Piloting the effect of a film-based intervention on attitudes and stigma towards people with intellectual disabilities in the South Asian community

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Thesis declaration form

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signature:

Name:

Date:

Overview

This thesis is presented in three parts. The overall focus of the thesis relates to stigma, public attitudes and beliefs towards individuals with intellectual disability.

Part one presents a systematic review which explored the findings of empirical interventions aimed at increasing awareness and targeting attitudes towards people with intellectual disabilities. Currently little is known about the types of interventions which have been attempted and the effectiveness of these initiatives. The review highlighted promising outcomes from interventions that aimed to increase knowledge through delivering education whilst support for the positive influence of contact, both indirect and direct, has been demonstrated by several interventions. Whilst methodological limitations of quantitative measurement tools are considered, the review concluded that awareness and change interventions do show promise for improving attitudes towards intellectual disabilities.

Part two is an empirical paper that investigates the impact of a film-based intervention on inclusion attitudes and stigmatising beliefs towards individuals with intellectual disabilities held by members of the UK South Asian community. Previous research has suggested that contact may be effective in improving public attitudes. The effect of indirect contact as a promising component of stigma change initiatives is examined by comparing the impact of two film conditions. The extent to which brief interventions can generate actual behaviour change to improve the lives of individuals with intellectual disabilities is discussed.

Part three offers a critical appraisal of the study presented in the empirical paper. The appraisal discusses the process of developing the intervention with reference to key messages and content. Difficulties encountered during the research process with a specific focus on recruitment are outlined. Consideration is also given to the benefits and limitations of conducting online research.

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Part 1: Literature Review

A review of interventions aimed at raising awareness and improving attitudes towards people with intellectual disabilities

Abstract

Aim: To review the findings of empirical interventions aimed at increasing awareness and targeting attitudes towards people with intellectual disabilities.

Method: An electronic search using PsycINFO, Web of Science and PubMed identified the studies that met the inclusion criteria. Studies were included if written in English, published between 1990-2012 and reported a specific intervention with a general population sample of individuals aged 16 years and above.

Results: Twenty studies were reviewed in total. The majority of studies reported promising outcomes, particularly those aimed at increasing knowledge through educational components. Support for the positive influence of contact, both direct and indirect, with people with intellectual disabilities was demonstrated across several interventions. Training packages facilitated by individuals with intellectual disabilities, alongside educational information appear to have the most promise. Findings are reviewed with regards to methodological weaknesses and the limitations of quantitative measurement tools.

Conclusions: Awareness and change interventions show promise for improving attitudes towards intellectual disabilities, however, the development of sound and robust measurement tools specific to attitudes towards intellectual disabilities remains a priority.

Introduction

Intellectual disability (ID) is characterised by intellectual impairment and significant deficits in two or more areas of adaptive functioning that have an onset before adulthood (BILD, 2011; WHO, 1992). There are around 1.2 million people with ID in England (Emerson et al., 2012) and an estimated further 230,000 in other parts of the UK.

1.1. Public attitudes and stigma towards intellectual disabilities

The limited research available into public attitudes and knowledge regarding ID paints a varied picture. A recent study in the UK found that public attitudes were generally improving towards people with ID with rights, choice and self-determination being advocated (Scior, Kan, McLoughlin & Sheridan, 2010). Some attitude surveys have suggested that generally pro-inclusion beliefs are held, which may show promising evidence for the efforts made by disability activists and advocacy movements (Scior et al., 2010). Whilst attitudes appear to becoming more positive, the continued need for advocacy is warranted as there are also numerous reports and studies which demonstrate that negative attitudes and a lack of knowledge and understanding in the lay population continues to exist. Stigma is an overarching term that can be understood in relation to three components- stereotypes, prejudice and discrimination (Corrigan & Watson, 2002; Rusch, Angermeyer & Corrigan, 2005). People with ID consistently emerge as one of the least desirable groups to socially interact with (Gordon, Feldman, Tantillo & Perrone, 2004) and lay people frequently show a limited understanding of the concept of ID (Mencap, 2008). People with intellectual disabilities are at an increased risk of targeted violence, physical assault and anti-social behaviours, compared to those in other disabled groups (Quarmby, 2008). Negative attitudes and stigma towards individuals with ID has been shown to lead to prejudice and discrimination towards them (Abbott & McConkey, 2006; McManus, Feyes & Saucier, 2010). Following a survey of police officers in the UK, it was recognised that the rate of hate crime towards individuals with ID is hugely under reported (Sheikh, Pralat, Reed & Sin, 2010).

Discrimination takes several forms including reduced employment opportunities, education, housing and social isolation (McManus et al., 2010; Cummins & Lau, 2003) and a failure to meet the health needs of individuals with ID (MENCAP, 2007). The prevalence of these prejudices towards those with intellectual disabilities can be seen to indicate the existence of on-going stigmatised attitudes held within society (Quarmby, 2008).

Current UK policy endorses four key principles to improve the lives of people with ID and their families: civil rights, independence, choice and inclusion (Valuing People, 2001) and recognises the prejudice and discrimination that exists towards people with ID. Although current policies aim to enhance social inclusion, independence and empowerment, their success remains at risk if, as the literature suggests, a lack of awareness, negative attitudes and stigmatising beliefs prevail among the public (Scior, 2011). Much of the research in this area has provided descriptive accounts of attitudes towards ID and in doing so has relied heavily on the use of self-report attitudinal measures (Scior, 2011; Werner, Corrigan, Ditchman & Sokol, 2012). A comprehensive review of the limitations of such measures in the field has usefully been provided by Werner et al. (2012) highlighting the need for developments in the conceptualisation of such measures to be prioritised. Nevertheless the findings from the literature base to date demonstrate the continued need for initiatives to be undertaken, to both improve the perceptions of people with ID in society and to tackle negative and prejudicial attitudes towards them if people with ID are to live safe, inclusive and empowered lives.

1.2. Aims and objectives

To my knowledge there are no systematic literature reviews to date which have evaluated interventions that have endeavoured to increase awareness and target attitudes towards intellectual disabilities. The aim of this review was to summarise the findings of studies conducted between 1990 and 2012 within this domain. A specific focus across

different sectors of the population and the nature of the intervention trialled has been intended.

This review addressed the following questions:

1. What interventions have been developed to tackle low awareness of and negative attitudes towards ID?
2. What were the effects of these interventions?
3. How have these effects been measured?

Method

2.1. Search strategy

Studies published between 1990 and November 2012 were sourced across the following databases: PsycINFO, Web of Science and PubMed. Table 1 illustrates the search string keywords which were combined using the Boolean operator 'AND'. The same string of terms was searched within each database with equivalent search limits applied. All studies were selected for review by assessing eligibility through reading the abstracts or the full paper in cases where the abstract was not sufficient to establish its relevance to this review.

In addition to the database searches, the reference lists of each article considered were reviewed to identify additional relevant references. Hand searching of the following key journals was also conducted dating from the year 1990 to present; Research in Developmental Disabilities, Journal of Intellectual Disability Research, Journal of Applied Research in Intellectual Disability, Journal of Intellectual and Developmental Disability and American Journal of Intellectual and Developmental Disabilities.

Table 1

Search String Keywords

Intellectual Disability	Conceptualisation	Intervention
*learning dis**	*knowledge, belief**	*tackle, intervention*
*intellectual dis**	*attitude*, stigma*	*programme, reduc*,*
mental retardation	*public*	*educat*, change,*
*developmental dis**		

* indicates terms that have been truncated to allow for multiple endings of words to be sourced.

2.2. Inclusion and exclusion criteria

The studies were reviewed to ascertain their eligibility against the following inclusion criteria: 1) the paper must be written in English; 2) only studies published in peer reviewed journals as opposed to book chapters were eligible; 3) the study had to have been published between years 1990-2012; 4) the sample population must be aged 16 years and above; 5) studies must report a specific intervention that aimed to impact attitudes towards ID and/or increase awareness or understanding of ID.

Studies that related to learning difficulties such as dyslexia, other developmental disorders such as Autistic Spectrum Disorders or physical disability were excluded from the review. Articles relating to mental illness stigma were also omitted to ensure a specific focus on intellectual disability. After reviewing the full papers, studies that reported attitudinal shifts or increased knowledge as an outcome of research conducted for alternative means, such as challenging behaviour training, were excluded (Lowe et al., 2007; McGill, Bradshaw & Hughes, 2007; Williams, Dagnan, Rodgers & McDowell, 2012). Studies that assessed attitudes without testing an intervention (Beh-Poojah, 1991; Boyle et al., 2010; Schwartz & Rabinovitz, 2001) or which focused on increasing social inclusion within an educational setting (Barr & Bracchitta, 2008; Carter & Hughes, 2005) were excluded. Studies which sampled school children or adolescents younger than 16 were not included (Rillotta &

Nettlebeck, 2007; Shevlin & O'Moore, 2000). Finally, studies that did not specifically focus on ID and encompassed a spectrum of disabilities including physical and sensory impairments were excluded (Sharma, Forelin & Loreman, 2008; Smedema, Ebener & Grist-Gordon, 2012; Timms, McHugh, O'Carroll & James, 1997).

2.3. Quality assessment

A structured quality assessment tool was used to extract information about the research design and methodology of each study. The checklist was adapted from the STROBE Statement (Von Elm et al., 2008) and items relevant to the nature of this review were incorporated, see Appendix A.

Results

The search strategy yielded a total of 7907 initial references, of which 82 were considered in further detail following the exclusion of irrelevant papers and duplications. These 82 references were screened for eligibility and 47 were excluded, see Figure 1. The remaining 35 papers were read in full after which a further 15 papers were excluded. The remaining 20 papers were included in the review. Figure 1 details the process of identifying articles for inclusion in the review.

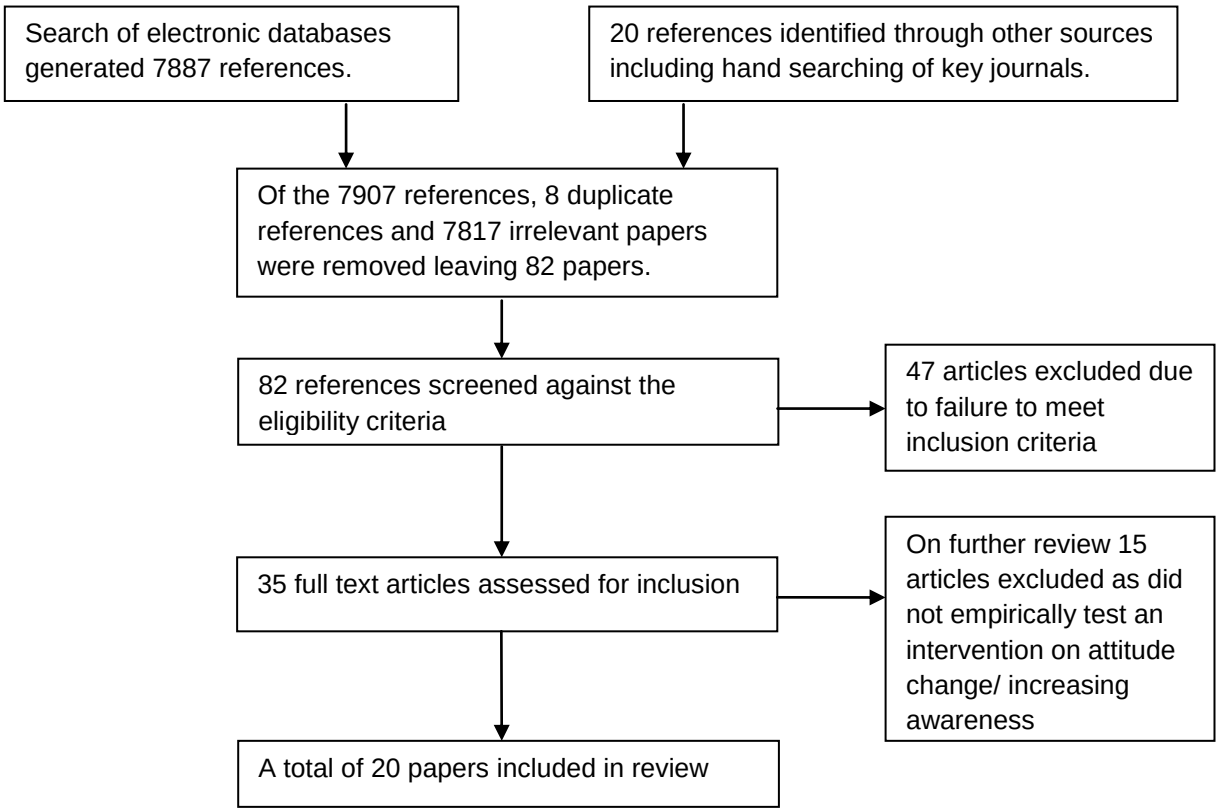

Figure 1. Flow Diagram of Search Process

3.1. Overview of studies included

Of the 20 articles included in the review paper, the earliest was published in 1990 whilst the majority of studies (13) were published from 2000 onwards. Most of the studies were conducted in the UK, USA, Australia or Canada (18), with the remaining two studies conducted in Israel and Hong Kong. Eleven studies used a student sample, which varied from psychology undergraduates, teachers in training to medical students. Four studies drew samples from the general population. All the articles relied on convenience sampling methods. Only one study utilised a qualitative research design (Sharma, Lalinde & Brosco, 2006); several others employed mixed methods which allowed for qualitative reflections from participants to be obtained (Freudenthal, Boyd & Tivis, 2010; Iacono et al., 2011; Tracy & Iacono, 2008). The majority used a repeated measures design although several studies did

not report baseline data. An overview of all studies included in the review is provided in Table 2.

Table 2

Overview of Studies Included in the Review

Study	Location	Focus	Sample (N)	Method	Results
Adler et al. (2005)	UK	Impact of participation in a vision screening programme on attitudes and awareness of ophthalmic complications in ID patients	173 qualified and student optometrists volunteering at Special Olympics. No demographics given.	- 2 group repeated measures design: both groups had 1 day of lectures; only experimental group had supervised clinical practice - Measure: self-constructed questionnaire administered pre and post	- Improvement in self-rated knowledge of ophthalmic complications in ID for both groups - Increase in confidence in both groups but stronger for experimental group - Attitude change reported by 52% in experimental group and 30% in control - Confidence in working with people with ID related to number of clinical contacts with such patients
Bailey et al. (2001)	UK	Impact of training on attitudes towards ID within the police	65 trainee police officers, of which 57 fully completed (87% response rate)	- Quasi-experimental repeated measures design - 2 groups: 1) received training about ID (n=27); 2) control (n=30) - Intervention: training plus role-play (no contact with person with ID), discussion on stereotypes and plenary - Measures: Attitudes to Mental Retardation and Eugenics (AMRE) (Antonak, Fielder & Mulick, 1993), pre and post measures taken	- When baseline scores controlled a significant shift in AMRE scores found for intervention group - Training produced more favourable attitudes towards ID

Study	Location	Focus	Sample (N)	Method	Results
Campbell & Gilmore (2003)	Australia	Impact of formal teaching and experiential learning on attitudes, inclusion and knowledge of Down's syndrome	274 first year student teachers. Response rate not provided	- Quasi-experimental repeated measures design - Intervention: 13 week course plus fieldwork exercises (interview members of community and write report) - Measures: Interaction with Disabled Persons Scale (IDP) (Gething, 1994). Questionnaire on knowledge and attitudes towards Down's syndrome (Wishart & Manning, 1996) Pre and post measures taken	- Increase in knowledge of Down's syndrome and more accurate estimations regarding developmental milestones and academic achievement - Reduction in positive and negative stereotypes endorsed by students - More positive views post intervention regarding inclusive education for children with Down's syndrome, plus less 'discomfort', 'uncertainty', ' fear' and 'vulnerability' but also less 'sympathy'
Freudenthal et al. (2010)	USA	Impact of volunteering at Special Olympics on attitudes and expectations of athletes with ID	Health professional volunteers at Special Olympics, pre= 80 (48.5% response rate) post= 55 (68.7% response rate) 47% aged 21-25. 77% students from healthcare courses, 42% (n=28) had previous experience caring for people with ID	- Mixed methods design. - Intervention: completing screening exercises with athletes (approx. 12 hours contact) - Measure: Prognostic Belief Tool (PBS) (Wolraich & Siperstein, 1983). Post-questionnaire included open ended questions for qualitative reflections Pre and post measures taken	- No significant change overall in PBS scores pre to post - Expectations of people with severe ID increased in a positive direction but not for those with mild/moderate ID - Although qualitative data indicated that volunteering improved perceptions of the abilities of athletes with ID

Study	Location	Focus	Sample (N)	Method	Results
Hall & Hollins (1996)	UK	Effect of a workshop taught by actors with ID on attitudes	28 medical students. No demographics or response rate data provided	- Intervention: 2 hour workshop led by people with ID - Measures: asked to rate 10 statements concerning people with Down's syndrome pre and post	- Attitudes were more positive post intervention
Hall & Minnes (1999)	Canada	Impact of media on attitudes towards people with Down's syndrome	92 first year psychology undergraduates 55% female Mean age = 19.6	- Experimental design - 3 groups: 1) drama film; 2) documentary; 3) control - Measures: Attitudes Towards Disabled Persons Scale (Yuker, Block & Young, 1970), Feelings of Comfort Scale (Marcotte & Minnes, 1989); Jackson Social Desirability scale (Jackson, 1974); questionnaires on volunteering intentions, previous contact and television viewing Post-intervention measures only	- Prior media exposure, quality of contact and social desirability predicted inclusive beliefs rather than film type - Documentary associated with more positive affect towards ID, greater feelings of comfort and volunteering intention - Drama and documentary film predicted behavioural intentions - Favourable attitudes associated with previous positive contact rather than frequency of contact
Iacono et al. (2011)	Australia	Impact on attitudes of films as part of a teaching package	241 first year health, science and social care students (response rate 80%) 71% female	- Mixed methods design - Intervention: 2 films on strengths, interests, challenges of people with disabilities - Measures: Interaction with Disabled Persons Scale (IDP) (Gething, 1994), Simulation questionnaire to evaluate films for teaching (Williams & Brown, 2007). - Film 1, discussion, measures, focus group for qualitative data Film 2, student focus group Pre and post IDP	- No attitude change on IDP measure - Qualitative findings indicated more positive attitudes - Films evoked deep engagement and rated good educational tool for raising awareness - Students reported shift in perception; focusing less on disability and more on individual person

Study	Location	Focus	Sample (N)	Method	Results
Kobe & Mulick (1995)	U.S.A	Impact on attitudes of 10 week course and contact with people with ID	37 psychology undergraduate students (64.9% response rate) Mean age = 22 years 84% female 69% previous contact with ID	- Repeated measures design - Intervention: 9 x 2 hour educational sessions and 20 hours clinical contact with people with ID - Measures: Attitudes towards Mental Retardation and Eugenics (AMRE) (Antonak et al., 1993) Pre and post measures	- No change in attitude scores - Increase in self-rated knowledge post intervention - Post-test attitude scores associated with educational attainment, but not previous contact
MacDonald & MacIntyre (1999)	Canada	Impact on attitudes towards ID of a) vignettes using different labels and b) educational intervention	168 university students Mean age = 22 45% female	- Repeated measures design - Intervention: 4 x educational vignettes describing similarities in daily activities, hobbies, each with different label - Measures: Mental Retardation Attitude Inventory-Revised (MRAI-R) (Antonak & Harth, 1994) Pre and post measures	- Main effect of education across all groups on attitudes - No attitude change associated with label - Education affected attitudes in ADD comparison group - Females more positive
Melville et al. (2006)	UK	Effect of training on knowledge, skills and self-efficacy working with people with ID	201 nurses completed baseline (69% response rate)	- 3 group experimental design: 1) training pack and intervention (n=42); 2) training pack only (n=21); 3) control (n=60) - Intervention: 45 page training pack on ID health, communication and support, 3 hour event led by health professionals and person with ID - Measures: self-developed questionnaire (Melville et al., 2005) covering knowledge of health needs in people with ID Pre and post measures	- Significant between group differences in knowledge scores between groups 1 and 2 compared to control - Change in post self-efficacy scores between group 1 and 3 indicate impact of intervention

