GP	562	90
Psychology	23	4
CMHT	10	2
Health Visitor	9	0.7
Practice nurse	18	3
Unknown	2	0.3
Total referrals	624	100%

Table 2: Number of types of onwards referrals from Self-Help (referral events and actual cases)

October 2004-April 2005

Onwards referral	*Referral events*	% of onwards referral sample	Actual cases (by primary referral)	% of onwards referral sample
GP	17	20.5	15	19.5
Psychology	14	16.9%	13	18
CMHT	2	2.4%	2	2.5
Vol Orgs	50	60.2%	47	60
Total number of onwards referrals	83 (33 excluding Vol. Orgs.)	100	78 individual cases (31 excluding Vol. Orgs.)	100

Fig 1: Number and percentage of type of onwards referral events from Self-Help October 2004-April 2005

October 2004 - April 2005: Number and type of onwards referral events from Self Help

17
20%

50
61%

14
17%

2
2%

- GP
- Clinical Psychology
- CMHT
- Voluntary Organisations
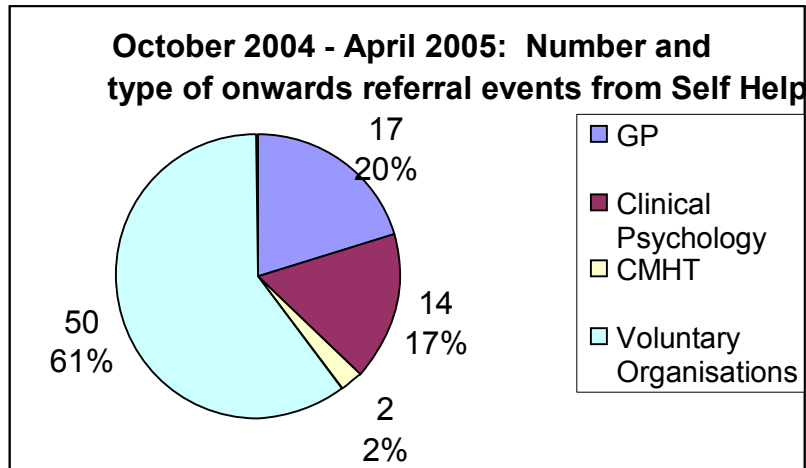
Table 3: Number of sessions attended for patients who attended Self-Help

Number of sessions	Referred onwards (n=59)	Not referred on (n=375)
1 session	12	57
2 sessions	17	73
3 sessions	25	73
Active (still attending at time of discharge)	5	172
Total	59	375

Table 4: Mean initial HADs scores patients who attended the Self Help Service and those referred onwards

Primary referral	HADS – A (Anxiety) scores		HADS-D (Depression) scores	
	Mean HADS-A	Range of scores	Mean HADS-D Depression	Range of scores
Voluntary organisations only (n=47)	13.76 (s.d 4.56))	3-19	9.46 (s.d 4.04)	0-19
Referred on excluding voluntary organizations (n=12	13.41 (s.d 3.50)	7-19	9.75 (s.d 3.59)	4-16
Referred on (all including voluntary organisations) n=59	13.69 (s.d 4.39)	3-19	9.52 (s.d 4.01)	0-19
Attended (except referred on) n=375	13.31 (s.d=3.8)	2-21	8.73 (s.d=3.92)	1-20

Table 5: Mean initial WSAS scores for patients attending self help and those referred onwards

Primary referral (n=417)	Mean WSAS score	Range of scores
Voluntary organisations (n=46)	20.45 (s.d=9.286)	2-38
Referred Onwards referrals excluding voluntary orgnaisations (n=12)	20.6 (s.d= 5.789)	1-40
All Referred on (all including voluntary organisations) (n=58)	20.5 (s.d=8.717)	1-40
Attended (except referred on) (n=359)	20.163 (s.d =8.917)	2-40

Chapter Two

Systematic Literature Review

Observer And Self Evaluations Of Social Skills Amongst Individuals With Social Anxiety

Observer and self evaluations of social skills amongst individuals with social anxiety

Shelagh Morrison* & Andrew Jahoda

* corresponding author

Address for Correspondence:

Department of Psychological Medicine

Gartnavel Royal Hospital

University of Glasgow

1055 Great Western Rd

Glasgow

G12 0XH

Email: shelaghmorrison@yahoo.co.uk

Telephone: 0141-2110607

ABSTRACT

Background: Historically it has been suggested that socially anxious individuals present with social skills deficits which were thought to be implicit in the etiology of this disorder. However more recent research in this area has shown inconsistent evidence of a social skills deficit amongst this population. More recent research efforts have focused on whether socially anxious individuals display distorted perceptions of their social skills.

Method : An electronic search of seven databases along with hand searching of relevant journals was undertaken . Studies exploring the social skills of individuals presenting with social anxiety and social phobia, alongside studies addressing how these individuals perceive their social skills were extracted from the literature. Case controlled studies, conducted within experimental laboratory settings, and employing independent ratings of social skills were included.

Results: Fourteen papers meeting inclusion criteria were reviewed. These showed inconsistent evidence that socially anxious individuals present with deficits in social skills. The nature of these deficits was unclear. More consistent findings were found with regard to a negative evaluative bias in self-ratings of social skill amongst this population.

Conclusions: The results lend some support to cognitive models of social anxiety, and have implications for treatment interventions targeting cognitions. However further research is necessitated to clarify the nature of social skills deficits amongst socially anxious individuals.

Key words: social anxiety, social phobia, social skills.

Introduction

Social anxiety refers to anxiety around social interactions, ranging from mild discomfort in social situations to more severe social anxiety described in the DSM-IV (APA, 1994) as "social anxiety disorder" or "social phobia".[1] As an interpersonal disorder (Alden & Taylor, 2004), social anxiety disorder disrupts one's relationships with others, impacting negatively on one's social, occupational, and emotional functioning (DSM-IV, APA, 1994). Given that social skills are broadly defined as "an ability to interact with other people in a way that is both appropriate and effective" (Spitzberg & Cupach, 1989), the notion of poor social skills as a maintaining factor in social anxiety, is intuitively appealing. For instance, social anxiety could be conceptualized as arising from underlying poorly developed social skills. Or, it could be hypothesized that chronic avoidance of anxiety-inducing social situations could lead to a deterioration of existing social skills, and further impede appropriate development of social skills.

Historically, it was hypothesised that significant social skills deficits existed amongst the socially anxious, and that these deficits led to the development and maintenance of social anxiety. Thus the anxiety and chronic avoidance displayed by socially anxious individuals in social situations were "reactive" and due to an "inadequate behavioural repertoire" (eg. Curran and Gilbert, 1975). Support for the skills deficit hypothesis arose from a number of studies conducted in the 1970's, which identified social skills deficits amongst the socially anxious (Borkovec et al., 1974; Glasgow & Arkowitz 1975; Twentyman & McFall , 1975). Some of these studies employed laboratory based methods, whereby participants high or low in social anxiety, and observers

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[1] The term "social anxiety" in the present review will broadly refer to social anxiety, social anxiety disorder and social phobia.

rated participants' social performance following an interaction with a confederate, or an impromptu speech. These early findings led to the emergence of behavioural interventions such as social skills training (SST), delivered as the treatment of choice for social anxiety. Despite the relative success of this approach, it is difficult to isolate the acquisition of improved social skills alone as the active treatment ingredient in reducing social anxiety. This is because SST also involves behavioural components such as exposure to social situations, and inherent challenges to cognitions of social incompetence (see Rowa & Antony, 2005).

Subsequently, a growing body of evidence has emerged suggesting that socially anxious individuals do not *always* display avoidant or maladaptive social skills compared to controls, when these social skills are rated by an independent observer. Indeed some investigators (eg Glasgow & Arkowitz, 1975; Rapee & Lim, 1992; Segrin & Kinney, 1995; Strahan & Conger, 1998) have found no observable social skill differences between socially anxious individuals and controls with low social anxiety. Others have reported small observable differences in social skills between socially anxious individuals and controls (eg Baker & Edelmann, 2002; Stopa & Clark , 1993) on ratings of molecular social skills and behaviours, such as gaze, features of speech and body movements. A smaller number of studies have reported observable deficits in ratings of global social skills (eg Beidel, Turner & Dancu, 1985). Hence the issue of whether socially anxious individuals differ on objective ratings of social skills remains unclear, and represents a key research question in this area.

A second and related research question is whether socially anxious individuals systematically under-rate their own social skills in comparison to observer ratings. To date, several studies have found this to be the case (Alden & Wallace, 1995; Rapee & Lim, 1992; Rapee & Hayman, 1996; Segrin & Kinney, 1995; Stopa & Clark, 1993), Whilst this question has produced more convergent findings than the question of actual social skills deficits, there are some notable exceptions (Bogels et al , 2002; Strahan & Conger, 1998). It is of interest to clarify these findings. If self-evaluative biases in social anxiety do exist, this might support a cognitive model of social anxiety, which posits that socially anxious individuals engage in a process of detailed and often biased self- monitoring and observation. Factors which may influence such differences between self and observer ratings of social skills amongst this group are also of interest.

Thus it seems that historically, prevailing models of psychopathology, whether behavioural or cognitive, have altered the focus of research in this area, possibly influencing study design and interpretation. In interpreting the divergent findings on the relationship between social skills and social anxiety, methodological features may also be considered. These require introduction and will be expanded upon within this review.

Most studies in this area rely on laboratory controlled role-play or speech tasks which aim to reflect real life social functioning whilst maintaining high internal validity. These will form the focus of the present review. Social tasks may vary in terms of audience size, difficulty, duration and degree of structure which may influence task demands (Rapee & Heimberg, 1997), and will be explored herewith.

Within this arena, some research samples comprise participants with a diagnosis of social phobia. A second sampling strategy is the selection of analogue samples, which consist of individuals scoring high on measures of social anxiety. Despite some concerns about external validity, employing analogue samples is appealing within social anxiety research, due to their ease of recruitment (Stopa & Clark, 2001). Since the current consensus is that social phobia and social anxiety co-exist on a continuum (eg Leary & Kowalksi, 1995), the present review will systematically explore the literature amongst both groups.

With no unifying definition of social skills in the literature (Meier & Hope, 1998), a variety of measures, both standardised and bespoke, feature in the papers reviewed. The literature usually broadly distinguishes between molecular and global measures of social skills (Meier & Hope, 1998). Global ratings refer to general impressions ("generally socially skilled") whereas molecular ratings comprise specific verbal, non verbal and paralinguistic behaviours. Within molecular social skills measures, Monti et al (1984) have further differentiated between micro and midi ratings.[2] , the former referring to quantitative, objective observations of frequency and duration for specific social skills or behaviours. Midi ratings refer to qualitative, subjective judgements regarding the adequacy of social behaviours (eg "made appropriate eye contact with audience"). Since reliance on one kind of rating may provide insufficient information about social skills, researchers advocate combining all three levels of social skill ratings: micro, midi and global ratings, within social skills assessments (e.g.Monti et al 1984; Fyrdich et al., 1998). These approaches to social skills measurement are summarised in Table 1.

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[2] Since terminology around social skills assessment varies, the present review will adhere to the terms outlined herewith.

Insert Table 1 here

In sum, there exist a number of competing hypotheses and discrepant findings regarding the relationship between social skills and social anxiety. It is the aim of the present systematic review to explore these divergent findings. As outlined, findings may be influenced by the theoretical orientation of the investigators and methodological approaches used. A fuller understanding of the relationship between social skills and social anxiety, and the contribution of cognitive and behavioural factors has clinical implications for psychotherapeutic interventions. If poor social skills are associated with social anxiety, this justifies the use of SST approaches amongst vulnerable individuals with poor social skills, or those with social anxiety. If, on the other hand, social skills remain largely unimpaired amongst socially anxious individuals, SST approaches would be of little value. Finally, CBT approaches, targeting performance-related cognitions may be more fruitful if socially anxious individuals are shown to systemically underestimate their social skills.

Method

Key Questions

1. Do individuals with high levels of social anxiety or with a diagnosis of social phobia exhibit observable deficits in social performance when compared to a control group?

2. To what extent do individuals with a high level of social anxiety or a diagnosis of social phobia underestimate their own social performance, when their self-ratings are compared to those of independent raters?

Inclusion Criteria

Due to the large number of studies in this field, stringent inclusion criteria were devised. Controlled studies aimed at investigating social skills amongst socially anxious adult populations, published in peer-reviewed journals, were included. Studies employed a laboratory approach to social skills assessment whereby participants completed at least one standardised behavioural task (a speech or interaction with an unknown confederate) and were immediately rated on their social performance by an observer. It was required that studies presented formal statistical analyses of quantitative data, addressing at least one of the key questions described.

Search Strategy for the Identification of Studies

1. The following electronic databases were searched :MEDLINE, EMBASE EBSCO Collections, PSYCHInfo, Proquest Psychology Journals, CINAHL, Cochrane Library. The following search terms were used to describe social anxiety and social skills: social anxiety /socially anxious/ social phobia/social phobic combined with: social skills/ social competence/social performance/ social behaviour/ (social) interaction. In addition, social anxiety/phobia was combined with cognitive/perceived/perception/appraisal/self-evaluation. These additional terms were introduced after preliminary searches.

2. Hand searches were conducted on the following journals: Behaviour Research and Therapy, Journal of Anxiety Disorders, British Journal of Clinical Psychology, Cognitive Therapy and Research.

3. The references of identified articles and review papers were checked for possible references missed by the electronic database search.

Search results and excluded studies

The search identified 972 papers in total, but many of these were duplicates. Abstracts of fifty-three were identified as appropriate and scrutinised to check for suitability. Studies were excluded if they did not meet inclusion criteria, some examples of which are provided. Studies without control groups (e.g. Woody, 1996), independent assessments of social skill (E.g. Spurr & Stopa, 2003,) or data on immediate social skills ratings were rejected. Studies using a sampling measure of trait shyness (Pilkonis , 1977; Segrin & Kinney, 1995) speech anxiety (e.g. Rodebaugh & Chambless, 2002) and dating frequency were excluded (e.g Glasgow & Arkowitz, 1975) as these traits describe a wider group, with differing symptom profiles (Beidel & Turner, 1999, Clark et al., 1997). Studies with samples wherein social anxiety was not the primary presenting problem (e.g. Bellini, 2004) were also rejected. Studies using individualised behavioural assessments (Heimberg et al, 1990; Hope et al., 1995) , involving more than one socially anxious participant in the task (eg Woody, 1996) or where the interaction partner was known (eg Wenzel et al, 2005) were rejected in order to enhance internal validity of the review and allow for ease of comparison of studies.

Quality Criteria

Due to the stringent inclusion criteria there was a high threshold of quality within the selected papers. A categorical quality rating system was devised to capture broad differences in quality between the selected papers. Quality was evaluated using <u>core</u> and <u>specific</u> quality criteria, which are shown in Table 2.

Insert Table 2

Core methodological quality criteria involving clearly defined populations and outcomes were extracted from published guidelines (CASP, 2004; Cochrane, 2006). Specific criteria relating to the nature of the studies were drawn from the evidence base. For each criterion, studies were allocated a rating of adequate, good or excellent.

<u>Core quality criteria</u>

<u>1. Design and sample selection</u>

Papers were allocated a higher quality rating for including a second clinical control group, or a control condition for additional variables, such as self-awareness (Bogels, et al.,2002). Studies with approximate gender matching between groups were awarded higher ratings, since gender differences present in social anxiety (Turk et al., 1998). Papers were allocated a higher quality rating for sampling based on more valid and reliable assessments of social anxiety (eg. Clark et al., 1997).

2. Social skills assessment

Norton & Hope (2001b) advocated the use of global, midi and micro ratings to create a meaningful social skills profile. These were outlined in Table 1. Thus inclusion of multiple types of rating, and a higher number of items rated were considered more thorough and enhanced quality rating. Studies including micro ratings of social skills attained higher quality ratings as these are more reliable and less prone to measurement error (Norton & Hope, 2001b).

3. Quality of observer ratings of social skills

Higher quality ratings were awarded where there were at least two raters blind to the study hypotheses and achieving modest inter-rater reliability ($\kappa=$ >0.6, Fleiss, 1981). When one rater was used, moderate indices of internal consistency (Cronbach's $\alpha=$>0.8) were required instead to increase study quality.

Additional quality criteria

4. Psychological comorbidity

Socially anxious individuals experience a high comorbidity with additional psychological problems such as anxiety and depression (Tran & Chambless, 1995; APA, 1994), known to impact upon social skills (Segrin, 2000) and self-evaluative cognitions (Beck Rush & Emery , 1979). Therefore a study's quality ratings were enhanced by controlling for comorbidity.

5. Task and confederate factors

Whilst some studies favoured use of interactions with untrained confederates, these may reduce internal validity (Norton & Hope, 2001b). Therefore studies controlling for variability in confederate behaviour, via training, use of standard response formats and consistency checks, attained higher quality ratings. Studies including multiple tasks were awarded higher ratings, since variability in task features may mediate differences in social skills (Rapee & Heimberg, 1997).

Categories of quality rating

Categories of quality ratings are detailed in Table 3, below.

Insert   Table 3

In the present quality rating system, core criteria were prioritised over study specific criteria. For each of the five quality criteria, a rating of "adequate" differentiated the category in which the study was placed. Group A included studies of at least 'good' methodological quality across core features of the study. Group B studies attained a minimum of one 'adequate' rating of methodological quality across core features of the study. Within these groups, further subdivisions were made between (1) studies demonstrating at least 'good' control of study specific factors, and (2) those demonstrating 'adequate' control of study-specific factors. Table 4 summarises the quality ratings and main limitations of the fourteen studies. An additional rater (SA) rated 50% of the studies, in order to assess the reliability of the quality criteria. There was 92% agreement between the author and the additional rater..

Insert Table 4

Results

The results of this systematic review are presented in order of the two key questions addressed. Within each question, results will be grouped according to the assessment task employed: speech, conversation and multiple tasks. The results are organised in this manner for ease of comparison since tasks are based on similar formats. A brief synopsis of the results will then be presented, followed by a summary of methodological issues. These findings will then be discussed, with reference to theoretical aspects of the key question. Table 5 also describes the methodological features and outcomes of the selected studies, grouped by task.

1. Do individuals with high levels of social anxiety or a diagnosis of social phobia exhibit observable deficits in social performance when compared to a control group?

All fourteen papers reviewed addressed this question, by comparing observer ratings of social skills amongst socially anxious individuals[3] with the observer-rated social skills of controls.

Studies using speech tasks only

A descriptive summary of these studies is presented in Table 5 (i).

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[3] Please note that from hereonin, socially anxious groups will be abbreviated to SA/HSA (high social anxious), whilst low socially anxious will be abbreviated to LSA. Groups with a diagnosis of social phobia will be abbreviated to SP.

Insert Table 5(i)

A series of studies by Ronald Rapee and associates (Rapee & Lim, 1992; Rapee & Hayman, 1996; Abbott & Rapee, 2004) used the Performance Questionnaire (Rapee & Lim, 1992) to assess social skills during a three minute impromptu speech. These studies failed to detect significant differences in observer rated social skills between groups, however specific caveats must be raised. Rapee & Lim (1992) used participants as observers, and it is possible that they may have made ratings in relation to their own anticipated or actual performance. As seen in Table 4, Rapee & Hayman's (1996) study achieved the lowest quality rating overall (B2) partly due to their sampling strategy, and use of a less sensitive threshold on the Fear of Negative Evaluation Scale than recommended, to differentiate groups (Stopa & Clark, 2001). However, it seems unlikely that poor sampling alone explains the null results, given that the remaining two studies of higher methodological quality, used clinical samples.

An additional explanation may relate to how statistical analyses were conducted. Rapee & Hayman (1996) and Abbott & Rapee (2004) both used a composite score collapsing midi and global ratings in their analysis. This was intended to reduce inflation of Type I error, however may have reduced the sensitivity of the measure by obscuring differences. As shown in Table 5 (i), it is notable that neither of these papers focused their analyses on between group comparisons of observed social skills ratings. These caveats must be borne in mind before concluding that the studies demonstrate no difference in social skills between socially anxious and non socially anxious individuals.

Using a dimensional scale, Ashbaugh and coworkers (2005) evaluated performance on an impromptu speech amongst thirteen socially anxious college students. As shown in Table 5(i), the SA group displayed poorer nonverbal skills, and evoked a less positive impression although the latter difference was modest. More significantly the SA group displayed a higher degree of anxiety mediated behaviours than the controls. Overall this study was awarded the lowest quality rating (B2), reflecting methodological weaknesses (See Table 4). In addition to weaknesses reflected in the quality ratings, Ashbaugh's small sample limits generaliseability, although the authors reported effect sizes to take account of this. Additionally, the speech was concerned with characteristics of good presenters, and always followed a task rating an actor's performance. This may have increased self-focused attention and negative evaluative thoughts impacting on anxiety and social performance (Clark & Wells, 1995).

Studies using conversation tasks only

Another series of studies used conversation tasks within their designs, which may provide richer data regarding interactional and reciprocal social behaviours such as self-disclosure. All of these studies evidenced poorer social skills amongst more socially anxious individuals. Descriptions of these studies are provided in Table 5(ii), below.

