


## RESEARCH ARTICLE

# Group CBT for men with intellectual disabilities and/or autism who have harmful sexual behaviour

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**Abstract**

**Objectives:** Men with intellectual disabilities and/or autism sometimes engage in harmful sexual behaviour (HSB), but it may be harder for them to access treatment, than it is for non-disabled men. The aim of this study was to evaluate the effect of attending an adapted CBT group, known as SOTSEC-ID, on men with intellectual disabilities and/or autism who had HSB.

**Method:** Ninety-eight men from intellectual disability services, who had ID and/or autism and a history of HSB were recruited, and they received group CBT for a year (46 of these men have been previously reported). Harmful sexual behaviour, sexual knowledge, distorted cognitions and victim empathy were measured before and after treatment, and at 6 month follow-up.

**Results:** There were low levels of further harmful sexual behaviour: 12% of men engaged in further HSB during the 1-year period of the group, and 8% engaged in further HSB in the 6-month follow-up period. There were also significant improvements in sexual knowledge, distorted cognitions and victim empathy following treatment, maintained at 6-month follow-up. Men with autism showed significantly more non-contact HSB, were less likely to have been interviewed by police and had higher rates of further HSB, compared to men without autism.

**Conclusions:** It is concluded that SOTSEC-ID is a promising treatment for men with ID/autism and HSB. Nevertheless, the study had a number of limitations and lacked a control group, so there is now an urgent need for a proper controlled study.

**KEYWORDS**

Autism, group CBT, harmful sexual behaviour, intellectual disabilities

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### Practitioner points

- Men with intellectual disabilities and/or autism sometimes show harmful sexual behaviour
- Adapted group CBT, using SOTSEC-ID, resulted in improvements in sexual knowledge, cognitive distortions and victim empathy for these men
- Harmful sexual behaviour was rare after group treatment
- Men with autism seemed to do less well than men with ID only

## INTRODUCTION

There is considerable public disquiet about men who engage in harmful sexual behaviour (HSB), and this has long been evident in Western countries. Typically, interventions for such men consist of group cognitive behavioural therapy (CBT) and this is widely available in prisons and probation services, as well as in health settings, in the UK and many other countries. A number of systematic reviews and meta-analyses have concluded that CBT reduces recidivism among men with harmful sexual behaviour (Gannon et al., 2019; Hanson et al., 2002; Harrison et al., 2020; Losel & Schmucker, 2005; Schmucker & Losel, 2015). A number of these studies have commented on the variability of results across different reports, and several have tried to analyse the important variables. Harrison et al. (2020) reported that treatment studies prior to 1990 and after 2000 were less effective than those in the 1990s. Meanwhile, Gannon et al. (2019) concluded that such treatment was more effective if it included a number of features: group-based CBT, psychologist-led intervention, with supervision for facilitators, absence of polygraphy and arousal reconditioning.

Men who had ID were largely excluded from these early CBT programmes. An adapted Sex Offender Treatment Programme (A-SOTP) programme was developed in prisons in the United Kingdom, for men with an IQ below 80, but it ran in few prisons, and only for those with lengthy sentences (on the grounds of assessments of risk). Very few sites outside of prisons were permitted to run the programme and there was a dearth of treatment available in the community. Nevertheless, some reports of adapted CBT for such men have appeared, and according to four recent systematic reviews, there are promising results, but participant numbers are small and there is a distinct lack of controlled designs (Cohen & Harvey, 2016; Heppell et al., 2020; Jones & Chaplin, 2019; Marotta, 2017).

The Sex Offender Treatment Services Collaborative – Intellectual Disabilities (SOTSEC-ID) is one intervention programme designed specifically for men with ID and/or autism and HSB. The group-based, year-long adapted CBT programme consists of six modules covering group rules, sex education, emotion regulation, increasing victim empathy, understanding legal issues, cycles of offending, reducing cognitive distortions and relapse prevention (Murphy & Sinclair, 2009; Sinclair et al., 2002). Each session begins with a consideration, with the men, of how their week has gone. The issues the men bring up in this way forms the basis of part of the group work in that session and later sessions, with the aim of promoting the men's skills at negotiating difficult issues, regulating their emotions and developing their relationships and social skills. Arguably, the programme combines the essential elements of the Good Lives model as well as the reduction of risk, and qualitative studies of the men's views of the programme seem to confirm this (Hays et al., 2007; Melvin et al., 2020b). The inclusion of this Good Lives approach is perhaps not surprising, given the long commitment of intellectual disability services to the constructional approach (Goldiamond, 1974), to skill building and to positive behavioural support (Gore et al., 2013).