Study	Location	Focus	Sample (N)	Method	Results
Nosse & Gavin (1991)	U.S.A	Impact of a two and half day organised direct contact experience on attitudes	31 college students from 119 at baseline (26% response rate) Mean age= 21 78% female 75% from health profession courses	- Repeated measures design - 2 groups: 1) intervention group; 2) control group (n=21, baseline only) - Intervention: 2 and half day workshop of organised direct contact with people with ID, presentations from people with ID, plenary, joint entertainment - Measures: Adjective Generation Technique (Allen & Potkay, 1983), semantic differential scale (Gottlieb & Corman; Horne, 1985) Pre and post measures for experimental group	- At baseline intervention group had more favourable and positive attitudes than control - Direct contact intervention improved favourability in attitude scores and reduction in anxiety related adjectives
Rae et al. (2011)	UK	Impact of a half day training event on knowledge of ID	40 primary school teachers Mean age= 44 1 male 68% had a child with ID in class 19 follow-up measures (47.5% response rate)	- Within-group repeated measures design - Intervention: training package on knowledge of ID, previously evaluated by health/social care staff (McKenzie & Paxton, 2002; McKenzie, Matheson, Patrick, Paxton & Murray, 2000 - Measures: Questionnaire (McKenzie et al., 2000) assessing understanding of criteria of ID Pre and post and follow-up measures	- Increased knowledge of ID criteria after intervention and at one month follow-up

Study	Location	Focus	Sample (N)	Method	Results
Rimmerman et al. (2000)	Israel	Effect of controlled contact with children with disabilities on attitudes	139 students Mean age= 22 81% female	- Quasi-experimental design - 4 groups: 1) prior contact and wish to tutor child with ID (n=34); 2) no prior contact and wish to tutor child with ID (n=28); 3) prior contact with wish to tutor other child (n=39); 4) no prior contact and wish to tutor other child (n=38) - Intervention: 4 month tutoring programme - Measures: Disability Factor Scale-General (DFS-G) (Siller, Ferguson, Vann & Holland, 1967) measuring attitudes towards disability types Pre and post measures taken	- Less rejection and anxiety as consequences of contact associated with prior contact and no contact but a wish to tutor child with ID - Contact best predictor of reduction in rejection - Association between contact and attitudes related to time and length; longer duration required for balanced and realistic attitudes
Roper (1990a)	U.S.A	Impact of contact on volunteers' perceptions of athletes with ID	369 volunteers 60% female 50% aged 21 years or under 61.5% response rate	- Quasi-experimental design - Questionnaire administered at start of event, participants grouped by following independent variables; number of games attended; level of experience; contact experience outside of the games - Measure: self-developed instrument on demographics, experience, perceptions of ID, social distance scale	- Contact did not impact on perceptions - Frequent sustained contact associated with reduced positive perceptions - Female participants had more favourable perceptions

Study	Location	Focus	Sample (N)	Method	Results
Roper (1990b)	U.S.A	Impact of contact on volunteers' perceptions of athletes with ID	369 volunteers 60% female 50% < age 21 61.5% response rate	- Quasi-experimental design - Questionnaire administered at start of event, participants grouped by following independent variables; number of games attended; level of experience; contact experience outside of the games - Measure: self-developed instrument on demographics, experience, perceptions of ID, beliefs about ID	- Contact did not affect perceptions - Sustained levels of contact associated with less positive perceptions - Lowest scores associated with perceptions of competence in people with ID
Sharma et al. (2006)	U.S.A	Impact on awareness of experiential learning and contact with families whose child has a disability	63 medical residents 35% White non-Hispanic, 27% White Hispanic, 24% Black	- Qualitative design - Intervention: each resident paired with one of 24 families who described having a child with a disability, approximately 2 hours contact - Data collection: one-page narrative description of the visit and observations	- 4 major themes found: 1) Insight: 27% reported intervention as powerful educational experience and change in understanding; 2) Information: 44% described families wanting more information from health teams; 3) Obstacles: acknowledgment of hardship, financial strain; 4) Adjustment: increased understanding on how families cope and adjust
Tracy & Iacono (2008)	Australia	Impact on attitudes of training and contact with people with ID	128 medical students Mean age= 22	- Mixed methods design - Intervention: 3 hour training with didactic lecture on impact of ID on communication skills, barriers to communication, plus workshop led by people with ID, role-play, awareness exercise and plenary - Measures: Interaction with Disability Persons Scale (IDP) (Gething, 1994) IDP pre and post, qualitative data from written evaluation	- Improved attitude scores and comfort interacting with people with ID - 99% evaluated the intervention positively - 77% valued direct contact - Greater understanding and insight into communication reported by 45%. - Direct contact associated with attitude change

Study	Location	Focus	Sample (N)	Method	Results
Varughese & Luty (2010)	UK	Effect of presenting picture of man with Down's syndrome on attitudes	360 general population 74% female Mean age= 48 93% response at baseline, 87% at 6 month crossover	- Experimental design - 2 groups: 1) experimental group shown photo while completing measures; 2) control group - Measures: Attitude to Mental Illness Questionnaire (AMIQ) (Luty, Fakuda, Umoh & Gallagher, 2006), administered post intervention and at 6 months	- Small positive attitude change in experimental group - Order of exposure to experimental conditions did not affect attitudes
Varughese et al. (2011)	UK	Effect of presenting pictures of people with ID and dysmorphic features on attitudes	187 general population, (74% response rate)	- Experimental design - 2 groups: 1) 'bad photo' group viewed picture with dysmorphic features and skin condition in casual clothes (n=82); 2) 'good photo' group viewed picture smartly dressed man working in office (n=105) - Measures: Attitude to Mental Illness Questionnaire (AMIQ) (Luty et al., 2006), post measure only	- Positive attitude change associated with photo of smartly dressed man with ID
Wong & Wong (2008)	Hong Kong	Effect of training on attitudes, knowledge and skills	45 residential staff supporting people with ID 36 female 100% response rate	- Experimental design - 2 groups: 1) experimental group attended six session training (n=32); 2) no training (control) - Intervention: training to build positive attitudes towards self-determination, enhance knowledge, role-play, homework, visual playback - Measure: self-constructed questionnaire with vignette on attitudes, knowledge and skills - Delivered by trained interviewers pre and post	- Increased knowledge and skills, and more positive attitudes post intervention

3.2. Assessment of quality

The majority of studies scored highly on the quality assessment measure, see Table 3. These studies provided appropriate detail for each stage of the research process and to allow for replication. All but one study (Hall & Hollins, 1996) provided sufficient detail about the nature of the intervention being evaluated.

Thirteen studies used standardised and validated measures which are reviewed in section 3.5. Six articles used a measure developed for their particular study, four of which provided detailed descriptions of the measurement content (Adler, Cregg, Duigan, Ilett & Woodhouse, 2005; Roper, 1990a/b; Wong & Wong, 2008). The remaining study was qualitative in design (Sharma et al., 2006).

Fourteen studies used a repeated measures design collecting data at baseline and post intervention (Adler et al., 2005; Bailey, Barr & Bunting, 2001; Campbell & Gilmore, 2003; Freudenthal et al., 2010; Hall & Hollins, 1996; Iacono et al., 2011; Kobe & Mulick, 1995; MacDonald & MacIntyre, 1999; Melville et al., 2006; Nosse & Gavin, 1991; Rae, McKenzie & Murray, 2011; Rimmerman, Hozmi & Duvdevany, 2000; Tracy & Iacono, 2008; Wong & Wong, 2008). One study provided baseline data for both the experimental and comparison group, but did not yield post-data for the latter (Nosse & Gavin, 1991). Two studies were limited in design by their omission of repeated measures or a control group (Roper, 1990a; Roper, 1990b). When evaluating the effectiveness of interventions it is critical that baseline data be obtained wherever possible in order to measure the effects of the intervention. Studies by Hall and Minnes (1999), Varughese and Luty (2010) and Varughese, Mendex and Luty (2011) used comparison groups but did not provide baseline data. Consequently, the conclusions that can be drawn from these papers on the effects of the intervention trialled are limited. The remaining study reviewed was qualitative in design (Sharma et al., 2006).

Given that the majority of studies sampled a specific population using convenience sampling methods, limitations regarding generalisability of findings should have been

considered. Eighteen studies did not provide sufficient detail to ascertain whether recruitment bias had been considered or addressed, see Table 3. Nineteen studies used statistical analyses and all provided sufficient detail and information, although two studies did not report statistical significance with alpha values (Iacono et al., 2011; Roper, 1990a).

The literature in this area is not without shortcomings, most prominently a lack of baseline data collection. Furthermore, the diversity in the nature, content and duration of the interventions reviewed makes it difficult to evaluate their effectiveness against one another. Overall, attempts to improve negative attitudes towards people with ID and increase awareness are few and far between. Therefore the findings warrant further consideration, not least to identify areas for further research.

Table 3

Quality Assessment of Study Characteristics

Study	Introduction a. Rationale b. Aims	Methods a. Design b. Setting c. Intervention	Sampling a. Method b. Characteristics c. Bias	Measures/ Analysis a. Measures b. Analysis	Results a. Attrition b. Descriptives c. Main findings d. Stat. significance	Discussion a. Results summary b. Limitations	Total Score (max 16)
Adler et al. (2005)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15
Bailey et al. (2001)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15
Campbell & Gilmore (2003)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= ? b= 0 c= 1 d= 1	a= 1 b= 1	13
Freudenthal et al. (2010)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15
Hall & Hollins (1996)	a= 1 b= 1	a= 1 b= 0 c= ?	a= ? b= 0 c= 0	a= 0 b= 1	a= ? b= 0 c= 1 d= 1	a= 1 b= 0	7

Study	Introduction a. Rationale b. Aims	Methods a. Design b. Setting c. Intervention	Sampling a. Method b. Characteristics c. Bias	Measures/ Analysis a. Measures b. Analysis	Results a. Attrition b. Descriptives c. Main findings d. Stat. significance	Discussion a. Results summary b. Limitations	Total Score (max 16)
Hall & Minnes (1999)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= ?	a= 1 b= 1	a= ? b= ? c= 1 d= 1	a= 1 b= 0	12
Iacono et al. (2011)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 1	a= 1 b= 1	a= 1 b= 1 c= 1 d= 0	a= 1 b= 1	15
Kobe & Mulick (1995)	a= 1 b= 1	a= 1 b= 0 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	14
MacDonald & MacIntyre (1999)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 0	14
Melville et al. (2006)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 0 c= 0	a= 0 b= 1	a= 1 b= 0 c= 1 d= 1	a= 1 b= 1	12
Nosse & Gavin (1991)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= ?	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15
Rae et al. (2011)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15

Study	Introduction a. Rationale b. Aims	Methods a. Design b. Setting c. Intervention	Sampling a. Method b. Characteristics c. Bias	Measures/ Analysis a. Measures b. Analysis	Results a. Attrition b. Descriptives c. Main findings d. Stat. significance	Discussion a. Results summary b. Limitations	Total Score (max 16)
Rimmerman et al. (2000)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 0	14
Roper (1990a)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 0	a= 1 b= 1	14
Roper (1990b)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15
Sharma et al. (2006)	a= 1 b= 1	a= ? b= 1 c= 1	a= 1 b= 1 c= 1	a= ? b= 1	a= 1 b= 1 c= 1 d= n/a (qualitative design)	a= 1 b= 1	13/15
Tracy & Iacono (2008)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15

Study	Introduction a. Rationale b. Aims	Methods a. Design b. Setting c. Intervention	Sampling a. Method b. Characteristics c. Bias	Measures/ Analysis a. Measures b. Analysis	Results a. Attrition b. Descriptives c. Main findings d. Stat. significance	Discussion a. Results summary b. Limitations	Total Score (max 16)
Varughese & Luty (2010)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15
Varughese et al. (2011)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15
Wong & Wong (2008)	a= 1 b= 1	a= 1 b= 1 c= 1	a= 1 b= 1 c= 0	a= 1 b= 1	a= 1 b= 1 c= 1 d= 1	a= 1 b= 1	15

Note: 1= satisfactory; 0 = unsatisfactory;? = unable to determine due to insufficient detail reported (See Appendix A)

3.3. Overview of findings

Seven studies aimed to increase knowledge and awareness of ID and evaluated whether their interventions created a shift in attitudes. Thirteen studies evaluated interventions that tackled attitudes towards ID and utilised some variant of contact as an integral part of the intervention. Of these 13, ten evaluated direct contact with people with ID whilst three studies assessed the impact of indirect contact with ID via the use of films.

3.4. Types of interventions evaluated

A range of interventions were tested: 1) training events for students (n=2); 2) experimental interventions with the general public (n=2); 3) training programmes for staff teams/professionals (n=3); 4) interventions incorporating indirect contact (n=3), and 5) interventions including direct contact (n=10). The results are summarised in turn below.

3.4.1. Interventions that aimed to raise awareness and/or improve attitudes

Two studies intended to raise awareness and improve attitudes in a student population. Campbell and Gilmore (2003) evaluated whether a university educational programme modified attitudes towards disability and increased knowledge of Down's syndrome. Students completed a 13-week course which provided formal lectures on human development, individual differences, atypical development and disability. The training had a significant impact on the students' knowledge of Down's syndrome with more accurate and positive estimations regarding development and academic achievement being held after the intervention. More positive views of inclusion were endorsed in their attitudes. However, the study did not use a control group nor a follow-up, making it difficult to conclude whether elements of the intervention itself had created a shift towards more positive attitudes and whether given the transient temporal nature of attitudes, these were sustained at follow-up.

MacDonald and MacIntyre (1999) also used a student population to assess the impact of educational vignettes on attitudes. Four vignettes described daily life activities,

hobbies and interests of a person with severe ID and the label used to describe the disability was altered. While there was a significant main effect for education and sex, no effect of label change on attitudes was found; females were generally more positive in their attitudes on the whole. The study did not assess the stability of attitudinal changes over time and its generalisability is limited by the use of a self-selected student sample.

Two further studies used vignettes to assess stigmatised attitudes towards ID amongst a general population UK sample. Varughese and Luty (2010) assessed the impact of viewing an image of a person with facial features of Down's syndrome on attitudes. The control group received a written vignette describing a man with Down's syndrome, whilst the experimental group were asked to view a picture of a man with Down's syndrome who was dressed smartly. This study found that accompanying the vignette with a picture had a small yet significant effect in reducing stigmatised attitudes. A similar study one year later (Varughese et al., 2011) found that participants who viewed a photo of a smartly dressed man with ID working in an office reported less stigmatising attitudes when compared to a photo depicting a man with ID and visible dysmorphic features. However, neither of these two studies collected data at baseline to illustrate participants' attitudes to begin with and as such it is questionable whether any change can reliably be concluded. One should be tentative about drawing any firm conclusions from simply viewing a picture as it is highly likely that participants' responses were biased by social desirability rather than evidencing any enduring change in stigma.

Other studies evaluated the impact of training programmes delivered to staff teams and agencies in light of the common finding that the unmet training needs of professionals working with people with ID contribute to the inequalities experienced by the latter (Melville et al., 2005). Support for training initiatives was found by a study conducted by Rae et al. (2011) who evaluated training on the diagnostic criteria and general information about ID. The training significantly increased knowledge scores and these improvements were sustained at one month follow-up. However, the sample was small (n=40) and only 19

follow-up questionnaires were received which suggests that the sustained improvement presented at follow-up should be viewed cautiously. Similar findings were presented by Wong and Wong (2008) who evaluated the effectiveness of staff training which included education, role-play, videotaped exercises and homework. A questionnaire developed for the study was administered by trained interviewers to prevent the potential bias inherent in a self-report format. The training was found to increase staff members' knowledge and skills and shifted attitudes towards facilitating self-determination in people with ID. The authors acknowledge that a larger sample and a longitudinal focus would be required to conclude that the type of training offered could lead to sustained effects on knowledge and awareness.

One study evaluated a training initiative with trainee police officers to assess the impact on attitudes towards ID (Bailey et al., 2001). The officers either received training specific to people with ID or no training (control group). There were no statistical differences at baseline between the groups and mean attitude scores for the experimental group rose following the intervention. By conducting further analyses which controlled for baseline scores, a significant shift in attitudes was present in the experimental group demonstrating a significant impact of the training on eugenic attitudes towards people with ID in a favourable direction. The findings should be considered with caution given the small and specific professional sample and the lack of follow-up data to assess whether more positive attitudes were sustained.

3.4.2. Interventions that incorporated contact with people with ID to improve attitudes

As noted, of the 13 studies that integrated contact in their interventions, three used indirect contact. The first of these (Hall & Minnes, 1999) explored the impact of two television representations of people with Down's syndrome on attitudes among psychology students. Measures of social desirability and television preferences were administered before participants were assigned to the experimental groups. Two experimental films were

tested; a documentary and a drama film portraying the life of a man with Down's syndrome. A control group watched a film-based drama featuring a young man who did not have a disability. The documentary film was associated with more positive affect and greater feelings of comfort. Prior media exposure, contact with people with ID and social desirability were found to be significant predictors of beliefs and attitudes. The study benefitted from utilising two testing procedures to explore possible order effects, but baseline data were not obtained. Furthermore, the study used a student sample that may have held fairly positive and inclusive attitudes to begin with.

The potential value of indirect contact through film presentations was further explored by Iacono et al. (2011). They showed film footage that depicted the lives of real people with ID as part of a training package for students. In this instance, the films did not impact upon attitudes although data from the focus groups conducted did support a shift towards more positive attitudes and a more person-centred perception of disability amongst the students. However the student sample was self-selected and therefore may already have held inclusion friendly attitudes. Of interest though is the failure of the measurement tool to discern any changes in attitudes, perhaps due to its limited sensitivity and construct validity. Another potential explanation could be a high prevalence of socially desirable responses being expressed in the focus groups if participants felt compelled to feedback in a certain manner.

A third study assessed the impact of indirect contact through an experiential learning module where the families of children with disabilities were interviewed by medical students (Sharma et al., 2006). The students subsequently wrote a narrative of the visit which was analysed using Grounded Theory. Twenty-seven per cent of residents described the intervention as a powerful educational experience and reported change in their understanding of the families' perspective on disability. The authors contend that a small experiential intervention can provide individuals with increased insight and awareness of issues relating to disability which may otherwise be unobtainable through formal educational

courses or training. Limitations inherent in the uncontrolled nature of the design and issues of social desirability should be borne in mind when considering the generalisability of these findings. Furthermore, whilst it is deduced from the paper that these experiential experiences were largely positive for the residents, it would have been valuable to hear more about the reflections of participants who may have had less positive experiences.

Although studies incorporating indirect contact are welcome contributions to the literature there are limitations in terms of their scope and ecological validity. Ten studies over the review period evaluated the effect of direct contact on attitudes and awareness of ID. Four studies provided direct contact as part of more formal training programmes for student populations. Tracy and Iacono (2008) explored whether a two hour training session on communication, which integrated didactic learning, discussion, disability awareness tasks and workshop exercises facilitated by a tutor with ID would have a positive impact on attitudes. The training had a significant impact on attitude scores with students reporting feeling more comfortable about interacting with people with ID following the intervention. In the absence of follow-up data, it should be noted that the contact was very brief and therefore the sustainability of the positive attitude change reported is questionable.

Additional support for direct contact as a key feature in attitude change stems from a small study conducted by Hall and Hollins (1996) who evaluated the impact of a workshop lead by a professional actor with an ID on the attitudes of medical students. Students attended a two hour workshop and, in line with the conditions outlined by Allport (1954), the facilitator was in a socially valued role. Using pre and post measures participants were asked to rate their agreement with ten statements regarding Down's syndrome. Following the workshop participants showed more agreement with positive items and less with negative items (of which seven items reached statistical significance). For example, participants showed less endorsement of people with Down's syndrome being poor communicators or frightening.

An additional direct contact intervention conducted by Nosse and Gavin (1991) found that contact increased favourable attitudes and reduced anxieties. In this study a group of students (n= 31) in groups of 10-12 housed and entertained individuals with ID and their support staff over a two and a half day interaction. The authors used a comparison group of students who were not enrolled on health related courses but only yielded data at baseline as they report that attempts to resurvey this group were unsuccessful. Therefore statistical comparisons could only be examined prior to the experiential interaction. In addition, the positive findings should be viewed with caution as participants volunteered to be in the contact group rather than be randomly allocated. The authors acknowledge the potential bias of this on the findings alongside the influence that is likely to have stemmed from the fact that the students personally knew the coordinators of the intervention.

Melville et al. (2006) incorporated direct contact in their intervention for nurses. They report a positive impact on self-efficacy scores in groups 1 and 3 following the training intervention and an increase in knowledge when compared to the control group. This increase was greater for the group who received both the written training package and the intervention, which strengthens the positive impact of interactive training. The study is limited due to the potential for bias within the sample as participants opted-in and therefore are likely to have been more motivated individuals. Furthermore, the authors failed to provide descriptive statistics of the sample, hindering any conclusions about the findings' generalisability.