Insert Table 5 (ii) here

Baker & Edelmann (2002) reported that compared to controls, participants with social phobia manifested less 'adequate' social skills across global ratings, and on midi ratings of speech fluency and gestures. They also reported that the SP group spent

significantly more time making manipulative gestures. This study achieved the highest quality rating (A1) due to its robust design, careful control of variables and rigorous social skills assessment, therefore these findings are reasonably persuasive. Adding weight to these findings, a study of similar methodological quality (Bogels et al., 2002) reported that SA participants displayed significantly poorer midi social skills than LSA participants. Closer analysis revealed that these poorer skills were attributable to anxiety symptoms (blushing, trembling) rather than 'skilled' behaviours such as eye contact, and may reflect other findings reported elsewhere(Alden & Wallace, 1995; Ashbaugh et al., 2005). However, it is possible that the use of two confederates in this task may have elevated anxiety levels. The self awareness manipulation did not add to this effect, although it seems possible that the aforementioned task features might have elevated self-awareness, irrespective of conditions.

Stopa & Clark (1993) cited evidence that participants with social phobia displayed more negative and fewer positive social behaviours, than both anxious and non clinical controls during a conversation task. However as reflected in the quality rating (Table 4) interpretation is constrained by sample size, inclusion of auditory stimuli during the conversation, and use of a single rater with no internal consistency checks. Additionally amongst Stopa & Clark's participants, there appeared to be significantly more males in the SA group. This is noteworthy, since the social interaction was with a female, exposing the SA group to more opposite sex interactions, which may have magnified social skill difficulties (see Beidel, Turner & Dancu, 1985). Stopa & Clark's confederate was also trained to respond in a reserved manner which may have negatively impacted on social performance, as illustrated overleaf.

Two studies from the Alden group (Alden & Wallace, 1995; Alden & Bieling, 1998) manipulated variables thought to mediate social performance, amongst socially anxious groups. Alden & Wallace reported that participants with social phobia made fewer positive impressions in terms of warmth, interest and likeability, and displayed increased anxiety-mediated behaviours, contributing to existing evidence. Taken together Alden & Wallace (1995) and Alden & Bieling (1998) both found that socially anxious participants tended to engage in less self-disclosure. Indeed reduced self-disclosure was the only social skill rating identified by Alden & Bieling as discriminating individuals with SA, from controls, irrespective of experimental condition. Crucially, self disclosure increased and previously observed differences in social skills decreased when participants interacted with a more responsive confederate (Alden & Wallace, 1995) or made more positive anticipatory appraisals of the interaction (Alden & Beiling, 1998). Since both of these studies were characterised by high methodological rigour, these findings may be relatively robust. In addition they highlight the importance of considering confederate factors in interpreting this research and in understanding the nature of social anxiety and social skills.

Other tasks

Strahan & Conger (1998) were unique in using a simulated job interview task. They failed to detect differences in global and midi-level social skills between males with social phobia and male controls. Notably, Table 4 shows that this study attained the lowest quality rating (B2) , partly due to their limited social skills assessment.

Multiple tasks

Four papers compared social skills across two or more tasks. This approach facilitates comparison of social performance across tasks and may clarify which features may mediate social performance. These papers are of the highest methodological quality (A1) , with the exception of Norton & Hope (2001), and may further elucidate findings reported thus far. Details of these studies are offered in Table 5(iii).

Insert Table 5 (iii) here

Two studies compared social skills during an impromptu speech with those observed during a 'getting acquainted' role play (meeting a new neighbour or someone at a party). These failed to detect differences between SA and controls during the speech task in terms of social skill, although such differences were observed in the conversational tasks for the SA group (Beidel, Turner & Dancu 1985; Norton & Hope, 2001). Unfortunately Norton & Hope's use of one global rating of social skills, prevented identification of specific behaviours contributing to this impression. Beidel et al (1985) reported global ratings of poorer performance in the opposite-sex interaction for all participants, with SA males exhibiting poorer gaze during this task. The authors also reported globally poorer social performance in the same sex interaction between groups , although inspection of the statistics suggests that this difference was negligible Although this study achieved the highest quality (A1) its inappropriate selection of significance levels, without adjusting for multiple comparisons, merits consideration.

One study (Stangier et al.,2006) reported a strong positive correlation on social skills ratings between speech and conversational tasks prompting the researchers to conduct analyses combining social skill ratings for both tasks. In summary, individuals with generalised social phobia displayed less positive and more negative behaviour than both anxious and non clinical controls; this was mediated by self- reported excessive use of safety-seeking behaviours.

Thompson & Rapee (2002)'s study provides further support for some of these contentions. Their observers reported obtaining global impressions of poorer social skills amongst socially anxious females, across tasks. However this difference was exacerbated, and was far larger, during the naturalistic interaction. During the naturalistic interaction, between group differences in micro ratings of social skill, such as a longer latency to first utterance, also emerged.

Summary of results for key question 1

The cumulative outcome of these studies, suggests that socially anxious individuals portray a global impression of impaired social performance, particularly during conversational tasks. However, socially anxious individuals did not differ from controls in their social performance on speech or interview tasks (eg Abbott & Rapee, 2004; Rapee & Lim, 1992; Rapee & Hayman, 1996; Strahan & Conger , 1998). One notable exception to this was the Stangier et al 's (2006) study.

Evidence of molecular social skills contributing to this global impression was more inconsistent. When nonverbal behaviours were assessed, only a small proportion of these, such as eye contact and manipulative gestures emerged as significantly

different from controls (Baker & Edelmann , 2002). Differences in verbal behaviours such as response duration, degree of disclosure and fluency were identified by some studies (Alden & Bieling, 1998; Alden & Wallace, 1995 Baker & Edelmann, 2002; Thompson & Rapee, 2002) but not others (E.g Beidel , Turner & Dancu 1985).

Factors such as positive anticipatory appraisal (Alden & Bieling, 1998) , reduced task demand (Thompson & Rapee, 2002), and responsiveness of the confederate (Alden & Wallace, 1995), were seen to mediate observed differences in social skills amongst socially anxious individuals.

Methodological summary and considerations

Table 4 shows that all studies reviewed feature good to excellent core design and sampling criteria with the exception of Rapee & Hayman, (1996). Specifically, most studies utilised appropriate control groups and gender matching where possible.

Although sample size was omitted from quality ratings because of the typically low sample size characterising these studies, it requires mention. Table 5 shows that the sample size of socially anxious groups ranged from 12 (Stopa & Clark, 1993) to 54 (Norton & Hope, 2001), with a mean size of 29. Four studies included fewer than 20 participants per group. Thus, although no power calculations were reported, it seems likely that many studies were statistically underpowered, restricting extrapolation of findings. Challenges in recruiting socially anxious samples may partially account for this. However, no significant differences in sample size were apparent between the seven analogue samples, which were presumably easier to recruit, and the seven clinical samples. Unfortunately only two of the more recent studies reported effect size (Ashbaugh et al., 2005; Norton & Hope, 2001). This is now recognised as a more

informative way of disseminating results, especially where sample size is an issue (Clark-Carter, 2003).

A gender bias was present throughout, with five studies including at least 75% females in their sample (Alden & Bieling, 1998, Bogels et al., 2002; Thompson & Rapee, 2002; Baker & Edelman, 2002; Rapee & Hayman, 1996), and only one exclusively male sample (Strahan & Conger, 1998). This reflects gender differences in lifetime prevalence of social phobia (e.g. ECA study, Schneier et al., 1992). However it remains possible that gender may have exerted an impact on the social performance of socially anxious individuals. This is relevant, given that researchers have noted gender differences in social fears amongst socially anxious individuals (Turk et al., 1998).

Studies of the highest quality incorporated robust designs with well defined sampling criteria and social skills measurements. Additionally, studies of the highest quality included multiple tasks in their assessment of social skills. Tasks were rarely counterbalanced, leading to a potential confounding effect of anxiety habituation. Only a few studies (eg Thomson & Rapee, 2001) conducted post hoc analyses eliminating this possibility. The remainder of studies reviewed featured a single social task in their assessment. Given the reported variance in social skills across task type and structure, task selection may have weakened these designs.

The papers included a heterogeneous range of social skills measures, impeding direct comparison of outcomes. Moreover the same measure was sometimes applied differently across studies. One example, outlined in Table 5, is the variation in the use

of Trower, Bryant & Argyle's (1978) rating system (Baker & Edelmann, 2002;Beidel Turner & Dancu, 1985; Thompson & Rapee, 2002) . Behaviour checklists such as those devised by Stopa & Clark (1993) and Rapee & Lim (1992) combined items relating to anxiety, social behaviours and perceived traits. Investigators frequently used composite scores of midi and global ratings of social skills which may have obscured differences and careful consideration of their underlying constructs is advocated in interpreting outcome.

Discussion

The combined results from question one primarily suggest that socially anxious individuals portray a global impression of impaired social performance, yet isolating specific behaviours contributing to this has proved a challenge. Several methodological and theoretical explanations exist for these mixed findings.

Firstly, observers may form a global impression of poorer social skills, arising from a combination of more subtle differences in molecular behaviours, less sensitive to detection on molecular scales (eg Beidel et al., 1985).

Secondly, the collective outcome of the studies suggests that poorer social skills were mediated by several factors, explored in turn below.

Thomson & Rapee (2002) found that impoverished social skills amongst socially anxious individuals only emerged during less structured interactions. They proposed that these were masked during social interactions with clearer expectations and increased structure, such as speeches. This assertion is sustained by two well-designed

studies (Beidel et al., 1985; Norton & Hope, 2001), and may explain the minimal results reported in studies utilising speeches (Abbott & Rapee, 2004 ; Rapee & Lim, 1992; Rapee & Hayman, 1996), and interview tasks (Strahan & Conger, 1998). Two studies, however did cite observably poorer social skills amongst socially anxious groups during speeches (Ashbaugh et al., 2005; Stangier et al., 2006). However, the former study was of low quality (B2), and reported comparatively small effect sizes (see Cohen ,1988). The claim that deficits in social performance are less apparent during speeches for socially anxious individuals is intriguing, because speeches actually frequently represent one of the most feared situations for socially anxious individuals (Holt et al., 1992), and are usually more feared than getting acquainted interactions (Turk et al., 1998).

Beidel et al. (1985) suggest that opposite sex ('heterosocial') interactions may impair social performance amongst socially anxious individuals. This has been suggested elsewhere (Eisler et al., 1975) but, surprisingly has not been explored further. This warrants consideration in interpreting studies relying exclusively on heterosocial interactions (e.g. Thompson & Rapee, 2002; Stangier et al, 2006; Alden & Wallace, 1995; Strahan and Conger, 1998). Perceived partner attractiveness was also largely ignored despite research indicating its impact on social performance (Strahan & Conger, 1998). Situations wherein individuals anticipated negative outcomes (Alden & Bieling, 1998) or were deprived of positive social cues (Alden & Wallace, 1995) were also seen to mediate observed social skills and require further exploration.

A third explanation is that differences in social performance may reflect anxiety rather than "deficits" in social skills per se. For instance Rapee (1995) suggested that

individuals with social phobia possess an adequate social skills repertoire but struggle to showcase these skills during social interactions due to their overwhelming anxiety. Direct support for this suggestion arises from a number of studies specifically measuring anxiety mediated behaviours (Alden & Wallace, 1995; Ashbaugh et al., 2005; Bogels et al., 2002; Norton & Hope, 2001) and their relationship with subjective self-ratings of anxiety (Alden & Wallace, 1995; Baker & Edelmann, 2002). Such findings may seriously challenge how social skills are conceptually organised and analysed within studies of this nature.

A fourth hypothesis for purported reduced social skills amongst socially anxious individuals, relative to non anxious individuals is that these, in part, may relate to the strategic use of safety behaviours (Clark & Wells, 1995). Support for this hypothesis is offered by three studies (Alden & Wallace, 1995; Alden & Bieling , 1998; Stangier et al., 2006). Alden and her colleagues concluded that the relatively reduced self-disclosure displayed by socially anxious individuals during situations of perceived social threat was a self-protective strategy, adopted to prevent feared outcomes. However, reduced self-disclosure may equally arise from poor social skills or anxiety-mediated inhibition. Intriguingly, nonetheless, the safety behaviour hypothesis might account for reports of reduced eye contact (Beidel et al., 1985; Thompson & Rapee, 2002) and reduced speech duration (Ashbaugh et al., 2005) amongst SA groups. Similarly, amongst socially anxious individuals, impaired social performance during heterosocial or less structured social tasks may relate to cognitive appraisals and subsequent use of safety behaviours. This possibility has yet to be explored.

2. To what extent do individuals with a high level of social anxiety/social phobia underestimate their own social performance, when their self-ratings are compared to those of independent raters?

Nine studies addressed this question. These papers refer to discrepancies between self and observer ratings of social skills as 'self-observer discrepancies' and this term will used within this section. Details of these studies are offered in Table 5. Since this is a smaller group of studies, main findings will be presented by theme rather than task. This will be followed by a summary of additional findings of note. Since reference has already been made to methodological features these will not be explored in depth.

Rapee & Lim's (1992) study was the first to explore the existence of a discrepancy between self and observer ratings of social skills. They noted that all participants formed critical judgements of their own social skills, but this was exacerbated amongst those with social phobia, during a speech task. Interestingly, these effects only emerged for global ratings of performance, suggesting that socially anxious individuals could more accurately appraise specific behaviours.

Two further studies, conducted by the Rapee group (Abbott & Rapee, 2004; Rapee & Hayman, 1996) partially replicated this finding. Both papers cited evidence of a general trend towards underestimating social performance across participants, however only Abbott & Rapee (2004) found this bias to be significantly worse amongst socially anxious participants. Rapee & Hayman's study was of limited quality (B2 - see Table 4) and their failure to detect a significant difference may have related to poor sampling techniques. The remaining two studies were of slightly superior quality (A2). Therefore their findings bear more weight, and suggest that

individuals with social anxiety, may at least in part undervalue their social skills, even when these have actually been judged to be adequate.

Four studies found that socially anxious individuals displayed a negative evaluative bias, when their social performance had been judged as objectively poorer relative to control participants, during conversation and speech tasks. (Ashbaugh et al., 2005; Alden & Wallace ,1995; Norton & Hope, 2001; Stopa and Clark , 1993). Mirroring previous findings, these negative self–evaluative biases were found to be exaggerations of biases apparent in the control groups in three of the studies using conversation tasks (Alden & Wallace, 1996; Norton & Hope, 2001; Stopa & Clark, 1993). On the other hand, Ashbaugh and coworkers (2005) found no evidence for such a self-evaluative bias amongst control participants during a speech. However, as noted, Ashbaugh et al's (2005) study was weakened by potentially confounding task features (A2, see Table 4). Specifically participants rated an actor's social skills prior to the speech task. This may have impacted upon the self-rating of social skills for control participants, by providing an anchor for judgements of their own social skills.

Two of these studies (Alden & Wallace, 1996; Ashbaugh et al., 2005) offered some insight into which aspects of social performance might be prone to underestimation by socially anxious participants. Both studies reported that socially anxious participants overestimated their visible anxiety and underestimated their nonverbal social skills, yet were more accurate in self-appraisals of verbal skills. Although these findings are compelling, these are the only studies to consider self-observer discrepancies along specific dimensions of social performance, and only one of these studies (Alden & Wallace, 1995) was considered of high methodological study (A1 – see Table 4).

Two studies failed to evidence an exaggerated self-observer discrepancy in evaluating social skills, amongst socially anxious individuals (Strahan and Conger, 1998; Bogels et al., 2002). Strahan & Conger's findings are perhaps not surprising, since socially anxious participants were not judged as less socially skilled in their study. Overall, Strahan and Conger's findings may be affected by methodological factors relating to task and social skills assessment, reflected in the study's low quality rating (B2), all of which limit interpretation.

Nonetheless, a study of superior quality, Bogels et al (2002), also found that all participants underestimated their social skills to the same extent. This supports the existence of a general tendency to derogate one's social performance, shown in most of the studies. However this study may challenge suggestions that this bias is uniquely pronounced amongst socially anxious individuals, and given this study's high methodological quality, these implications merit reflection.

Additional findings

Four studies (Alden & Wallace, 1995;Ashbaugh et al.,2005; Rapee & Lim, 1992; Stopa & Clark, 1993) found that the observed negative bias in judging social skills amongst SA individuals, did not extend to their judgments of others. Moreover, Alden & Wallace (1995) noted that the socially anxious group displayed a positive bias in this regard. These papers were of mixed quality, yet reported reasonably consistent results worthy of attention.

Further studies have attempted to elucidate which factors may mediate a self-observer discrepancy in social skill estimation amongst groups. Rapee & Lim (1992) observed

that socially anxious individuals with increased concerns about how they were perceived by others (FNE) were more likely to derogate their own performance. These findings were not borne out in two subsequent studies (Norton & Hope, 2001; Stopa & Clark, 1993). However Norton & Hope's replication of Rapee & Lim's study was limited by its use of a poor social skills measure.

Stopa & Clark's (1993) study highlighted that immediately after a conversation, individuals with social phobia were highly preoccupied with negative self-referent thoughts (e.g.' I am stupid') in particular, relative to controls. This may have influenced participants' subsequent self-evaluations of social performance. Extending this theme, Abbott & Rapee (2004) demonstrated a relationship between harsher self-appraisals of social performance and subsequent rumination. Despite the relative methodological shortcomings of each study (Table 4), their results provide reasonably convincing evidence regarding negative self-referent thought processes in social phobia.

Summary of key question 2

Most papers found that socially anxious individuals underestimated their social performance, even when they were independently judged as displaying adequate social skills. Interestingly the studies found that this was not unique to socially anxious individuals.

Four papers highlighted that these biased ratings arose when the social performance of socially anxious individuals was objectively inferior, relative to controls (Ashbaugh et al., 2005; Alden & Wallace, 1995; Norton & Hope, 2001; Stopa & Clark, 1993). This

suggests that socially anxious individuals exaggerated existing social skills deficits. One study (Bogels et al., 2002) did not find this to be the case. Ashbaugh et al (2005) and Alden & Wallace (1995) cited evidence that socially anxious individuals made more accurate appraisals of their verbal behaviours, compared to their harsher self-appraisals of nonverbal behaviours and presumed visible anxiety.

Three additional studies cited evidence of a derogation effect, in the absence of significantly inferior social skills amongst SA individuals (Rapee & Lim, 1992; Rapee & Hayman, 1996; Abbott & Rapee, 2004).One further study, Strahan & Conger, 1998 failed to find evidence of both poorer social skills or exaggerated underestimation of social skills amongst socially anxious individuals.

Socially anxious participants made accurate judgements of their partners behaviour suggesting that this evaluation bias was specifically self-referent (Alden & Wallace, 1995;Ashbaugh et al.., 2005; Rapee & Lim, 1992; Stopa & Clark, 1993).

Methodological summary and considerations for key question 2
It is of note that only one study addressing this question achieved the highest quality rating (Alden & Wallace, 1995). There are a number of limitations in the remaining studies which require consideration in synthesising these findings.

Only one study compared self and observer ratings of social skills across multiple tasks (Norton & Hope, 2001). Results implied that the self-observer discrepancy in social skills ratings was unaffected by task type. However given this study's shortcomings, further research is required to clarify this issue, particularly given that

task type was seen to influence actual social performance of socially anxious individuals.

An overarching methodological limitation of these studies is, in the most part, their failure to account for psychological comorbidity. This is crucial given that anxiety and depression are known to impact on the processing of self-referent information (Beck et al., 1979). Two studies suggested that socially anxious individuals displayed a stronger negative bias in estimating their social performance than individuals presenting with dysthymia and anxiety, who, in turn made less accurate estimations of their social performance than non clinical controls (Norton & Hope, 2001; Stopa & Clark, 1993). However only Rapee & Lim (1992)'s analyses took account of the impact of low mood on self-critical biases amongst socially anxious individuals. The remaining five studies neglected to consider psychological comorbidity , which lowered their quality ratings (Table 4). (Rapee & Hayman, 1996; Strahan & Conger, 1998 Ashbaugh et al., 2005; Bogels et al., 2002).

Additional methodological weaknesses of these studies included use of poor social skills measures (Norton & Hope, 2001; Strahan & Conger, 1998), and use of composite scores of ratings (Abbott & Rapee, 2004; Bogels et al., 2002; Rapee & Lim, 1992; Rapee & Hayman, 1996). Interpretation of Ashbaugh et al's (2005) outcome is also compromised by their failure to counterbalance tasks.

Discussion

The contention that socially anxious individuals systematically underestimate their social skills is upheld by the majority of studies in this review. These studies suggest

that a natural tendency to discount one's social abilities may be magnified amongst individuals presenting with social anxiety.

Such observations provide empirical support for cognitive models of social anxiety Rapee & Heimberg, 1997; Clark & Wells, 1995). These models emphasise biased self-perception as a critical factor in maintaining social anxiety: when confronted with a perceived social threat, socially anxious individuals engage in a process of detailed self- monitoring and observation, often prone to cognitive distortions. Thus the systematic underestimation of social skills, shown in socially anxious individuals may be a cognitive distortion.

Results from some of the studies reviewed suggested that these negative self-evaluations were not necessarily data driven, since derogation of social skills also occurred in the absence of actual social skills deficits (Rapee & Lim, 1992; Abbott & Rapee, 2004). Instead, these negative self-evaluations may have arisen from longstanding negative self-referent performance beliefs (Hope et al., 1995). Rapee & Heimberg (1997) have proposed that these beliefs lead to negative mental representations, which play a significant role in social anxiety.

Beyond social skills ratings, some studies in the present review have suggested that socially anxious individuals experience a significant degree of negative self-referent thoughts following social performance, and may continue to be preoccupied with negative appraisals of their social performance (Stopa & Clark, 1993; Abbott & Rapee, 2004). These studies further support Clark & Wells' (1995) contention that

socially anxious individuals tend to engage in excessive ruminative, biased processing of their social performance.