In a previous multi-site study of SOTSEC-ID, most of the 46 men (83%) had engaged in more than one incident of harmful sexual behaviour prior to treatment (Sex Offender Treatment Services Collaborative – Intellectual Disabilities, 2010). Almost all of the 46 men (92%) who began treatment (and consented to take part in the research) completed treatment 1 year later and there were statistically

significant increases in sexual knowledge and victim empathy, as well as reductions in cognitive distortions over the course of the treatment. These changes were still significant at 6-month follow-up for sexual knowledge and cognitive distortions. Only three men showed further harmful sexual behaviour during the 1-year period when they were attending treatment, and four men showed such behaviour during the 6-month follow-up period (Sex Offender Treatment Services Collaborative – Intellectual Disabilities, 2010). Long-term follow-up of 34 men treated with SOTSEC-ID (Heaton & Murphy, 2013) showed that only 6% were reconvicted, and all the improvements in sexual knowledge, victim empathy and cognitive distortions were maintained at long term follow-up (mean length of follow-up 44 months). However, it appeared that men who had a diagnosis of autistic spectrum disorders were more likely to have shown further sexually abusive behaviours ( $\chi^2 = 6.7, p < .01$ ) than the men without autism (Heaton & Murphy, 2013).

Most of the other previous studies of group CBT for men with ID and/or autism and harmful sexual behaviour have included very small samples of men: Heppell et al. (2020) found 17 studies of men with ID and HSB for their meta-analysis, and all but two of these studies included between 3 and 20 participants (the prison study by Williams et al., 2007, has been excluded as these men had IQs up to 80 and most did not have ID). The two largest samples in the 17 papers on men with ID in Heppell et al. (2020) included 30 and 46 participants, respectively (Lindsay et al., 2011; Sex Offender Treatment Services Collaborative – Intellectual Disabilities, 2010). One further study had 34 participants (Heaton & Murphy, 2013): it was the follow-up of men in SOTSEC-ID (2010).

Within the current study, noting this is a difficult-to-recruit clinical population, we were able to recruit and evaluate treatment outcomes for 98 men with harmful sexual behaviour (HSB) who had intellectual disabilities and/or autism, and who had all taken part in the SOTSEC-ID treatment programme. Of these 98 men, 46 men were the subject of a previous study (SOTSEC-ID, 2010). The aim for this study was to amass a larger sample of men, given the small size of previous studies, so as to be more confident about outcome, and to compare men with ID only to men with ID and autism.

## METHOD

### Design

This study was an open-label study where each site offered 50-week manual-guided group cognitive-behavioural treatment, using the SOTSEC-ID model, to treat men with intellectual disabilities and/or autism who showed HSB. Participants were assessed at initial enrolment (baseline: before the treatment group commenced), and then again at approximately 52 weeks (post-treatment group), and finally, at approximately 78 weeks following enrolment (follow-up, i.e., 6 months after the group finished). The participating sites were spread across England and Wales and each one consisted of a clinical team of facilitators, usually based in an NHS Trust, as part of a Community Learning Disability Team, or a clinical team based in secure services (run by the NHS or the independent sector). The group facilitator teams were led by a clinical psychologist or trained cognitive behaviour therapist, and all team members had undertaken the SOTSEC-ID training. Two facilitators ran each group session, and typically each site had 3 or 4 facilitators who rotated across sessions (to allow for occasional unavailability, such as annual leave).