An earlier study which integrated direct contact into formal education did not find any attitude change. Kobe and Mulick's (1995) evaluation of a minimum of 20 hours contact via an agency working with people with ID perhaps surprisingly found that previous contact with people with ID versus no previous contact was not found to influence attitudes. However, participants showed an increase in self-reported knowledge about ID after the course. The authors contended that attitudes towards ID may develop as a product of cumulative

experience and if so discrete attempts to provide education and contact may do little to alter them.

The notion that extended periods of sustained contact may be required for more balanced perceptions of people with ID is suggested by Rimmerman et al. (2000). This study evaluated the effect of controlled contact with children with disabilities on volunteers' attitudes. At baseline volunteers who expressed a wish to tutor a child with ID, regardless of prior contact or not, showed less rejection and anxiety in their perceptions. Following the intervention only volunteers with prior and current contact had more favourable attitudes; those with just current contact did not adopt such positive perceptions. The authors report these findings as support for the importance of time and length of contact in predicting attitudes. Even though this study was longitudinal in its remit, the authors concluded that longer contact may be necessary for sustained shifts in attitudes.

Four studies made use of sporting events for people with disabilities in the USA as a way of operationalising and exploring the impact of direct contact on attitudes. The Special Olympics provide opportunities for sports training and competition for athletes with ID but also aim to educate the public about the capabilities of people with ID, generate respect and promote inclusion (Freudenthal et al., 2010). The earliest studies in this review that utilised the Special Olympics are by Roper (1990a; 1990b) who evaluated the impact of contact with athletes on volunteers' perceptions. Volunteers were approached as they signed up for the event and were asked to complete a collection of measures. In his first paper (1990a), Roper explored the impact of contact using social distance and found no significant shift in a positive direction. In fact, he found that frequent and sustained contact with people with ID actually led to a reduction in positive attitudes towards them. When examining beliefs about ID (Roper, 1990b), those with the highest levels of contact during the Special Olympics held more negative perceptions than those with less sustained contact, suggesting that medium levels of contact (rather than none or extensive) may lead to more positive attitudes. A reason offered for this finding is that when contact situations arise out of dependency of the

person with ID, a decrease in positive appraisals may develop (Roper, 1990b). Conclusions drawn from this study must be considered in light of possible sampling bias as a self-selected sample willing to give up a significant amount of their time are likely to hold more inclusive attitudes to begin with. Unfortunately the study is limited by its omission of repeated measures or a control group.

A more recent study has used a sample of health professionals working for the Special Olympics to ascertain the effect of contact on attitudes (Freudenthal et al., 2010). Similar to previously reported findings, there were no significant differences in belief scores following the contact intervention. Although qualitative data suggested that the volunteering experience had produced more favourable perceptions of the athletes' abilities, this was only captured in relation to the tasks people with severe ID were expected to perform. The findings are limited by the fact that the belief scores at baseline had already reached a ceiling with scores at 26 out of a possible 27, leaving no room for positive change. Moreover, the sample size was fairly modest which will have affected the power available for the statistical tests to determine significance.

Positive findings are presented by Adler et al. (2005) who evaluated the impact of a screening programme for ophthalmologists working at the Special Olympics against a control condition. The control group was a convenience sample of optometrists who received lectures but did not attend practical training or have any contact with people with ID. Both interventions appeared to lead to significant improvement in self-rated knowledge of ophthalmic issues relating to ID. Both groups also showed attitude change and a rise in confidence in working with people with ID, but to a greater extent for the group who had contact with individuals with ID. A limitation of this finding is that knowledge was measured using a single self-reported score rather than participants being asked knowledge-based questions, which may have been a more substantive and accurate way to measure change.

3.5. Quantitative measures used to evaluate intervention effects

A variety of measurement instruments were used across the studies included in this review and a brief summary of these will be presented in order to appraise their properties and implications for the findings presented above.

Several scales used within the review were originally developed to measure attitudes towards disability in general. The Interaction with Disabled Persons Scale (IDP) (Gething, 1994) is a 20-item Likert scale that measures attitudes towards general disability groups. Responses are made on a 5-point Likert scale of "strongly agree" to "strongly disagree" to indicate agreement with each item. Three studies included in this review used the IDP (Campbell & Gilmore, 2003; Iacono et al., 2011; Tracy & Iacono, 2008). The 20 items have been found to load on six stable factor clusters (Campbell & Gilmore, 2003; Tracy & Iacono, 2008). The measure is reported to have appropriate levels of reliability and validity, with internal consistency coefficients ranging between 0.74 to 0.86 (Campbell & Gilmore, 2003; Tracy & Iacono, 2008). Although this is a valid and reliable measure, it does not specifically capture attitudes towards ID and therefore caution should be taken regarding the extent to which it can sufficiently measure the effectiveness of ID specific interventions.

Another study in the review used The Disability Factor Scale- General (DFS-G) (Siller et al., 1967), rather than a specific ID measure (Rimmerman et al., 2000). An additional limitation in the utility of this measure is that it was constructed some time ago and as such one should be cautious as to the extent to which the constructs it assesses remain appropriate and relevant to present day research. A similar limitation could be noted in relation to Rae et al.'s (2011) study which used a measure not designed for the population to which it was administered (teaching staff).

Two studies reviewed used the Attitudes to Mental Retardation and Eugenics (AMRE) (Antonak et al., 1993) questionnaire, which was developed to measure attitudes towards the reproductive rights of people with ID (Werner et al., 2012). Both Kobe and

Mulick (1995) and Bailey et al. (2001) report good psychometric properties for the 32 item AMRE. Bailey et al. (2001) report a high level of reliability amongst the scale items and an internal consistency coefficient of 0.93.

The limitations of public attitude scales within the field of ID research have been comprehensibly reviewed by Werner et al. (2012). Of note, they conclude that many scales fail to include the multidimensionality inherent to attitude formation and stigma, i.e. affective, behavioural and cognitive components. One scale, The Mental Retardation Attitude Inventory-Revised (MRAI-R) used by MacDonald and MacIntyre (1999), has usefully taken into account the multidimensionality of the attitude construct. The MRAI-R, originally developed by Antonak and Harth (1994), contains 29 items that load onto four subscales; social distance, integration-segregation, subtle derogatory beliefs and private rights. Cronbach alpha values of 0.91 for the overall scale have been reported (Werner et al., 2012). An additional benefit of the measure is that the subscales comprising the MRAI-R provide scope to explore stigma across different contexts, further adding to its utility (Werner et al., 2012).

Two papers used instruments that capture beliefs about ID; the Attitudes Toward Disabled Persons Scale (Hall & Minnes, 1999) and The Prognostic Belief Scale (PBS) (Freudenthal et al., 2010). The Attitudes Toward Disabled Persons Scale is a 20-item instrument that uses a 6-point Likert scale. Hall and Minnes (1999) used a modified version of the original scale developed by Yuker et al. (1970) but noted that the minor changes they made to the scale to reference Down's syndrome instead of the original 'disabled person/people' would have had little effect on the scale's psychometric properties. The PBS is a 27-item scale that asks respondents to assess the capabilities of individuals with mild, moderate and severe ID in areas such as self-help skills and activities of daily living). Psychometric properties for this tool are not provided in the study's report (Freudenthal et al., 2010), but the authors question the sensitivity of the tool due to the ceiling effect noted earlier.

A five-item brief self-report questionnaire, the Attitude to Mental Illness Questionnaire (AMIQ), was used by two authors (Varughese & Luty, 2010; Varughese et al., 2011). The AMIQ is a well validated tool for assessing stigma, but was developed to measure stigma towards mental illness only. Respondents are required to read a short vignette and indicate their agreement with five items on a 5-point Likert scale. Such items include "Do you think this would damage Oliver's career?"; "How likely do you think it would be for Oliver's wife to leave him?"; "How likely do you think it would be for Oliver to get in trouble with the law?" Sound psychometric properties are reported by both studies with test-retest reliability of kappa= 0.70 and Cronbach alpha values of 0.93. However, the authors recognise that the findings rely on participants' perceptions of a hypothetical individual rather than real experience. Social desirability effects as an additional limitation to self-report instruments of this kind, particularly a measure so brief, are also acknowledged. Although the authors have adapted the vignette to label the character as having Down's syndrome, the extent to which the AMIQ is suitable and valid for assessing stigma towards ID and consists of items relevant to ID, is questionable. The authors describe how in its design the AMIQ draws on an established attribution model of public discrimination (Corrigan, Markowitz, Watson, Rowan & Kubiak, 2003) and has been validated against other measures of stigmatised attitudes producing good alternative test reliability (Varughese & Luty, 2010). Although there may well be similarities in the experience of stigma between people with ID and those diagnosed with a mental illness, generalising the findings derived from such measures to the ID population remains problematic until well validated ID scales become available.

Several other studies developed their own measurement tools for the purposes of their research. Descriptions of these varied in detail across the reports, making it difficult to evaluate their validity and psychometric properties (Adler et al., 2005; Hall & Hollins, 1996; Melville et al., 2006; Roper, 1990a/1990b; Wong & Wong, 2008). Only Adler et al. (2005) and Wong and Wong (2008) provided a copy of their self-developed measurement as part of their report.

Nearly all the studies included in the review failed to report effect sizes. Furthermore, most of the studies only presented internal consistency data using Cronbach's alpha coefficients (unless stated otherwise in their individual review). Consequently it is difficult for the reader to comprehensively appraise how robust these measures are. Calculations regarding other principles that delineate psychometric evaluation would have been helpful for the authors to report. Furthermore, self-report methods have been relied on heavily, which limit the ecological validity of the study's findings i.e. the extent to which they are likely to measure any real life changes in prejudice and discrimination. This is further compounded by the use of scales that measured disability in general as opposed to ID specifically, which begs the question of the appropriateness of their use in ID research.

Discussion

The current review has summarised the findings from various interventions that have been implemented to increase knowledge and awareness of ID and improve negative attitudes. In general, the majority of studies reported promising outcomes, particularly those that aimed to increase knowledge using an educational component. The interventions were effective in increasing knowledge and awareness across students, staff and general population groups to varying levels of significance. Support for the positive influence of contact, both indirect and direct, with people with ID has also been demonstrated across several interventions including the benefits of using film and media representations to create contact on a wider scale. Training packages and workshops that have been facilitated by an individual with ID or provided some type of positive and valued contact, alongside an educational component, appear to present the most promise. However, the association between contact and favourable attitudes does not appear to be straightforward. There remains a dearth in our understanding of which types of contact are effective and how much contact may be necessary for attitude change. Most notably, sustained contact with people with ID has been found to potentially hinder or reduce the presence of favourable attitudes in

others, which is a very important finding to explore if anti-stigma interventions involving contact are to be fully understood and considered for roll-out.

As discussed in section 3.5, there are several shortcomings to the studies reviewed in this paper. The degree to which one can generalise from the small body of literature is limited given the small scale nature of the studies and the limitations inherent in the measurement tools and methodology. The distinct lack of follow-up data in conjunction with missing baseline data, where applicable, makes it difficult to assess the findings beyond what may be relatively surface level attitudinal changes. This is further compounded by the well documented limitations of self-report measures and social desirability effects on participants' responses. With reference to increases in knowledge that have been reported, many of the studies asked participants to self-rate change in their knowledge rather than objectively assessing this. Following the receipt of educational material and the tendency of participants towards socially desirable responding, it is not surprising that some change was captured. Therefore, the extent to which this change is ecologically valid is questionable. Furthermore, without follow-up data it is impossible to establish the sustained impact of such interventions and to evaluate which aspects of the interventions hold the most promise.

Moreover, and echoing the findings from a recent review by Werner et al. (2012), our ability to progress and identify which interventions may be beneficial and how they appear so is constrained by the dearth of appropriate attitude scales specifically designed for use in research on attitudes towards ID. As such, our understanding of the types and prevalence of public attitudes towards ID, whether positive, inclusive or stigmatising, and our ability to evaluate the impact of interventions aimed at tackling such perceptions is heavily restricted. Recommendations have been made for further development of ID scales which the outcome of the current review support and share. Werner et al. (2012) suggest the need for measures to be developed in line with the rich conceptualisation of stigma present in the mental illness field, namely the work of Corrigan and Watson (2002), to enable the effectiveness of change initiatives to be determined.

4.1. Limitations of current review

The current review is limited by the possibility that the search strategy did not yield all relevant literature on this topic and some relevant papers may have been unintentionally missed. Furthermore, only articles published in English were included which may further contribute to the search not being exhaustive.

The primary limitation of the review lies in the discrepancies between the high ratings that the quality assessment tool yielded and the extensive limitations which have been levied at the research examined. Furthermore, the majority of papers scored around 15 out of a possible 16 which further indicates inadequacies in the measure. This may have arisen for several reasons. The tool may be limited in the appropriateness and relevance of the aspects rated, or perhaps each aspect was not defined with enough detail to allow for a more comprehensive appraisal. Due to the lack of criteria under each heading the tool was unable to discriminate between those studies that were very detailed in their reporting and those that provided minimal information but still sufficient detail to achieve a positive rating. The quality assessment tool was clearly limited and did not adequately achieve its purpose of validly examining and comparing the methodological quality of each study.

4.2. Future directions

The issues summarised raise the question as to what may be realistic aims for change initiatives and interventions relating to ID; what exactly should future authors attempt to measure and how may this be best pursued? The research into this area is in its infancy, and as such it is difficult to ascertain with any confidence the direction our focus should take. In the absence of valid measurement scales and appropriate resources to design research that is methodologically sound and robust, it is difficult to conclude whether aiming to create shifts in attitudes is the most fruitful endeavour.

Nevertheless, several studies found support for the notion of contact as a vehicle for shaping favourable or unfavourable attitudes and this warrants further investigation. It would

be beneficial to re-appraise the theoretical frameworks which underpin the aims and research questions of future studies pertaining to ID, for example Contact Theory (Allport, 1954; Pettigrew, 1998). If sustained contact with people with ID leads to less favourable attitudes (Roper, 1990a/b), and/or a possible interaction between the effect of duration and quality of contact on attitudes exists (Rimmerman et al., 2000), this should be considered imperative to future work. As the evidence base expands, hopefully with as much richness as its mental illness counterpart, it will be important for discussions to continue regarding the aims and objectives of change interventions in the hope that social inclusion for people with ID can be effectively achieved.

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Part 2: Empirical Paper

Piloting the effect of a film-based intervention on attitudes and stigma towards people with intellectual disabilities in the South Asian community

Abstract

Aim: To determine whether a film-based brief intervention can shift attitudes towards intellectual disabilities in a favourable direction and reduce non-stigmatising causal beliefs and social distance among members of the South Asian community in the UK. The impact of indirect contact (defined as contact with individuals with intellectual disabilities via film footage) on attitudes and beliefs towards intellectual disability was investigated.

Method: Two brief films provided information on intellectual disability and promoted awareness of the capabilities of people with intellectual disabilities whilst also addressing the discrimination that many people with intellectual disabilities experience. The indirect contact film featured individuals with intellectual disabilities delivering the key messages whilst the control film only featured people without disabilities. A total of 60 adult members of the UK South Asian community completed an online survey pre and post-intervention, of which 32 participants completed a one month follow-up.

Results: The films had a small yet significant short-term positive effect on inclusion attitudes, causal beliefs and social distance across both groups. Several of these changes were maintained over time although effect sizes were modest. Indirect contact did not have a greater impact on public attitudes and beliefs in comparison to the control condition.

Conclusions: Film interventions that provide education and promote knowledge and awareness of intellectual disability can have a small yet positive influence on public inclusion attitudes and beliefs. The role of contact as a promising component of change initiatives was not supported by the findings of the present study and potential reasons for this are discussed. Limitations and the extent to which brief interventions that aim to tackle stigma can generate actual behaviour change to improve the lives of individuals with intellectual disabilities are considered.

Introduction

Policies and legislation aimed at maximising social inclusion, empowerment and protecting the rights of people with intellectual disabilities (ID) are in force worldwide. Current UK policy endorses the principles of civil rights, independence, choice and inclusion (Valuing People, 2001) and recognises discrimination towards people with ID. Internationally, the United Nations Convention on the Rights of Persons with Disabilities has recognised the need for comprehensive legislation to change the perception of disability and improve the lives of individuals with ID (United Nations, 2006). These provisions illustrate continuing concern regarding the barriers that exist for individuals with ID in leading full and inclusive lives.

Research has recurrently found that people with ID are the targets of negative attitudes and beliefs which lead to prejudice and discrimination towards them (Abbott & McConkey, 2006; McManus, Feyes & Saucier, 2010). Individuals with ID consistently emerge as one of the least desirable groups to socially interact with (Gordon, Feldman, Tantillo & Perrone, 2004) and can be exposed to teasing, stares and avoidance by others (Pratt, 2010). Negative attitudes and discrimination take several forms, including a failure to meet the health needs of individuals with ID (MENCAP, 2007), reduced employment opportunities, education, housing and social isolation (Cummins & Lau, 2003; McManus et al., 2010). The use of segregated day services and workshops rather than community-based services has also been cited as being illustrative of the discrimination faced by people with ID (Siperstein, Parker, Norins & Widaman, 2011).

The theoretical literature on the existence of stigma towards marginalised groups is extensive. Stigma can be understood in relation to three components- stereotypes, prejudice and discrimination (Corrigan & Watson, 2002; Rusch, Angermeyer & Corrigan, 2005). Stereotypes are social, knowledge constructs which generate impressions and expectations of persons, which when negative and endorsed by the beholder, lead to

prejudiced attitudes. Prejudice is a fundamentally cognitive and affective response which leads to discriminatory behaviour (Rusch et al., 2005). Stigma has been named as one of the potential barriers to inclusive and adequate services for the ID population (Gill, Kroese & Rose, 2002), alongside discriminatory practices that impede inclusion and social acceptance of people with ID within society (Jahoda & Markova, 2004).

Limited knowledge and understanding of ID amongst the general population may also to some extent contribute to negative attitude formation. A UK-based study by Mencap (2008) revealed that lay people frequently show a limited understanding of ID. In addition, awareness of ID has been found to vary across cultures. Low levels of awareness have also been reported by Scior and Furnham (2011). A recent study of ethnic groups in the UK found that only 28% of individuals recognised symptoms of mild ID (Scior, Potts & Furnham, 2012). Studies exploring the experience of family members and carers of people with ID also suggest limited knowledge across lay populations (Hatton et al., 2010). Reduced knowledge and awareness of ID have been shown to be associated with heightened levels of stigma (measured by the construct of social distance), as are other characteristics including age and sex (Ouellette-Kuntz, Burge, Brown & Arsenault, 2010; Scior et al., 2012).

1.1. Intellectual disability across cultural groups

Cultural factors have been reported to have a significant influence on prevailing attitudes towards people with ID (Yazbeck, McVilly & Parmenter, 2004), with the degree of stigmatisation of ID dependant on the beliefs regarding undesirable attributes, causal beliefs and attitudes towards care-giving within a given culture (Allison & Strydom, 2009). This is coupled with findings that suggest that awareness of ID varies greatly between ethnic groups (Scior et al., 2012). Cross-cultural variation in attitudes has been associated with differences in belief systems and understandings of the causes of ID, and research suggests that potentially stigmatising beliefs are not uncommon in some cultures. Beliefs relating to disability as 'given' by an agent with purpose, for example, as a consequence of parents'

'foolish actions' (Miles, 2002), a punishment for past sins (Hubert, 2006) or resulting from possession by 'spirits' (Hatton, Akram, Robertson, Shah & Emerson, 2003) have been documented within South Asian cultures. Furthermore, several studies report beliefs amongst some South Asian families in the curability of ID (Durà-Vilà & Hodes, 2012; Fatimilehin & Nadirshaw, 1994; Mirza, Davidson & Rahma, 2009). A study of Pakistani parents with a child with ID illustrated various explanations for ID (Croot, Grant, Cooper & Mathers, 2008). All the parents sampled made reference to theological explanations for disability, however biomedical explanations were also endorsed and were often used to dispel what parents saw as unhelpful and stigmatising suggestions from others i.e. disability resulting from a curse or evil spirit.