An additional consideration is that critical self-judgements may be exacerbated by the laboratory situation which is, by its nature, evaluative. It is possible that individuals may have significantly adjusted their performance estimations downwards, as a self-protective strategy to avert embarrassment, if these were not accurate. This would fit in with the hypothesis that socially anxious individuals engage in self-protective strategies during situations of perceived social threat and ambiguity (De Paulo, Epstein & May, 1990). Uncertainty about the experimental setting, in this case, may have cued self-derogation as a protective strategy. There exists a scarcity of research examining more naturalistic social interactions which might be fruitful, in order to rule out such potential laboratory effects.

Concluding remarks

Although socially anxious individuals sometimes impart a global impression of being less socially skilled, this is often negligible, difficult to delineate within molecular skills, and often mediated by situational, behavioural, emotional and cognitive factors. More consistently socially anxious individuals have been seen to derogate the quality of their social performance. Collectively these results may undermine skills-deficit conceptualisations of social anxiety, and endorse a more cognitive-behavioural account (Beck & Emery 1985; Leary & Kowalski, 1995; Clark and Wells, 1995; Rapee & Heimberg, 1997).

Disorders of social anxiety are debilitating, particularly if left untreated (Alden & Taylor, 2004). The findings presented herewith are of direct therapeutic value. Clinicians should be aware that a client's reports of social incompetence may be influenced by negative self-evaluative biases. If this is the case, addressing self-referent performance cognitions should be prioritised over social skills training; if indeed this is necessary (Clark & Wells, 1995). Cognitive-behavioural treatment packages have been developed to target self-evaluative biases amongst individuals with social anxiety. In particular providing video feedback of social performance, has been shown to enable individuals to take an 'observer perspective' on their social skills and has met with promising results (Rapee & Hayman, 1996, Harvey et al., 2000, and Abbott & Rapee, 2004).

Future research might also seek to extend on the literature described in the present review whilst addressing methodological weaknesses. Application of robust, dimensional rating scales of social performance would be of value. This might help pinpoint where differences in social performance lie, if these do exist. This might also help clarify if there are particular aspects of social performance prone to more negative self appraisals by socially anxious individuals, as this is as yet unresolved. Finally future research might benefit from improving on features of the task used to assess social skills. Conversations may provide richer data and, and offer more opportunities to examine the interpersonal nature of social skills. Use of more than one confederate may be of interest, since many socially anxious individuals report that group situations are more anxiety-provoking than one to one interactions (Turk et al., 1998). Enhancing ecological validity of the social interaction by using more naturalistic observations (e.g. Thompson & Rapee, 2002) would be of further value.

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List of Tables & Figures

Table I: Types of social skills ratings

Type of rating	Level of rating	Content
Global ratings	Global	- Likert ratings of social skills, or impression of how individual presents
Molecular ratings	Midi/ mid- level	- Likert rating of behaviours - Likert ratings of judgements of appropriateness or adequacy of behaviours (e.g. gaze). - Likert ratings of anxiety-mediated symptoms (e.g. blushing)
	Micro level	- Durations - Frequency counts - Speech content analysis

Table 2: Quality Criteria

CORE CRITERIA	Adequate (1)	Good (2)	Excellent (3)	RATING (circle)
1(a) Sample design	One control group, unmatched for gender/not known if matched for gender	one control group , matched for gender *or* two control groups, not matched for gender	Two control groups matched for gender *or* One control group + controlled additional manipulation of variable (2X 2 design)	<4= adequate 4=good 5-6=excellent
1(b) Sample selection	Unselected sample of volunteers, divided into high and low social anxiety groups by an arbitrary cut-off, on one measure alone.	Selected on the basis of scores from one of : - Social Phobia & Anxiety Inventory (SPAI) - Social Interaction Anxiety Scale Social Phobia Scale) - Fear of Negative Evaluation Scale (FNE) - Social Avoidance & Distress Scale (SAD) - Social Phobia Inventory (SPIN) - Fear Questionnaire (FQ	Selected on the basis of and using 2+ of the following: - Social Phobia & Anxiety Inventory (- Social Interaction Anxiety Scale - Fear of Negative Evaluation Scale - Social Avoidance & Distress Scale - Social Phobia Inventory *Or* A formal diagnosis of social phobia, based upon: - --standardised criteria or tools (DSM-IV/DSM-III-R; ICD-10; ADIS-R; SCID)	
2.Social skills assessment measure [4]	Midi and global skill ratings with <5 items in total	2 of the three types of rating (midi, micro & global) with >5 items in total	Micro, midi and global skill ratings	1=adequate 2=good 3=excellent
3. Quality of observer ratings of social skills	1 rater with reported internal consistency across ratings of (<0.8). *or* 2+ raters with interrater reliability of <0.6 on at least one subscale. *or* interrater reliability/ internal consistency not reported.	2+ raters, not blind or trained, with inter rater reliability >0.60 on total or subscale measures *or* 1 blind or trained rater, with internal consistency of ratings across participants as >0.80	2 + blind, trained raters with inter rater reliability >0.60 on total or subscale measures *or* 2 + untrained blind raters with interrater reliability of >0.75 overall, or on all subscales of social skills measure where reported	1=adequate 2=good 3=excellent
SPECIFIC CRITERIA	**Adequate (1)**	**Good (2)**	**Excellent (3)**	
4. Psychological comorbidity	Does not report co morbidity of additional psychological problems within the sample	Reports specific comorbidity of psychological problems , depression and anxiety within the sample	Excludes 1+ psychological problems in the socially anxious group *Or* Includes clinical control group *Or* Includes depression/trait anxiety as covariates	1=adequate 2=good 3=excellent
5. (a) Tasks	1 task	2 tasks	3 tasks	<4= adequate 4=good 5-6=excellent
(b) Partner or audience in social interaction task	Naturalistic interaction or audience - no training and no consistency checks performed	Role play practiced beforehand *or* Instructed in general response style (eg "neutral") *or* Consistency checks performed	Trained in structured responses and consistency checks performed	

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[4] Please refer to Table 1 for the differences between micro, midi and global ratings.

Table 3: Summary of quality categories

Quality category		Features of the study
A1 :	➢ Good to excellent core criteria	Well defined population sampling, design and social skill measurement .
	➢ Good to excellent specific criteria	Good to excellent control of comorbidity and/or task factors.
A2 :	➢ Good to excellent core criteria.	Well defined population sampling, design and social skill measurement.
	➢ Adequate study specific criteria	Adequate control of comorbidity and/or task factors.
B1	➢ Partially adequate core criteria	At least one adequate rating on criteria regarding population sampling, design and social skill measurement..
	➢ Good to excellent study specific criteria	Good to excellent control of comorbidity and/or task factors
B2	➢ Partially adequate core criteria	At least one adequate rating on criteria regarding population sampling, design and social skill measurement
	➢ Adequate study specific criteria	Adequate control of comorbidity and/or task factors.

Table 4: Results of the assessment of methodological quality and limitations of studies

Quality categories and studies	Core criteria			Specific criteria		Limitations reducing quality ratings and additional limitations not covered by quality criteria
	Design and sampling	social skills measure	raters	Co-morbid	Task	
A1: Good/excellent core criteria + good/excellent study-specific criteria						
Beidel, Turner & Dancu, 1985	E	E	E	E	E	Did not correct for multiple comparisons in their analysis
Baker & Edelmenn , 2002	E	E	E	E	G	Small sample size (SA n=18) Participants made frequent ratings of anxiety during interaction
Stangier et al., 2006	E	G	E	E	G	Did not counterbalance tasks
Thomson & Rapee ,2002	G	E	E	E	G	Did not counterbalance tasks
Alden & Wallace, 1995	E	G	G	G	G	
A2: Good/excellent core criteria + partially adequate study-specific criteria						
Rapee & Lim 1992	E	G	G	E	A	Used SP raters Use of a single task
Alden & Bieling, 1995	E	G	E	A	G	Did not report comorbidity
Bogels et al 2002	G	G	E	A	A	Did not report comorbidity Use of a single task 'Neutral' confederates prompted if there was a 5 second silence.
Abbott & Rapee, 2004	G	G	G	G	A	No gender matching Use of a single task Collapsed midi and global ratings
Ashbaugh et al, 2005	G	G	G	A	A	Small sample size (n=13, SP group) Did not counterbalance tasks Speech topic related to public speaking skills
B1: Good/excellent core criteria + partially adequate study-specific criteria						
Norton & Hope, 2001	E	A	E	E	E	1 likert rating of global social skills Included participants with dysthymia in SA
A2: Partially adequate core criteria + partially adequate study-specific criteria						
Stopa & Clark, 1993	G	G	A	E	A	Poor gender matching Small sample size One rater, no reported statistics re consistency auditory stimuli played throughout the conversation, which may have been distracting Use of a single task
Strahan & Conger, 1998	G	A	E	A	A	Social skills measure contained 4 itmes Did not report comorbidity Use of a single task. This was an interview task which may have facilitated scripted responses
Rapee & Hayman, 1996	A	G	E	A	A	Unselected sample Did not report comorbidity Use of a single task Collapsed midi and global ratings

TABLE 5 (i) STUDIES FEATURING SPEECH TASKS

Study, quality rating	Sample features, selection criteria.	Measurement of social skills,) observer ratings	Task and audience features	Main findings. p values shown where reported Q1: observed social skills deficits Q2: self-observer discrepancy in social skill ratings
Rapee & Lim, 1992 A2	Clinical sample, media recruited N=61 SP: n= 28 (29.4% female) ADIS non clinical controls: n=33 (60%F) Colleagues & acquaintances of experimenter.	Rapee & Lim (1992) Performance Questionnaire (PQ) . likert 1-5: Midi ratings: 12 specific items: kept eye contact with audience, had a good voice etc. Global ratings: 5 items: confident, skillful, positive impression. Analysed midi and global ratings separately . Raters: 6 audience members (=study participants)r= 0.75-0.86.	Impromptu speech 3 minutes long. 2 minutes preparation, topic of own choice. 6-8 audience members including SP and non SP, mixed gender.	ANOVAs. Bonferroni corrections for multiple comparisons Q1. SPs were rated by themselves *and* observers combined as less skilled than controls. However, comparisons of observer ratings alone failed to find differences (p>0.05) Q2. All subjects rated themselves worse than the observers rated them (p<0.01)Rating X group interaction: this self-observer discrepancy occurred to a greater degree in SP group, on global measures onlySelf-observer discrepancy correlated with Fear of Negative Evaluation (FNE) (r=0.59, but less so with depression (DASS, r=0.24).
Abbott & Rapee, 2004 A2	Clinical sample n=85 SP: n=54 (35%female) DSM-IV non clincial controls college students n=31	Rapee & Lim (1992) Performance questionnaire (PQ)Likert 1-5: Midi ratings: 12 items: kept eye contact, had a good voice etc. Global ratings: 5 items: confident, skillful, positive impression Midi &global composite score Raters: 1 blind rater , internal consistency α=0.84	Impromptu speech 3 minutes long, 2 minutes preparation. Topic of own choice. Asked not to discuss anxiety /study. 1 audience member (experimenter). Other: the study reported a video feedback intervention.	Descriptive statistics only for Q1. ANOVAs for Q2. Q1 The SP group had lower mean observer rated social skill scores (X =52.6 (sd 6.5) vs X =552 (sd 5.3). Q2 consistent self-observer discrepancy in ratings across groups (p<0.01). Rater X Group interaction: the discrepancy in self-observer ratings was significantly larger for SP group (p<0.01). Other significant correlation between PQ scores & post-event rumination scores (r=-0.68, p<0.01) more negative self-appraisals related to more frequent negative rumination about the task.
Ash-baugh et al., 2005 B2	Analogue sample N=49. College students, selected from 333. 13 HSA(79% f) Scoring at least 1 s.d. below the mean on the SPIN. 13 LSA (71% female) scoring at least 1 s.d. below the mean on the SPIN.	Presenter Questionnaire, designed for study. likert 1-5. Midi ratings3 dimensions,14 items -Performance X 3 items : verbal behaviours, content, style. -presenter impressions X 6 items: intelligence, competence. - visible anxiety X5 items : e.g. shaky hands, blushing, sweating.. Global rating X 1 Raters2 blind raters, untrained, r= 0.56-0.86	Impromptu speech 3 minutes long. 2 minutes preparation. Topic : 'class presentations'. 1 audience member (experimenter). prompts if stopped talking for >5 s The speech task followed a task rating an actor's social skills .	Q1: ANOVAs. Q2: ANOCOVA. Effect sizes reported. Q1 HSA group displayed poorer nonverbal skills,(p=0.01, η²=0.31), evoked a less positive impression (p=0.04, η²=0.17), & displayed more visible anxiety behaviours (p=0.001, η²=0.4) than LSA group. Q2 HSA gave lower self ratings on 3 dimensions than LSA group: anxiety (p=0.001, η²=0.59), performance (p=0.001, η²=0.3) and presenter impression (p=0.001, η²=0.27). LSAs were more accurate in their self-appraisals. When controlling for observer ratings, HSAs still rated themselves as worse on visible anxiety (p=0.02, η²=0.25), & presenter impression, (p=0.05, η²=0.18), but not on performance (verbal skills). Other: HSA evaluated the actor similarly to LSA .

TABLE 5 (i) STUDIES FEATURING SPEECH TASKS

Study, quality rating	Sample features, selection criteria.	Measurement of social skills, analysis of social skills observer ratings	Task and audience/confederate features	Main findings. p values shown where reported Q1: observed social skills deficits Q2: self-observer discrepancy in social skills ratings
Rapee & Hayman 1996 B2	Analogue sample College students. N=62, unselected. HSA: = 29 >16 on FNE scale. LSA = 33 <16 on FNE scale. Overall, 85% females. No data on gender matching reported.	Rapee & Lim (1992) Performance questionnaire (PQ)Likert 1-5: Midi ratings: 12 items: kept eye contact, had a good voice. Global ratings: 5 items: confident, skillful, positive impression. Midi &global composite score. Raters:2 blind raters, brief training , internal consistency $r=0.62$.	Impromptu speech 3 minutes long. 2 minutes preparation. Topic of own choice. Asked not to discuss anxiety or the study. 1 audience member (experimenter). Other the study reported subsequent video feedback intervention.	Means presented for Q1. ANCOVA for Q2, comparing self rating between groups, observer entered as a covariate. Q1. LSA 50.0 (sd 6.7) vs HSA 52.8 (sd 5.1) . A higher score using the PQ in this study indicates worse performance. Q2 Both high and low SA appraised their social skills worse than observers did (p<0.001) HSA made lower self ratings on social skills than LSA. Magnitude of self-observer discrepancy appeared larger for the HSA group, but no significant group X rater interaction (p>0.05). Other: Video feedback had a positive impact on both groups ratings (brought closer to observer's ratings of SS).

TABLE 5 (ii)   STUDIES FEATURING CONVERSATION TASKS

Study, quality rating	Sample features, selection criteria.	Measurement of social skills, analysis of social skills (separate vs composite) observer ratings	Task and confederate features	Main findings. Results are summarised p values shown where available. Q1: observed social skills deficits Q2: self-observer discrepancy in social skills ratings
Alden & Wallace, 95

A1 | Clinical sample n=64. generalised SP n=32 ADIS-R 50% female. nonclinical control n=32 50% female .

2X2 design: confederate responsivity conditions.

Comorbidity reported. | Likert scales 1-10. Midi ratings 3 dimensions: Visible Anxiety, Nonverbal Behaviours, Verbal Behaviours.. 3 items per dimension = 9 items. Global ratings Measure of likeability, describe by authors as 'global'. =1 item Analysis separate dimensions.

Raters: 2 untrained raters : 1 confederate & 1 independent observer . κ=0.72-0.91. | Opposite sex getting acquainted conversation 5 minutes.

Confederate: Positive condition (self disclosed, warm tone, left few pauses). Negative condition (neutral tone, 15 s pauses, no positive non verbal behaviour). | MANOVAs.
Q1: SP performance was consistently worse, across conditions($p<0.01$): Simple effect analyses showed worse on all 4 dimensions (all $p<0.01$). All Ss were more socially skilled displayed during positive condition ($p<0.05$), displayed more positive nonverbal behaviour ($p<0.07$).
Q2. Group X rater interaction ($p<0.001$): SP self-ratings were significantly worse than observer ratings, this discrepancy was significantly bigger in SP group. Simple effect analyses revealed that the SP group underestimated their nonverbal behaviour, visibility of anxiety and liking (all $p<0.05$) but not their verbal behaviours.
Other :SP Positive bias in rating partner's behaviour ($p<0.01$). |
| Baker & Edelman

2002
A1 | Clinical sample N=54 participants

SP n=18 (77% female).
Anxious control (AC) n=18 (88% female).
Non clinical control (NCC) n=18(83% female). | Based on Trower, Bryant & Argyle, 1978. 5 point likert scales for :
Micro ratings 6 items: response duration, time spent smiling/silent/ gesturing, duration of eye contact .
Midi ratings 5 Item rated for adequacy: eye contact, gestures,smiling,, speech clarity/ fluency/tone. Global rating. 1 item. Raters : trained raters, completed practice items. 2nd rater rated 25% videos . r= 0.90. | Unstructured getting acquainted conversation 9 minutes , separated into 3 X 3 minute phases, rating anxiety every 3 minutes.

Female confederate. Extensive training and practice trials. Conversation checked for confederate consistency. | MANOVAs. Correction for Type I errors using Greenhouse-Geiser procedure.
Q1 For micro ratings SP made more manipulative gestures whilst talking ($p<0.1$), and exhibited less eye contact whilst talking ($p<0.1$) .For midi ratings, SP were rated as less adequate on gestures and speech fluency ($p<0.001$) and speech fluency ($p<0.1$) and overall performance $p<0.001$) compared to both control groups.

Q2 N/A. |

TABLE 5 (ii) STUDIES FEATURING CONVERSATION TASKS

Study, quality rating	Sample features, selection criteria.	Measurement of social skills, analysis of social skills (separate vs composite) observer ratings	Task and confederate features	Main findings. p values shown where reported Q1: observed social skills deficits Q2: self-observer discrepancy in social skills ratings
Bogels et al 2002 A2	Analogue sample n=72 females selected from 152 college students scoring high/low on Fear questionnaire HSA n=36 FQ score X=35.9 (6.7) LSA n=36 FQ score X=0.2 (3.6) 2X2 design: high self awareness (included mirrors) vs control conditions	Rapee & Lim (1992) Performance Questionnaire. (PQ)Likert scales 1-5 Midi ratings:12 specific items: eg kept eye contact with audience, had a good voice Global ratings: 4 items analysis: anxiety vs skilled behs. Raters 4 blind raters trained extensively + 1 confederate rater r= 0.76 Other Physiological measures Blushing	Getting acquainted conversation. Instructed to keep a conversation going with 2 confederates: 1 male and 1 female. 5 minutes. Confederates: were trained to be neutral but friendly, wait 5 seconds before talking.	ANOVAs: Q1 Confederates rated HSA group significantly lower on social skills (p<0.05). This difference was due to showing anxiety symptoms, p<0.01 (Vs skilled behaviour p >0.5). Observers did not rate the HAS as lower on social skills (p>0.05). Q2: HSA and LSA rated social skills as significantly lower than all observers. No significant differences in self-observer discrepancies between groups: HSA and LSA underestimated their social skills to the same extent Other increased self-awareness impacted only on positive self-attributions
Alden & Bieling, 1998 A2	Analogue sample College students. n=82, all female. LSA n=41 7< on SAD. 41 HSA n=41 >11 on SAD. 2X2 design: pre-task manipulation of cognitive appraisal.	Likert scales 1-7 Micro ratings : response duration Midi ratings: 3 dimensions: Intimacy (degree disclosure) Appropriateness X 6 items. Liking X 4 items =total of 11 midi items. Raters: 2 raters. 1 confederate, 1 observer κ=0.93	Opposite sex getting acquainted conversation 5 minutes. Female confederate, memorized scripts, trained to be neutral. 2 X pre task appraisal conditions: Positive : written instructions suggest positive outcome Negative: written instructions suggest negative outcome.	ANOVA Q1HSAs less intimate in disclosures than LSA. Simple effect analyses: No significant differences in positive appraisal condition between groups for appropriateness or liking (both p>0.05). Significant differences in negative appraisal condition for HSA vs LSA (both p<0.0001. Q2. N/A