### Participants

Ninety-eight men with intellectual disabilities and/or autism, receiving ID services, participated in the 26 SOTSEC-ID groups, across the 15 sites (some sites ran more than one group). Some of these men

( $n = 46$ ) had been included in our previous study (SOTSEC-ID, 2010); they will be referred to as Sample 1. The additional sample of 52 men will be referred to as Sample 2. There were no significant differences (all  $p > .05$ ) between Samples 1 and 2, in terms of age when enrolled (35 vs. 37 years), ethnicity (95% vs. 97% Caucasian), history of HSB prior to their index offence (85% vs. 84%). As regards residential status, for Sample 1, 23% lived alone or with family, 30% in a group home, 42% in secure settings, as compared to Sample 2 where 39% lived alone or with family, 24% in group homes and 42% in secure settings. In Sample 1, 40% were legally unrestricted, as compared to 50% of Sample 2, while 58% and 56%, respectively, had been victims themselves of HSB. None of these differences between Samples 1 and 2 were significant. It was considered therefore acceptable to combine the two samples to allow an analysis of a larger sample of men.

## Eligibility criteria

The inclusion criteria were: (1) Participants must be male, aged between 18 and 65 years, have committed at least one act of HSB, and have been associated with intellectual disability services; (2) they may or may not have an ASD diagnosis; (3) they must be deemed suitable for CBT and able to work in a group as judged by treating clinicians, and must have a Full Scale IQ in the mild or borderline range; and (4) clients should be drawn from either: community intellectual disability services (health or social services), or probation services, or low or medium secure health settings. The only exclusion criterion was that men in prison or in high secure services were ineligible. Not all of the participants had *convictions* for sexual offences, although they had all engaged in HSB (in many areas, police are still reluctant to charge, and the Crown Prosecution Service does not always prosecute men with ID/autism, especially if the victim is another person with an ID).

The demographic characteristics of the 98 men upon enrolment are given in Table 1. All men were drawn from ID services. The mean IQ was below 70, but 7 of the 98 men were found to have an IQ above 75 (these were mostly men with ASD whose social impairments had been seen by the ID service as indicative of ID). All 98 men undertook the SOTSEC-ID group, and of these 98 men, 10 men later went on to complete a second SOTSEC-ID group (or in one case a third), as clinicians deemed this appropriate. The results of the first round of treatment *only* are considered below, but the issue of whether these 10 men improved in their further treatment is reported at the end of the results section.

The presence/absence of an autism diagnosis was known for 93 men: 15 had ASD and 78 had ID only (it was not known for 5 of the 98 men and these men are *excluded* in the subgroup analyses in relation to autism). The two groups of men, with and without autism, did not differ significantly in age, IQ, ethnicity or in whether they had been convicted of other non-sexual crimes.

## Measures

### Primary outcome

The primary outcome measure was harmful sexual behaviour, defined as any sexually related behaviour for which the other person was not consenting (or was unable to consent) and where the behaviour would be defined as illegal within the jurisdiction in which it occurred. Data about HSB were collected by clinical psychologists using a structured form which was completed following interviews, and case note reviews, with residential and day care staff, family carers, health care professionals, social workers, police and probation officers. HSBs were collated, regardless of whether they had come to the attention of the police to ensure that records of incidents were as complete as possible.

TABLE 1 Demographic data for the whole sample and the two sub-groups.

	Whole group ( <i>n</i> =98)	Men with ID only ( <i>n</i> =78)	Men with ASD ( <i>n</i> =15)
Age (& <i>SD</i> )	35.7 (11.7)	35.6 years (11.6)	36.1 years (11.3)
IQ	66.0 (6.6)	65.7 (6.6)	67.1 (7.7)
Ethnicity	96.7% Caucasian	99% Caucasian	86% Caucasian
Residential status at start of group	Own home/family 31% Group home 28% Secure service 38%	Own home/family 29% Group home 28% Secure service 43%	Own home/family 53% Group home 27% Secure service 20%
Victim of sexual assault himself (as child/ adult)	Yes 58%	Yes 61%	Yes 36%
Non-sexual crimes (convictions as an adult)	Convicted 26%	Convicted 27%	Convicted 21%
Index offence: interviewed by police	Yes 76%	Yes 81%	Yes 53%
Index offence: went to court	Yes 60%	Yes 64%	Yes 33%
History of previous HSB prior to index offence	Yes 84%	Yes 85%	Yes 87%
Legal status at start of group	Informal 46% Restricted 54%	Informal 43% Restricted 57%	Informal 64% Restricted 36%
Predominantly non-contact offenders	Yes 27%	Yes 21%	Yes 53%