The impact of negative attitudes and stigma appears widespread. Parents have reported the prevalence of negative perceptions within the wider Pakistani community in the UK and described feeling scrutinised and judged as a result of underlying negative causal beliefs (Croot et al., 2008). Elsewhere families have reported high levels of social isolation (Hubert, 2006) and disability has been documented to reflect poorly on the associated family and to influence the marriage and employment prospects of siblings (Kramer, Kwong, Lee & Chung, 2002). Family members of individuals with ID from ethnic minority communities are more likely to report negative experiences regarding social acceptance within their community relationships and interactions with services than their White British counterparts (Hatton et al., 2010).

A study of South Asian individuals with ID revealed that they experienced pervasive racism and stigma across all areas of their lives, including a lack of culturally appropriate services and limited friendships and close relationships (Azmi, Hatton, Emerson & Caine, 1997). Together with the evidence that South Asian individuals with ID experience racism and discrimination, it has been suggested that individuals with ID from Black and minority ethnic (BME) backgrounds may experience a double disadvantage in terms of their experiences (Allison & Strydom, 2009). Disadvantages in accessing health care, practices

and service provision have been reported (NIMHE, 2003). South Asians are reported to make less use of psychiatric services than White individuals resulting in greater unmet need from community services (McGrother, Bhaumik, Thorp, Watson & Taub, 2002).

Consequently, there is a need to tackle both institutionalised stigma and discrimination through efforts at the policy and service delivery level, in conjunction with work targeting stigma and discrimination at a wider community level.

1.2. Tackling stigma and theories of change

There has been a lack of attention given to exploring how public stigma towards people with ID may be reduced (Scior, 2011; Werner, Corrigan, Ditchman & Sokol, 2012). In light of this gap, literature on tackling mental illness stigma is drawn upon here.

Stigma towards mental illness endorsed by the general public (Corrigan & Watson, 2002) has a significant impact on individuals' psychological well-being and quality of life (Couture & Penn, 2003). Three themes have been regularly cited as drivers of mental illness stigma: authoritarianism, fear and exclusion, and benevolence (Corrigan & Watson, 2002; Corrigan, Backs-Edwards, Green, Lickey-Diwan & Penn, 2001a; Couture & Penn, 2003; Rusch et al., 2005). Authoritarianism is the belief that individuals with severe mental illness are irresponsible and incapable and therefore decisions should be made on their behalf by others. Fear and exclusion denotes the belief that individuals should be feared and isolated from communities. Finally, benevolence relates to the belief that individuals are naïve, innocent and childlike and consequently require care (Corrigan & Watson, 2002; Couture & Penn, 2003; Rusch et al., 2005). These constructs have been influential in understanding that addressing stigma requires consideration of how fear and reduced awareness may play an underlying role in the formation of negative attitudes, beliefs and subsequent behaviour.

Three approaches to challenging stigma have been widely documented: protest, education and contact (Couture & Penn, 2003; Rusch et al., 2005). Protest approaches are

reactionary attempts to diminish negative attitudes by identifying injustices to stigmatising portrayals of persons. Educational strategies provide contradictory evidence that is factual and informative. Although some moderate success has been indicated for these approaches it is the role of contact which has been reported to present the most promising avenue for change (Couture & Penn, 2003; Rusch et al., 2005).

1.2.1. Role of contact in reducing stigmatising attitudes

Intergroup contact theory (Allport, 1954; Pettigrew, 1998) contends that direct contact between groups can have a positive impact on prejudicial attitudes. This early theory specified the need for the following conditions to be met: a) equality in status between group members; b) cooperative working without competition; c) a commonly shared goal-orientated effort; and d) the perception that contact is socially sanctioned and readily accepted (Allport, 1954). Support for this approach from the mental health literature has been documented. A review by Couture and Penn (2003) indicated that contact which was intimate, voluntary, equal and pleasant was associated with less stigmatising views and more positive attitudes. Similarly, familiarity with mental illness was shown to be inversely associated with prejudicial attitudes (Holmes, Corrigan, Williams, Canar & Kubiak, 1999).

An increasing number of studies have lent support to the role of contact on attitudes towards ID. However rather than the need for specific conditions to be met, as proposed by Allport's (1954) criteria, contact in itself or 'mere exposure' (Zajonc, 2001) appears sufficient to shift attitudes in a favourable direction (Pettigrew, 1998; Pettigrew & Troop, 2006). Direct contact with an individual with ID as part of training initiatives has been found to improve self-rated attitude scores (Adler, Cregg, Duigan, Ilett & Woodhouse, 2005; Melville et al., 2006; Tracy & Iacono, 2008). The relationship between sustained periods of direct contact and attitudes is by no means fully understood though (Rimmerman, Hozmi & Duvdevany, 2000; Roper, 1990). Nevertheless contact has become a foundation of attitude change interventions and inclusion philosophy (Cummins & Lau, 2003). Whilst direct contact

interventions have been shown to be valuable, such interventions are arguably difficult to disseminate on a large scale. Accordingly, several studies have evaluated the impact of indirect contact on attitudes and yielded promising findings. How contact with people with ID, both directly and indirectly, may be used as a driver to challenge stigma and influence change on a larger scale requires further consideration.

1.2.2. Use of indirect contact via film-based interventions

The value of indirect contact via the use of film media in improving attitudes is showing promise and they are appealing as a means of reducing stigma on a relatively broad scale (Reinke, Corrigan, Leonhard, Lundin & Kubiak, 2004). Although much of the literature is based in the mental health field, several evaluations regarding ID are available. When a documentary and drama film depicting the life of a man with Down's syndrome were compared with a control film, the documentary was associated with more positive affect and greater feelings of comfort and willingness to volunteer (Hall & Minnes, 1999). However the study was limited by a lack of baseline data. One study found that a film which utilised disability humour to address issues of persons with disabilities and provide constructive images of disability elicited more positive attitudes than a serious documentary or no film at all (control) (Smedema, Ebener & Grist-Gordon, 2012). Elsewhere, the impact of two indirect contact films was explored and found a small but significant effect on inclusion attitudes and a reduction in social distance, with the impact on social distance and two of the attitudinal subscales maintained at one month follow-up (Walker & Scior, 2013). Data from focus groups in a study by Iacono et al. (2011) showed that film presentations led to more positive attitudes and person-centred perceptions of disability in a student sample. However, attitude change was not supported by analysis of the quantitative measures used.

1.3. Study rationale, aims and research questions

There remain several questions regarding the development of effective interventions that challenge negative attitudes and stigma towards ID. The question of whether indirect

contact can be an effective means of attitude change warrants further attention. Furthermore, there is a need for interventions which tackle negative attitudes and stigmatising beliefs that target specific cultural communities.

The present study aimed to elucidate these gaps and investigate the impact of indirect contact on attitudes and beliefs towards people with ID held by members of the South Asian community in the UK. Indirect contact is defined as contact with individuals with ID through film footage rather than in person. The experimental condition which provided indirect contact comprised a seven minute film that provided information about ID, aimed to raise awareness of the capabilities of people with ID whilst also addressing the discrimination experienced by individuals with ID. This was compared to a control film which conveyed the same messages but did not provide any contact with individuals with ID. The study aimed to address four research questions:

1. Does the intervention shift inclusion attitudes in a positive direction regardless of the type of film viewed?

2. Does the intervention increase the endorsement of non-stigmatising beliefs and reduce endorsement of stigmatising beliefs irrespective of film condition?

3. Does the intervention reduce social distance regardless of the film viewed?

4. Is the contact film which utilises indirect contact with people with ID more effective than the control film?

It is hypothesised that both films will show some effect on inclusion attitudes and social distance in a positive direction by the nature of the information they convey. It is hypothesised that both conditions will have some effect on increasing the endorsement of non-stigmatising beliefs. However, with respect to all these elements, any change elicited by the contact film is anticipated to be greater than that observed in the control condition. Both films provide awareness raising information and psycho-education. However, the control

film lacks direct exposure to people with ID and does not include first person accounts, which research suggests is most promising in generating attitudinal change.

Method

2.1. Participants

Participant recruitment took place between November 2012 and April 2013. Participants were aged 16 years and above, were of South Asian ethnicity and resided in the UK. For the purposes of the study South Asian was used to refer to populations originating from India, Pakistan, Bangladesh, Sri Lanka and Nepal (Modood et al., 1997). The study and all instructions were delivered in English via an online survey, therefore literacy in English and access to the internet was required.

A total of 100 individuals provided data at baseline (time 1) and immediately following the intervention (time 2), following initial interest from 218 individuals who opened the survey link (45.8% attrition rate). After initial screening was conducted 84 participants met the eligibility criteria for the study. At the four week follow-up (time three), 42 participants provided data and therefore completed all three time points (attrition rate of 50%). However, whilst undertaking preliminary data screening for the analysis it became apparent that some participants in the sample had failed to adhere to the instructions of the survey and had chosen not to view the film in full. As such, each participant's responses were thoroughly reviewed by checking the time that each measure had been completed which is provided by the survey software. This enabled the author to establish whether the films had been viewed in full. It was found that 24 participants had chosen to play the film for between a few seconds and two minutes which meant that they had not received the intervention in full. Consequently their responses were void and their data were removed from the analysis which affected the power of the final sample. A final sample of 60 participants who completed time one and time two were included in the study. Of this sample 32 participants

completed all three time points (53.3% response rate). Figure 1 provides an overview of the sample attrition.

There were similar proportions of males and females within each group although women were over-represented in the total sample. Ethnic groupings were relatively evenly spread across the groups. Within the total sample 50% were of Indian origin, with Sri Lankan origin comprising the second largest group. The sample was highly educated on the whole with graduates comprising 73% of the total sample. The largest proportion of non-graduates was clustered in the contact film group. The largest proportion of the sample was Hindu or Muslim in their religious affiliation.

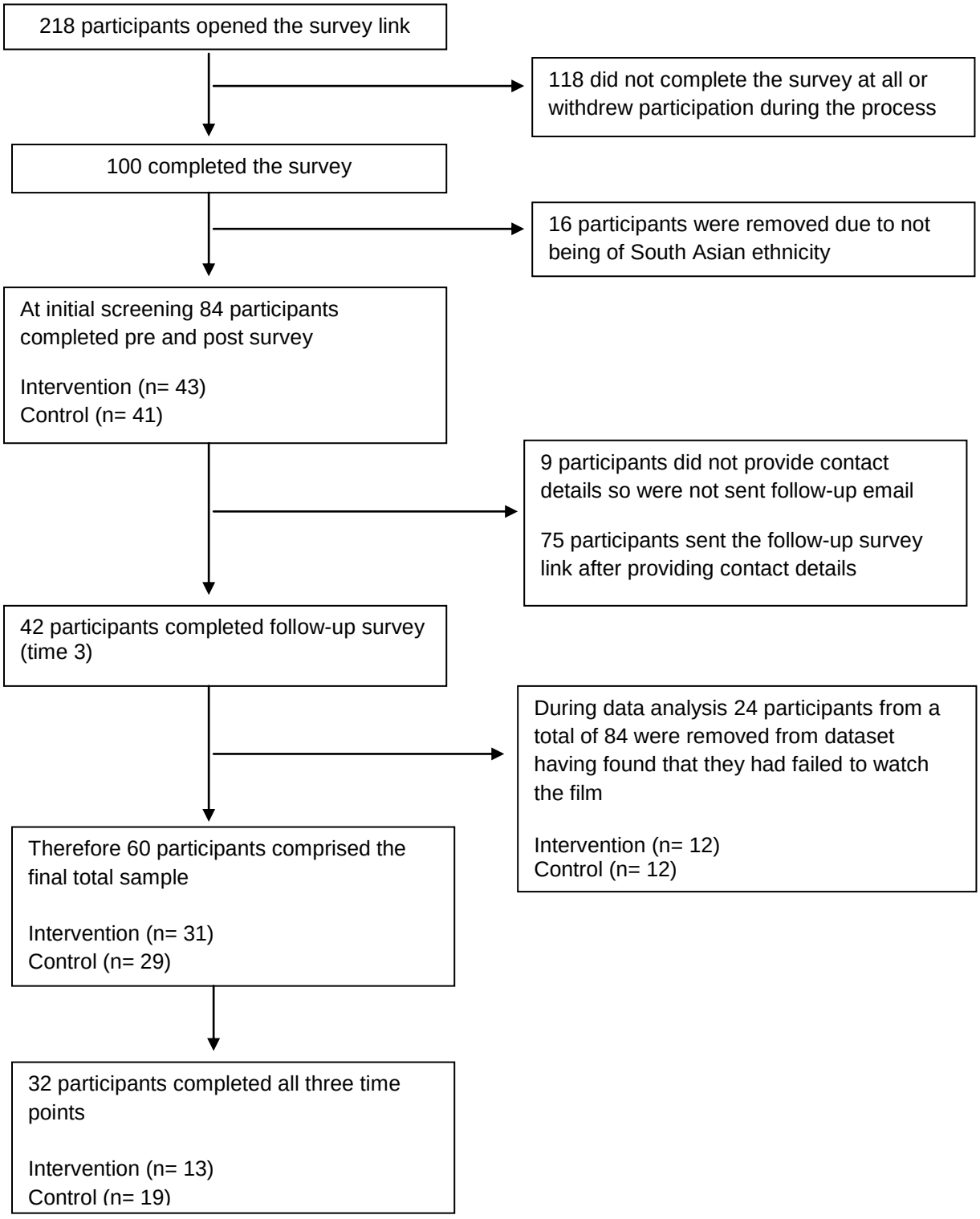

Figure 1. Flow Diagram of Participant Attrition

2.2. Sampling Procedure

A convenience sample was obtained for the purpose of this study. An email invitation featuring the link to the study and inviting recipients to participate was distributed (see Appendix B). The invitation was posted on social networking sites such as Facebook and was disseminated to the subject pool and distribution list associated with the author's educational institution (University College London). Liaison and email requests were sent to various South Asian community agencies and religious organisations across the UK including in large cities such as Birmingham, Leeds and Bradford, as well as the Greater London area. Although such agencies expressed interest in the project, only a very small number of participants were recruited via this method. An incentive to create a snowball effect was used whereby already recruited participants were asked to forward the survey link to their social network, with a prize of £50 on offer to the two participants who recruited the most people into the study. This was somewhat successful in promoting the study although it failed to recruit as many participants as anticipated.

2.3. Power Calculation

To estimate the required sample size for the current paper "G*Power 3" software (Faul, Erdfelder, Lang & Buchner, 2007) was used. Assuming equal groups sizes, a power calculation was carried out specifying alpha = 5% and desired power = 80%. There were no previous studies available to review with regards to effect sizes. By assuming a medium effect size of .25 the total sample size was computed at 28 participants. This was in comparison to a small effect size of .1 that estimated a total sample size required of 164. Given the dearth of studies to draw upon for consideration of effect sizes, it was decided that a small to medium effect size would be a reasonable aim and represented the lowest level that would be of clinical interest. By assuming a small to medium effect size (.15) the total sample size estimated was 74. Therefore, this study aimed to recruit 100 participants to allow for attrition or other ineligibilities.

2.4. Design

The study utilised a 3 x 2 mixed repeated measures design (3 time points x 2 group conditions). Attitudes towards ID, causal beliefs and social distance comprised the dependent variables for the study. The type of film condition (indirect contact versus control) comprised the independent variable. The study collected data at baseline, immediately post-intervention and at one month follow-up in an effort to ascertain change over time between the experimental and control group.

2.5. Intervention Film and Control Film

All participants were randomly allocated one of two films. The contact film was designed to incorporate four key messages regarding ID and the experiences of people with ID in society. Firstly, the film aimed to raise awareness of ID by providing information on definitions, prevalence, addressing common misconceptions such as confusion between ID and mental health problems, and provide information on the range of known causes of ID (and which tried to directly tackle stigmatising causal beliefs more commonly expressed within South Asian populations). Secondly, the film conveyed the capabilities and similarities in goals and values of people with and without ID using a clip of a young woman with ID employed at her local council. This excerpt aimed to promote inclusion and raise awareness of the valuable contributions people with ID can make to society. Thirdly, the prevalence of discrimination towards people with ID was conveyed using clips where individuals with ID discussed their personal experiences of hostility, harassment and discrimination first hand. Lastly, the film provided tips for effective communication with people with ID using a voiceover recorded by the author which was accompanied by photographic stills of people with ID. Advice on communication was given in response to research findings that suggest it may be feelings of discomfort and anxiety associated with relating to people with ID that may drive negative attitudes and excluding behaviour, rather than direct hostility (Beh-Poojah, 1991; Hudson-Allez & Barrett, 1996). The content of the film was presented by various

people with ID, support staff from several organisations and also featured a consultant psychiatrist who provided an expert opinion. The contact film was seven minutes long and provided indirect contact as people with ID appeared throughout the film imparting information and sharing their personal accounts. The film featured individuals with ID from a range of ethnic backgrounds including two people of South Asian origin. It was hoped that featuring individuals of South Asian origin would increase the relevance and applicability of the messages presented to an audience drawn from this community.

The control film aimed to convey these same messages and featured the same presenters as the intervention film. However, individuals with ID were not featured in order to test the impact of indirect contact on attitudes. To achieve this, all first-hand accounts and images of people with ID were omitted. The experiences of the council employee were described by colleagues and relatives instead of the first-hand account provided in the contact film. Written accounts of harassment and hostility towards people with ID were provided as slides. The picture stills that accompanied the communication voiceover were removed. The control film was five minutes in length. It was decided that the use of a completely unrelated film clip, as opposed to the amended film which was used, would not be appropriate. Having agreed to participate in a study on attitudes towards people with ID and having completed a battery of respective measures, it was felt that a completely unrelated film clip would not make sense to the respondent.

2.6. Measures

2.6.1. Social Desirability

Self-report attitudinal measures were used in this study (see Appendix C). The risk of response bias in self-report methods is well documented (Antonak & Livneh, 2000) and can be affected by social desirability amongst other threats to validity. The Marlow-Crowne Social Desirability Scale (MCSDS) ten item version was administered at baseline to measure the extent to which participants gave socially desirable responses (Greenwald & Satow,

1970). Items are scored on a true/false format with higher totals indicating a greater degree of social desirability. Satisfactory reliability across different sample populations (α= 0.77) has been reported (Ray, 1984).

2.6.2. Inclusion Attitudes

The Community Living Attitudes Scale- Intellectual Disability version (CLAS-ID; Henry, Keys, Jopp & Balcazar, 1996) measures attitudes towards ID on four related but independent subscales: a) *Empowerment*: that people with ID should take an active role in decisions affecting their lives; b) *Similarity*: whether the respondent believes their own life goals and rights are the same as for a person with ID; c) *Exclusion*: the extent to which people with ID should be excluded from society; and d) *Sheltering*: how much help a person with ID is deemed to need in their daily life and the extent to which they need to be protected against risks in the community. Using a 6-point Likert scale ranging from 1= strongly disagree to 6= strongly agree, respondents indicated their agreement with 17 items that load on the four subscales outlined above. The measure has been reported to have good psychometric properties across a range of cultural contexts (Henry et al., 1996; Scior, Kan, McLoughlin & Sheridan, 2010; Scior & Furnham, 2011; Yazbeck et al., 2004).

Three further items were added to the measure as per a previous study by Scior et al. (2010) which assess values specific to the South Asian community. The internal consistency of these additional three items was low (Cronbach's α= 0.22), therefore these items were treated separately in the analysis.

2.6.3. Intellectual Disability Literacy Scale (IDLS)

The IDLS is a measure of recognition, causal beliefs and social distance in relation to ID and schizophrenia (Scior & Furnham, 2011). For the purpose of the present study only the ID vignette was incorporated from the original measure and was explicitly labelled, therefore recognition was not measured. The name of the individual in the vignette was altered from a Western name (James) to a more culturally relevant South Asian name

(Samir). All items relating to schizophrenia and treatment beliefs from the original measure were omitted, with the following items utilised for the purpose of this study.

2.6.3.1. Causal beliefs: Respondents rated their agreement with 22 statements about possible causes of ID on a 7-point Likert scale (1= strongly disagree to 7= strongly agree). The items load onto four factors, namely *Biomedical; Adversity; Environmental; Supernatural* that have good internal reliability across a range of cultural groups (Scior & Furnham, 2011).

2.6.3.2. Social distance: Willingness to have social contact with the person in the ID vignette was rated across five items replicated from Link, Phelan, Bresnahan, Stueve and Pescosolido (1999). Respondents used the same 7-point Likert scale (1= strongly disagree to 7= strongly agree) to indicate their agreement. High internal consistency (Cronbach's α= 0.87) across cultural groups has been reported by Scior and Furnham (2011). Furthermore, test-retest reliability for all items of the social distance measure have been reported to be kappa > 0.7, indicating that the items measure relatively stable attitudes (Scior & Furnham, 2011).