TABLE 5 (ii) : STUDIES FEATURING CONVERSATION TASKS

Study, quality rating	Sample features, selection criteria.	Measurement of social skills , analysis of social skills (separate vs composite) observer ratings	Task and confederate features	Main findings. p values shown where reported Q1: observed social skills deficits Q2: self-observer discrepancy in social skills ratings
Stopa & Clark, 1993 B2	Clinical sample, n=36 SP n=12(33% female) Recruited from Clinical Psychology anxious controls (AC)n=12 (75%female) recruited from Clinical Psychology non clinical controls (NCC)n=12 (58% female) university students	Stopa & Clark , 1993: Behaviour Checklist. Likert scales 1-9 Midi ratings: 23 items. 15 positive: eg. friendly, confident, relaxed, assertive, fluent 7 negative: e.g. Blushing, hands shaking, awkward. uncomfortable Analysis: negative and positive ratings analysed separately Raters: 1 rater	Conversation 7-8 mins long Female confederate, trained to be 'reserved' . waited 30 secs before talking/initiating conversation Other: thought listing task re social situation to assess content of thoughts	ANOVAs & Tukey post-hoc tests to locate differences Q1. Observers rated SP's behaviours as more negative than both control grps (p<0.01)and less positive than non patients (P<0.01) Q2. Group X rater interaction: SPs rated their own social skills as less positive (p<0.01) and more negative (p<0.05) than both control groups. There was a larger self-observer discrepancy in social skill ratings amongst SPs (P<0.05) than both control groups. Other SPs but did not differ in rating of stooge's SS. SPs had a significant higher frequency of negative self-referent thoughts (=39.4%)following the conversation than controls (NCC=9.1%, AC,=6.5%) (p>0.01). (Percentages out of all thoughts they listed)
Strahan & Conger, 1998 B2	Analogue sample Male college students Those scoring in upper and lower thirds of distribution HSA n=27. SPAI score: X= 106 LSA=26. SPAI score X= 46 (in the same range as diagnosed SPS in SPAI study)	Likert rating not reported Midi ratings 3 items: Content, fluency, nonverbal behaviour Global rating: 1 item Raters 6 untrained students. Composite reliability = 0.76-0.84	Interview (opposite sex) 10 minute simulated job interview with an 'attractive' female (as rated elsewhere). 10 open ended questions. Confederate female, trained to be moderately responsive, friendly but providing few prompts.	Q1. No deficits found across ratings Q2. no self-observer differences in ratings were observed

TABLE 5 (iii) STUDIES FEATURING MULTIPLE TASKS

Study, quality rating	Sample features, selection criteria.	Measurement of social skills, analysis of social skills, observer ratings	Task and audience/confederate features	Main findings. p values shown where reported Q1: observed social skills deficits Q2: self-observer discrepancy in social skills ratings
Biedel Turner & Dancu, 1985 **A1**	Analogue sample pf college students, n=52 , scoring above cut offs on all measures, below. 26 HSA : 50%ofemale Mean scores: SAD (14.2); FNE (22.2) STAI (46.5) 26 LSA : 50%ofemale Mean scores: SAD (4.8); FNE (8.1); STAI (34.8). Exclusion criteria: no other reported anxiety disorder.	Based on Trower, Bryant & Argyle, 1978. likert 1-5 for: Micro ratings: 2 items: response duration & speech dysfluencies. Midi ratings: 3 Items: intonation, speech volume, gaze Global rating . 1 item. Raters 2 blind raters κ= >0.75	(1) Opposite sex role play conversation First date. (2)Same sex role play conversation Meeting a new roommate Confederate were trained to remain 'neutral', not ask Qs. Consistency checks performed. (3)Impromptu speech 3 minutes preparation, topic of own choice, 3 audience members.	ANOVAs. Did not control for multiple comparisons and risk of Type I error e.g. by collapsing ratings or use bonferroni corrections. Q1. The only significant difference observed across midi and micro ratings was rating of appropriate gaze: HSA males used less appropriate gaze in the opposite sex conversation. On global ratings, SA were rated worse than controls in opposite sex interaction (p<0.025) and same sex interaction (X =3.19 vs X =3.14 p<0.07). Q2. N/A.
Thomp -son & Rapee, 2002 **A1**	Analogue sample Female college students. N=60. HSA: n= 26 . scoring 22-30 on FNE scale . LSA: n=24. scoring 0-8 on FNE scale.	Based on Trower, Bryant & Argyle, 1978. 5 point likert scales for : Micro ratings 2 items: latency to first utterance, number of confederate prompts. Midi ratings 3 dimensions: voice intonation, non verbal skills, verbal skills. 25 midi ratings. Global rating. 7 items Raters: 2 blind raters r = 0.75-0.83.	(1)Naturalistic conversation Surreptitious waiting room observation – participant unaware. 5 minutes duration. (2) Opposite sex role play conversation 'Imagine you are at a party and you have to get to know each other' 5 minutes.	ANCOVAS . Made corrections for multiple comparisons. Q1 On micro ratings, HSA showed a longer latency to first utterance, and required more prompts in the naturalistic conversation only (p<0.001).These differences were not apparent in the opposite sex role play conversation task. On midi ratings, HSA group were rated as less skilled in the naturalistic conversation. All participants were rated as less globally socially skilled during the naturalistic task. (p<0.001). On global ratings HSA were observed to be less socially skilled, compared to LSA, irrespective of task. BAI and BDI entered as covariates.

TABLE 5 (iii) STUDIES FEATURING MULTIPLE TASKS

Study, quality rating	Sample features, selection criteria.	Measurement of social skills, analysis of social skills, observer ratings	Task and audience/confederate features	Main findings. p values shown where reported Q1: observed social skills deficits Q2: self-observer discrepancy in social skills ratings.
Stangier et al. 2006 **A1**	Clinical sample n=51 All males Recruited through Clinical Psychology & media . SP n=20. SCID. Anxious clinical control group (ACC) n=14. Non clinical control (NCC)group n=17 Number of males and females not known. Authors reported no significant gender imbalance.	Stopa & Clark, 1993: Behaviour Checklist. 9 point likert scales. Midi ratings: 23 items. 15 positive items eg. friendly, confident, relaxed, assertive, fluent. 7 negative items: e.g. Blushing, hands shaking, awkward, uncomfortable . Global ratings: 1 item midi &global composite score. Safety behaviours questionnaire , (Clark et al., 1995)competed by participants only.	5-6 hour examination extending over a two day period . (1) Opposite sex conversation (2)Impromptu Speech : 4 minutes preparation, 2 minute speech selected form 4 options. 3 audience members : 2 experimenters and one person unfamiliar participant. Tasks not counterbalanced.	Authors found a high correlation between observer ratings of negative midi ratings across both tasks, (r=0.79, p<0.01), therefore used composite scores for ANOVAs (Not known if positive midi ratings on tasks also correlated). Q1. SPs rated as less positive behaviours (p<0.001)and more negative on behaviours (p<0.001), than both control groups. Other Higher use of safety behaviours were self reported , significantly higher than anxious clinical control group. Safety behaviour also shown to explain for some of the variance in social performance.
Norton & Hope 2001 **B1**	Clinic sample N=105. Media recruited. SP: n=54 (60.4% f) DSM-III-R/ADIS-R Dysthymic clinical control (DCC) : (82.4% f) n=23. SCID & BDI S Non clinical controls Controls (NCC): n=28 , (64.3% f) Included comorbid depression, anxiety. Excluded: substance dependence, LD, psychosis .	Global rating of social skill Performance rated on 0-100. Also: Subjective anxiety 0-100. thought listing 3 untrained raters , blind to study hypothesis. r=0.75.	(1) Impromptu speech 3 mins preparation, for 4 mins speech . (2) Unstructured conversation Getting acquainted. 4 minutes. Confederates instructed to be natural. (3). Structured role play – meeting new neighbour. 4 minutes . Confederates were instructed to be 'friendly but reserved'.	Used ANOVAs. Reported effect sizes (d). Q1 NCCs performed significantly better than both SPS and dysthymic clinical control group. (p<0.01). Of all groups, SP were rated by observers as the worst in terms of social skills.(p<0.01, d=0.96) Performance during the structured role-play conversation was rated worst, followed by performance during the speech. Performance during the unstructured conversation was rated as significantly better. p<0.01, d=0.73. Q2 Across groups, observers made superior social skills ratings than individuals. Interaction of rater X group: SAs displayed a greater self-observer discrepancy in rating social skills than did NCCS. Dysthymics did not differ on discrepancy scores from SA or NCC groups. Other impact of comorbid anxiety and depression – no between group differences found. (p>0.05).

Chapter Three

Major Research Project Proposal

An Investigation Of Social Anxiety And Stigma Amongst Adolescents With Mild Intellectual Disabilities

An Investigation of Social Anxiety and Stigma amongst Adolescents with Mild Intellectual Disabilities

Shelagh Morrison* & Andrew Jahoda

* Address for Correspondence:

Department of Psychological Medicine

Gartnavel Royal Hospital

University of Glasgow

1055 Great Western Rd

Glasgow

G12 0XH

Email: shelaghmorrison@yahoo.co.uk

Telephone: 0141-2110607

Summary of project

Research indicates that adolescents with mild Intellectual Disabilities (IDs) are more likely to experience mental health problems, including social anxiety, compared to their normally developing peers (Emerson, 2003). The study of social anxiety in adolescents with IDs has been neglected in the literature but is of particular interest for several reasons.

First, the onset of social anxiety peaks during adolescence in the general population. This is presumably linked to developmental goals of adolescence such as establishing social relationships, which facilitate attainment of emotional independence from the family and the creation of an individual social identity. Adolescents may become more aware of, and sensitive to, negative evaluation and treatment from others during this stage. Adolescents with IDs may particularly struggle to achieve these goals. Second, adolescents with IDs are recognised as a stigmatised group, and are frequently the recipients of stigmatised treatment, such as peer rejection. This may predispose them to fearing negative evaluation from others, hypothesised to be a factor in the onset and maintenance of social anxiety, according to the cognitive model (Clark & Wells, 1995). Finally, adolescents with ID may present with poor social skills, either linked to the ID itself or to negative social interactions, which may predispose them to experiencing awkwardness and anxiety in social interactions.

These aspects of social anxiety have not been systematically examined in ID populations, therefore this study aims to explore experiences of anxiety in social situations amongst adolescents with IDs, and to establish their association with experiences of stigma and poor social skills.

Introduction

Existing research on prevalence rates of psychopathology in adolescents with ID suggest that they may be up to four times more vulnerable to developing psychopathology than their non-ID peers (Emerson, 2003). In particular, Emerson found that 0.8% of his survey sample with ID was diagnosed with social phobia compared to the 0.3% of their normally developing peers. Whilst this difference is small, it suggests that adolescents with ID are perhaps more susceptible to experiencing social anxiety. However there is a lack of research in this area.

The present study will assume that social anxiety is on a continuum, ranging from social discomfort, which most people experience on occasion, to more severe social anxiety, which impairs functioning and attracts a diagnosis. DSM-IV (APA, 1994) classifies this as "social anxiety disorder" or "social phobia": an intense fear of embarrassment, humiliation and negative evaluation of others in social settings and a tendency to avoid these situations.

Cognitive models of psychopathology underscore the role of cognitive biases in the onset and maintenance of psychological disorders such as social anxiety. Clark and Wells' (1997) cognitive model of social anxiety proposes that individuals who are socially anxious wish to make a favourable impression on others but fear acting incompetently and experiencing negative evaluation in social settings. Hence such individuals tend to focus on these anxious thoughts and accompanying physical symptoms of anxiety, diverting their attention from the social interaction itself. They therefore frequently miss out on important elements of the interaction, selectively attending to social cues confirming their predictions of negative evaluation by others. This further impedes the social interaction, which in turn provides evidence for thoughts of social incompetence. In order to avoid this discomfort, socially anxious individuals learn to avoid social situations. Such persistent avoidance may reinforce feelings of social anxiety and disrupt the

development of social skills in the long term. Additionally, possessing poor social skills, regardless of causality, may also predispose individuals to developing social anxiety, although cognitive models of social anxiety tend to lay more emphasis on how the individual appraises their social skills.

The onset of social anxiety is thought to peak at around 15.5 years (Schneier et al., 1992). This may relate to adolescence being a critical stage in identity formation (Eriksson, 1968) and finding one's place in society, with increasing emphasis on peer acceptance (Petterson & Leffert, 1995) and gaining emotional independence from the family. Some life experiences theorized to be involved with the onset of social anxiety include maladaptive familial environments, peer rejection, and experiences of panic in a perceived social-evaluative situation. As adolescents with ID may be vulnerable to these events, their experiences of social anxiety merit investigation.

As discussed, there is some evidence from prevalence studies suggesting that adolescents with ID are more vulnerable to developing social anxiety than their normally developing peers. Applying existing models and research on social anxiety, this vulnerability may arise from a number of factors.

One potential mechanism, through which adolescents with ID may be vulnerable to developing social anxiety, may be stigma. Dovidio et al (2000) define stigma as:

"A social construction that involves two fundamental components:

(1) an awareness of difference based on some distinguishing characteristic, and

(2) the consequent devaluation of that person"

This awareness and experience of stigma may help shape how an adolescent with ID views themselves in the world, and, it is hypothesized, could specifically lead to them developing hypervigilance in social interactions. This is discussed below.

Research highlights that people with IDs are often aware of "being different" - possessing an attribute used to define their identity by others. Dagnan & Waring, (2004) found that amongst people with ID, perception of stigma led to negative self-evaluation and distress. In particular they found a significant relationship between people's perceptions of stigma and perceived negative evaluation by others. Hebl, Tickle & Heatherton (2000), demonstrated how stigma awareness can promote awkwardness in social interactions, as stigmatized individuals may perceive increased focus on themselves from others, and a feeling that they are being socially characterized by their stigma. The authors suggested that an awareness of stigmatized status may lead to an individual fearing rejection in these interactions and becoming hypervigilant to any hint of rejection. This is in line with the description of fear of negative evaluation and selective attention to social cues, proposed in the cognitive model of social anxiety. Similarly, Dagnan & Jahoda (2006) have suggested that individuals with ID who are stigmatized, may actively monitor their social presentation.

This fear of rejection may not necessarily be a cognitive distortion but may also be based upon actual stigma experiences. Research highlights that people with IDs frequently report being systematically devalued - treated "differently", avoided, derided or marginalized (Jahoda et al., 1989; Dovidio et al., 2000). For instance Zetlin & Turner (1985) found that adolescents with IDs experience high rates of peer rejection. In normally developing adolescents, such peer rejection experiences can contribute to fear of negative evaluation from others, leading to social anxiety

(La Greca & Lopez, 1998). This relationship has not been explored in adolescents with ID who may actually experience negative evaluation from others and learn to anticipate it.

Social skills deficits are mediating factors in the onset of social anxiety in normally developing adolescents (La Greca & Lopez, 1998) and may also contribute to social anxiety amongst adolescents with ID. These deficits may arise from the ID itself or from stigma awareness and experiences, which can reduce opportunities to develop these social skills.

There is a paucity of research examining social anxiety amongst adolescents with IDs. This is despite research highlighting that adolescents with mild IDs experience stigmatized treatment and an increased awareness of stigma, which could lead to fear of negative evaluation from others and to the onset of social anxiety.

Aims

The present research aims to explore experiences of anxiety in social situations within a sample of adolescents with mild IDs. Social anxiety in this sample will be considered within a cognitive model of social anxiety, which highlights the role of sensitivity to others' evaluation of self in the development of social anxiety. This study specifically aims to consider the relationship between stigma (awareness and treatment) and social skills in relation to social anxiety amongst adolescents with IDs.

Research Questions:

1. Is there an association between both perceived and experienced stigma and social anxiety in adolescents with mild ID?

2. Is there an association between poor social skills and social anxiety in adolescents with mild ID?

3. How much of the variance on the social anxiety measure could stigma (perception and experiences) account for, when controlling for the contribution of poor social skills as an explanatory variable?

Hypotheses

In adolescents with mild ID:

1. There is an association between both experience of stigmatised treatment and perceived stigma and increased social anxiety.

2. There is an association between poor social skills and increased social anxiety.

3. A degree of the variance in social anxiety scores will be accounted for by stigma perception and experiences, when social skills are controlled for.

Plan of Investigation

Design

This is a quantitative, within group design using a correlation approach to examine associations between key variables. Attempts will be made to gather qualitative data regarding stigma and peer interactions from open-ended questions.

Participants

Thirty-six individuals with mild LDs will be recruited from local

colleges. This number was established on the basis of a power calculation, described in the following section.

Inclusion criteria:

- Males and females aged 16-19 (matched for gender).

- Participants who are able to cope with the assessment in terms of having sufficient expressive and receptive communication abilities. It is hoped that they will be classified as having a "mild" LD (IQ= 60-70), which will be formally assessed following recruitment.

Exclusion criteria :

- Sensory impairment (visual and hearing).

- Participants with autistic spectrum disorders (ASD) will be excluded as their social skills deficits may confound the data.

- Severe learning disability – poor level of comprehension and expressive verbal ability.

- Diagnosis of a psychotic disorder as individuals' responses may be affected by their disorder.

<u>Measures</u>

<u>Social Anxiety</u>

LaGreca & Lopez's (1998) Social Anxiety Scale for Adolescents (SAS-A)

This was developed on non-ID adolescents. It was designed to measure the degree of social anxiety experienced and is not a diagnostic screening tool. It contains eighteen self rated items, comprising three subscales: Fear of Negative Evaluation (FNE), Social Avoidance and Distress in New Situations (SAD-New), and Social Avoidance and Distress-General (SAD-G). Its authors report satisfactory levels of internal consistency with Cronbach's alpha coefficients for each subscale as follows: FNE (0.91), SAD-New (0.83), SAD-G (0.76). Test-retest reliability data ranged from 0.54 to 0.78. As there is no measure of social anxiety normalised on ID populations,

this was selected as the most appropriate measure due to its psychometric properties, its brevity, relevant content and its amenability to adaptation. See Appendix I

Stigma

Stigma Scale (Szivos, 1991)

This is a ten-item self-report measure, aimed to measure perception of stigma in adolescents with mild IDs. Szivos (1991) cited a scale alpha of 0.81. This scale has been used in subsequent ID research. (eg Dagnan & Waring, 2004). See Appendix II.

Experiences of Stigma Checklist (Cooney et al., 2006)

This aims to assess young people with IDs' experience of stigma. This consists of thirteen items, eight concerning frequency of experiencing stigmatized treatment from key figures, the remaining five with the frequency of experiencing non-threatening stigma experiences. The authors reported a scale alpha of 0.61. See Appendix III.

Social Skills

Social Skills Questionnaire –Teacher (SSQ-T) (Spence, 1995)

This is designed to measure social behaviours mediating social interactions among 8-18 year olds. It comprises 25 items, rated by the teacher, covering peer relationships, social relationships and general social behaviour. These have been demonstrated to have sound reliability and validity with a split half reliability of 0.9 (Spence 1995). See Appendix IV.

Intellectual ability

The two-item subtest version of the *Wechsler Abbreviated Scale of Intelligence* (WASI-II) will be used to estimate participants' intellectual ability. The WASI is nationally standardized, and yields Verbal, Performance and Full Scale IQ scores.

Procedure

There will be a pilot phase in this study to check that items on the measures are valid and salient to young people with IDs and that they will comprehend and respond to these reliably.

Heads of colleges will be contacted asking if they wish to participate in the study.

The researcher will visit classes in the colleges who have agreed to take part and present information on the planned study to young people. Potential participants will be given information sheets to take away with them, adapted for use with individuals with learning disabilities. If they agree to participate, participants will be asked to sign a consent form , or verbal consent and agreement will be witnessed and noted by an advocate. Written informed consent will be required by parents or carers of participants under eighteen years of age.

Following recruitment, participants will meet with the researcher to complete the measures in a semi-structured interview format. In line with Zetlin, Herriot & Turner's (1985) recommendations, participants will be encouraged to talk around each of the items to increase reliability of responses. They will complete the WASI as the final measure, as it has correct and incorrect responses, contrary to the subjective measures employed.

Settings and Equipment

Questionnaires will be administered within the schools/colleges or where requested in young people's homes, with the researcher. Access to a WASI will be required.

Power calculation

The current research is a preliminary investigation since relationships between stigma, social skills and social anxiety have not been previously analysed, in this population. Therefore the

current power calculation is based upon the most relevant data available, a paper using one of the key measures, Szivos's (1991) Stigma Scale. Dagnan & Waring's (2004) paper examined the relationship between perceived stigma, evaluative beliefs (using Chadwick et al's (1999) Evaluative Beliefs Scale) and social comparisons (using Dagnan & Sandhu's (1999) Social Comparison Scale) amongst a sample of thirty nine adults with learning disability. At a level of p<0.05 , they found the stigma measure to be strongly correlated with evaluative beliefs (r=0.55), other-self evaluative beliefs (r=0.41) , and social comparison (r=0.4). Other-self evaluative beliefs are particularly relevant, since , as previously discussed, there is a relationship between perceived evaluation by others and social anxiety.

Therefore, based on these results it could be expected that a modest correlation of 0.4 could be achieved in the current study between stigma (using Szivos's (1991) Stigma Scale) and social anxiety (as measured by LaGreca & Lopez's (1998) Social Anxiety Scale for Adolescents (SAS-A). For a power level of 80%, at the 5% level of significance, for a one-tailed correlation, it was calculated that the required sample size would be 37. [5] Power was calculated using the UCLA website power calculator.

Data Analysis

Data from each of the measures will be collated and analysed using the Statistical Package for Social Science (SPSS for Windows). Descriptive statistics will be generated for each of the measures. Mean scores and standard deviations on the SAS-A will be compared to the normative data available, although it may be difficult to draw conclusions from this due to differences between the degree of representativeness from the study sample and the normative sample.

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[5] If the correlation in the present study were to be 0.45, a sample size of n=30 be required

Question 1 & Question 2 are correlational as they are examining relationships between (1) stigma (experiences and perceived stigma) and social anxiety, and, (2) poor social skills and social anxiety, in adolescents with mild ID. Data will be checked for skew and kurtosis and if the data are normally distributed, Pearson's r will be calculated. If the data are not normally distributed and do not meet the other assumptions required for a normal distribution, then Spearman's rho will be calculated.