## Secondary outcomes

Four self-report measures were used to index change within three key domains that are thought to relate to risk of sexual offence recidivism: (1) sexual offence supportive beliefs and attitudes—cognitive distortions, (2) sexual knowledge and (3) victim empathy:

- Cognitive distortions: The Questionnaire on Attitudes Consistent with Sexual Offending (QACSO) (Broxholme & Lindsay, 2003) is a 63-item questionnaire designed for use with sex offenders with intellectual disabilities. The questionnaire assesses distorted cognitions relating to sexual offending, spanning seven different offending categories: (i) rape, (ii) voyeurism, (iii) exhibitionism, (iv) dating abuse, (v) homosexual assault, (vi) paedophilia and (vii) stalking and sexual harassment. Lower scores indicate fewer cognitive distortions. The QACSO has been found to effectively discriminate between sex offenders and non-offenders with intellectual disabilities, with good levels of test–retest reliability for six of the seven categories (Broxholme & Lindsay, 2003).
- Cognitive distortions: Sexual Offenders Self-Appraisal Scale (SOSAS) (Bray & Forshaw, 1996). The Sexual Offenders Self-Appraisal Scale was designed for people with intellectual disabilities and examines cognitions about sexual offending. It consists of 20 statements requiring the respondent to indicate their level of agreement or disagreement, on a five-point scale. The 20 items form four subscales: (i) denial, (ii) victim blaming, (iii) minimization and (iv) realism. Lower scores indicate fewer cognitive distortions. Cronbach's alpha for this measure was .68 (Langdon et al., 2007).
- Sexual knowledge: The Sexual Attitudes and Knowledge Scale (SAKS) (Heighway & Webster, 2007) contains 19 questions (accompanied by pictorial representations) regarding sexual knowledge and attitudes, and was designed for use with people with intellectual disabilities. The SAKS has four subscales: (i) understanding relationships, (ii) social interaction, (iii) sexual awareness and (iv) assertiveness. Higher scores indicate better knowledge and attitudes. Cronbach's alpha for this measure was .82 (Langdon et al., 2007)

- Victim Empathy: The Victim Empathy Scale – Adapted (VES-A), (Beckett & Fisher, 1994) is a 30-item scale, originally developed for use with sexual offenders without intellectual disabilities, and it has been adapted for use with sexual offenders with intellectual disabilities, in consultation with one of the authors (Dawn Fisher). Respondents rate (on four-point Likert scales) how much they agree with a series of statements describing how victims felt about respondents' sexual behaviour. Lower scores indicate better empathy. For the adapted measure, the Cronbach's alpha was .91 (Langdon et al., 2007).

## Procedure

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008. All procedures involving human subjects/patients were approved by the South West Multi-Centre Research Ethics Committee (MREC/03/6/09). The easy read research information sheets and consent forms made it clear that participation in the research was voluntary and that the men could withdraw their consent at any time. It was also emphasized that men could consent to the treatment without consenting to the research, and in such circumstances their data would not be used (a small number of men did indeed decline to be included in the research, and their data are not presented here). All men whose data are included gave signed informed consent to the research. Their capacity to consent was checked by asking them to explain what they had understood from the information and consent forms, as is usual in ID services.

Men were informed that the information they provided was confidential, provided it did not indicate that they themselves or someone else was in imminent danger or liable to be harmed. Any such information would be shared with the safeguarding team. Men were also told that if disclosures of new offences were made, the safeguarding team would be notified. These are the usual limits to confidentiality in such treatment groups.

## Analysis

Data were entered onto SPSS and analysed using SPSS version 28. The analysis considered the whole sample of 98 men, and then compared those with ASD ( $n = 15$ ) and those without ASD ( $n = 78$ ). All statistical analyses were completed using appropriate parametric or non-parametric statistics, according to the data (non-parametric analyses were used where variables departed from normality and/or where groups were small, for example, in the sub-group analyses). The chi square statistic was used where appropriate but where cells had expected numbers of fewer than 5, Fisher's exact test was employed.

## RESULTS

The men had engaged in a range of harmful sexual behaviours, including contact behaviours, such as sexual assault and rape, as well as non-contact behaviours, such as public masturbation, sexual harassment, stalking (see Table 2). Most men had committed previous harmful sexual behaviours, prior to their index HSB (see Table 1) and most had been interviewed by the police in relation to the index HSB, though fewer had gone to court. As regards living situation, about a third were living alone or with family members, about a third were in group homes in the community and a third in secure services. Many had also been victims of abuse themselves, usually during childhood (see Table 1).