2.6.4. Demographics

Social demographics including age, sex, ethnicity, educational attainment, occupation, religion and previous or existing contact with a person with ID (capacity, frequency and closeness) were obtained at baseline.

2.7. Procedure

Both the measures and two films were administered individually to participants via Opinio, a web-based survey system. By following the link participants were presented with an online information sheet providing details of the study and the inclusion criteria for participation (see Appendix D). Participants completed a battery of questionnaires at time one (baseline) before being randomly assigned to either the contact or control condition based on a neutral question. Participants with an even birth date viewed the contact film

whilst those with an odd birth date received the control condition. After viewing their respective films participants were requested to complete the battery of measures for a second time (time two). The survey on average took 24 minutes in total to complete. Participants were asked to leave their contact details (name, contact number and email address) if they would like to be entered into a prize draw, a monetary incentive designed to bolster participant numbers. Participants were also informed that they would be contacted at a later date to request participation in the follow-up survey.

Participants who left their contact details received a personalised email between four to six weeks after completing the initial survey inviting them to participate in the follow-up survey. The follow-up survey consisted of the CLAS-ID, IDLS and social distance items only, which participants were requested to complete for a final time. Social desirability was only tested at baseline and participants did not view either film at follow-up. The follow-up survey took on average six minutes to complete. Participants were again asked to leave their contact details in order to allow their follow-up responses to be matched to their baseline data. This also provided a second opportunity to be entered into the prize as a means of thanking them for their participation. At the end of the follow-up survey participants were debriefed about the nature of the study and the two film conditions. This was offered once participation was complete as doing this after the initial survey would have contaminated the results across the time points.

2.8. Ethics

The present study was part of a larger project that was approved by the UCL Research Ethics Committee (project reference: 0960/001). Informed consent was provided when participants read the information sheet and chose to advance to the survey. The information form outlined participants' right to withdraw at any time, stated that their participation was voluntary and that the data generated would be anonymised and stored in accordance with the Data Protection Act (see Appendix E). Contact details for the

researchers were provided at the beginning and end of the survey to enable participants to make contact.

2.9. Statistical Analysis

Data were collated and prepared for statistical analysis using SPSS version 21. Tests for normality and outliers were conducted to ascertain the appropriate use of parametric analyses on the data. Where violations of parametric assumptions were identified, equivalent non-parametric analyses were carried out. Independent sample t-tests were employed to compare both groups at baseline on the subscales which met the assumptions for parametric analyses. Non-parametric Chi Square analyses were conducted for socio-demographic categorical data and other non-normally distributed data.

To compare the impact of the two conditions tested on inclusion attitudes, beliefs and social distance, a 2 X 2 mixed ANOVA was conducted for parametric data. Equivalent non-parametric analyses were conducted on those scales which were significantly skewed and thus violated assumptions of normality. A 3 X 2 mixed design ANOVA was then employed to assess changes over the three time points and examine any differences between the intervention and control conditions. However, it should be noted that the sample size at time three was very small (n=32). As such, caution should be exercised whilst conducting this level of statistical investigation with an underpowered sample. Examination of whether there were any significant differences between participants who completed all three time points and those who only provided data at time one and time two was conducted. Throughout the paper effect sizes are reported in line with guidelines proposed by Cohen (1988).

Results

The study aimed to investigate the impact of an indirect contact film promoting awareness and non-stigmatising attitudes towards people with ID versus a control condition on participants' attitudes, causal beliefs and desire for social distance. The results of the study are presented in the following sections: 1) data screening; 2) inter-item reliability; 3)

participant characteristics; 4) impact of the films on inclusion attitudes between scores at time one and time two; 5) impact of films on causal beliefs towards ID between scores at time one and time two; 6) impact of the films on social distance towards people with ID between pre and post time points; 7) analyses of the effect on inclusion attitudes, causal beliefs and social distance across the three time points drawing comparisons between the film conditions; and 8) analyses of differences between participants who provided data at time three (follow-up) to those who did not.

3.1. Data screening

3.1.1. Missing data

Minimal amounts of missing data were identified when the data were screened. As this amounted to less than 1%, the missing values were replaced using the mean values for the appropriate scale items in accordance with the group condition (Field, 2009).

3.1.2. Assumptions of normality

The data were checked for parametric assumptions using the skewness and kurtosis values, histograms and consideration of the Kolmogorov-Smirnov statistic. The CLAS-ID *empowerment*, *exclusion* and *similarity* subscales were found to violate the assumptions of normality. Two of the three additional items added to the CLAS-ID, which related to values specific to the South Asian community, also violated assumptions of normality (item 19; *'families should hide their relative with ID away'* and item 20; *'having ID in a family damages marriage prospects of siblings'*). The IDLS *supernatural* causes subscale also deviated from normality. Successful attempts were made to transform the data for the CLAS-ID *empowerment* scale only using a square root transformation. For the *exclusion*, *similarity* and *supernatural* subscales, and items 19 and 20 on the CLAS-ID, transformations were unsuccessful and distributions for these scales remained significantly skewed. Consequently non-parametric analyses were conducted where possible due to these violations and given the modest sample size.

3.1.3. Outliers and influential cases

On the CLAS-ID three outliers were identified on the *exclusion* subscale and one outlier on the *similarity* subscale at baseline. These were deemed to be exerting influence on the mean after the difference between the original and 5% trimmed mean was examined as suggested by Pallant (2005). A further four influential outliers were identified on the IDLS *supernatural* causes subscale and three more were identified on the scores for question 19 of the additional CLAS-ID items. To reduce the impact of these outliers they were replaced with the mean of the entire subscale +/- 2x SD, as suggested by Field (2009).

3.2. Inter-item reliability

Inter-item reliability checks were conducted for the social distance items and all CLAS-ID and IDLS subscales. Cronbach's alpha coefficients were found to be acceptable across all scales ranging between 0.62 to 0.89 (see Appendix F).

The three items added to the CLAS-ID to assess values specific to the South Asian community (items 18, 19, 20) were found to have low internal consistency (Cronbach's α= 0.22). As such these items were treated individually in the subsequent analysis.

3.3. Participant characteristics

Descriptive data for the total sample and distributions across both participant groups are presented in Table 1.

Table 1

Descriptive Statistics across Groups

Variable		Complete sample		Contact film		Control film	
		n	%	*n*	%	*n*	%
Sex							
	Male	23	38.3	12	38.7	11	37.9
	Female	37	61.7	19	61.3	18	62.1
	Total	60	100	31	100	29	100
Ethnicity							
	Indian	30	50.0	17	54.8	13	44.9
	Sri Lankan	10	16.8	3	9.8	7	24.2
	Pakistani	8	13.3	4	12.9	4	13.8
	Bangladeshi	8	13.3	5	16.1	3	10.3
	Asian Other	2	3.3	1	3.2	1	3.4
	Mixed	2	3.3	1	3.2	1	3.4
	Total	60	100	31	100	29	100
Education							
	Non-graduates	16	26.7	11	35.5	5	17.5
	Graduates	44	73.3	20	64.5	24	82.5
	Total	60	100	31	100	29	100
Religion							
	Hindu	18	30.0	7	22.6	11	38.0
	Muslim	18	30.0	12	38.6	6	20.7
	Christian	8	13.3	6	19.4	2	6.9
	Non-religious/ Atheist/ Agnostic	8	13.3	2	6.5	6	20.7
	Sikh	5	8.3	3	9.7	2	6.9
	Buddhist	2	3.3	1	3.2	1	3.4
	Other	1	1.8	0	0.0	1	3.4
	Total	60	100	31	100	29	100
Contact							
	Yes	39	65.0	24	77.4	15	51.7
	No	21	35.0	7	22.6	14	48.3
	Total	60	100	31	100	29	100

Participants across both the intervention and control groups did not differ significantly on gender, χ^2 =.004, *df* =1, *p*=.95; ethnicity, χ^2 = 2.57, *df* =5, *p*=.77; educational attainment,

χ^2 = 2.55, *df*= 1, *p*=.11; religion, χ^2 = 8.03, *df* = 6, *p*=.24, or social desirability, *t*(58)= -.157, *p*=.17. Participants' ages ranged from 17 to 56 years with a mean age of 29.57 (S.D. = 10.67) for the contact film group and a mean of 27.50 (S.D. = 7.876; *t*(53)= -.843, *p*=.40) for the control condition indicating no significant difference. For those who identified themselves as religious there was no significant difference in the importance of religion reported, *t*(54)= -1.60, *p*=.88.

It was found that 77.4 % of the contact film group had prior contact with a person with ID in comparison to 51.7% of the control group, χ^2 = 3.29, *df* = 1, *p*=.04. However, there was no significant difference between the groups in terms of the closeness of any previous ID contact relationship, *t*(32)= -1.28, *p*=.87, indicating that the higher rate of previous contact in one group was not reflected in a difference in the quality of relationships with people with ID.

The relationship between social desirability (as measured by The Marlow-Crowne Social Desirability Scale) and each dependent variable was investigated using Pearson's product-moment correlation co-efficient (*r*) for *empowerment*, *sheltering*, *biomedical*, *environment*, *adversity* and social distance scores and Spearman's rank order correlation (r_s) for the non-parametric subscales (*exclusion*, *similarity* and *supernatural*), see Table 2. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity occurred. No statistically significant correlations were found between social desirability and the dependent variables which suggests that social desirability at best had only a modest effect on attitudes and causal beliefs towards ID.

Table 2

Correlations between Social Desirability and Dependent Variables for Total Sample (n=60) at Baseline

Subscale		Social Desirability
Attitudes		
	Empowerment	r= -.14*
	Sheltering	r= -.15*
	Exclusion	r_s= -.22*
	Similarity	r_s= .05*
Causal Beliefs		
	Biomedical	r= -.13*
	Adversity	r= .01*
	Environment	r= .23*
	Supernatural	r_s= .11*
Social Distance		r= -.14*

**= non-significant*

Table 3 details the mean scores at baseline for the subscales of the CLAS-ID and additional South Asian specific items for both groups. Both groups were similar with regards to empowerment*,* $t(58)= .264$, $p=.79$ and *sheltering,* $t(58)= .591$, $p=.56$. Non-parametric analyses showed that *exclusion* scores for the contact film group (*Mdn* = 1.00) did not differ from the control group (*Mdn* = 1.25) at baseline, $U = 378.0$, $Z = -1.13$, *ns*, $r = -0.15$. This was also the case for the *similarity* subscale, $U = 400.0$, $Z = -.744$, *ns*, $r = -0.10$.

The three additional items on the CLAS-ID assessing values specific to the South Asian community were also compared at baseline, see Table 3. Both groups did not differ with regards to their agreement that parents should bear the main responsibility for children with ID (item 18), $t(58)=-1.38$, $p=.17$. The contact film group (*Mdn* = 1.00) and control group (*Mdn* = 1.00) held similar views regarding the notion that families should hide relatives with ID from society and not draw attention by using services (item 19), $U =388.50$, $Z = -.958$, *ns*, $r = -0.12$. The groups were also similar in the degree to which they endorsed the view that having a person with ID in a family could damage the marriage prospects of siblings (item

20), (contact film group: *Mdn* = 2.00; control: *Mdn* = 1.00), *U* = 371.50, Z = -1.86, *ns*, *r* = -0.24.

Mean scores at baseline for the IDLS subscales for both groups are presented in Table 4. Both groups were similar on the following subscales: *biomedical, t*(58)=-.942, *p*=.35*; adversity, t*(58)= 1.08, *p*=.29*; environment, t*(58) = 1.02, *p*=.31. Furthermore, the contact group (*Mdn* = 1.60) and control group (*Mdn* = 1.40) were similar on the s*upernatural* subscale, *U* = 447.0, Z = -.038, *ns*, *r* = -0.01.

In addition, participants across both groups were similar in the degree of social distance endorsed at baseline, *t*(58)= .057, *p*=.96. Table 5 details the baseline scores for social distance by group.

These preliminary analyses suggest that baseline attitudes amongst this convenience sample of South Asian individuals, as measured by the CLAS-ID, were generally positive. Participants in both conditions supported ideas of similarity, and were opposed to the exclusion of people with ID. There was moderate agreement for sheltering and participants in both groups expressed favourable views towards the empowerment of people with ID. Attitudes regarding whether families should bear the responsibility of care for relatives with ID were more ambivalent across the sample, with means clustering around the mid-point of the scale (3 = disagree somewhat, 4= agree somewhat). Participants across the two groups strongly opposed the notion that families should hide relatives with ID from society and disagreed that ID within the family may damage siblings' marriage prospects.

Social distance was markedly low amongst all participants at baseline indicating that respondents were willing to have social contact with a person with ID as measured through self-report.

Participants in both groups endorsed *biomedical* explanations as the primary cause of ID and largely opposed fate-related explanations as captured by the *supernatural* subscale. Support was moderately low for explanations that take into account *adversity* in life events and the *environment*, whilst, *environmental* items were agreed with slightly more than *supernatural* items.

As there were no significant differences on the dependent variables between the groups at baseline, it was appropriate to conduct analyses to examine changes over time. Throughout the analysis it was imperative to be conscious of the fact that the sample for the study was underpowered and the consequent limitations that this places on the use of statistical techniques. Furthermore, in an attempt to address the potential impact of multiple testing and Type 1 error inflation, a lower threshold of p= 0.01 was applied throughout the analyses. Accordingly all findings presented have been considered with caution and the conclusions drawn remain tentative.

3.4. Short-term effect of the intervention on inclusion attitudes

Descriptive data for all four subscales of the CLAS-ID and additional items 18, 19 and 20 are presented in Table 3. To aid readability and allow for appropriate comparisons to be made to data presented by other studies using this measure, the descriptive data are presented in their original form. However, for the *empowerment* subscale the statistical analyses were conducted on the transformed means.

A 2 X 2 (group x time) mixed design ANOVA was conducted to compare change in scores on the *empowerment* and *sheltering* subscales between time one and time two according to group condition. There was no significant interaction effect between the two conditions over time for either the *empowerment* scale, $F(1, 58)=2.64$, $p=.11$ or *sheltering* scale, $F(1, 58)= .356$, $p=.55$. There was a significant main effect for time in *empowerment* scores, $F(1, 58)=27.10$, $p=<.001$, $d= 0.20$, and also in *sheltering* scores, $F(1,58)= 14.90$, $p=<.001$, $d= 0.32$. A main effect for group was not found. Thus regardless of the

intervention received, endorsement of *empowerment* increased and *sheltering* decreased between time one and time two.

As the *exclusion* and *similarity* subscales were not normally distributed the scores were analysed using the Wilcoxon signed-rank test to examine changes between the pre and post-intervention scores, see Table 3. There were no significant differences found between time one and time two scores for the contact film group for *exclusion*, T=16.50, p=.09 or *similarity*, T=50.50, p=.94. However, a small significant difference was found for the control condition for both *exclusion*, T=8.00, p=.003, d=-0.36, and *similarity*, T=30.00, p=.05, d=-0.26. This indicates that the extent to which participants who saw the control film endorsed exclusion attitudes decreased at time two and participants became more supportive of the notion that the goals and rights of individuals with ID were similar to their own post-intervention. Again only small effect sizes were achieved and as such the extent to which these findings are meaningful must be viewed with caution.

Table 3

CLAS-ID Attitudes Subscales and South Asian-specific Items: Mean and Standard Deviation for Total Sample and by Group

		All (n= 60)		Contact film (n= 31)		Control film (n= 29)	
Measure		Time 1 M (SD)	Time 2 M (SD)	Time 1 M (SD)	Time 2 M (SD)	Time 1 M (SD)	Time 2 M (SD)
	Empowerment	4.39 (0.86)	4.51 (0.87)	4.36 (0.90)	4.60 (0.90)	4.42 (0.83)	4.41 (0.85)
	Sheltering	3.27 (0.93)	2.94 (0.94)	3.20 (1.02)	2.88 (0.91)	3.34 (0.84)	3.01 (0.98)
	Exclusion	1.49 (0.68)	1.33 (0.53)	1.41 (0.65)	1.30 (0.52)	1.57 (0.73)	1.36 (0.55)
	Similarity	5.41 (0.55)	5.48 (0.59)	5.44 (0.58)	5.45 (0.63)	5.37 (0.52)	5.52 (0.55)
	Item 18	3.50 (1.61)	3.25 (1.65)	3.23 (1.67)	3.06 (1.63)	3.79 (1.52)	3.45 (1.68)
	Item 19	1.19 (0.46)	1.15 (0.42)	1.09 (0.35)	1.11 (0.30)	1.29 (0.55)	1.19 (0.51)
	Item 20	2.35 (1.57)	2.22 (1.42)	2.55 (1.65)	2.42 (1.50)	2.14 (1.48)	2.00 (1.31)

As noted, three individual items designed to tap into beliefs and values more commonly noted amongst South Asians were analysed separately. A 2 X 2 design ANOVA was run to compare scores on item 18 between time one and time two according to group condition. There was no significant interaction effect between the two conditions over time for scores on this item, $F(1, 58)= .313$, $p=.58$. No main effect for time, $F(1,58)= 2.36$, $p=.13$, or group $F(1,58)= 1.52$, $p=.22$ was found.

As item 19 and 20 were not normally distributed the scores were analysed using the Wilcoxon signed-rank test. There were no significant differences found between time one and time two scores for the contact film group for item 19, $T=4.00$, $p=.75$ or item 20, $T=25.00$, $p=.55$. Similarly no significant differences were found for items 19, $T=3.00$, $p=.25$, and 20, $T=19.00$, $p=.46$, for the control condition. These results indicate that participants' agreement with any of the three additional items did not change.

3.5. Short-term effect of the intervention on causal beliefs towards ID

Descriptive data for the total sample and by group for the four IDLS subscales is presented in Table 4.

A 2 X 2 ANOVA was conducted to compare change in scores across time one and time two for the *biomedical, adversity* and *environment* subscales according to group. Results suggest that there was no significant interaction effect between changes in *biomedical* scores over time for the two groups, $F(1, 58)=1.73$, $p=.19$. A main effect for time, $F(1, 58)= 48.58$, $p=<.000$, $d= 0.46$, was observed for *biomedical* scores, in that endorsement of such causes increased from time one to time two. A main effect for group was not found, that is to say that there was no significant difference in the increase of *biomedical* beliefs across time endorsed by participants who received either the contact film or those in the control condition.

With regards to *adversity*, no interaction effect was found, $F(1, 58)=0.58$, $p=.81$. A small main effect for time was found, $F(1, 58)= 5.21$, $p=.03$, $d= 0.08$; meaning that for both

groups endorsement of adversity causes decreased slightly immediately after the intervention. A main effect for group was not found, $F(1, 58)=1.95$, $p=.17$. Similarly, for the *environment* subscale only a main effect for time was found to be significant, $F(1, 58)= 36.69$, $p=<.001$, $d= 0.39$, indicating that endorsement of such causes reduced for both groups between time one and time two. An interaction between scores at time one and two for the two groups was not observed, $F(1, 58)=.787$, $p=.38$.

The remaining subscale, *supernatural,* was assessed using the Wilcoxon signed-rank test. Results indicate that the mean scores for both the contact film group, $T=7.00$, $p=.002$, $d=-0.37$, and the control group, $T=19.00$, $p=.001$, $d=-0.41$, significantly reduced following the intervention. However, participants' scores in both groups were markedly low from the outset indicating low endorsement of fate-related causes in the first instance. Given the possibility that a floor effect may have occurred, any conclusions regarding the extent to which the films generated any change are questionable.

Table 4

IDLS Causal Beliefs Subscales: Mean and Standard Deviation for Total Sample and by Group

		All (n= 60)		Contact film (n= 31)		Control film (n=29)	
Measure		Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
		M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
	Biomedical	4.27 (1.24)	5.33 (1.46)	4.41 (1.15)	5.28 (1.37)	4.11 (1.33)	5.39 (1.57)
	Adversity	3.02 (1.36)	2.65 (1.27)	2.84 (1.29)	2.43 (1.31)	3.21 (1.43)	2.89 (1.21)
	Environment	2.73 (1.43)	1.90 (1.10)	2.54 (1.30)	1.82 (1.02)	2.92 (1.56)	1.98 (1.19)
	Supernatural	1.88 (1.08)	1.48 (0.86)	1.85 (1.01)	1.47 (0.84)	1.92 (1.17)	1.48 (0.89)

3.6. Short-term effect of the intervention on social distance towards ID

Descriptive data for social distance is presented in Table 5. A 2 X 2 ANOVA found that there was no interaction effect between scores over time for the two groups,

F(1, 58)=.194, *p*=.66. A significant main effect for time was found, *F*(1, 58)= 9.58, *p*=.003, *d*= 0.14; in both conditions the desire for social distance was reduced immediately after the intervention. A main effect for group was not found, indicating that the differences in social distance scores across time were not associated with the particular condition each participant was exposed to.