Question 3 addresses the degree of variance on the social anxiety measure which stigma could account for, when controlling for the contribution of poor social skills as an explanatory variable. A partial correlation will be therefore be undertaken to determine the extent to which social skills difficulties may account for the variance in scores on the social anxiety measures.

Practical Applications

Addressing the psychological needs of adolescents with mild ID is important in terms of their future functioning and well-being as adults. However many areas, such as social anxiety amongst adolescents with mild IDs, have received little attention in the literature. This is surprising, given that many adolescents with mild IDs have their own specific sets of challenges to cope with, such as experiences of stigmatised treatment, and poor social skills, which in the light of current research and cognitive models of social anxiety could be considered as risk factors in developing social anxiety. The present study would inform how cognitive models of social anxiety could potentially be applicable to ID populations, with particular attention being paid to the roles of stigma, peer rejection and social skills. It may inform models of early intervention, and clinically, assessment and intervention with regards to social anxiety in this population.

<u>Timescales</u>

Ethical approval, recruitment of subjects and preparation of materials will be completed between April 2006 and October 2006. It is hoped that the data collection will commence in October 2006 and continue for a period of six months, following which data analysis and the write-up will commence.

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Chapter Four

Major Research Project Paper

An Investigation Of Social Anxiety And Stigma Amongst Adolescents With Mild Intellectual Disabilities

An Investigation of Social Anxiety and Stigma amongst Adolescents with Mild Intellectual Disabilities

Shelagh Morrison* & Andrew Jahoda

*Address for Correspondence:

Department of Psychological Medicine

Gartnavel Royal Hospital

University of Glasgow

1055 Great Western Rd

Glasgow

G12 0XH

Email: shelaghmorrison@yahoo.co.uk

Telephone: 0141-2110607

Abstract

Background: Experiences and perceptions of stigma have been shown to play a role in the psychopathology of individuals with intellectual disability. In particular, stigma may impact upon evaluative cognitions amongst this group. Despite this, the association between stigma and socio-evaluative concerns and social anxiety has not been explored in this group. The study of social anxiety amongst adolescents with intellectual disability is of particular interest since the onset of social anxiety peaks in adolescence.

Methods: Twenty-seven adolescents attending learning support classes at further education colleges participated. They completed a series of self-report measures on social anxiety, perceived stigma, and experiences of stigma. Their college tutors also completed rating scales measuring participants' social skills.

Results: Positive associations between experiences and perceptions of stigma, and social anxiety were found. Lower social skills were not associated with elevated social anxiety, nor did these contribute to the observed association between social anxiety and perceptions and experience of stigma.

Conclusions: This study highlights that anxiety in social situations can be an issue for adolescents with ID, and requires consideration in both theoretical developments and clinical practice. In exploring experiences of social anxiety amongst individuals with ID, the value of considering stigmatising experiences and evaluative cognitions amongst this group is emphasised. Limitations and future directions are outlined. Since this is a preliminary study, further research in this area is required.

Key words: Social anxiety, intellectual disabilities, stigma, adolescence.

Introduction

Recent research adapting cognitive-behavioural models of psychopathology to individuals with intellectual disability (ID) has identified a range of cognitive and social factors, such as perceived stigma, in the etiology and maintenance of depressive disorders (Benson & Ivins, 1992; Dagnan & Sandhu, 1999; Dagnan & Waring, 2004). Although anxiety disorders are prevalent amongst individuals with intellectual disabilities (Bailey & Andrews, 2003) the study of social and cognitive factors linked to anxiety disorders amongst this population remains largely neglected (Dagnan & Jahoda, 2005). If social experiences play a key role in the onset of depression amongst individuals with ID, one might infer that these may impact on socially mediated anxiety amongst this population.

Social anxiety, a fear of embarrassment, humiliation and negative evaluation of others in social settings and a tendency to avoid these situations, ranges from social discomfort, to a more severe, diagnosable form - "social anxiety disorder" or "social phobia" (DSM-IV, APA, 1994). The present study will explore this continuum of social anxiety, amongst adolescents with intellectual disabilities.

Social anxiety peaks in adolescence, and therefore this is a useful developmental stage for its study (Schneier et al., 1992). This peak onset may relate to tasks of adolescence such as identity formation (Eriksson, 1968) and peer acceptance (Petterson & Leffert, 1995), which result in adolescents becoming sensitized to negative evaluation and treatment from others. The literature indicates that experiences of negative evaluation -bullying, peer rejection, and panic in social-evaluative situations – may predispose individuals to developing social anxiety. These experiences are particularly pertinent to adolescents with IDs, yet the impact of these upon social anxiety remains unexplored. An investigation of this nature is of merit given that adolescents

with intellectual disabilities are four times more vulnerable to developing psychopathology than their non-ID peers (Emerson, 2003).

Clark and Wells' (1997) model of social anxiety identifies core cognitive and behavioural processes implicated in its maintenance. They propose that socially anxious individuals wish to make a favourable impression on others but fear acting incompetently and experiencing negative evaluation by others in social settings. In a social situation, individuals who are socially anxious tend to selectively focus on these fears of negative evaluation by others and search for social cues supporting these fears. Additionally they may focus on physical symptoms of anxiety. This prevents socially anxious individuals from fully engaging in social interactions, which in turn provides them with further evidence of their social incompetence. Persistent avoidance of social situations reinforces thoughts and feelings of social anxiety and may disrupt the development of social skills. Although the link between preexisting poor social skills and social anxiety is contentious (Morrison, 2007), and cognitive models focus on self-appraisal of social skills, there remains a possibility that poor social skills may lead to and help maintain social anxiety (LaGreca & Lopez, 1998). The present research explores how key aspects of the cognitive model of social anxiety such as fear of negative evaluation, and poor social skills, may apply to intellectually disabled populations.

Stigma refers to a socially judged negative evaluation of a difference, which is perceived as marking one's identity (Goffman, 1963). This negative evaluation entails both an awareness of a perceived difference, usually based on some distinguishing characteristic; and a consequent devaluation of that person, by the stigmatizer. The concept of fear of negative evaluation may be particularly relevant to adolescents with intellectual disabilities, who may experience or perceive stigma, relating to their ID. For these adolescents, such awareness and experience of stigma

might impact on how they view themselves in society, and on any underlying concerns they may have regarding negative evaluation by others.

This notion is supported by recent findings of an association between perception of stigma , negative self-evaluation and distress amongst adults with intellectual disabilities (Dagnan & Waring, 2004). Hebl, Tickle & Heatherton (2000), also described how stigma awareness may promote awkwardness in social interactions. They suggested that stigmatised individuals may perceive themselves as socially characterized by their stigma, leading them to fear rejection and become hypervigilant to any hint of rejection. This is in line with the description of fear of negative evaluation and selective attention to social cues, proposed within the cognitive model of social anxiety. Similarly, Dagnan & Jahoda (2006) have suggested that stigmatised individuals with ID may actively monitor their social presentation, further reflecting the cognitive model of social anxiety.

This fear of rejection may not necessarily be a cognitive distortion but may also be based upon actual experience of stigma. Research highlights that people with IDs frequently report being systematically devalued - treated "differently", avoided, derided or marginalized (Dovidio et al., 2000). Zetlin & Turner (1985) found that adolescents with IDs experience high rates of peer rejection. Cooney et al (2006) provided descriptive data on stigma experiences amongst adolescents with ID and reported that 65% of their sample had experienced bullying at school. Evidence suggests that in normally developing adolescents, peer rejection can contribute to fear of negative evaluation, and social anxiety (La Greca & Lopez, 1998). This relationship has not been explored in adolescents with ID, whose experience of negative evaluation from others might heighten their anxious anticipation of such treatment.

In addition to stigma, poor social skills may predispose adolescents with ID to developing social anxiety. Poor social skills may mediate social anxiety in normally developing adolescents (La Greca & Lopez, 1998; Beidel et al., 2007), and are particularly relevant to adolescents with ID, who frequently present with social skills deficits, due to their cognitive impairment (E.g. De Bildt et al., 2004).

In sum, although research highlights that adolescents with IDs report awareness and experiences of stigma, alongside increased anxiety relative to their non-ID peers (Emerson, 2003), no investigation of the association between stigma and social anxiety has been undertaken. This may be fruitful, given that both stigma and social anxiety link with themes of negative evaluation by others. Additionally this would extend clinically relevant research integrating social factors into cognitive-behavioural models of psychopathology within this population (Dagnan & Waring, 2003; Dagnan & Jahoda, 2006).

This study aims to explore social anxiety amongst adolescents with mild IDs, and how this may be associated with stigma and social skills. On the basis of the cognitive model of social anxiety (Clark and Wells, 1997), it is hypothesized that (1) increased experiences of stigma will be associated with increased levels of social anxiety, and more specifically to fear of negative evaluation; (2) increased perception of stigma will be associated with increased levels of social anxiety. Finally, it is hypothesised that (3a) lower independent social skill ratings will be associated with higher levels of social anxiety; and that (3b) lower social skills may partially contribute to the relationship between social anxiety and stigma.

Method

Design

A within group correlational design was employed, exploring associations between dependent variables of stigma, social anxiety and social skills, within a sample of adolescents with mild IDs.

Participants

Twenty-seven individuals with mild to moderate intellectual disabilities, aged 16-21 participated. They were attending courses on personal development provided by learning support departments at three further education (FE) colleges in Glasgow.

Recruitment

Following receipt of ethical approval (Appendix I), adolescents attending relevant courses at the participating colleges were provided with verbal and written information on the study. They were encouraged to take time to consider participation, and discuss this with their parents and tutors. Participants signed a consent form, or where necessary, verbal consent was witnessed and noted by an advocate. Information and consent sheets were symbolized and emphasized the voluntary nature of participation.

Inclusion and exclusion criteria

Participants were included if they were considered to possess sufficient expressive and receptive communication abilities to cope with the study. Individuals with severe sensory impairment (visual and hearing), severe learning disability, or a diagnosis of psychosis or autistic spectrum disorder (ASD) were excluded.

Measures

Background information on participants' previous education, ethnicity, and their postcode was obtained. A deprivation category was derived from the postcode, based on the Carstairs scores (McLoone (2004). Participants were asked to complete the following three self-report measures.

Social Anxiety Scale for Adolescents (SAS-A, LaGreca & Lopez, 1998)

Since there is no measure of social anxiety with norms for an intellectually disabled population, the SAS-A was selected due to its brevity, content, amenability to adaptation and psychometric properties. The SAS-A was developed for use with non-learning disabled adolescents and possesses sound psychometric properties, including levels of subscale internal consistency (α=0.76-0.91), and test-retest reliability ranging from 0.54-0.78 (LaGreca & Lopez, 1998). The SAS-A consists of twenty-one self-rated items (including three filler items), rated on a five point likert scale (1=not at all 5= all the time). The SAS-A comprises three subscales: the Fear of Negative Evaluation (FNE) subscale containing eight items on fears and worries regarding negative evaluation from peers; the Social Avoidance and Distress in New Situations (SAD-New) subscale, which deals with social avoidance and distress in new situations (six items); and the Social Avoidance and Distress-General (SAD-G) subscale which contains four items on more pervasive social distress and inhibition. These subscales reflect two well-documented components of social anxiety: fear of negative evaluation and social avoidance and distress (Watson & Friend, 1969) however the distinction between types of SAD was added by La Greca & Lopez (1998). Minor amendments resulting from the piloting phase were made on the SAS-A such as changing "peers" to "people my age".

Stigma Scale (Szivos-Bach, 1993)

The ten-item Stigma Scale, designed for use with adolescents with mild IDs, was used to measure perception of stigmatization. It comprises three subscales: Feeling Different, Anxiety, and Poor In-group Concept. Szivos-Bach (1993) cited item-total correlations of 0.34-0.62 and a scale alpha of α=0.81. This scale has been used in subsequent ID research (e.g. Dagnan & Waring, 2004).

Experiences of Stigma Checklist (EOS - Cooney et al.,2006)

This measure assessed participants' past and present experiences of stigma. The EOS consists of thirteen items, eight concerning frequency of experiencing stigmatised treatment from others (family, teachers, peers, people in community) and the remaining five concerning frequency of non-threatening experiences. The scale was designed for use with adolescents and is reported to have a scale alpha of α=0.61 (Cooney et al., 2006). In accordance with Cooney at al (2006) further information was elicited with verbal prompts, which were later transcribed and reviewed by the researcher and an independent rater (SM, SA) to determine whether these experiences could be categorized as stigmatizing. Inter-rater agreement was strong (*K=0.95*).

Social Skills Questionnaire- Teacher (SSQ-T - Spence, 1995)

College tutors were asked to complete this measure. This was selected as appropriate because it aims to measure social behaviours mediating social interactions amongst 8-18 year olds. It comprises thirty items, rated on a three point likert scale, and covers peer relationships, social relationships and general social behaviour. This has been demonstrated to have sound reliability and validity, with scale alpha of α=0.95.

Global rating of social skills

The college tutors were also asked to rate participant's global social skills on a ten point likert scale. This was selected as an adjunct to the SSQ-T in accordance with evidence-based recommendations regarding the measurement of social skills (Norton & Hope, 2001).

Wechsler Abbreviated Scale of Intelligence (WASI-II, 1999)

The two-subtest version of the *Wechsler Abbreviated Scale of Intelligence* (WASI-II) **:** Vocabulary and Matrix Reasoning subscales was used to estimate participants' intellectual ability. This is an abbreviated version of the Wechsler Adult Intelligence Scale (WAIS-III; Wechsler, 1997). Correlations between the WASI and the WAIS-III are adequate (0.88 for Vocabulary, 0.66 for Matrix Reasoning). Adequate content validity, clinical validity and construct validity has been demonstrated amongst intellectually disabled populations.

Procedure

During the study phase, participants met with the researcher to complete the measures in a semi-structured interview format. Interviews were conducted over two sessions, each lasting thirty to forty five minutes, and were conducted in classrooms within the college. The response format for the self-report measures involved presentation of each item on an A4 landscape page with large print, with blocks of increasing size representing the five likert responses. In line with Zetlin, Herriot & Turner's (1985) recommendations, participants were encouraged to talk around each of the items to increase reliability of responses. The WASI was always administered last, as it has correct and incorrect responses, contrary to the spirit of the self-report measures which were used. With the participant's consent, responses to the Experience of Stigma Checklist were audio-recorded. Three participants refused consent for recording, and their answers were written on prepared response sheets.

Results

<u>Data analysis</u>

This study aimed to examine associations, between perceptions of stigma, experiences of stigma and social skills and social anxiety. The associations were analysed using bivariate correlations and partial correlations.

Selection of correlational procedures was based upon whether the data met assumptions for parametric analysis. The Social Anxiety Scale-Adolescents (SAS-A), Stigma Scale, and Global Rating of Social Skills all met assumptions of normality, therefore Pearson's r parametric correlations were conducted with these measures. The Experience of Stigma (EOS) Checklist data violated parametric assumptions, as the data were positively skewed (Kolmonogrov-Smirnov, p=<0.05). Visual inspection of the Social Skill Questionnaire-Teacher (SSQ-T) data, were also negatively skewed and therefore violated parametric assumptions. Nonparametric correlational analyses (Spearman's rho) were selected for analyses involving either the EOS or the SSQ-T.

This was a novel study examining relationships between variables, which have been hitherto unexplored. Therefore the current power calculation is based upon the most relevant data available, extracted from Dagnan & Waring's (2004)'s paper. This paper examined the relationship between evaluative beliefs and perceived stigma, using Szivos's (1991) Stigma Scale. Power calculation using this data suggested that a sample size of 36 was required to ensure adequate statistical power.

Consequently this is an underpowered study. The strategy for statistical analysis therefore aimed to balance the risk of making a Type II error due to the small sample size, with the need to

control for Type I error potentially arising from multiple correlations. With underpowered studies of this nature, Bonferroni studies are not recommended (Wilkinson & Taskforce on Statistical Inference, 1999). Instead, it was considered appropriate to report two-tailed tests, and confidence intervals for correlations (Wilkinson & Taskforce on Statistical Inference, 1999). Confidence intervals provide an estimated range of values, which are likely to include a population parameter based upon a set of observations. Reporting of confidence intervals is recommended to guide interpretation of results in a more cautious manner (Wilkinson & Taskforce on Statistical Inference, 1999).

In the following sections, participant characteristics will be reported, followed by descriptive and psychometric properties of the measures. Results for each of the three hypotheses will then be presented. Finally post-hoc analyses will be reported.

A. Participant characteristics

Demographic data are summarized in Table 1.

Insert Table 1 here

This shows that the twenty-seven participants comprising nine males and eighteen females, with a mean age of eighteen took part. Additionally Table 1 shows that the majority of the sample lived in more deprived areas, consistent with established findings that individuals with ID tend to live under poorer socioeconomic circumstances (Fryers et al., 2003).

Table 1 also shows that twenty of these participants had IQ (Intelligence Quotient) scores within the range of intellectual disability (<70), whilst the remaining participants were estimated to have

intellectual abilities in the borderline to the low average range. Although caution is advised in interpreting results of a brief assessment of intellectual ability (Stano, 2004), these scores may reflect the heterogeneity of individuals with "additional support for learning needs" attending supported learning college courses. Nevertheless, these participants had the same experience of receiving specialist learning support throughout their educational career and therefore shared the same potentially stigmatizing experience of being perceived as intellectually disabled. As this study is concerned with the social impact of disability, it was therefore considered appropriate to include data from these participants in the analysis.

B(1) Descriptive data and psychometric properties of the measures

The means and standard deviations for total and subscale scores on the Social Anxiety Scale – Adolescents (SAS-A); Stigma Scale; Experience of Stigma Checklist , Social Skills Questionnaire-Teacher (SSQ-T) and Global Social Skills Ratings are presented in Table 2. Means and standard deviations from the standardisation samples are also reported. Attrition and non-response resulted in missing data on some of the measures, shown in Table 2.

Insert Table 2 here

SAS-A: Whilst differences in sampling characteristics preclude formal comparisons, Table 2 shows that the present sample have higher levels of self-reported social anxiety than those reported in the standardization sample of typically developing adolescents (La Greca & Lopez, 1998). Internal consistency of the SAS-A subscales for the present sample ranged from α=0.69-0.78, with an overall scale alpha of α=0.74. This suggests acceptable to good internal consistency.

<u>EOS:</u> Table 2 highlights the distribution of Experience of Stigma (EOS) scores in the current sample. This was broadly comparable to that of Cooney et al (2006), who also reported range of 0-18, in their sample of adolescents with mild to moderate ID. The scale alpha of α=0.66 indicated good internal consistency on this measure, amongst the present sample. Further descriptive findings from the EOS are reported in the following section.

<u>Stigma Scale</u>: These scores are also summarised in Table 2. The scale alpha for the current sample was α=0.75. This was reasonable, albeit slightly lower than that reported for the original sample (Szivos, 1991).

<u>SSQ-T</u> : Table 2 shows that the mean scores in the current sample appear marginally lower than those reported in the standardization sample of the SSQ-T. The scale alpha, at α=0.96, was high and comparable to Spence's (1995) data. Convergent validity between the SSQ-T and the Global Social Skills Rating was evaluated by conducting a correlation. The positive correlation observed between the SSQ-T and the global rating of social skills (*rho*= 0.72 (95%CI, 0.37, 0.92), *p*<0.0001), suggested convergent validity for staff's intra-individual ratings of social skills. Due to this, only data from the SSQ-T were included in subsequent analyses.

B (2) Frequency and qualitative data on experiences of stigma (EOS)

Table 3 presents descriptive data on the participants' experiences of stigma, coded using Cooney et al's (2006) categories.

Insert Table 3 here

The most frequent experience of stigma reported was being ridiculed and called names, within educational settings. Three participants described being ridiculed due to a speech impairment, within segregated settings. This is illustrated in the following quote from one participant:

"Because of the way I speak they laugh at me. .trying to get the word out. .They make me say things".

Name calling in the area where the participants lived, was the second most frequent stigmatizing experience, described in the following:

"people on my street call us the mongol we'ans"

" when I'm out and about I have been shouted at …called spazzy.., mongol and idiot" .

Participants who reported experiencing discriminatory treatment from family members. This included reports of family members ridiculing the participants, mostly due their cognitive impairment. The following comments were made by participants:

"My cousin laughs at me because I can't count"

There were also complaints of unwarranted parental restrictions:

"They treat me like a baby still. They don't trust me, they think someone might mug me".

C: Correlational analyses and study hypotheses:

(1) Experience of stigma and social anxiety

Correlational data from all nonparametric correlations, using Spearman's *rho,* is summarised in Table 4:

Insert Table 4 here

Table 4 shows that, as predicted, positive correlations were observed between experience of stigma and social anxiety (*rho*= 0.59 (95%CI   0.28, 0.79), p=0.02). EOS total scores also correlated positively with Fear of Negative Evaluation (FNE) scores from the SAS-A (*rho*=0.59 (95%CI=0.25, 0.79), p<0.01). Furthermore, EOS total scores were positively associated with the Social Avoidance and Distress- General (SAD-G) subscale of the SAS-A (*rho*=0.71 (95%CI 0.48, 0.86) , p=0.001). However, no significant association was observed between experience of stigma (EOS total) and the Social Avoidance and Distress –New (SAD-N) subscale of the SAS-A (*r*=0.21, (95%CI= -0.18, 0.79), p=0.473).

C2: Perceived stigma and social anxiety

The scatterplot shown below suggests a positive linear relationship between perceived stigma and social anxiety.