Overall, of the 98 men, only 4 failed to complete the year-long group: one was asked to leave by the group facilitators, as he was clearly not understanding the group (he had developed serious mental

**TABLE 2** Percentage of men in each of the two groups who showed various types of harmful sexual behaviours in their index HSB and historically.

Type of HSB	Index HSB		History of HSB	
	Men with ASD, N= 15 (%)	Men with ID, N= 83 (%)	Men with ASD, N= 15 (%)	Men with ID, N= 83 (%)
<b>Contact HSBs</b>				
Perpetrator touching victim's genitals (unclothed)	21	30	31	43
Perpetrator touching victim's genitals (clothed)	14	27	54	36
Victim made to touch perpetrator's genitals (unclothed)	0	7	0	11
Victim made to touch perpetrator's genitals (clothed)	14	6	8	7
Perpetrator masturbates victim	0	19	15	23
Victim made to masturbate perpetrator	0	10	8	13
Performs oral sex on victim	0	10	0	14
Victim forced to perform oral sex	7	10	0	13
Anal/vaginal penetration of victim	7	33	31	42
Sadomasochistic sex	0	1	0	4
Other (frotteurism, fetishism, child kissing, child abduction)	36	14	46	34
<b>Non-contact HSBs</b>				
Verbal sexual harassment	0	4	31	16
Stalking	21	3	31	20
Indecent exposure	7	21	38	29
Victim shown pornography	0	1	0	7
Perpetrator masturbates in public	21	14	31	18

*Note:* Figures add to more than 100% for each group, as men may have engaged in more than one behaviour on any one occasion.

health difficulties), two men committed further offences (and the legal process required them to leave) and one man left when his probation order finished, despite being asked to stay on. All four men had pre-group data; post group data were obtained for two of the four, and follow-up data for three of the four men, with their consent.

As regards the sub-group with ASD, at baseline (i.e., before the start of the group), a somewhat larger proportion of men with ASD, than those with ID only, were legally unrestricted and living at home or with families, and a smaller proportion of men with ASD were in secure care. In addition, a smaller proportion of men with ASD had themselves been victims of sexual assaults as children or adults, compared to the men with ID only. Approximately half of the men with ASD (47%) engaged in HSB with children whereas 67% of men with ID had child victims. None of these differences were statistically significant.

Nevertheless, there were some statistically significant differences between the men with ASD and those with ID only: taking all their HSB into account, the ASD group were statistically more likely to

be non-contact offenders than the men with ID only (Fisher's exact test  $p = .022$ ). Perhaps because of this, men with ASD were also significantly less likely to have been interviewed by the police for their index offence, as compared to men with ID only (Fisher's exact test  $p = .041$ ), and there was a non-significant trend for them being less likely to have appeared in court, than men with ID only (Fisher's exact test,  $p = .058$ ).

## Primary outcome measure

Overall, 12 men ( $n = 12\%$ ) engaged in further HSB *during* the one-year period of the group, and 6 of these (6%) also engaged in further HSB in the 6-month follow-up period, *after* the end of the group. A further two men who did not show further HSB *during* the group, did show such behaviour in the 6-month follow-up period, making the total number showing HSB in the follow-up period 8 men (8%). It is important to note that the men were on the whole supervised at the same level or at lower levels after the treatment group, as compared to their level of supervision before the treatment group (supervision levels were clinical decisions, not research decisions). For example, in terms of their escort levels when out in the community, 84% were supervised at the same level at follow-up as before the treatment group, and 16% were supervised at lower levels at follow-up compared to before the treatment group. None of the 98 were on higher levels of supervision by the time of the follow-up.

The men with autism spectrum disorders more often engaged in further HSB than those with ID only: 27% of the men with ASD during the year of treatment and 21% of the men with ASD in the 6-month follow-up period, compared to 10% and 6% (respectively) of the men with ID only (see Table 3 for details). However, these group differences in outcome, in terms of further HSB, were not significant (Fisher's exact test  $p > .05$ ). During the 1-year duration of the treatment group and the 6-month follow-up period, none of the men committed *non-sexual* offences.