Table 5

Social Distance: Mean and Standard Deviation for Total Sample and by Group

	All (n= 60)		Contact film (n= 31)		Control film (n= 29)	
Measure	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Social Distance	2.45 (1.14)	2.19 (1.06)	2.45 (1.12)	2.14 (1.12)	2.46 (1.19)	2.23 (1.02)

3.7. Effects on inclusion attitudes, causal beliefs and social distance over time

To examine whether effects observed immediately after the intervention were maintained at one month follow-up, 3 x 2 mixed ANOVAs (3 time points x 2 film groups) were conducted for those subscales suitable for parametric tests, all of which had demonstrated a main effect for time when time one and time two were compared (*empowerment, sheltering, biomedical, adversity, environment* and social distance). The analyses assessed for main effects of time, film condition and an interaction between these. As the previous findings which compared the short-term effect on the dependent variables found small changes, it was recognised that these additional analyses may also yield limited results. Nonetheless, given that the present study was a pilot it was decided that these exploratory analyses were worth conducting. This remained a tentative examination, in part due to the sample size of participants who completed data at the one-month follow-up being modest (n= 32). With regards to condition, there were fewer participants at time three for the contact film (n= 14) than the control condition (n= 18), increasing the need for cautious consideration of the findings. It was also imperative to hold in mind the increased risk of a

type 1 error by multiple testing procedures and how this may have influenced the results yielded by additional testing. As the sample size was small, descriptive data were examined in addition to the statistics.

The descriptive data for mean scores and ANOVA results across the subscales at time three are presented in Table 6.

Table 6

Descriptives at Time One, Time Two and Time Three with ANOVA Results across Subscales by Group

Subscale	Contact film (n= 14)			Control film (n= 18)			Main effect time		Main effect film		Interaction	
	Time 1	Time 2	Time 3	Time 1	Time 2	Time 3						
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	*F (df)*	*p*	*F (df)*	*p*	*F (df)*	*p*
Empowerment	4.44 (0.63)	4.51 (0.72)	4.76 (0.73)	4.52 (0.67)	4.52 (0.72)	4.73 (0.66)	59.84 (2, 29)	<.001	0.01 (2, 29)	.93	0.10 (2, 29)	.90
Sheltering	3.20 (0.95)	2.79 (0.91)	2.98 (0.63)	3.35 (0.78)	2.93 (0.83)	3.11 (0.58)	6.79 (2, 29)	.004	0.32 (2, 29)	.57	0.01 (2, 29)	.10
Biomedical	4.08 (0.98)	4.93 (1.49)	4.97 (1.12)	4.16 (1.33)	5.43 (1.61)	5.37 (1.73)	13.76 (2, 29)	<.001	0.52 (2, 29)	.48	0.53 (2, 29)	.59
Adversity	2.70 (1.12)	2.30 (1.19)	2.60 (0.94)	3.04 (1.42)	2.90 (1.31)	2.68 (1.36)	1.16 (2, 29)	.33	0.36 (2, 29)	.36	1.34 (2, 29)	.28
Environment	2.16 (1.07)	1.74 (1.17)	1.86 (0.96)	2.53 (1.44)	2.01 (1.28)	1.66 (0.89)	7.65 (2, 29)	.002	0.15 (2, 29)	.70	1.02 (2, 29)	.37
Social Distance	2.34 (1.19)	1.96 (1.01)	1.96 (1.06)	2.60 (1.31)	2.46 (1.14)	2.26 (1.05)	5.98 (2, 29)	.01	0.88 (2, 29)	.36	0.52 (2, 29)	.60

3.7.1. CLAS-ID subscales

3.7.1.1. Empowerment

As illustrated in Table 6, a large main effect for time was found, *partial η²* = 0.81. This indicates that for both groups the intervention shifted attitudes in a favourable direction in that their endorsement of the empowerment of individuals with ID increased. However, it is important to note that attitudes amongst both groups were positive from the outset. An interaction effect for changes in scores between groups was not found, nor was a main effect for group.

3.7.1.2 . Sheltering

A significant main effect for time was demonstrated as highlighted in Table 6, which achieved a small effect size, *partial η²* = 0.32. There was no interaction found for changes in score between the two groups. Participants' endorsement of the need for people with ID to be sheltered decreased at time two but had somewhat increased by time three, although agreement remained lower than at baseline.

3.7.2. IDLS subscales

3.7.2.1. Biomedical

A main effect for time was found, see Table 6. This achieved a moderate effect size, *partial η²* = 0.49. There was no interaction for changes in scores between groups nor a main effect for group. For both groups endorsement of *biomedical* causes increased from time one to time two and did not reduce back to baseline, indicating that this increase was maintained to a degree at follow-up. Examination of the means indicates that scores reduced for the control condition, with participants in the contact film group showing a very modest increase. Nevertheless, this was not significant statistically which is likely to reflect issues inherent in the small sample size. Endorsement of *biomedical* causes by both groups

were favoured across the three time points, although support was stronger in general for the control film group overall.

3.7.2.2. Adversity

There was no significant main effect for time, type of film or interaction on the *adversity* subscale. Reviewing the means indicates that support for *adversity* causes continued to reduce at time three for the control condition. By contrast, scores decreased at time two for the contact film group but had risen again at follow-up, almost equalling those at baseline. It is possible that a potential interaction for group might have been shown if the present study had a larger sample size. That said, both groups generally disagreed with *adversity* causes and therefore the small increments of change presented are unlikely to represent any distinct meaningful change in the broader context.

3.7.2.3. Environment

A significant main effect for time was found with a small effect size, *partial* $\eta^2 = 0.35$. An interaction effect between time and group was not found nor was a main effect for group. By looking at the means one can observe that support for *environmental* causes steadily reduced across all three time points for participants in the control group. For participants in the contact film group, endorsement of environmental causes reduced at time two but increased again somewhat at time three albeit not to baseline levels. It is worth noting the potential for an interaction effect if the sample size were larger.

3.7.3. Social Distance

A main effect for time was found with a small effect size, *partial* $\eta^2 = 0.29$. There was no main effect for group nor significant interaction. By reviewing the means it can be seen that both groups' scores at time two decreased indicating reduced desire for distance from individuals with ID. Scores decreased further at time three for participants in the control condition whilst scores remained constant for participants who received the contact film.

However, desire for social distance by all participants was low from the outset which potentially points toward a floor effect for this variable.

3.8. Analyses between completers of follow-up and non-completers

As the sample size at follow-up was small, the extent to which changes over time could be stringently assessed was limited. Given the attrition within the study it was decided to explore whether there were any differences between participants who had provided data across all three time points (completers, n= 32) in comparison to those who only completed time one and time two (non-completers, n= 28). The means for the dependent variables which met the assumptions of normality were compared between completers and non-completers using independent samples t-tests. Non-parametric data were explored using Mann-Whitney U tests.

Findings indicate that there were no significant differences between completers and non-completers on any of the following subscales: *empowerment*, $t(58)= .76$, $p=.45$; *sheltering*, $t(58)= .09$, $p=.93$; *biomedical*, $t(58)= -.97$, $p=.34$; *adversity*, $t(58)= -.77$, $p=.44$; social distance, $t(58)= .25$, $p=.81$.

Completers (*Mdn*= 1.25*)* and non-completers *(Mdn*= 1.00*)* also did not differ at baseline on *exclusion*, $U = 402.0$, $Z = -.73$, *ns*, $r = -0.09$, or *similarity,* (completers (*Mdn*= 5.50*)*; non-completers (*Mdn*= 5.50*)*, $U = 440.50$, $Z = -.11$, *ns*, $r = -0.01$, or the *supernatural* subscale, (completers *Mdn*= 1.22; non-completers *Mdn*= 2.07), $U = 360.0$, $Z = -1.35$, *ns*, $r = -0.17$.

A small yet significant difference was found between completers and non-completers for causal beliefs relating to *environment*, $t(58)= -2.14$, $p=.04$, with the latter endorsing more *environmental* causes at baseline.

Discussion

The present study was a pilot investigation which aimed to assess the potential impact of an indirect contact film promoting awareness and non-stigmatising attitudes towards people with ID on attitudes, causal beliefs and social distance held within the South Asian community. This pilot is the first of its kind to attempt to target attitudes using an empirical intervention amongst a specific community not only within the ID literature but also within the mental health field.

The specific focus on attitudes towards ID within the South Asian community stemmed from recurrent findings in the literature regarding the prevalence of potentially stigmatising beliefs held within this group. Several studies have documented beliefs regarding disability as a punishment for past sins (Hubert, 2006) or resulting from possession by 'spirits' (Hatton et al., 2003). Carers of individuals with ID have reported the prevalence of negative perceptions held amongst some members of the wider South Asian community in the UK (Croot et al., 2008). The reports of the scrutiny and judgement experienced by carers as a result of underlying negative causal beliefs, high levels of social isolation, poor social acceptance within community relationships and the concurrent high levels of distress associated with these experiences is highly concerning (Croot et al., 2008; Hatton, Azmi, Caine & Emerson, 1998; Hatton et al., 2010; Hubert, 2006).

Likewise awareness of ID has been found to vary extensively across cultures with knowledge and awareness being lower in BME communities (Scior, 2011; Scior et al., 2012). South Asian families with a child with ID have been found to be less aware of what their child's difficulties were called and 50% reported that they did not know the cause of their child's ID (Fatimilehin & Nadirshaw, 1994). Furthermore, there is a belief amongst several ethnic minority cultures that ID can be cured and such families live in hope of the reversibility of ID for their relative (Durà-Vilà & Hodes, 2012; Fatimilehin & Nadirshaw, 1994; Mirza et al., 2009). Low levels of awareness and increased stigmatising beliefs amongst this population

and the impact that this may have on inclusive attitudes towards individuals with ID, presents significant cause for concern. As such, the current pilot's effort to develop an intervention to target awareness and stigma at a specific community level was highly warranted.

Baseline attitudes towards ID amongst the present sample of South Asian individuals were generally positive. Ideas of *similarity* between oneself and those with ID were supported and participants in both conditions opposed the *exclusion* of individuals with ID from society. A desire for social distance was low and favourable views towards *empowerment* were endorsed. These baseline attitudes were similar to findings by Sheridan and Scior (2013) who administered the CLAS-ID and additional South Asian-specific items amongst a British South Asian sample. This study aimed to compare the attitudes of young people from British South Asian and White British backgrounds towards ID. The only noteworthy variation between this study and the current paper was that *similarity* was more positively endorsed at baseline by participants in the present study and that this was more closely matched to previous findings from a large UK sample of mixed ethnicities (Walker & Scior, 2013). *Biomedical* explanations as the cause of ID were prevalent and participants opposed fate-related beliefs associated with increased stigmatising attitudes from the outset. As a consequence, opportunities for positive change may have been limited.

The main findings of the study can be summarised as follows: 1) The brief films had a small yet significant impact on inclusion attitudes, causal beliefs and social distance in the short-term; 2) changes were maintained at one month follow-up for the *empowerment* and *sheltering* scales of the CLAS-ID, and social distance and *biomedical* and *environmental* causes as measured by the IDLS; 3) indirect contact did not shift attitudes or beliefs to a greater degree than the control film. These findings are discussed in detail below.

4.1. Inclusion attitudes, causal beliefs and social distance

Both film conditions had a small yet significant impact on participants' attitudes towards *empowerment* of people with ID in the short-term, shifting attitudes in a favourable

direction. This effect was maintained at one month follow-up achieving a large effect size, indicating the benefit of the intervention on attitudes towards *empowerment*. Participants also expressed more favourable attitudes regarding the extent to which they felt that individuals with ID needed support and protection from the risks of living in the community following the intervention. However, the effect size of this change in *sheltering* was modest. The films appeared to reduce stigmatising *exclusion* attitudes for all participants although this only reached statistical significance for the control condition. Attitudes towards *similarity* were not affected by the films. In line with hypothesis one, the present study has shown that watching a brief film (regardless of type) shifted *empowerment*, *sheltering* and *exclusion* inclusion attitudes in a positive direction and that this impact was more pronounced for *empowerment*. These findings replicate the outcomes of previous research that have also demonstrated the positive short-term effects of film-based interventions on attitudes towards ID (Hall & Minnes, 1999; Smedema et al., 2012; Walker & Scior, 2013).

In line with hypothesis two, the current findings indicate that irrespective of film condition, non-stigmatising beliefs regarding the causes of ID increased following exposure whilst the endorsement of stigmatising beliefs reduced for both groups. *Biomedical* and *supernatural* explanations shifted in a positive direction in the short-term for both groups illustrating a small yet favourable impact of the intervention. These changes achieved a moderate effect size. There was also a reduction in participants' endorsement of *adversity* and *environmental* causes.

Previous research found belief in *biomedical* causes of ID to be negatively correlated with social distance, while *supernatural* explanations showed a positive relationship with social distance (Scior, 2012). Therefore the results from the present study that indicate small yet favourable shifts in these two subscales are promising. *Environmental* causes were also found to correlate positively with social distance (Scior, 2012). Attribution theory offers one means of understanding this finding (Weiner, 1985). Attribution theory suggests that how a person attributes responsibility or control to another person for their

circumstances, affects their attitudes towards that person. In this case, *environmental* items such as a lack of daytime occupation may be deemed within the person's control and therefore something they could change. As such, the person may be viewed disparagingly which could potentially lead to increased stigma and blame. In the present study, small reductions in *environmental* beliefs were observed in the short-term after viewing the film. This is a promising finding that offers hope that even brief interventions may be effective in shifting potentially stigmatising attributions. By contrast, *adversity* beliefs appear to have little relationship to stigmatising beliefs held by an individual (Scior, 2012). As such, the lack of significant change found for this subscale in the present study may not be so important.

As noted, previous research has used the concept of social distance as a way to measure stigmatising perspectives (Jorm & Oh, 2009; Ouellette-Kuntz et al., 2010; Scior et al., 2012). In the present study both films were found to generate a small reduction in social distance in the short-term. However, one must be cautious when interpreting this finding as the scores for all participants at baseline were markedly low. Consequently there is likely to be a floor effect occurring for this variable and although significant changes were indicated, the very small effect size associated with this limits the significance of this result.

Importantly, the present study also explored whether the short-term changes observed were maintained at one month follow-up. The most encouraging finding of the present study was that increased support for the *empowerment* of people with ID was maintained at follow-up for all participants. Given that the intervention trialled was very brief, this is a promising result from the pilot that lends welcome support to the notion that some positive benefit can be generated from interventions of this nature. This is in line with previous findings which demonstrate that brief film-based interventions can result in lasting improvements in empowerment attitudes (Walker & Scior, 2013). Positive change was also maintained at one month follow-up in relation to participants' endorsement of *biomedical* causes, which achieved a moderate effect size. Given the association of these beliefs with reduced stigma, this again represents an encouraging finding from the study. Furthermore,

examination of the means showed some indication that a potential group effect could have occurred for *biomedical* explanations if the study had not been hindered by a small sample size. Although this is conjecture, it may warrant further exploration by larger studies in the future.

Elsewhere only small effect sizes were yielded and little change was observed. This may relate to a couple of factors, firstly that the study was underpowered and secondly, that participants' scores on social distance and *adversity* were relatively low from the outset (indicating disagreement and low stigma). Therefore only limited change was likely to be observed. With regards to social distance, the finding of the present study contrasts with previous research which found a stronger significant effect for the reduction of social distance scores over time (Walker & Scior, 2013). However, beyond this recent publication there is a dearth of previous research within the ID field that these results can be compared to. Similarly there are no other studies that have assessed the effects of an intervention on causal beliefs associated with ID. Whilst most effect sizes noted in the present study were small, the positive shifts in attitudes and beliefs observed are encouraging and suggest a need for further research in this area.

Whether these changes can be deemed meaningful in the real world requires consideration. There are several limitations of the present study which realistically limit the applicability of the findings and warrant discussion here. As previously stated, the shifts in attitudes and associated effect sizes observed were modest and the relationship between the self-report of an individual and their actions in real life is tenuous. The complexity and challenge associated with inferring a link between attitudes and actual behaviour is well documented (Fishbein & Ajzen, 1975; Glasman & Albarracin, 2006). This remains a significant obstacle for all manner of attitude research within the ID literature and more widely, and is one that researchers continue to grapple with. Whether the subscales of the IDLS and CLAS-ID are predictors of actual behaviour is questionable. Furthermore, researchers have questioned the magnitude of change that can realistically be achieved by

brief interventions targeting the general public (Walker & Scior, 2013). These authors drew links to the largest mental illness anti-stigma campaign currently active in the UK, *Time for Change*, which aims to improve public attitudes by 5% (Department of Health, 2012). This may appear rather a conservative aim. What this seems to suggest is that widespread change may not be realistically achievable utilising brief initiatives that target the general public. Nonetheless, such interventions may reduce the frequency of discriminatory behaviours experienced by those affected (Corker et al., 2013), and therefore remain a valuable and necessary endeavour. This author suggests that the expectation of what constitutes a meaningful change in research of this kind is an important issue for debate. Whilst remaining mindful of these constraints and the small effect sizes achieved, the short-term effects that this pilot has demonstrated deserve to generate interest and curiosity in the potential effectiveness of short film-based interventions in tackling negative attitudes towards people with ID within targeted cultural communities.

4.2. Effectiveness of indirect contact as means of stigma change

An additional aim of the present study was to explore the impact of indirect contact on attitudes and beliefs. As predicted, both films showed some positive effects on inclusion attitudes, social distance and stigmatising beliefs. Furthermore, it was anticipated that changes would be greater for the contact film and less for the control condition due to research suggesting that contact is the most promising factor in generating change in public attitudes (Angermeyer & Matschinger, 1996; Corrigan, Green, Lundin, Kubiack & Penn, 2001b). Conversely, the present findings did not yield support for this hypothesis as neither film condition was found to be superior in achieving change.

As noted the expanding literature, to date drawn largely from the mental health field, has promoted the value of using contact within initiatives aimed at challenging stigma (Couture & Penn, 2003; Rusch et al., 2005). Research has indicated that psychiatric programmes designed to reduce stigma should focus on contact, education and

empowerment as strategies for inducing change (Alexander & Link, 2003, Corrigan & Watson, 2002; Pinfold, Thornicroft, Huxley & Farmer, 2005). Furthermore, an increasing number of studies have lent support to the use of contact in ID research (Adler et al., 2005; Hall & Minnes, 1999; Tracey & Iacono, 2008). The role of contact was initially associated with intergroup contact theory (Allport, 1954) which, as noted earlier, outlines specific conditions that are believed to be required for contact to have an impact on prejudicial attitudes. More recently evidence for the role of mere exposure as being sufficient for positive attitude change has been presented (Pettigrew & Troop, 2006; Walker & Scior, 2013; Zajonc, 2001).

Therefore the fact that the present study did not find support for the role of contact may be considered somewhat surprising. It is possible that neither group was affected by contact more significantly than the other because both groups in the present sample were fairly positive in their baseline attitudes at the outset. Furthermore, one could question whether the film conditions were significantly different enough in their design and content to have realistically elicited change between the two groups. In addition, the small sample size may not have provided sufficient statistical power to detect any interactions or distinctions between the two conditions. This may have been further exacerbated by the representativeness of the sample, as it may be that the contact technique is more effective for a different audience in some way, for example an older, less educated sample with less prior contact with individuals with ID. It is, however, important to note that in the present study contact did not appear to have a detrimental impact on attitudes either. Additional research is therefore required to explore these findings further.

The current findings appear to promote the positive impact of providing education and information that increases knowledge and awareness of ID on public inclusion attitudes and beliefs. The role of education as a valuable component for stigma change initiatives has been supported in the mental health literature (Alexander & Link, 2003; Couture & Penn, 2003; Rusch et al., 2005), although contact has taken precedence as the foundation of

change interventions (Cummins & Lau, 2003). The present findings indicate the continued importance of providing education and factual information as a means of modifying lay perspectives, although it seems unclear whether education, or any other component described, can serve as an effective driver for change in isolation. As the body of literature continues to expand it is hoped that future research will elucidate our understanding of these components further and identify the active ingredients for change.