Insert Fig. 1 here

Correlational data for all parametric (Pearson's *r*) correlations is presented in Table 5. As shown, the predicted positive correlation between social anxiety (SAS-A) and perceived stigma (Stigma Scale) was observed (*r*=0.63, (95%CI, 0.31-0.81), *p*=0.001).

Insert Table 5 here

In order to explore whether specific elements of social anxiety within the SAS-A were associated with perceived stigma, further correlational analyses were undertaken between scores from the three subscales of the SAS-A and the total Stigma Scale scores. Table 5 illustrates a highly

significant positive correlation between the Stigma Scale and the Fear of Negative Evaluation (FNE) subscale of the SAS-A (r=0.65, (95%CI 0.36, 0.83) p<0.001,). The Social Avoidance and Distress-New (SAD-N) subscale of the SAS-A yielded a smaller positive correlation with the Stigma Scale, (r=0.42, (95% CI 0.16, 0.69), p=0.04,). This suggested the presence of an association between increased awareness of stigma and an anxiety about meeting new people and being in novel social situations. There was no significant correlation observed between the Social Avoidance and Distress in general situations (SAD-G) and the Stigma Scale (r=0.30 (95%CI – 0.09, 0.062).

C 3(a) Social skills and social anxiety

It was hypothesized that there would be an association between poor social skills and elevated social anxiety. To test this hypothesis, nonparametric correlations were undertaken between the Social Skills Questionnaire-Teacher (SSQ-T) and the SAS-A total scores. Tables 5 depicts these correlations. As can be seen, correlational analyses failed to reveal an association between social skills and social anxiety (rho=0.25 (95%CI= -0.16, 0.59) p=0.21).

C 3(b) The impact of social skills on the relationship between social anxiety and stigma

A series of nonparametric partial correlations were conducted as planned, to examine whether social skills contributed to the observed relationship between social anxiety and perceived and experienced stigma. Table 6 summarises the outcome of these correlations.

Insert Table 6 here

As can be seen, the positive correlation between social anxiety and perception of stigma remained (rho=0.55 (95%CI= 0.2, 0.78,) p<0.05) when SSQ-T scores (rho=0.54 (95%CI,

p<0.05) were held constant. Similarly, Table 6 shows that the positive correlation between experience of stigma and social anxiety (*rho*=0.42 (95%CI, 0.02, 0.7) p<0.05) persisted, when SSQ-T scores were kept constant *(rho*=0.41, (95%CI, 0.02, 0.7) p<0.05).

D: Post-hoc analyses

In addition to the main research hypotheses, further analyses were carried out to address further theoretically interesting questions in the data.

Role of gender

It has been shown that gender can mediate presence of social anxiety in the normal population (La Greca & Lopez, 1998; Turk et al., 1998). However, an independent samples *t*-test failed to detect any significant difference in the level of social anxiety due to gender in the present sample (*t*= 0.41 df=25, *p*=0.688 two-tailed).

Role of socially apparent disability

The question of whether socially apparent impairments such as speech impairment or visible disability have an impact on levels of stigma and social anxiety was also explored. The data from those with known disability and other visible impairments were collapsed into an 'apparent disability' group. This consisted of twelve participants with impairments including Downs Syndrome, physical disability, and speech impairment. This left fifteen participants with 'not apparent' disabilities. Independent samples *t*-tests indicated no significant between group differences on social anxiety (*t*=0.26, df=25, *p*=0.979, two-tailed) and perception of stigma (*t*=0.75, df=23, *p*=0.460, two-tailed) between these groups. The Mann-Whitney U test indicated that there was no significant difference between the two groups' experiences of stigma (*U*=51.5, N_1 =12, N_2=15, *p*=0.251, two-tailed).

Discussion

In the present study, adolescents with intellectual disabilities reported a range of stigmatising experiences, consistent with findings reported elsewhere in the intellectual disability literature (Zetlin & Turner, 1985; Dovidio et al., 2000; Cooney et al., 2006). As hypothesised, these increased experiences of stigma were associated with elevated levels of social anxiety. Similarly the hypothesised association between heightened perception of stigmatised status and elevated levels of social anxiety was also sustained. The subscale of the social anxiety measure corresponding to fear of negative evaluation was highly associated with experience and perception of stigma. However there was no support for the third hypothesis which proposed that poor social skills would be associated with elevated social anxiety, and that this would contribute to the relationships between social anxiety, and perception and experiences of stigma.

These findings are consistent with research highlighting that experiences of victimization and peer rejection may predispose typically developing adolescents to generating socio-evaluative concerns, and subsequent social anxiety (LaGreca & Lopez, 1998;Slee, 1994; Vernberg, Abwender, Ewell, & Beery,1992). Moreover, this study highlighted a significant association between past and present experiences of stigma and a fear of negative evaluation. This may fit with cognitive theorists' assertions that negative past experiences can lead to the formation of maladaptive schemas regarding social interactions and the responses of others. Activation of these schemas in situations of social threat may result in cognitive biases in the processing of social information , including expectations regarding negative evaluations of others (Clark & Wells, 1995; Rapee& Heimberg, 1997).

Amongst typically developing adolescents, a further consequence of experiencing negative peer interactions may be a tendency to disengage from social situations (La Greca & Lopez, 1998;

Vernberg et al., 1992). This was supported by the present data which showed a strong association between being treated in a stigmatized manner and social avoidance, and in particular, generalized social avoidance amongst adolescents with ID. Although the direction of this relationship can not be confirmed from the present data, this could suggest that experiences of stigmatizing treatment may lead adolescents to disengage from social interactions with peers who are familiar to them. This precise casual relationship was described in a longitudinal study of typically developing adolescents (Vernberg et al., 1992).

In addition to experiences of stigma, the present study indicated that increased perception of stigma may be associated with levels of social anxiety amongst adolescents with ID. Adolescents who described increased awareness of stigma also reported frequent anxious concerns about how they were perceived by others. This is consistent with emerging research which has illustrated an association between heightened recognition of stigmatized status and core evaluative beliefs amongst adults with ID. Specifically, Dagnan & Waring (2004) demonstrated that amongst adults with ID, increased awareness of stigma predicted negative beliefs concerning the evaluation of others.

Cognitive models of social anxiety contend that in situations of perceived social threat, socially anxious individuals fear rejection and engage in a process of detailed self-monitoring and biased processing of threat related social cues (Clark & Wells, 1995). Similarly, it appears that adolescents with ID, who possess a heightened awareness of being stigmatised may be hypervigilant to social cues of rejection and may make anxious predictions that they will not be accepted by others. Paralleling this, investigations of other stigmatised groups have cited evidence that individuals who are highly aware of their stigmatised status may experience

exacerbated fears of social rejection or derision (Frude et al., 1990; Hebl, Tickle & Heatherton , 2000).

In the current study, social anxiety and fear of negative evaluation were equally linked to experiences and awareness of stigma. Scrambler & Hopkins (1992) and Jacoby (1994) suggested that even in the absence of 'enacted stigma', members of stigmatized groups may generate expectations of rejection, which they termed 'felt stigma'. However in the present sample of adolescents with ID, although perceptions of stigma were implicated in social anxiety, stigmatising experiences appeared to play an equally critical role.

This is a preliminary study in this area and as such caution may be warranted in interpreting these findings. Whilst this study highlights associations between experiences and perceptions of stigma and social anxiety, the design constrains interpretation of causality. An alternative explanation of reported associations may be that the measures of stigma and social anxiety simply represent overlapping constructs. Although sociological theories of stigma and psychological accounts of social anxiety have developed in relative isolation from each other, they share many features (Kent, 2000). For instance stigma theorists delineate stigma along cognitive, behavioural and affective components (Dovidio et al., 2000). Elsewhere in the stigma literature, Jacoby's (1994) description of 'felt stigma' appears to apply to both awareness of stigma and anxious predictions regarding a fear of negative evaluation and rejection of others. Therefore it may be intuitively appealing that a relationship between stigma ,and in particular, fear of negative evaluation, exists.

However, if findings from the present study are indeed robust, a number of clinical and theoretical implications may be inferred. In the current study, experiences of stigmatising treatment were shown to be associated with increased levels of social anxiety. This suggests that

early intervention ought to remain a continued goal of educators and policymakers in considering the social and emotional needs of adolescents with ID. Ideally this would be achieved through improving social integration and continuing to strive to reduce stigma surrounding intellectual disabilities within the education system and society at large.

The importance of interventions to reduce discriminatory experiences is illustrated by research in typically developing adolescent populations. In particular, fear of negative evaluation and social avoidance have been seen to change in accordance with experiences of negative social interactions (Vernberg et al.,.1992; La Greca & Lopez, 1998) . Therefore positive intervention to reduce stigmatising experiences might offer some protection against the onset of social anxiety for adolescents with ID.

Conceptually, findings from the present study converge with the recent emphasis on the contribution of social experiences to cognitive models of psychopathology amongst ID individuals (Dagnan & Waring, 2004; Dagnan & Jahoda, 2006; Kroese, 1997). Accordingly, the present study has clinical implications, in terms of demonstrating the value of integrating social factors into cognitive-behavioural assessment, formulation and treatment of social anxiety.

Clements (1997) has argued that in adapting cognitive behavioural therapy for individuals with intellectual disabilities, there is a need to 'locate cognitive functioning within the broader socio-cultural domain'. The present study illustrates the value of considering socio-cultural factors within a historical case conceptualization, to elucidate the impact of past and present experiences of stigmatised treatment on the development of maladaptive beliefs and fears of negative evaluation. In addition, how these experiences may affect awareness of stigma merits attention.

Careful consideration of this may inform selection of an appropriate intervention approach. For instance, when individuals with ID describe a personal history replete with discriminatory treatment, then reliance upon conventional CBT approaches targeting cognitive distortions may not be sufficient in addressing social anxiety. Thus when these individuals report a history of discriminatory treatment, alternative intervention strategies require consideration, for instance, utilizing strategies to foster a more positive self-image, by drawing upon identified personal strengths may be profitable (Dagnan & Jahoda , 2006). Where individuals with ID report heightened stigma awareness and fear of negative evaluation but few experiences of 'enacted' stigma, targeting socio-evaluative concerns, and cognitive biases may be of value.

Furthermore the current study highlighted that social avoidance was related to experiences and perceptions of stigma amongst adolescents with ID. Such disengagement from peer interactions may be concerning and could further disrupt the development of supportive friendships. In addressing this therapeutically, sensitivity to social and individual factors is necessitated, perhaps by considering factors such as limited access to social opportunities, and impaired social skills with which adolescents may present (De Bildt et al., 2005; Vaughn et al., 1992). Enhancing individual's coping skills repertoire to address difficult experiences, may also be a fruitful potential focus for intervention.

Limitations and directions for future research

Interpretation of the present study is constrained by a number of methodological and theoretical issues. First, small sample size limits interpretation of the results and therefore a conservative approach to statistical procedures and reporting was undertaken. Whilst results are promising, the size of the confidence intervals reported for the correlational data reflects the caution with which

conclusions must be drawn. Replication of this study, with a larger sample size, is desirable in order to add weight to the current findings.

It was surprising that no evidence was found for the expected association between social anxiety and social skills. One explanation for this is that Social Skills Questionnaire-Teacher (SSQ-T, Spence et al., 1995) did not adequately capture the range of social skills applicable to individuals with ID. Several observations point to this. The distribution of SSQ-T scores did not differ substantially from that reported in a typically developing adolescent sample (Spence, 1995). This might not be expected given that social skill impairments are a core feature of intellectual disability (BPS, 2000; Greenspan, 1999). A ceiling effect was also observed within the SSQ-T data, further suggesting that this measure lacked sensitivity. Measurement error may have arisen because different raters may have used different baselines to anchor their judgments of social skills. Greenspan (1999) has suggested that measuring social skills amongst ID populations requires an instrument which captures the range and richness of social skills reflecting 'social intelligence'. Therefore future research is necessitated, implementing a more sensitive measure of social skills amongst this population. This may enable a fuller consideration of the role of social skills in social anxiety amongst adolescents with ID.

The present study failed to find support for other variables, thought to influence social anxiety and stigma. This was not surprising given the inherent methodological constraints within this study. For instance the imbalance in gender within the present sample may have obscured gender differences on the social anxiety measure. Moreover, socially apparent impairments did not significantly influence the extent of social anxiety, perceived stigma or experience of stigmatizing treatment reported by adolescents with ID. The was contrary to expectations, given

that visibility of stigmatised identity has been theorized as "disruptive" to social interactions (Jones et al., 1984), and has been implicated in social anxiety (Leary et al., 1998; Kent, 2000).

Prospective studies might seek to clarify the relationship between experiences and perceptions of stigma and social anxiety. Implementation of a prospective design which allows for causal inferences to be made, would be of benefit to help elucidate how stigmatising experiences may be internalised and how this may relate to the emergence of social anxiety amongst adolescents with mild IDs. Vernberg et al's (1992) prospective study on typically developing adolescents illustrates the value of conducting prospective studies in this area.

As is the case with correlational studies, there remains a possibility that other unmeasured variables may have contributed to the observed results. Indeed, an association between stigma and social anxiety amongst adolescents with ID is unlikely to be a straightforward, linear one, and therefore an array of factors require further investigation in elucidating the apparent association between stigma and social anxiety. Other investigations amongst ID populations have highlighted associations between stigma awareness, downward social comparison processes, self esteem, and psychological distress (e.g. Dagnan & Waring 2006; Szivos-Bach, 1993). Recent research has found that adults with social anxiety make frequent derogative social comparisons than non socially anxious controls (Antony et al., 2005). Moreover, themes relating to coping and resilience, such as how adolescents may have maintained positive identities in the face of prejudicial treatment, were omitted in this study, yet merit future exploration. Thus the relationship between stigma and social anxiety is a complex and intriguing one, potentially influenced by a range of variables, which require investigation.

Overall though, the emergent picture is that social factors such as stigmatizing treatment and perception of stigma mat exert a potent influence on self-evaluation, and perceived threats of the negative evaluations of others, amongst individuals with ID.

Conclusions

Adolescence may be construed as a 'critical period' in the development of social competence, social identity and, for some, social anxiety. The present study demonstrates an association between experiences and perceptions of stigma and social anxiety. This might suggest that adolescents with intellectual disabilities are especially vulnerable to experiencing anxiety in social situations, as reflected in prevalence data (Emerson,2003). These findings may reflect the growing evidence base surrounding the importance of social factors in psychopathology amongst individuals with IDs. The results may also have clinical and theoretical implications in addressing social anxiety. However, as a preliminary study, it is recommended that this is replicated and extended to address some of methodological and conceptual caveats raised.

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List of Tables & Figures

Table 1 : Descriptive demographic data : frequencies and means

Demographic variable (range of values)	Frequency n (% of sample)	Mean (s.d.)
Gender		
Male	9 (33.33%)	-
Female	18 (66.66%)	-
Deprivation Category (2-7)[6]	-	5.3 (1.49)
Education- primary and secondary		
Both segregated schools	16	-
Combination of segregated and mainstream schools	7	-
Both mainstream schools	4	-
IQ scores (55-93)[7]		
<70	20 (74%)	68.59
>70	7 (26%)	(11.21)
Age (16-21)	-	
16-18	20 (74%)	17.96
18-21	7 (26%)	(1.53)
Additional conditions		
Genetic and Down's syndrome	5 (18.5%)	-
Speech impairment	5 (18.5%)	-
Physical disability	1 (3.4%)	-
ADHD/conduct disorder	1 (7.4%)	-
One or more of the above/complex needs	2 (6.9%)	-
None/Not known	13 (48.1%)	-

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[6] Deprivation Category was derived from the Carstairs Index (McLoone, 2004). Scores range from 1 (least deprived) and 7 (most deprived) .

[7] IQ scores were measured by the WASI, where the lowest possible value is 55.

Table 2: Means scores on key variables

Measure Possible range of values	Range	Mean (s.d.)[8]	Published means[9]
Social Anxiety Scale – Adolescents (SAS-A) (n=27) Possible range = 18-90			
Total SAS-A score	29-78	58.81 (14.19)	39.09 (12.0)
Fear of Negative Evaluation	11-33	21.22 (6.13)	16.81 (6.4))
Social Avoidance and Distress-New	9-30	18.74 (5.71)	15.37 (4.7)
Social Avoidance and Distress-General	4-18	10.74 (3.95)	6.91 (2.8)
Stigma Scale (n=25) Possible range 10-50	10-33	21.56 (5.05)	
Feeling different	0-19	8.48 (3.91)	
Anxiety	3-14	7.16 (2.42)	
Poor in-group concept	3-10	5.8 (1.93)	
Experiences of Stigma (EOS) (n=25) Possible range 0-32	0-17	3.04 (3.96) * =2	*= 3
Social Skills Questionnaire–Teacher (SSQ-T) (n=26) Possible range : 0-60	20-60	48.30 (10.71) * =50	52.28 (10.9)
Global social skills scale (n=26) Possible range: 0-10*	3-9	6.76 (1.56)	-

For non normally distributed data/ordinal data , medians are also reported.

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[8] For non normal data (EOS and SSQ-T) medians are also reported in the 'Means' column, denoted by an asterisk.

[9] For the SAS-A, norms are derived from LaGreca & Lopez (1998). For the stigma scale, norms are derived from Szivos (1991). For the EOS, these norms are derived from Cooney et al (2006). For the SSQ-T

Table 3: Frequency data from the Experiences of Stigma Checklist

Broad stigma experience category	Frequency (*n*=25)	Specific stimgatizing experience	Frequency
		Outwith school/college time	
People in the local area	12	People in local area calling them names/ridicule	6
		People in the local area ignoring them	1
		People in the local area staring at them	3
		Violent physical contact by people in the local area	2
Parents and family	11	Their parents restricting them/overprotective/mistrusting	5
		Family members calling them names	1
		Family members ridiculing/mimicking them	5
		Within school/college time	
Students	14	Being ridiculed or called names by other people	10
		Taken advantage of	2
		Violent physical contact by other students	1
Tutors	2	Teachers/tutors giving unwanted extra help/work at too easy a level	1
		Ignoring	1

**Table 4: Correlation matrix for nonparametric correlations (Spearman's *rho)*

	EOS.	SSQ-T
1. Social Anxiety	**0.59**	0.26
2. Fear of negative evaluation (FNE)	**0.59**	0.38
3. Social Avoidance and Distress-new (SAD-N)	0.21	0.21
4. Social avoidance and distress - general (SAD-G)	**0.71**	-0.08
5. Stigma Scale (SS)	**0.62**	0.16
6. SS: Feeling Different	**0.56**	0.19
7. SS: Anxiety	0.29	-0.27
8. Stigma Poor Ingroup Concept	0.28	0.32
9. Experiences of Stigma		-0.07
10. SSQ-T		

**Table 5: Correlation matrix for parametric correlations (Pearson's *r)*

	1.	2.	3.	4.	5.	6.	7.
1. Social Anxiety (SAS-A)		**0.88**[10]	**0.8**	**0.68**	**0.63**	0.38	<u>0.47</u>[11]
2. Fear of negative evaluation (FNE)			**0.59**	<u>0.43</u>	**0.65**	<u>0.49</u>	<u>0.39</u>
3. Social Avoidance and Distress-new (SAD-N)				<u>0.41</u>	<u>0.42</u>	0.28	<u>0.42</u>
4. Social avoidance and distress - general (SAD-G)					0.30	0.21	0.30
5. Stigma Scale (SS)						**0.69**	**0.7**
6. SS: Feeling Different							<u>0.45</u>
7. SS: Anxiety							
8. SS: Poor Ingroup Concept							

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[10] Bold type denotes significance at p>0.01 (two-tailed)
[11] underlined figures denotes significance at p>0.05 (two-tailed)

Table 6: Correlation matrix for nonparametric ranked partial correlations

Key variables in the correlation	Correlation coefficient	Partial correlation coefficient when controlling for SSQ-T
SAS A & SSQ-T	0.27	-
SAS-A & Stigma Scale	0.558	0.540
SAS-A & Experience Of Stigma	0.416	0.411

NB: This correlational procedure involved transforming data into a ranked data set and conducting a partial parametric (Pearson's r) correlation with this data set. This is an acceptable procedure since many statistical programmes do not include an option for a nonparametric correlation and was performed upon the advice of a medical statistician

Fig. 1 : Scatterplot of SAS-A and Stigma Scale scores

Association between SAS-A and Stigma Scale scores
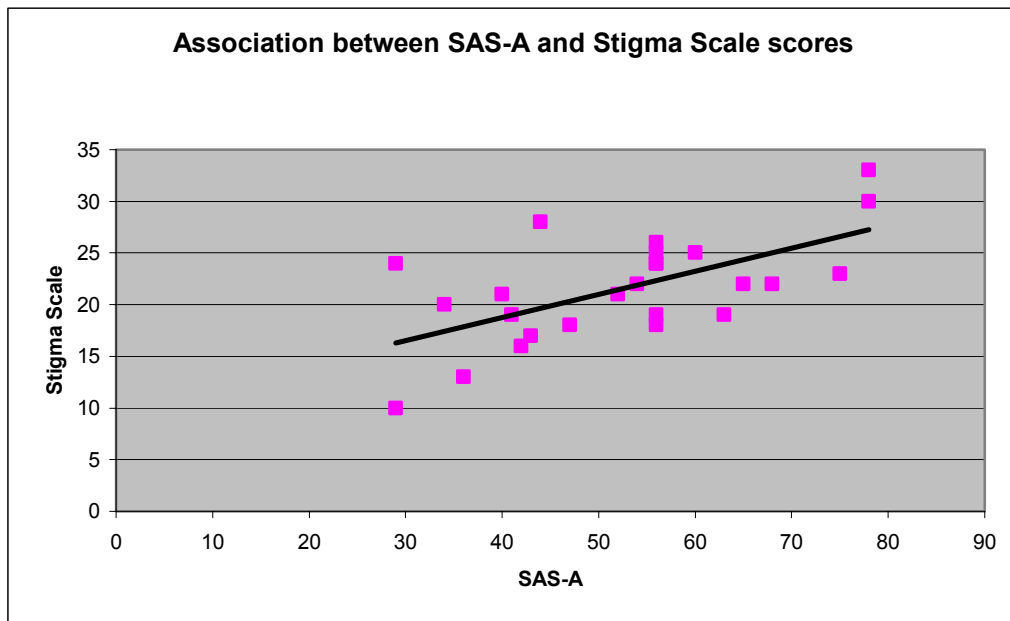
Fig. 2 : Scatterplot of Fear Of Negative Evaluation scores and Stigma Scale scores