## Secondary outcome measures

Overall, for the men as a whole, there were significant improvements following treatment, in sexual knowledge (SAKS scores), victim empathy (VES-A scores) and cognitive distortions (both SOSAS scores and QACSO scores), according to paired sample *t*-tests (see Table 4). At 6-month follow-up, these were all maintained, with the pre-group to follow-up scores still all showing significant improvements in sexual knowledge ( $t = 2.9$ ,  $p = .006$ ), victim empathy ( $t = 4.2$   $p < .001$ ), SOSAS and QACSO scores ( $t = 3.6$ , and  $8.2$  respectively, both  $p < .001$ ).

For the sub-group analysis, between the ASD group and the ID-only group, the mean scores for the ASD group were worse than those for the ID-only group for every measure on every occasion (pre-group; post-group; follow-up). However, these differences were not statistically significant, apart from the ASD group had significantly poorer pre-group sexual knowledge scores (Mann–Whitney  $U = 735$ ,  $p < .048$ ).

When the change in scores between pre-group and post-group were analysed, for the two separate sub-groups, men with ASD and men with ID-only made similar improvements, with no significant between-group differences on Mann–Whitney *U*-tests.

## Outcome of further treatment

It appeared that men with ASD were significantly more likely to complete a further treatment group, with 5 of the 15 (33%) men with ASD doing so, and only 6 of the 78 (8%) men with ID-only doing so (Fisher's exact test,  $p < .02$ ). It was always a decision for the clinician to offer a further



**TABLE 3** Percentage of men in each of the two groups who showed various types of further harmful sexual behaviours during the treatment period, and in the 6-month after treatment.

Type of HSB	HSB during period of group treatment		HSB during follow-up	
	Men with ASD (%)	Men with ID (%)	Men with ASD (%)	Men with ID only (%)
Any HSB at all	27	11	21	6
Contact HSBs				
Perpetrator touching victim's genitals (unclothed)	7	0	0	0
Perpetrator touching victim's genitals (clothed)	7	1	14	0
Victim made to touch perpetrator's genitals (unclothed)	0	0	0	0
Victim made to touch perpetrator's genitals (clothed)	0	0	0	0
Perpetrator masturbates victim	0	1	0	0
Victim made to masturbate perpetrator	0	1	0	0
Performs oral sex on victim	0	0	0	0
Victim forced to perform oral sex	0	1	0	0
Anal/vaginal penetration of victim	0	0	0	0
Sadomasochistic sex	0	0	0	0
Other (frotteurism, fetishism, child kissing, child abduction)	7	0	7	0
Non-contact HSBs				
Verbal sexual harassment	7	3	0	3
Stalking	7	4	7	0
Indecent exposure	0	3	0	2
Victim shown pornography	0	0	0	0
Perpetrator masturbates in public	7	3	7	2
Interviewed by police	13	5	0	4
Went to court	0	3	0	3

Note: Figures add to more than that in the top 'Any HSB at all' row, as men may have engaged in more than one behaviour on any one occasion.

group (i.e., it was not a research decision). For the men who completed more than one group, their scores on the SAKS, VES-A SOSAS and QACSO all improved significantly following their *first* group ( $p < .05$  on Wilcoxon signed-rank test for all four measures). However, although they did improve further following the *second* group, these changes were not significant for any of the four measures ( $p > .05$  on Wilcoxon signed-rank test). Differences in scores between the men with ASD who repeated groups and the men with ID-only who repeated groups were not analysed due to the very small numbers.

TABLE 4 Pre-group and post-group mean scores (and *SD*) for the men overall.

All men	Pre-group, mean score ( <i>SD</i> )	Post-group, mean score ( <i>SD</i> )	<i>t</i>	<i>p</i>
SAKS	42.0 (6.6)	45.6 (6.1)	4.9	<.001
Victim empathy	32.9 (18.0)	24.4 (16.9)	6.0	<.001
QACSO	49.4 (23.2)	32.3 (23.9)	8.7	<.001
SOSAS	54.2 (9.5)	49.3 (11.4)	3.7	<.001

Note: For SAKS, improvements are signified by scores increasing; for the other measures, improvements are signified by scores decreasing.