4.3. Limitations

Several limitations of the study should be considered. A convenience sample was obtained which is unlikely to be representative of the UK South Asian community. The current census in England and Wales states that the mean age of individuals across South Asian groups ranges from 24 to 32 years of age (Office for National Statistics, 2011), so although the mean ages of participants in the present study appears fairly young (29 years for the contact group and 27 years for the control group) this does align with the national statistics. In terms of ethnicity, half of the sample identified themselves as Indian. Indians are the second largest ethnic group in England and Wales after all white groups are combined together (Office for National Statistics, 2011), and therefore the present sample can be seen to correspond to this statistic. Current estimates of religious affiliation show Muslims to be the largest group after Christians (Office for National Statistics, 2011), which is somewhat comparable to the spread of religious affiliation noted in the present sample.

However, women were over-represented in the present study and previous research has indicated that females tend to hold more positive views towards ID (Scior, 2011). Age differences have also been highlighted whereby younger adults have been found to be less negative in their beliefs about individuals with disabilities (Goreczny, Bender, Caruso & Feinstein, 2011). In addition, the sample was highly educated with 73.3% of the total sample being graduates which is unlikely to be representative of the wider South Asian population. Females, young people and respondents who are highly educated have been found to show

less social distance towards individuals with ID (Antonak & Harth, 1994; Krajewski & Flaherty, 2000; Yazbeck et al., 2004). As such, the composition of the present sample and the nature of the sampling procedure used in the study, may have meant that participants were more likely to have positive and inclusive attitudes towards individuals with ID from the outset.

Whether a participant had prior contact with individuals with ID or not was the only significant difference noted between the two groups at baseline. A large proportion of the participants in the contact condition had prior contact with a person with ID (77.4%) in comparison to just over half of the control group. It is possible therefore that the extent of prior contact reported within the groups, which was more pronounced in the contact group, could have impacted on the findings of the study with participants being more favourable. However, this only reached statistical significance at $p = .04$ and no difference was found in terms of the quality of these relationships between the groups, making it less likely that this had a substantial influence on attitudes.

When considered together, the features addressed above illustrate that the present sample cannot be considered to be wholly representative of the UK South Asian community. Furthermore, the sample was made up of individuals from many different countries of origin and religious affiliation under the conception of 'South Asian'. As such, it should not be assumed that the sample form a homogeneous group as there are many nuances in the perceptions and cultural and religious practices within these communities. Therefore limitations on the interpretation and generalisability of the findings must be considered, particularly as participants were found to be generally positive in their attitudes at baseline. As such, the findings of this pilot require replication from further studies which have a wider and more varied sample, yet which also consider the inevitable heterogeneity within a specified cultural community.

There were no differences between participants who completed only the first part of the study and those who provided data at all three time points apart from on one dependent variable (*environmental* causal beliefs). Thus, while the total sample falls short of representing the South Asian community as a whole, the subset of participants who completed all the stages of the study can be considered to be representative of the study's larger sample over all.

The major limitation of the present study is its modest sample size. As referenced throughout, the interpretation of the findings must be made cautiously as the study was underpowered. This is particularly pertinent for the one month follow-up sample where only 32 cases were recruited. Moreover several of the subscales violated assumptions of normality which meant that less stringent analyses had to be performed that may have reduced the rigour of the findings. There are several reasons as to why the study was underpowered. The present study aimed to recruit individuals from a specifically targeted community which precluded access to many possible participants within the author's social network. As a consequence, the author was more reliant on the assistance of others in sourcing participants and thus beholden to their time and motivation, in conjunction with other recruitment strategies that were attempted with varied success. In addition, the fact that the study was conducted solely online, methods of recruitment including leafleting did not yield many participants as the study required potential respondents to access the survey at another time, rather than the more immediate participation facilitated by receiving a survey link via email. Similarly the online nature of the study made it difficult for techniques such as in-house testing to be conducted. Computer access at the authors work setting was limited and arranging appointments for participants to complete the survey in person would have been highly laborious and beyond the study's resources. Whilst the impact of an underpowered sample has not gone unrecognised, it is hoped that as a pilot the present study has contributed exciting findings that further research may wish to pursue.

The study benefited from having a control condition, using a repeated measures design and its attempt to assess changes over time with the one month follow-up stage. Reviewers of the previous research in the field of ID have commented on the lack of studies which incorporated a repeated measures design and have argued that randomised group allocation is preferable as a means of reliably evidencing any effects of contact (Scior, 2011). In applying these recommendations to the present study, the author has attempted to contribute a small yet thorough and methodologically sound study to the evidence base.

Several issues pertaining to the valid assessment of stigma and public attitudes and the limitations inherent in the measurement tools currently available must also be considered. As noted earlier, there is a risk of response bias in self-report methods (Antonak & Livneh, 2000) whereby participants may choose not to disclose attitudes and beliefs that are considered socially unacceptable or politically incorrect in order to give a good impression. In order to address the risk of social desirability influencing responses in the present study, a measure of social desirability formed part of the battery of measures administered at baseline. No significant correlations between social desirability and the attitude and beliefs scales were found. This is similar to the results of some studies which also did not find significant correlations between attitudes towards people with ID and social desirability (Antonak & Harth, 1994; Henry et al., 1996; Scior, 2012). However, the relationship between social desirability and attitudes appears to be inconsistent within the literature, as other studies have reported findings which appear to demonstrate an influential relationship (Hall & Minnes, 1999). One explanation that has been offered regarding the ambiguity of this relationship is that members of the general public may not have a clear notion of what socially desirable responses towards this population consist of, particularly given the relative invisibility of individuals with ID in public and media domains (Scior, 2011). Whilst the present study did not find a significant association between social desirability and attitudes on this occasion, the threat of social desirability inherent in research of this nature remains a factor to address.

A recent review by Werner et al. (2012) described the present difficulty in being able to identify the benefits of interventions which tackle stigma due to a dearth of scales specifically designed for research into attitudes towards ID. Although the current study benefits from using tools designed specifically for ID research, they may not be robust enough to capture the multifaceted nature of attitude formation or the dynamic construct of stigma. This potential limitation has been recognised by others within the field who have recommended that such measures be further developed in line with the rich conceptualisation of stigma present in the mental illness literature (Werner et al., 2012).

Furthermore, the extent to which the variables examined in the present study are indicative of attitude improvements that would evoke actual behavioural change is questionable. Although the concept of social distance is more in line with the behavioural choices a respondent may make, it is arguably a behavioural intention at most. This remains a contentious issue for research of this nature. It has been noted that despite the positive impact of short-term interventions on awareness and attitudes of mental health issues, the extent of actual behaviour change is uncertain (Pinfold et al., 2005). Whether it is feasible for interventions to modify public attitudes to an extent that equates to meaningful change in the social inclusion and acceptance of people with ID remains to be seen.

4.4. Conclusions and implications

The present study has shown that film-based interventions that aim to raise awareness of ID and provide factual information can have a short-term positive effect on social distance, stigmatising beliefs and shifting inclusion attitudes within a UK South Asian sample. Although these effects were small, attitude scores did not return to baseline levels over time which is encouraging.

As the UK continues to grow in size so does its ethnic, religious and cultural diversity. An estimated 9.5% of the population in England and Wales belong to a BME group, with the largest numbers of this population originating from South Asian countries including India and

Pakistan (Office for National Statistics, 2011). In 2011, there were reported to be approximately 1.2 million people with ID living in England (Emerson et al., 2012). Furthermore, it has been predicted that by 2021, 7% of all British people with ID will be of South Asian origin (Hatton et al., 2003) yet it is probable that this figure is an underestimation given suggestions of the increased prevalence of ID amongst some BME groups (McGrother et al., 2002; Scior, 2012). As reports of inequality, discrimination and disadvantage become increasingly prevalent in the literature regarding the experiences of South Asian individuals with ID, so does our understanding of the deleterious effects of stigma on the wellbeing of people with ID (Ali, Hassiotis, Strydom & King, 2012). The need for research that is culturally inclusive, and which progresses our capacity to develop successful interventions which challenge negative attitudes, is becoming ever more necessary if we are to effectively advocate for equality, empowerment and social inclusion for individuals with ID.

It is hoped that the present study is a useful contribution to the literature base on change initiatives that tackle attitudes towards individuals with ID. Suggestions for future research have been highlighted throughout the paper. To further advance our understanding in this field, studies which do not rely so heavily on self-report methods are recommended. The use of an implicit attitude measure such as the Implicit Association Test (Greenwald, McGhee & Schwartz, 1998) may present one feasible means of addressing the validity issues pertaining to direct attitude measures. Another approach would be to measure change in discrimination through the direct experience of people with ID.

The present study was innovative in its attempt to pilot an empirical intervention that was designed to address attitudes towards people with ID held by a specific cultural group. However, larger studies with more representative samples are needed to support the findings and to elucidate our understanding of the attitudes and beliefs held amongst different cultural groups within society. Future researchers should consider involving key members and representatives from the identified community in the planning and

implementation of future interventions. These individuals are likely to provide valuable contributions and insight which may help to improve the appropriateness and validity of cross-cultural research.

The present study utilised a web-based approach which was an efficient way to administer the survey and films to a large sample population. Whilst web-based surveys have several key advantages, future research should consider the potential limitations of this approach and address the methodological and ethical considerations that may arise.

Whether attitudinal research can help to bridge the gap between the short-term effects of interventions, the question of their lasting impact and their association with actual behaviour change, should be prioritised for further investigation. Finally, whilst the present study has lent support to the potential impact of film-based interventions on inclusion attitudes, further research is required to establish which components of interventions are effective drivers for change in public attitudes.

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Part 3: Critical Appraisal

Introduction

This appraisal provides a critical reflection on the present study. The appraisal will discuss the challenge of designing the empirical intervention with reference to key messages and content. Difficulties encountered during the research process with a specific focus on recruitment will be outlined. Design limitations and the methodological challenge faced by researchers who aim to investigate and tackle public attitudes and beliefs towards intellectual disabilities (ID) are discussed. Finally, consideration is given to the benefits and limitations of conducting online research.

1.1. Tackling attitudes and stigma within a cultural context

The present study was a pilot investigation which aimed to assess the potential impact of an indirect contact film on awareness, attitudes, causal beliefs and social distance associated with ID held within the UK South Asian community. The South Asian community was targeted due to literature suggesting that stigmatising lay beliefs are prevalent within this community. Beliefs that disability is a punishment for past sins (Hubert, 2006) or results from possession by 'spirits' (Hatton, Akram, Robertson, Shah & Emerson, 2003) have been identified within this community. Furthermore, South Asian family carers of individuals with ID have expressed concern about negative perceptions within their wider community, which lead to social rejection and isolation for the family (Croot, Grant, Cooper & Mathers, 2008; Hatton, Azmi, Caine & Emerson, 1998; Hatton et al., 2010; Hubert, 2006). How best to support these families and improve perceptions of ID within the wider community, whilst remaining respectful of differences in cultural understandings, is an issue for health professionals and researchers alike.

Designing the present intervention was not without its challenges: it needed to reflect current understandings of ID (albeit largely Western ones), and also be meaningful, appropriate and relevant across cultural groups. It was important to try and sensitively address the beliefs held within the South Asian community which are felt to be potentially

stigmatising of people with ID, without being perceived as overly judgemental. This was held in mind whilst developing the film content and script, and was helped by liaison with agencies and colleagues working in the field of ID who had experience of cross-cultural research.

It was also important to consider that the conception of 'South Asian' in itself is rather a fluid notion and different countries are included within this group depending on the source cited. For the purpose of the present study, the term South Asian was used to refer to populations originating from India, Pakistan, Bangladesh, Sri Lanka and Nepal (Modood et al., 1997). Whilst the present study attempted to draw upon an accurate definition, it cannot be assumed that this conception is considered fully inclusive to all readers. The fact that participants identified themselves as being of South Asian heritage can be taken to indicate the appropriateness of the definition operationalised in the study. However, it should not be assumed that individuals from these different countries form a homogeneous group as there are many nuances in the perceptions and cultural and religious practices within these communities. Bearing this is mind, developing an intervention aimed at targeting 'the South Asian community' was not a straightforward endeavour.

1.2. Designing the film interventions

Discussion and feedback was sought from various agencies working in the ID field, including representatives from organisations specifically working with the South Asian community. Representatives from these agencies included Summaya Kara; Service Manager at Ansaar, a community project group working with Black and minority ethnic communities in Leicester; Ruhana Nahar, Bangladeshi Advocacy Worker at Hopscotch Asian Women's Centre in London; Mark Goodwin, Specialist Tutor with the Open Door Training Group in Leeds; and Laura Turner, Senior Development Officer at Richmond Mencap. It is difficult to ascertain whether the intervention fully achieved its stated aim, namely to be relevant to the South Asian community, as only a limited amount of qualitative

feedback was received from participants. Consequently, researchers in the field should remain mindful of the conceptual and practical challenges that may arise when designing studies for particular target populations. Whilst extensive liaison was not possible within the time constraints of the Doctorate of Clinical Psychology, future research is likely to benefit from more time spent on the development phase and the close involvement of representatives from the South Asian community.

The decision to examine the effect of a brief film-based brief intervention on attitudes and beliefs was informed by evidence in both the ID and mental health literature regarding the potential positive effects of this medium in disseminating anti-stigma initiatives to large audiences (Reinke, Corrigan, Leonhard, Lundin & Kubiak, 2004; Walker & Scior, 2013).

Initially searches were conducted to identify brief films or clips relating to ID available in the public domain. It quickly became apparent that these ranged from personal entries available on YouTube to professional short films conveying messages on all manner of issues including information about ID, disability hate crime, abuse and discrimination. There was much variability in understanding of the concepts used to denote ID and misconceptions were common in the information available to the general public. Often resources used terms such as 'learning disability' and 'learning difficulty' interchangeably to signify both global developmental delay and specific learning difficulties such as dyslexia. In view of evidence that awareness of ID amongst the general public is generally low (Coles & Scior, 2012; Gordon, Feldman, Tantillo & Perrone, 2004; Mencap, 2008), ensuring that the present study provided participants with an accurate and consistent definition of ID was imperative.

A description of what ID is, and is not, was presented in the film conditions by a Consultant Psychiatrist (see Appendix G) and also in written format at the start of the survey as part of The Community Living Attitudes Scale- Intellectual Disability version (CLAS-ID; Henry, Keys, Jopp & Balcazar, 1996). It was important that the description was informative, not overly complex and brief to avoid losing the attention and interest of the audience. It is

unclear whether this aim was fully achieved. In their qualitative feedback a few participants stated that the information presented in this extract was too long and that they found it boring. Moreover, several participants appeared unclear about the global nature of ID even though the information had been provided. These participants, when asked whether they knew someone with ID, made reference to someone with specific learning difficulties, like dyslexia. By contrast, other participants commented that they would have liked more information regarding the severity of disability that was being discussed throughout the study to enable them to answer the questions more accurately. Therefore, it is important for future studies that aim to raise awareness and/or tackle attitudes towards ID to consider how accurate information can be presented and retained by participants, to protect the validity of the constructs they intend to measure.

An extensive amount of planning and consideration was given to the content of the films and the messages it aimed to deliver. The messages were designed to be in line with the key principles outlined by current UK policy: rights, choice and inclusion (Valuing People, 2001). The films aimed to raise awareness of ID by providing information on definitions, prevalence, causes and addressing common misconceptions, such as the confusion between ID, mental health problems and other specific learning difficulties. They aimed to promote similarities in goals and values of people with and without ID in order to promote acceptance and emphasise the capabilities of people with ID, based on evidence that this can result in more positive attitudes (MacDonald & MacIntyre, 1999). Furthermore, the films aimed to provide advice on how to effectively communicate with people with ID to reduce insecurity and discomfort which have been cited as potential drivers of social distance (Beh-Poojah, 1991; Hudson-Allez & Barrett, 1996). Finally, the films aimed to raise awareness of the hostility, harassment and discrimination people with ID experience. In conjunction with these key messages, it was important to ensure that individuals from the South Asian community were represented in the film to make the content relevant to an audience drawn from this community.

The development of the films was challenging within the time frame of the project in terms of sourcing relevant footage, obtaining permission for its usage, developing the technical skills to edit the clips into a coherent story and taking into account how the material may be received by viewers. Several agencies played an integral part in this process by providing key pieces of footage. The Open Door Training Group, a team of individuals with ID who raise awareness of disability hate crime, gave permission for an extract from one of their existing films (Open Door hate crime film, 2011) to be incorporated into the contact film. Permission was also given by Richmond Mencap to use extracts from an awareness film they had produced which featured people with ID (Richmond Mencap Learning Disability Awareness Film, 2011). Similarly Ansaar, a community project who support people with ID into employment in Leicester, approved the use of a clip which featured an employee of Leicester council to promote the capabilities and skills of employees with ID (Valuing Employment Now- Shamima's story, 2009). These extracts were very helpful and could also be amended so that the appearances of people with ID could be omitted for the purpose of the control film, with support staff and carers conveying the key messages instead.

All three agencies were asked to approve the film before dissemination and a lot of positive support and interest was received from these and other liaison contacts, which was very encouraging. In developing the films, it was important to strike an appropriate balance between providing accurate information whilst concurrently ensuring that the content was not overly emotive. This was in order to avoid eliciting a sympathy response in the short-term, which may have potentially threatened the reliability of the attitudes reported. A space for comments and qualitative feedback was provided at the end of the survey. All the comments received were positive about both films and no concerns were expressed regarding content. A few participants suggested that the technical quality of the films could be improved which is an important consideration for future research.

Although participants did not report any concerns regarding the content of the intervention, the issue of debriefing is important to consider when developing web-based

surveys. Early withdrawal from a study, due to a program error, computer issues or boredom, is a threat to ensuring adequate debriefing (Nosek, Banaji & Greenwald, 2002). Nosek et al. (2002) suggest that a 'leave the study now' button could be incorporated into web-based surveys and available on each page of the survey. Therefore should participants withdraw, they would still be directed to the debriefing page by pressing this button. Future research would benefit from including options of this kind into the design of their study in an attempt to minimise ethical issues that may be arise when conducting internet research.

1.3. Recruitment

As acknowledged throughout the empirical paper, the present study was limited by its modest sample. Several strategies to maximise recruitment uptake were attempted with varying success. A considerable amount of time was dedicated to contacting various community and religious organisations by telephone and email to explain the purpose of the study and request support; however, this only appeared to yield a handful of respondents. The author refrained from contacting groups who were affiliated with ID advocacy projects and organisations as it was felt that individuals connected to such agencies would be more likely to hold positive attitudes. The study was posted on several discussion forums and social networking sites but again this did not draw in large numbers of participants. Nevertheless, an initial total sample of 100 participants was obtained in line with the study's aim. However, the final total was smaller due to issues regarding eligibility which are discussed below.

It was particularly challenging to disseminate the study invitation to older members of the South Asian community which the present study was not able to overcome. Future research would benefit from thinking creatively about how to maximise participation of older individuals in research. This difficulty was further perpetuated by the fact that the study was solely administered via the internet and by its very nature therefore only recruited individuals with good computer literacy and internet access. Although participants were encouraged to

forward the study onto family and friends and were specifically requested to consider older members of the community, this was not fruitful. One participant commented that this would be difficult due to a potential language barrier for older adults. However, providing paper-based and translated measures in themselves do not appear to offer a ready-made solution, as noted by Kaur, (2011). In this study on lay attitudes towards people with ID held within the Sikh community, both English and translated versions of the survey tools were provided. In addition, the author actively approached older members of the Sikh community only to find that they frequently declined to participate on the basis that they 'knew little about such matters' and advised the researcher to recruit younger relatives. This remains an obstacle for future studies that endeavour to obtain a representative sample where the attitudes and beliefs of older individuals are included.

1.4. Study design

The present study used a repeated measures design, a control group, and random allocation to the group conditions. The control group was not traditional in that it aimed to deliver the same messages as the contact film (therefore providing psycho-education) but did not feature individuals with ID. An alternative to this would have been to use an unrelated film clip. However, it was decided that this could be confusing to participants after they had agreed to participate in a study on attitudes towards people with ID and had completed a battery of respective measures. Future research may wish to plan a study which incorporated a third arm to the design, whereby an unrelated film may be used as a control. This design has been utilised by researchers in the mental health field to investigate the impact of anti-stigma films which compare different strategies for attitude change (Kerby, Calton, Dimambro, Flood & Glazebrook, 2008; Reinke et al., 2004).