Association between Fear of Negative Evaluation scores on the SAS-A and Stigma Scale scores (perceived stigma)(n=24)
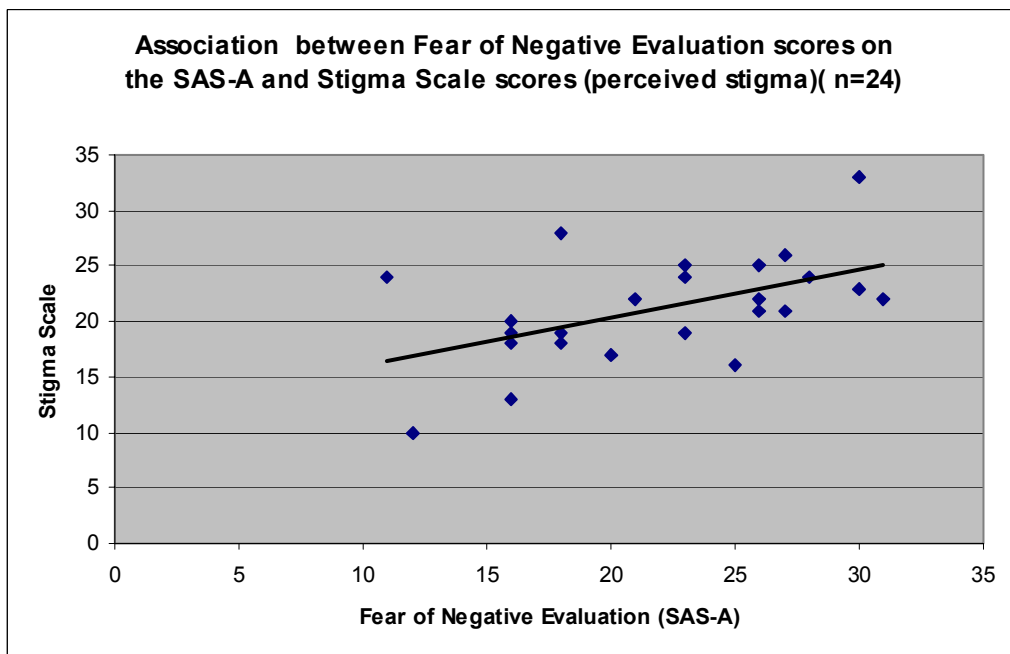
Chapter Five

Single N Case Research Study

A Functional Analysis Of Antecedents Evoking Problem Behaviour In A Nine Year Old Girl With Intellectual Disabilities

A functional analysis of antecedents evoking problem behaviour in a nine year old girl with intellectual disabilities

Shelagh Morrison* & Andrew Jahoda

* corresponding author

Address for Correspondence:

Department of Psychological Medicine

Gartnavel Royal Hospital

University of Glasgow

1055 Great Western Rd

Glasgow

G12 0XH

Email: shelaghmorrison@yahoo.co.uk

Telephone: 0141-2110607

To be submitted to: Journal of Applied Behavioural Analysis

Abstract

Background: Analogue assessments have demonstrated effectiveness in testing hypotheses regarding challenging behaviour, amongst children and adults with intellectual disability. In the literature, antecedent analogue assessments have received little attention yet may offer an effective means of identifying the determinants of problem behaviours in an effective and ecologically valid manner. This single case experimental investigation proposes an antecedent analogue assessment of a nine-year old girl with intellectual disabilities, who was presenting with tantrum behaviours in the school setting, which were severely impacting on her educational and social development.

Methods: An alternating treatments design is proposed to examine the effect of two hypothesised antecedents: (i) low levels attention and (ii) high levels of task difficulty, upon the participant's tantrum behaviour , affect and task engagement. The participant will engage in five sessions, each comprising four conditions which systematically manipulate these antecedents. Momentary time sampling techniques will be used to establish the frequency of the participant's behaviours across conditions, which will be subsequently compared.

Discussion: The findings from this assessment may inform antecedent interventions., to be implemented in the classroom. Depending on the outcome this may involve modifying features of the task or delivery of social attention.

Keywords: intellectual disability, functional analysis, analogue assessment, antecedents

Chapter Six

Research Portfolio Appendix

Contents of Appendices

Appendix 1 (i): Local Aims of Guided Self-Help Project (Hancock, 2005)

The specific aims and objectives of the Guided Self-Help Project can be summarised as follows:

1. Offer a locally delivered Guided Self-Help service which is accessible and readily available (no waiting lists) both to patients with mild to moderate depression/psychosocial difficulties and those at some risk of developing these difficulties.
2. To provide Guided Self-Help as an equitable alternative resource, which is both acceptable and frequently used by primary care healthcare workers.
3. To [provide a Guided Self Help service which demonstrably reduces the level of depression and anxiety and increases the level of functioning for those patients who use it.
4. To encourage understanding and promote personal responsibility for managing psychosocial problems.
5. To successfully incorporate a Guided Self Help service within a tiered/stepped care approach to mental health services provision.
6. Increase the knowledge base of primary care and non-statutory/voluntary organisations in dealing with patients with depression and psychosocial difficulties.
7. To encourage the appropriate and effective use of psychotropic medication for depression in primary care and with the intention of directly impacting on the rates of use of antidepressants, thereby at least partly self-financing the continuation of the project.
8. Provide a model which can promote cultural change and inspire other services to recognise the potential effectiveness of adopting a self-help model of care.

Self Help Project

Who is suitable?

- People with mild/moderate psychosocial problems of **recent onset**
- Emotional difficulties eg 1st episode aniety or depression perhaps associated with –

e.g. work stress/relationship issues/uncomplicated grief/panic/mild post traumatic stress disorder/adaptation to recent physical ill health

Past history of abuse is not an exclusion providing abuse is not the "hot" issue

Who is not suitable?

- People currently misusing drugs/alcohol doubt
- Admitting to suicide ideation
- Recent self harm (past 3 months)
- Visually/intellectually impaired
- Significantly impaired concentration/memory
- Not interested in self help
- People with previous contact with psychiatry or psychology services

Referral to Self-Help from Psychology

1. Referral from GP /CMHT/ Psychology assessed as suitable for Self Help
2. Psychologist /Counsellor/CMHT writes to inform referrer client passed onto self help
3. Patch Self Help worker informed of client details

Referral to Psychology/CMHT from Self Help Worker

1. Self Help Worker writes brief referral letter to patch psychologist/CMHT
2. Copy of letter sent to GP
3. Self Help Worker to discuss case with secondary service practitioner
4. Responsibility for holding client passes back to GP whilst client on waiting list for secondary service
5. Self Help Workers do not have a support role.

Appendix 1 (iii) : Referral pathways between Guided Self Help Project and other services
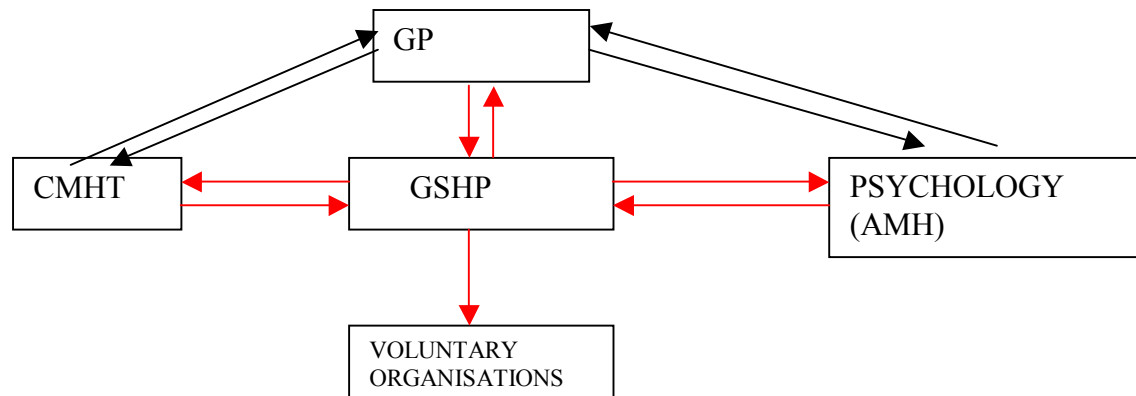
→ = referral pathways examined in the present audit.

Appendix 1 (iv): Referral proforma

<u>Assessment form for psychosocial problems</u>

G.P. Name: Today's Date:

Patient's name: Tel. No:

Date of Birth: Address:

Nature of Problem:

Screening Questions –
Is your patient……

	YES	NO
….interested in self help approach		▓
….admitting to suicidal ideation / recent self harm	▓	
….currently misusing drugs / alcohol	▓	
….visually or intellectually impaired	▓	
….able to concentrate on self help approach		▓
Has this person previously or currently been referred to psychiatry?	▓	
Has this person had more than one course of therapy in psychology?	▓	

(if all ticks are in the non-shaded boxes consider the self help option)

Is the patient <u>already</u> on psychotropic medication: YES ☐   NO ☐
If YES – name of drug:

Prescribed medication <u>on this visit</u>   YES ☐   NO ☐
If YES which psychotropic drug:

IF THE SELF HELP APPROACH WAS NOT AVAILABLE I WOULD HAVE……

(a)	Seen more often myself	YES ☐	NO ☐
(b)	Referred to psychology	YES ☐	NO ☐
(c)	Referred to psychiatry	YES ☐	NO ☐
(d)	Prescribed medication	YES ☐	NO ☐
(e)	None of the above	YES ☐	NO ☐

Self Help Support Worker to make initial contact: YES ☐   NO ☐

Appendix 1 (v) : Which voluntary organisations are patients in Self-Help referred onto?

Voluntary org	number	% of 54	% of 50
Couples Counselling	10	19	20
CRUSE	15	28	30
National Schizophrenia Fellowship	2	4	4
PASS	2	4	4
Princes Trust	1	2	2
Youth Enquiry Service	5	9	10
NCH Mediation	2	4	4
Befrienders	3	6	6
Victim Support	1	2	2
1st Base	1	2	2
Echo Project	1	2	2
CAB	5	9	10
Kidscape	1	2	2
ACAS	1	2	2
EDA	1	2	2
Friendship club	1	2	2
Survivors Poetry Group	1	2	2
Arthritis Scotland	1	2	2
Total number of voluntary organisation referrals	54 but only 50 actual cases 4 multiple referrals	100%	100%

October 2004-April 2005: Voluntary organisations recommended by Self Help

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<u>Appendix I (vi) Guidelines for journal submission</u>

Scottish Medical Journal

incorporating

Edinburgh Medical Journal (founded 1805) and The Glasgow Medical Journal (founded 1828)

Guidance notes for contributors

The *Scottish Medical Journal* is published four times per year and is devoted to the publication of original investigations in all branches of medicine, review articles, historical subjects of medical interest, and clinical memoranda. Papers are accepted for publication on condition that they are offered to this journal alone and that they become the property of the *Scottish Medical Journal*.

Manuscripts should be submitted as:

One copy on paper sent to:

Professor R Carachi, Editor, Scottish Medical Journal,

Department of Surgical Paediatrics, Royal Hospital for Sick Children, Yorkhill, Glasgow G3 8SJ

AND

An email attachment in Word or Text to submit@smj.org.uk.

Papers should be written in clear concise English. Manuscripts should be typed, double spaced including title page, abstract, text, acknowledgements, references, figures, tables and legends. Number pages consecutively beginning with the title page. **Total word count should not exceed 2500 words.**

The title page should include the name(s) and address(es) of all author(s) and a word count. The corresponding author's email address should be included. Authors should include any declaration of any financial or commercial interest. Proofs will be sent to the corresponding author's address unless otherwise stated.

The second page should carry an abstract of not more than 200 words (Background and Aims, Methods and Results and Conclusion). Below the abstract include three to five key words or short phrases for indexing.

The description of methods and results should be in sufficient detail to allow repetition by others. Data should not be repeated unnecessarily in text, tables and figures. The discussion should simply repeat the results, but should present their interpretation against the background of existing knowledge.

References should be numbered consecutively in the order in which they appear in the text. Identify references in text, tables and legends by arabic numerals in superscript e.g. 3 or 2-4. Use the style of references adopted by Index Medicus. The titles of journals should be abbreviated and when there are more than six authors, it should be abbreviated to three authors followed by *et al*. The title of article, abbreviated name of journal, year, volume, first and last page numbers. 'Personal communications' and 'unpublished observations' (including information from manuscripts submitted but not yet accepted) should be so identified in parenthesis in the text and not included as references. Reference to books should include surname and initials of author(s), title of chapter, editor(s), title of book, place of publication, name of publisher, year, volume and page numbers.

Tables numbered in roman numerals should be submitted on separate sheets and should be designed to appear in either one column or across

the whole page. Omit internal horizontal and vertical rules and do not submit tables as photographs.

Illustrations both half tone and line, should be referred to as 'Figures' and should be numbered in arabic numerals. They should be technically excellent. Each figure and table should be accompanied on a separate sheet by a short legend as a heading with explanatory matter in footnotes. The name(s) of the author(s) should be written on the reverse side of the paper copy.

Case Reports will be summarised in the Journal and full text will be available on the Journal website. The authors should not include names, initials or hospital numbers of patients, which might lead to their recognition. A patient must not be recognisable in any photograph unless written consent has been obtained.

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Appendix 2 : Guidelines for submission

BEHAVIOUR RESEARCH AND THERAPY
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Guide for Authors
For full instructions, please visit http://ees.elsevier.com/brat

Aims and Scope
Behaviour Research and Therapy encompasses all of what is commonly referred to as cognitive behaviour therapy (CBT). The major focus is on the following: experimental analyses of psychopathological processes linked to prevention and treatment; the development and evaluation of empirically-supported interventions; predictors, moderators and mechanisms of behaviour change; and dissemination of evidence-based treatments to general clinical practice. In addition to traditional clinical disorders, the scope of the journal also includes behavioural medicine. The journal will not consider manuscripts dealing primarily with measurement, psychometric analyses, and personality assessment.

The Editor and Associate Editors will make an initial determination of whether or not submissions fall within the scope of the journal and are of sufficient merit and importance to warrant full review.

Submission to the journal <u>prior</u> to acceptance Authors can submit their articles electronically via the Elsevier Editorial System (EES) page of this journal http://ees.elsevier.com/brat. The system automatically converts source files to a single Adobe Acrobat PDF version of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF at submission for the review process, these source files are needed for further processing after acceptance. All correspondence, including notification of the Editor's decision and requests for revision, takes place by e-mail and via the Author's homepage, removing the need for a hard-copy paper trail.

Online submission is strongly preferred but authors can, in special cases, also submit via mail. Four copies of the manuscript, including one set of high-quality original illustrations, suitable for direct reproduction, should be submitted to **Professor G. T. Wilson, Psychological Clinic at Gordon Road, Rutgers, The State University of New Jersey, 41C Gordon Road, Piscataway, New Jersey, 08854-8067, USA.** Email: brat@rci.rutgers.edu. (Copies of the illustrations are acceptable for the other sets of manuscripts, as long as the quality permits refereeing.)

Submission of an article implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, without the written consent of the Publisher.

Presentation of manuscript Please write your text in good English (American or British usage is accepted, but not a mixture of these). Italics are not to be used for expressions of Latin origin, for example, in vivo, et al., per se. Use decimal points (not commas); use a space for thousands (10 000 and above). Print the entire manuscript on one side of the paper only, using double spacing and wide (3 cm) margins. (Avoid full justification, i.e., do not use a constant right-hand margin.) Ensure that each new paragraph is clearly indicated. Present tables and figure legends on separate pages at the end of the manuscript. If possible, consult a recent issue of the journal to become familiar with layout and conventions. Number all pages consecutively.

Provide the following data on the title page (in the order given).
Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.

Author names and affiliations. Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name, and, if available, the e-mail address of each author.

Corresponding author. Clearly indicate who is willing to handle correspondence at all stages of refereeing and publication, also post-publication. **Ensure that telephone and fax numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address.**

Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Abstract. A concise and factual abstract is required (maximum length 200 words). The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. References should therefore be avoided, but if essential, they must be cited in full, without reference to the reference list.

Keywords. Immediately after the abstract, provide a maximum of 6 keywords, to be chosen from the APA list of index descriptors. These keywords will be used for indexing purposes.

Abbreviations. Define abbreviations that are not standard in this field at their first occurrence in the article: in the abstract but also in the main text after it. Ensure consistency of abbreviations throughout the article.

N.B. Acknowledgements. Collate acknowledgements in a separate section at the end of the article and do **not**, therefore, include them on the title page, as a footnote to the title or otherwise.

Shorter Communications This option is designed to allow publication of research reports that are not suitable for publication as regular articles. Shorter Communications are appropriate for articles with a specialized focus or of particular didactic value. Manuscripts should be between 3000 - 5000 words, and must not exceed the upper word limit. This limit includes the abstract, text, and references, but not the title pages, tables and figures.

Arrangement of the article Subdivision of the article. Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text.' Any subsection may be given a brief heading. Each heading should appear on its own separate line.

Appendices. If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: (Eq. A.1), (Eq. A.2), etc.; in a subsequent appendix, (Eq. B.1) and so forth.

Acknowledgements. Place acknowledgements, including information on grants received, before the references, in a separate section, and not as a footnote on the title page.

Figure legends, tables, figures, schemes. Present these, in this order, at the end of the article. They are described in more detail below. High-resolution graphics files must always be provided separate from the main text file (see Preparation of illustrations).

Specific remarks Tables. Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article.

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References Responsibility for the accuracy of bibliographic citations lies entirely with the authors

Citations in the text: Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications should not be in the reference list, but may be mentioned in the text. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Citing and listing of web references. As a minimum, the full URL should be given. Any further information, if known (author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Text: Citations in the text should follow the referencing style used by the American Psychological Association. You

are referred to the Publication Manual of the American Psychological Association, Fifth Edition, ISBN 1-55798-790-4, copies of which may be ordered from http://www.apa.org/books/4200061.htmlor APA Order Dept., P.O.B. 2710, Hyattsville, MD 20784, USA or APA, 3 Henrietta Street, London, WC3E 8LU, UK. Details concerning this referencing style can also be found at http://humanities.byu.edu/linguistics/Henrichsen/APA/APA01.html.

List: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters "a", "b", "c", etc., placed after the year of publication.

Examples: Reference to a journal publication: Van der Geer, J., Hanraads, J. A. J., & Lupton R. A. (2000). The art of writing a scientific article. Journal of Scientific Communications, 163, 51-59.

Reference to a book: Strunk, W., Jr., & White, E. B. (1979). The elements of style. (3rd ed.). New York: Macmillan, (Chapter 4).

Reference to a chapter in an edited book: Mettam, G. R., & Adams, L. B. (1994). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), Introduction to the electronic age (pp. 281-304). New York: E-Publishing Inc.

Note that journal names are not to be abbreviated.

Preparation of illustrations

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General points
• Always supply high-quality printouts of your artwork, in case conversion of the electronic artwork is problematic.
• Make sure you use uniform lettering and sizing of your original artwork.
• Save text in illustrations as "graphics" or enclose the font.
• Only use the following fonts in your illustrations: Arial, Courier, Helvetica, Times, Symbol.
• Number the illustrations according to their sequence in the text.
• Use a logical naming convention for your artwork files, and supply a separate listing of the files and the software used.
• Provide all illustrations as separate files and as hardcopy printouts on separate sheets.
• Provide captions to illustrations separately.
• Produce images near to the desired size of the printed version.

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TIFF: Colour or greyscale photographs (halftones): always use a minimum of 300 dpi.
TIFF: Bitmapped line drawings: use a minimum of 1000 dpi.
TIFF: Combinations bitmapped line/half-tone (colour or greyscale): a minimum of 500 dpi is required.
DOC, XLS or PPT: If your electronic artwork is created in any of these Microsoft Office applications please supply "as is".

Line drawings Supply high-quality printouts on white paper produced with black ink. The lettering and symbols, as well as other details, should have proportionate dimensions, so as not to become illegible or unclear after possible reduction; in general, the figures should be designed for a reduction factor of two to three. The degree of reduction will be determined by the Publisher. Illustrations will not be enlarged. Consider the page format of the journal when designing the illustrations. Photocopies are not suitable for reproduction. Do not use any type of shading on computer-generated illustrations.

Photographs (halftones) Please supply original photographs for reproduction, printed on glossy paper, very sharp and with good contrast. Remove non-essential areas of a photograph. Do not mount photographs unless they form part of a composite figure. Where necessary, insert a scale bar in the illustration (not below it), as opposed to giving a magnification factor in the legend. Note that photocopies of photographs are not acceptable.

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Elsevier facilitates author response to the NIH voluntary posting request (referred to as the NIH "Public Access Policy", see ⊟→http://www.nih.gov/about/publicaccess/index.htm) by posting the peer-reviewed author's manuscript directly to PubMed Central on request from the author, 12 months after formal publication. Upon notification from Elsevier of acceptance, we will ask you to confirm via e-mail (by e-mailing us at NIHauthorrequest@elsevier.com) that your work has received NIH funding and that you intend to respond to the NIH policy request, along with your NIH award number to facilitate processing. Upon such confirmation, Elsevier will submit to PubMed Central on your behalf a version of your manuscript that will include peer-review comments, for posting 12 months after formal publication. This will ensure that you will have responded fully to the NIH request policy. There will be no need for you to post your manuscript directly with PubMed Central, and any such posting is prohibited.

Appendix 3 (i)

Social Anxiety Scale for Adolescents – SAS-A (La Greca & Lopez, 1998)
Agreement is rated on a 5 point likert scale. Respondents rate how much each of the items are true on a five point scale (1=not at all, 5 = all the time)

ITEM	FNE	SAD-N	SAD-G
1. I worry about doing something new in front of other people		*	
2. I like people at college *(filler)*			
3. I worry about being teased	*		
4. I feel shy around people I don't know.		*	
5. I only talk to people I know really well.		*	
6. I feel that other young people talk about me behind my back.	*		
7. I enjoy my classes at college. *(filler)* 8.			
8. I worry about what others think of me.	*		
9. I'm afraid others will not like me	*		
10. I get nervous when I talk to other young people that I don't know very well.		*	
11. I meet my classmates outside of college *(filler)*	.		
12. I worry about what others say about me	*		
13. I get nervous when I meet new people		*	
14. I worry that others don't like me	*		
15. I am quiet when I am with a group of people (at college)			*
16. Its hard for me to ask other people to do things with me			*
17. I feel that others make fun of me.	*		
18. If I get into an argument I worry that others will not like me	*		
19. I am afraid to ask other people to do things with me because I am afraid they might say no			*
20. I feel nervous when I'm around certain people		*	
21. I feel shy even with other young people I know very well			*

Stigma Scale – Szivos, 1993

Participants rate the extent to which they agree with the following statements on a 5 point likert scale.

Feeling different

1. My family is disappointed in me
2. People treat me like a child
3. I wish I were someone different
4. Other people treat me oddly

Anxiety

5. I get teased or made fun of
6. I am uncomfortable in the company of strangers
7. IN groups I feel the odd one out

Poor ingroup concept

8. I worry about what other people think of me
9. I hate telling people I come from this place **
10. I hate going out in a group with people from here **

** wording may need to be adapted

Appendix 3 (iii)

Experience of Stigma Checklist – Cooney et al., 2006

For Qs 1,3,4,5,6,8,9,10,11 :
→ Never/Once or twice/sometimes/often/a lot
- What do they do?
- How does that make you feel?
- How do you think they're treating you?

1. Have other pupils in the school made fun of you?
2. Do you like where you live?*
3. Do your parents treat you as if you're different from other people?
4. Have people in the local area ever made fun of you?
5. Have other people ever made you laugh?
6. Do teachers treat you like you are different from other young people?
7. Do you like to go into town?*
8. Have people in your family ever made fun of you?
9. Do people in (local area) treat you like you're different from them?
10. Do you like the school you go to?
11. Have teachers ever made fun of you
12. Do you like to go to the cinema *
13. Do pupils in the school treat you like you're different from them?

Social Skills Questionnaire – Teacher 1   (SSQ-T, Spence, 1995)

Rated by staff on the social behaviour of the individual. Responses are on a five point likert scale.

Please put an X in the column which best described the student over the past four weeks. Alternately indicate 0, 1 or 2 (0=not true, 1=sometimes true, 2= mostly true), for each item

		Not True 0	Sometimes True 1	Mostly True 2
1	Listens to other people's points of view during an argument			
2	Makes requests from tutors in a polite way			
3	Controls his/her temper when (s)he loses in a game or competition			
4	Reacts appropriately if peers tease him/her or say unkind things			
5	Asks to join in activities with peers in an appropriate manner			
6	Expresses affection or positive feelings towards others			
7	Does kind things for others voluntarily			
8	Gives compliments or says nice things to others when appropriate			
9	Controls his/her temper when told or off criticised by teacher			
10	Asks permission before borrowing or using other peoples things			
11	Shares things with peers			
12	Controls his/her temper during disagreements with peers			
13	Asks peers if (s)he may join in activities			
14	Has an appropriate facial expression (eg not excessive grinning/aggressive)			
15	Apologises when (s)he does something wrong			
16	Spends free time in the company of peers			
17	Invites others to join in games or activities			

		Not True 0	Sometimes True 1	Mostly True 2
18	Tells a teacher if (s)he has a problem or needs help			
19	Expresses sympathy or concern to others who are hurt/upset			
20	Follows rules in games or activities			
21	Takes part in games or activities with peers			
22	Takes part in conversations with adults			
23	Makes eye contact appropriately with others			
24	His/her tone of voice is appropriate (eg not aggressive or unusual)			
25	Controls his/her temper when (s)he does not get own way with teacher			
26	Laughs or smiles when appropriate			
27	Takes part in conversations with peers			
28	Shows that (s)he is listening during conversations			
29	Can express feelings of anger without losing his/her temper			
30	Stands up for him/herself without acting unreasonably			

(2) General rating of social skills
To be completed in addition to the "Social Skills Questionnaire Teacher 1"

Please rate the above named person on a ten point scale of general social skills performance

1   2   3   4   5   6   7   8   9   10
extremely   moderate   excellent
poor

Appendix 3 (v) Q1 from the SAS-A example of layout for the self-report measures

I worry about doing something new in front of other people.

Never	Hardly ever	Sometimes	Often	Always

Young people's past experiences and feeling about how they get on with other people:
A research study
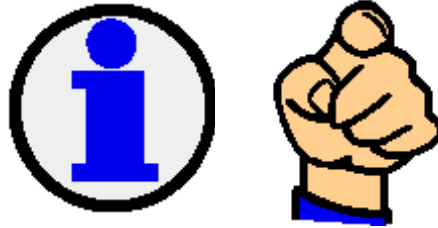
Information for You

My name is Shelagh Morrison.
I am a researcher from the
University of Glasgow

What is this about?

To help people like you make plans for the future.
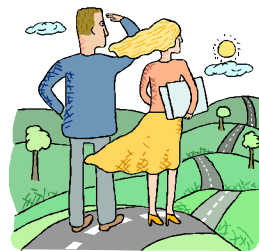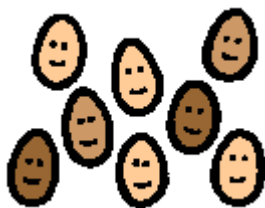
I am doing a study. I want to ask you what you think.

To decide if you want to talk to me.

Please read this information sheet. Ask your mum/ dad/ carer to help you.

Why have I been asked to take part?

You are a young person between the ages of 16 to 20 years old.

What you say will help young people like you make choices in their life and carry out their future plans.

36 people like you are being asked to talk about what they think. Everyone who takes part lives in Scotland.
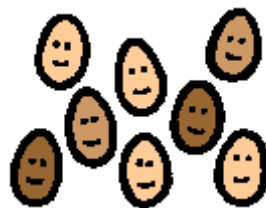
This study is part of my university course to get a doctorate in Clinical Psychology degree.

Do I have to take part?

No. You decide if you want to take part. You can take your time to think about this.

It is ok if you change your mind and decide you do not want to take part. It is your choice.

How do I let you know that I want to take part?

You contact me if you want to take part **by filling in the reply sheet and sending it to me using the stamp addressed envelope enclosed.**

What will happen to me if I take part?

I will contact you and I will meet with you at your college.

I will ask you to sign a form saying you agree to take part.
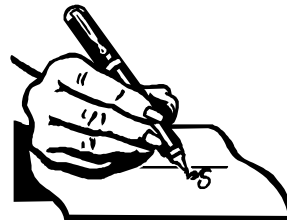
If you are unable to sign the form and you want to take part, you can tell me you want to take part and choose someone (such as your parent or carer) to sign the form for you.

There will be two meetings, which will last around 30-45 minutes each. These meetings will be about one week apart.

In the meeting, I will want to talk to you about yourself. I will ask you some questions.

I will also ask one of your college tutors to complete a questionnaire. This will about how they think you get on with people.

The questions will be about what you think about yourself, and about how you think you get on with other people in social situations.

The meeting will be recorded using an audiocassette recorder.
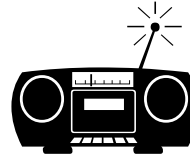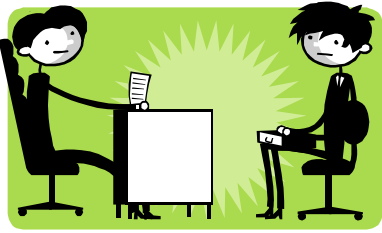
What if I change my mind and do not want to take part during the study?

At any time you can change your mind or stop taking part in the study. Nobody will be upset and you do not have to say why.

Will other people find out about what I say?

Anything you will say and anything your tutor will say will be private. I may put things you have said into my report. Your name will not be on any of the reports though, so nobody will find out what you said.

What will happen to the results of the research study?

The things you say will be helpful to other young people.

I will look carefully at the information you have given and the information from the other young people taking part in the study.

I will write about the information so people who work with young people can read them. The research study will also be part of my university degree course (Doctorate in Clinical Psychology).

Will I be able to find out the results of the research study?

Yes. Once the study has finished, I will send you details of the results and invite you to a meeting to talk about the results.

You can ask me any questions about this.
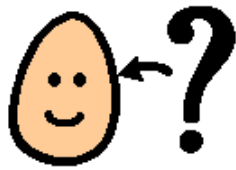
You can write or phone or email me :

**Shelagh Morrison
Trainee Clinical Psychologist
Department of Psychological Medicine
Academic Centre
Gartnavel Royal Hospital
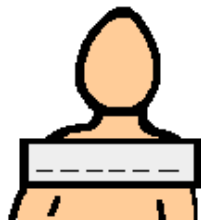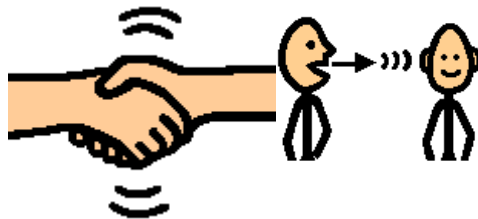1055 Great Western Road
Glasgow
G12 0XH**

**Telephone: 0141 211 0607
Email: 9606148m@student.gla.ac.uk**

Andrew Jahoda is the other researcher.
You can phone Andrew on the number above.
Thank you for taking time to read this leaflet.

Young people's past experiences and feeling about how they get on with other people:
A research study

CONSENT

UNIVERSITY
of
GLASGOW

My name is _____

I have read and understood the information sheet.
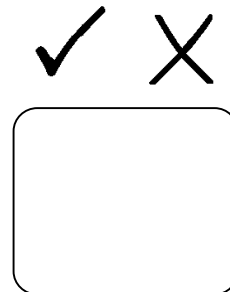
I have got a copy of the information sheet.

I have had a chance to ask questions about it.
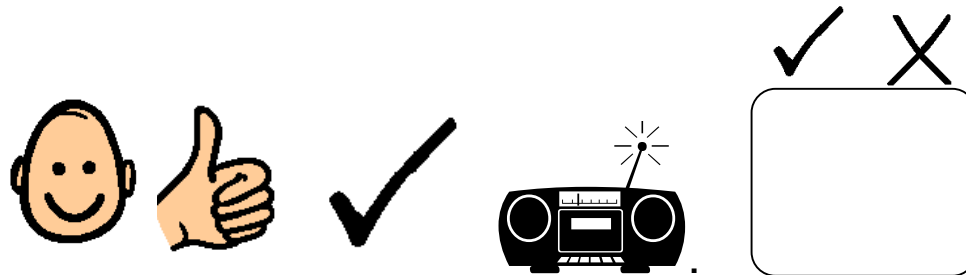
I agree to take part in the study.
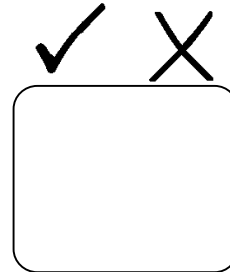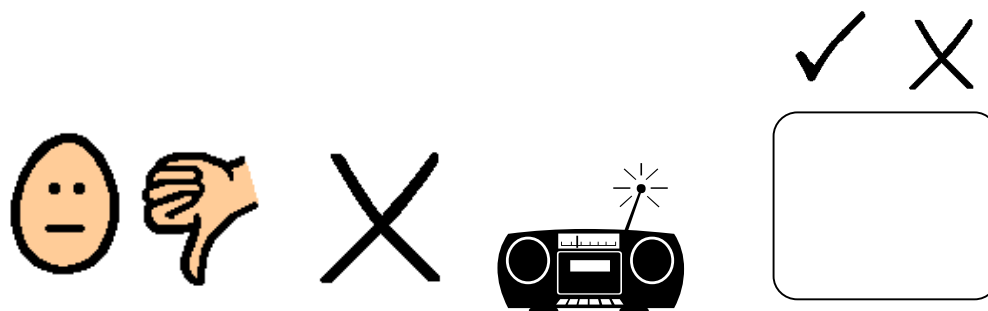
I do not agree to take part in the study.

I know I can stop at any time.

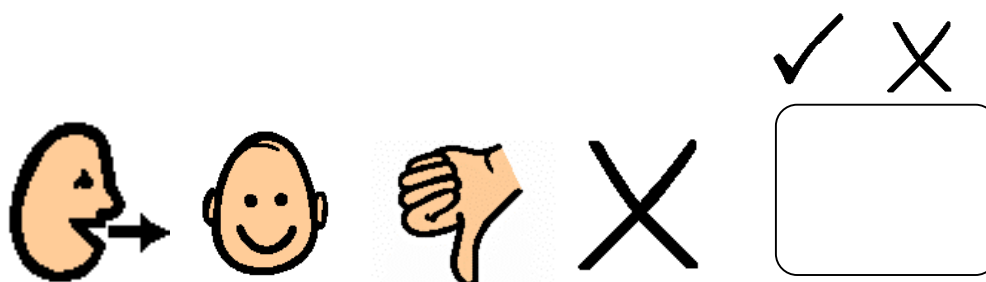I agree to take the meeting being tape-recorded.

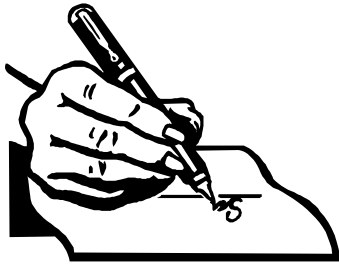
I do not agree to the meeting being tape-recorded.

I agree to the researcher talking to my college tutor.

I do not agree to the researcher talking to my college tutor.

Signature

_____

_____

Date _____

I confirm that this person has been given information about taking part in a study about the beliefs of young people, that they have understood as far as possible what is expected and freely given their consent.

Witnessed by (name) _____

Signature _____

Date _____

Appendix 4 (i) Letter of ethical approval

	Date	12 September 2006
Miss Shelagh Morrison	Your Ref	
Trainee Clinical Psychologist	Our Ref	
Department of Psychological Medicine,		
University of Glasgow	Direct	0141 211 3824
Academic Centre	line	
Gartnavel Royal Hospital	Fax	0141 211 3814
1055 Great Western Rd, Glasgow	E-mail	Liz.Jamieson@gartnavel
G12 0XH		glacomen.scot.nhs.uk

Dear Miss Morrison

Full title of study:	**An investigation of social anxiety and stigma in adolescents with mild learning disabilities**
REC reference number:	**06/S0701/82**

Thank you for responding to the Committee's request for further information.

The further information was considered by the Sub Committee of the Research Ethics Committee at the meeting held on 31 August 2006.

Confirmation of Ethical opinion

The Sub Committee agreed a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.
.
Ethical review of research sites

The favourable opinion applies to the research sites listed on the attached form.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Application	one	26 June 2006
Investigator CV		26 June 2006

Protocol		26 June 2006
Covering Letter		26 June 2006
Letter from Sponsor		26 June 2006
Participant Information Sheet: Information Sheet	Two	18 August 2006
Participant Information Sheet		26 June 2006
Participant Consent Form		26 June 2006
Participant Consent Form: Consent Form	Two	18 August 2006
Response to Request for Further Information	Two	18 August 2006

Research governance approval

The study should not commence at any NHS site until the local Principal Investigator has obtained final research governance approval from the R&D Department for the relevant NHS care organisation.

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

06/S0701/82	**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project

Yours sincerely

Liz Jamieson
Research Ethics Committee Co-ordinator on behalf of Dr Paul Fleming, Chair

Email: Liz.Jamieson@gartnavel.glacomen.scot.nhs.uk

Enclosures: List of names and professions of members who were present at the meeting
Standard approval conditions
Site approval form (SF1)

Copy to: [R&D Department for NHS care organisation at lead site

Appendix 4 (ii) Guidelines for submission

Journal of Intellectual Disability Research

Guidelines for Authors

The *Journal of Intellectual Disability Research (JIDR)* uses a web-based submission and peer-review system called Manuscript Central. All manuscripts should be submitted at http://mc.manuscriptcentral.com/jidr. This system is quick and convenient for both authors and reviewers and aims to reduce the time between submission and the decision whether or not to accept the manuscript.

Manuscript submission is a step-by-step process, and very little special preparation is required beyond having all parts of your manuscript in an electronic format and a computer with an Internet connection and a Web browser. Full help and instructions are provided on-screen. As an author, you will be prompted for author and manuscript details and then to upload your manuscript file(s). Please combine all parts of your submission into a single Word document (title, abstract, keywords, main document, references, figures and tables), as it is easier for us and reviewers to view and print a single file. Please remember that peer-review is double-blind, so that neither authors nor reviewers know each others' identity. Therefore, **no identifying details** of the authors or their institutions must appear in the submitted manuscript; author details should be entered as part of the online submission process. However, a 'Title Page' must be submitted as part of the submission process as a Supplementary File. This should contain the title of the paper, names and qualifications of all authors, their affiliations and full mailing address, including e-mail addresses and fax and telephone numbers.

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Full instructions and support are available on the Manuscript Central site and a user ID and password can be obtained on first visit. Each page has a 'Get Help Now' icon on the site connecting directly to the online support system. Support can also be contacted by phone (+1 434 817 2040 ext. 167) Monday-Friday, or at http://mcv3support.custhelp.com. If you do not have Internet access or cannot submit online, the Editorial Office will help with submissions. Please contact Sue Hampton Matthews at the Editorial Office of JIDR, Second Floor, Douglas House, 18b Trumpington Road, Cambridge, CB2 2AH, UK +44 1223 746 124; e-mail: smh44@medschl.cam.ac.uk.

Annotations for JIDR

The Journal of Intellectual Disability Research will feature four Annotation articles each year covering a variety of topics of relevance to the main aims of the journal or topics. Senior researchers, academics and clinicians of recognised standing in their field will be invited to write an Annotation for the journal covering an area that will be negotiated with the Associate Editor, Prof. Chris Oliver, on behalf of the Editorial team. Three main types of article will be commissioned:

1. Authoritative reviews of empirical and theoretical literature.

2. Articles proposing a novel or modified theory or model.

3. Articles detailing a critical evaluation and summary of literature pertaining to the treatment of a specific disorder.

The date for submission of the article should be negotiated with the Associate Editor. Articles should be no more than 5,000 words long including tables and figures and should not have been previously published or currently under review with another journal. The normal instructions to authors apply apart from the word limit. All articles will be subjected to peer review in the normal way and should be submitted to the journal via the website. An honorarium of £400 in total shall be paid to the author(s) when the article is accepted for publication.

Manuscript

Full reports of up to 4500 words are suitable for major studies, integrative reviews and presentation of related research projects or longitudinal enquiry of major theoretical and/or empirical conditions. *Brief reports* of 500-1,500 words are encouraged especially for replication studies, methodological research and technical contributions. A *hypothesis paper* can be up to 1500 words and no more than twenty key references. It aims to outline a significant advance in thinking that is testable and which challenges previously held concepts and theoretical perspectives.

For full and brief reports a structured summary should be included at the beginning of each article, incorporating the following headings: Background, Method, Results, Conclusions. These should outline the questions investigated, the design, essential findings, and the main conclusions of the study.

The main text should proceed through sections of Abstract, Introduction, Methods, Results, and Discussion. Tables and figures should be submitted on separate sheets and referred to in the text together with an indication of their approximate position recorded in the text margin.

It is important that the term 'intellectual disabilities' is used when preparing manuscripts.

The author should provide up to six keywords to aid indexing. Please note that 'intellectual disability', as used in JIDR, includes those conditions labelled mental deficiency, mental handicap, learning disability and mental retardation in some locales or disciplines.

References

The reference list should be in alphabetical order thus:

- Giblett E.R. (1969) *Genetic markers in Human Blood.* Blackwell Scientific Publications, Oxford.
- Moss T.J. & Austin G.E. (1980) Preatherosclerotic lesions in Down's syndrome. *Journal of Mental Deficiency Research* **24***,* 137- 41.

Journal titles should be in full. References in text with more than two authors should be abbreviated to (Brown *et al.* 1977). Authors are responsible for the accuracy of their references.

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