The present study is the only study to date that has assessed the impact of an intervention on causal beliefs in relation to ID over time (Scior & Furnham, 2011). Whilst the effects were small, the increase observed in the endorsement of *biomedical* causes which

are associated with reduced stigma (Scior, 2012) are encouraging and indicate that further research in this area is warranted. To advance the literature in the field of ID, larger studies that are methodologically sound are required. Further investigations assessing the impact of anti-stigma initiatives on causal beliefs would be useful.

Furthermore, the effects of contact on stigma towards ID remain poorly understood (Scior, Potts & Furnham, 2012). The present study did not find support for the role of indirect contact on improving attitudes and reducing stigmatising beliefs towards ID, as neither film condition was found to be superior in achieving change. Exploration of the role of contact in influencing attitudes towards ID is limited, as is the extent of our understanding of public stigma. This is in marked contrast to the richness of the mental health literature (Scior, 2011; Werner, Corrigan, Ditchman & Sokol, 2012). There is a need for future studies to consider the complex processes involved in attitude and stigma formation towards individuals with ID in conjunction with emotional responses and causal attributions associated with this group (Scior, 2011).

1.5. Internet research

Over recent years the use of the internet and web-based studies as a medium for scientific research has decidedly increased and it has been proposed that the internet will continue to shape the nature of psychological research in years to come (Buchanan & Smith, 1999; Nosek et al., 2002). Web-based studies have many advantages including their scope for large sample populations and also the speed of access that they offer to obtain large and rich amounts of data (Duffy, 2002). In the case of the current paper, the web-based survey was quick and easy to set up and provided an efficient way for the film-based intervention to be included as an integral part of the survey. Administering the survey online provided an immediate way to circulate the survey link to a large number of potential participants via email, who then had the opportunity to complete the survey at a convenient time, as opposed to the practical challenges of in-house testing. The survey software used in the

present study, Opinio, was also useful in that it transported the data collected straight into SPSS which reduced the risk of error associated with manual data entry.

Although there are many advantages of internet research, the methodological issues of this approach can seriously affect the validity of a study's findings (Duffy, 2002). A well-documented issue is that researchers have less control over the testing environment of participants during the study when the survey or tasks are web-based (Buchanan & Smith, 1999; Nosek et al., 2002). Researchers have less control over the conditions under which the respondent completes the task and this was particularly pertinent to difficulties that arose for the current pilot.

During thorough data screening it became apparent that the time taken by some participants to complete the survey was incongruous with their affirmation that they had viewed the film (participants were asked to explicitly confirm that they had watched the film). On closer inspection, it was evident that a substantial number of participants (n= 24) had failed to watch the film they had been assigned to. In most cases they had played the film for 30 seconds to a few minutes only. The Opinio software was helpful in that it timed each response, hence it was possible to infer whether the participant had received the intervention or not. Consequently it felt necessary to remove these 24 cases from the dataset to protect the validity of the study's findings. This was a very disappointing discovery and led to a modest final sample size.

This served as a powerful lesson about the issues that can arise when conducting research of this kind and more widely about the risk of possible falsification by participants, which could potentially have a serious impact on a study's accuracy. This situation illustrated one of the many potential consequences of researchers having less control over the testing environment in web-based studies in comparison to more traditional methods. Of course, it is possible that a proportion of participants may not have watched the film due to unreported technical problems, for example, the film may not have played correctly on their

computer. However, one might expect that a conscientious respondent would contact the researcher to inform them of a fault in the system if this was the case, rather than reporting that they had watched the film.

This also raises some interesting questions regarding the intentions of participants who self-select for research. It was somewhat puzzling in the present study as to what may have led a significant proportion of the participants who did not receive the intervention to complete the post-measures immediately afterwards, as opposed to the many respondents who began the survey and left at various points throughout. It may be that participants did not find the film interesting or felt unable to commit to watching it at the time of their participation but felt obliged to complete the questions that followed. Or perhaps some individuals preferred to answer written questions rather than undertake more experimental tasks. The present study offered the chance to be entered into a prize draw to win £100 of vouchers, which may have enticed individuals who had little interest in the subject to complete the post-measures without watching the film. Similarly a proportion of the participants who did not receive the intervention agreed to complete the one month follow-up. It is difficult to know with any certainty whether this was purely driven by the monetary incentive but should be seen as a warning sign for future studies that plan to use film-based interventions that are not administered by the researcher.

What motivates an individual to partake in research and influences how they complete the tasks involved is an interesting question for future research. It warrants attention and consideration, particularly as researchers consider the extraneous variables or circumstances that may threaten the validity of their findings at the planning and interpretation stages of the research process. Future researchers should aim to verify the extent to which participants adhere to the study's instructions, for example, by monitoring the timings of each stage of the survey if applicable. This may avoid problems of falsification being discovered at a later stage but may mean having to extend the recruitment window which could be laborious and/or costly.

Although in the present study the use of a web-based survey was not without its difficulties, it remained an appropriate and valuable medium to investigate the impact of film-based interventions on public attitudes. It is highly likely that the use of internet research will increase as investigators meet the challenge of developing efficient ways to administer surveys and tasks to large numbers of people. Whilst researchers must consider the drawbacks associated with this approach, the challenges of internet research should not deter them from utilising this powerful medium for discovery and education (Nosek et al., 2002).

1.6. Conclusions

The present study has demonstrated the potential positive effects that can be achieved from film-based interventions on attitudes and beliefs held within a UK South Asian sample. Although these effects were small, it is hoped that they offer a useful contribution to the evidence base on change initiatives that tackle attitudes towards individuals with ID. The pilot was innovative in its attempt to address attitudes held by a specific cultural group. However, as the present appraisal documents, there remain both conceptual and practical challenges to this endeavour and larger studies with more representative samples are required to increase our knowledge and understanding in this area. Involving members of the community and key representatives in the planning and implementation of future studies is likely to provide a valuable contribution to the appropriateness and validity of cross-cultural research.

Whilst film-based interventions appear to show much promise, further investigation is needed to establish which components of interventions are effective drivers for change in public attitudes. Internet based research undoubtedly offers a lot of promise but also comes with a new range of methodological and ethical considerations that warrant further attention. Lastly, it is hoped that the reflections provided in this appraisal serve as a helpful reference for future endeavours.

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Appendix A: Quality Assessment Tool

Domain	Criteria	Points		
		Yes	No	Unable to determine
Introduction				
1.	Scientific background and rationale reported	1	0	0
2.	Clearly stated aims and hypotheses	1	0	0
Methods				
3	Key elements of study design presented incl. use of baseline and follow-up time points / defined variables	1	0	0
4.	Setting, relevant dates, eligibility criteria, follow-up and data collection described	1	0	0
5.	Intervention clearly reported	1	0	0
Sampling				
6.	Sampling method described	1	0	0
7.	Characteristics of sample described incl. size	1	0	0
8.	Recruitment bias- efforts described to address sources of bias	1	0	0
Measurement and analysis				
9.	Details of measurements provided incl. standardisation	1	0	0
10.	Description of statistical methods used	1	0	0
Results				
11.	Participant numbers reported at each stage incl. attrition rates	1	0	0
12.	Descriptive data provided	1	0	0
13.	Findings clearly reported	1	0	0
14.	Statistical significance reported with alpha values	1	0	0
Discussion				
15.	Summary of key results with reference to study objectives	1	0	0
16.	Limitations discussed	1	0	0

Appendix B: Participant Invitation Email to Study

Dear all,

You are invited to take part in an online survey that involves watching a brief film about people with learning disabilities.

For this study we are interested in the views of people from South Asian backgrounds (those whose family originate from Pakistan, Bangladesh, India, Sri Lanka and Nepal) towards people with learning disabilities.

To be eligible to complete this study, you must be 16 years and over and identify yourself as being of South Asian ethnicity / heritage.

Completing this questionnaire will take you about 20-30 minutes and by taking part you will be helping us understand more about attitudes towards people with learning disabilities within the South Asian community.

*** To thank you for taking part you will be entered into a Prize Draw – you will have a chance of winning £100 in vouchers for a shop of your choice!***

*** In addition a £50 cash prize will be offered to the two people who recruit the most people into the study. Please forward details of the study to people you know including parents and other family members. We are particularly interested in the view of older members of the South Asian community as they are usually under-represented in research. ***

Click on this link now to start the survey: https://opinio.ucl.ac.uk/s?s=20289

This survey has full ethical approval from University College London. Please provide your contact details if you wish to be entered in the prize draw. Your details will be automatically separated from your survey responses on receipt and your responses are entirely anonymous.

Thank you very much for your help in advance!

Leila Seewooruttun
Trainee Clinical Psychologist

Dr Katrina Scior
Senior Lecturer in Clinical Psychology

Department of Clinical, Health and Educational Psychology, University College London, Gower Street, London, WC1E 6BT

Appendix C: Copy of Measures

1. Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

1. I never hesitate to go out of my way to help someone in trouble.
2. I have never intensely disliked anyone.
3. There have been times when I was quite jealous of the good fortune of others.
4. I would never think of letting someone else be punished for my wrong doings.
5. I sometimes feel resentful when I don't get my way.
6. There have been times when I felt like rebelling against people in authority even though I knew they were right.
7. I am always courteous, even to people who are disagreeable.
8. When I don't know something I don't at all mind admitting it.
9. I can remember "playing sick" to get out of something.
10. I am sometimes irritated by people who ask favours of me.

Samir has a learning disability (mental handicap). He is 22 and lives at home with his parents and younger brother. He found school a struggle and left without any qualifications. He has had occasional casual jobs since. When his parents try to encourage him to make plans for his future, Samir has few ideas or expresses ambitions that are well out of his reach. Rather than having him at home doing nothing, his mum has been trying to teach Samir new skills, such as cooking a meal, but Samir has struggled to follow her instructions. He opened up a bank account with his parents' help, but has little idea of budgeting and, unless his parents stop him, will spend all his benefits on comics and DVDs as soon as he receives his money.

2. Many people experience problems such as Samir's. Please indicate the extent to which you agree that the following are a likely reason for problems such as Samir's in *anyone,* using the same scale.

1.	overly spoilt as a child	1	2	3	4	5	6	7
2.	virus / other infection that affects the brain	1	2	3	4	5	6	7
3.	lack of daytime occupation	1	2	3	4	5	6	7
4.	possession by spirits	1	2	3	4	5	6	7
5.	family arguments	1	2	3	4	5	6	7
6.	financial worries	1	2	3	4	5	6	7
7.	punishment for own past wrongdoings	1	2	3	4	5	6	7
8.	strong religious or spiritual beliefs	1	2	3	4	5	6	7
9.	genetic factors	1	2	3	4	5	6	7
10.	suffering abuse as a child	1	2	3	4	5	6	7
11.	recent traumatic incident such as traffic accident	1	2	3	4	5	6	7
12.	punishment for parents' wrongdoings	1	2	3	4	5	6	7
13.	very poor schooling	1	2	3	4	5	6	7
14.	complications at time of birth	1	2	3	4	5	6	7
15.	being from a single-parent family	1	2	3	4	5	6	7
16.	parents too lenient	1	2	3	4	5	6	7
17.	lack of an intimate relationship	1	2	3	4	5	6	7
18.	brain abnormality	1	2	3	4	5	6	7
19.	a test from God / Allah	1	2	3	4	5	6	7
20.	recent death of relative or close friend	1	2	3	4	5	6	7
21.	meningitis	1	2	3	4	5	6	7
22.	isolation from extended family	1	2	3	4	5	6	7

3. Please indicate your agreement with the following statements:

I would be happy to move next door to someone with a learning disability

1 2 3 4 5 6 7

I would be happy to spend an evening socialising with someone with a learning disability

1 2 3 4 5 6 7

I would be happy to work closely with someone with a learning disability

1 2 3 4 5 6 7

I would be happy to make friends with someone with a learning disability

1 2 3 4 5 6 7

I would be happy for someone with a learning disability to marry into my family

1 2 3 4 5 6 7

© Scior & Furnham, 2010

What is a Learning Disability?

A '**learning disability**' is an umbrella term for a condition in which someone has an impairment in their ability to think (intellectual functioning) and to cope on their own on a day-to-day basis (social functioning) and which has been identified as having an onset before adulthood (18 years old). Learning disability is referred to in certain countries as an intellectual disability. In the past the terms **'mental handicap'** and **'mental retardation'** have also been used to denote this condition. Some specific syndromes and conditions such as Down's syndrome, Fragile X and Autism **may** in some cases be associated with having a learning disability.

Learning disabilities are different from specific learning difficulties such as Dyslexia, which are not the focus of this study.
Please indicate the extent to which you agree with the following statements according to this scale:

1 = Disagree strongly	4 = Agree somewhat
2 = Disagree moderately	5 = Agree moderately
3 = Disagree somewhat	6 = Agree strongly

1.	People with learning disabilities should not be allowed to marry and have children.	1 2 3 4 5 6
2.	A person would be foolish to marry a person with learning disabilities.	1 2 3 4 5 6
3.	People with learning disabilities can plan meetings and conferences without assistance from others.	1 2 3 4 5 6
4.	People with learning disabilities can be trusted to handle money responsibly.	1 2 3 4 5 6
5.	The opinions of a person with learning disabilities should carry more weight than those of family members and professionals in decisions affecting that person.	1 2 3 4 5 6
6.	Sheltered workshops for people with learning disabilities are essential.	1 2 3 4 5 6
7.	Increased spending on programs for people with learning disabilities is a waste of money.	1 2 3 4 5 6
8.	Homes and services for people with learning disabilities downgrade the neighbourhoods they are in.	1 2 3 4 5 6
9.	People who have learning disabilities are a burden on society.	1 2 3 4 5 6
10.	Homes and services for people with learning disabilities should be kept out of residential neighbourhoods.	1 2 3 4 5 6
11.	People with learning disabilities need someone to plan their activities for them.	1 2 3 4 5 6
12.	People with learning disabilities do not need to make choices about the things they will do each day.	1 2 3 4 5 6
13.	People with learning disabilities can be productive members of society.	1 2 3 4 5 6
14.	People with learning disabilities have goals for their lives like other people.	1 2 3 4 5 6
15.	People with learning disabilities can have close personal relationships just like everyone else.	1 2 3 4 5 6
16.	People with learning disabilities should live in sheltered facilities because of the dangers of life in the community.	1 2 3 4 5 6

17. People with learning disabilities usually should be in group homes or other facilities where they can have the help and support of staff. 1 2 3 4 5 6

18. Parents should bear the main responsibility for children with learning disabilities. 1 2 3 4 5 6

19. Families should hide their relatives with learning disabilities rather than draw attention to the learning disability through using services. 1 2 3 4 5 6

20. Having a person with a learning disability in a family may damage the marriage prospects of siblings. 1 2 3 4 5 6

Appendix D: Ethics Approval

UCL RESEARCH ETHICS COMMITTEE

Amendment Approval Request Form

1	**ID Number:**	**Name and Address of Principal Investigator:**
	0960/001	Dr Katrina Scior Research Dept of Clinical, Educational and Health Psychology University College London 1-19 Torrington Place London WC1E 7HB
2	**Project Title:** Public beliefs, knowledge and attitudes towards people with intellectual disabilities	
3	**Information about the amendment:**	
	(a) Is the amendment purely administrative?	☐ Yes ☒ No ☐ N/A
	(b) Has the Participant Information Sheet/Consent Form been changed as a result of the amendment? If yes, please enclose a copy.	☒ Yes ☐ No ☐ N/A
4	**Summarise the issues contained in the amendment:**	
	To date this large scale general public survey covers several aspects to assess lay attitudes, knowledge and beliefs, comparing attitudes towards people with intellectual disabilities and those with mental health problems. We are also examining whether a brief film based intervention can improve attitudes. As follow-on steps we will make several additions/ changes: 1. We will assess not only explicit attitudes, but also implicit, more deeply held attitudes towards people with intellectual disabilities, as before using an online anonymous survey. This aspect of the project will be run by Michelle Wilson, full-time student on the Doctorate in Clinical Psychology, under my supervision. 2. One arm of the large project is already examining whether a 10 minute film clip can effect change in lay attitudes and beliefs. We will extend this to focusing on ethnic minority communities by tailoring an intervention specific to one community and examining its effects on attitudes, again using a pre- and post design. This aspect of the project will be run by Leila Seewooruttun, full-time student on the Doctorate in Clinical Psychology, under my supervision.	
5	**Please give any other information you feel may be necessary:**	
	Film material to be used in this project will be taken from published material or will be produced by ourselves and will have the full permission of the relevant authors/ producers. It is not expected that the material presented will cause any distress in the member of the public who agree to taking part and will do so anonymously. We would like ethical permission until July 2013 to allow us to finish all parts of the project.	
	[redacted]	**Date of Submission:** 24/11/2011

FOR OFFICE USE ONLY:

Amendments to the proposed protocol have been ....approved.... by the Research Ethics Committee.

Ethical approval granted until July 2013

Chair's Signature: [redacted]

Date: 25/11/2011

Please return completed form to: SIR JOHN BIRCH.

Secretary of the UCL Research Ethics Committee
Graduate School, North Cloisters, Wilkins Building
Gower Street, London WC1E 6BT

Appendix E: Participant Information Sheet

We would like to invite you to participate in an important research project, conducted by University College London. Before you decide whether you want to take part, it is important that you read the following information carefully. It is up to you to decide whether or not to take part. Please ask if there is anything that is not clear or if you would like more information.

Purpose of the research
We are interested in finding out more about attitudes towards people with learning disabilities. For this study we are seeking the views of people from South Asian backgrounds (those whose family originate from India, Pakistan, Bangladesh, or Sri Lanka).

Completing this questionnaire will take you about 20 minutes. We are very interested in your honest views, not any 'right' or 'wrong' answers.

To thank you for taking part you will be entered into a Prize Draw – you will have a chance of winning £100 in vouchers for a shop of your choice.

In addition a £50 cash prize will be offered to the two people who recruit the most people into the study. We request that you forward details of the study to people you know. We are particularly interested in the view of older members of the South Asian community as they are usually unrepresented in research and their perspectives are very much valued.

The personal information you provide will only be used for the purposes of this project and not transferred to an organisation outside of UCL. The information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

Principal Investigator: Leila Seewooruttun, Clinical, Educational & Health Psychology, University College London, London WC1E 6HJ; Email: [redacted], Tel: [redacted]

This study has been approved by the Ethics committee of the Division of Psychology and Language Sciences.

This survey is in three parts. The first part asks you to rate your agreement with different items and asks for some demographic information from you. In the second part we will show you a short film which will provide information about people with learning disabilities which we hope you will find interesting and informative. The final part of the study asks you to respond to some of the questions we asked you earlier in part one. Please respond to all items - if you are unsure of a response please make a best guess.
[Edit | Delete]

Appendix F: Table of Cronbach Alpha Coefficients for Dependent Variables

Reliability Coefficients for Dependent Variables (n= 60)

Measure		Cronbach α
CLAS-ID		
	Empowerment	.68
	Exclusion	.89
	Sheltering	.69
	Similarity	.62
Additional items		
	Item 18, 19, 20	.22
IDLS		
	Biomedical	.72
	Adversity	.82
	Environment	.89
	Supernatural	.83
Social Distance		.84

Appendix G: Causes of Intellectual Disability Film Script

We know there is a lot of confusion about what a learning disability is and isn't. Someone with a learning disability has difficulties both in terms of their intellectual abilities and how they get on with everyday tasks. And these difficulties will have been there since childhood. So they will find it more difficult to learn new things and will often need help from others to go about their day to day lives. A learning disability can range from being relatively mild to very severe and the amount of help a person needs will vary. Most of these difficulties are life-long, but many adults with learning disabilities live quite independent and productive lives in the community.

A learning disability can be caused by any condition that impairs development of the brain. Many causes have been discovered but for about one-third the cause remains unknown.

Firstly, there are genetic conditions that result from abnormalities of genes. They may be passed down from parents, or an error may have occurred when genes combine, sometimes because of infections or other factors. Genetic conditions are more common when the parents are blood relatives. Two common genetic causes are Down's syndrome and Fragile X syndrome.

Secondly, problems at birth or childhood illness can cause damage to the brain which leads to learning disability.

The latest evidence doesn't support some common beliefs. In some faiths, for example, a disability is believed to be a punishment from God because the parents have done something wrong. We know that a learning disability is very rarely due to anything the parents did or didn't do. The one exception to this is excessive use of alcohol or drugs during pregnancy which can damage the developing brain.