## DISCUSSION

This is the largest published sample of men from ID services who have harmful sexual behaviour, treated in adapted CBT groups. This study concerns 98 men (46 of whom also featured in SOTSEC-ID, 2010) and it appeared that almost all the men completed the year-long treatment group (with only 4 of 98 not finishing it). The occurrence of further HSB was rare, especially after the end of the treatment group, when only 8% of men showed further HSB over the 6-month follow-up. However, there are no exactly comparable published data for *untreated* men with ID and autism in ID services; therefore, the rate of further HSB in this sample is difficult to interpret. Nevertheless, Klimecki et al. (1994) reported a recidivism rate of 34% over 2 years for sex offenders with ID released from prisons in Australia. Craig and Hutchinson (2005) estimated this recidivism rate was 6.8 times as high as for non-disabled men, and this implies that the low rate of repeated HSB in this study is impressive.

In this study, there were also significant improvements in the men's sexual knowledge, victim empathy and cognitive distortions by the end of the treatment, and these seemed to be maintained at 6-month follow-up. Men who undertook further treatment groups continued to show some improvements, but on a lesser scale. These results confirm the findings from earlier studies (Heaton & Murphy, 2013; Lindsay & Smith, 1998; SOTSEC-ID, 2010).

In clinical services for people with intellectual disabilities, it is not unusual to find that a significant proportion of the clientele also have ASD. In this study, which involved 15 different ID service sites offering CBT to men with ID and/or autism and harmful sexual behaviour, about one sixth of the men had additional ASD. These men significantly more often engaged in non-contact harmful sexual behaviour (as compared to the men with ID only) and, probably as a result, were significantly less often interviewed by the police with respect to their index offence, and were more rarely admitted to secure services. This is not to say, though, that their behaviours were less serious. For example, some of their HSB involved persistent stalking, repeated obscene letters and phone calls, public masturbation in front of children and similar offences.

Previous studies have indicated that clinicians find the men with ASD and HSB harder to treat than men with ID only (Melvin et al., 2020a). Nevertheless, the men themselves have mostly said they found the treatment groups helpful, though they showed little evidence of victim empathy on interview (Melvin et al., 2020b). Analysis of the scores of men with ASD in this study showed that they did make significant improvements after treatment, as did the men with ID only. However, the men with ASD had mean scores on all measures that were worse than those of the other men on all occasions, though these differences were mostly not statistically significant.

The men with ASD also engaged in more HSB during the year of the treatment group, and in the follow-up 6 months, than men without ASD. They were significantly more likely to be offered a further treatment group and, although they made significant gains in the scores for their first treatment group, these gains were lower in the second treatment group, suggesting diminishing returns with further treatment (this reduction in gains with a second round of treatment was true for both men with ASD and men with ID only).

Given the relatively small numbers of men in this study, we can only speculate as to why the men with ASD seemed to do worse than the other men. There are a number of possibilities:

- Their poorer empathy, even pre-group, may have meant that they were more vulnerable to committing further offences (due to poorer empathy for victims)
- Their cognitive distortions may have been more fixed than those of other men, and less liable to change with treatment
- Their tendency to engage in non-contact offences, which generally have a higher recidivism rate (Mair & Stevens, 1994), may make them seem to be not making progress (i.e., to be re-offending more often), when compared to the men with ID only.

The therapists running these treatment groups appeared to think the first two of these possibilities were true, according to Melvin et al's study (Melvin et al., 2020a), but there were no statistically significant differences in measures of empathy and cognitive distortions between the men with autism and men without autism in this study. It may be that the groups were simply too small to show these effects. As regards the third possibility, it would be hoped that if the men with ASD simply needed more treatment, they might show further gains from an additional treatment group, but where the men had further treatment there appeared to be diminishing returns in terms of improvements. It is also possible that the tendency of men with ASD to have fixed routines (which might involve HSB) made it harder for them to change their behaviour. This may mean that they need staff or carer assistance to support such changes, and that change may not be achieved by attending a CBT group alone, even a relatively lengthy one.

The study had a number of limitations. First, although all therapists were trained in SOTSEC-ID, there were no fidelity checks undertaken. Second, there was no control group, so that attributing the improvements that men showed to treatment is inherently arguable. Furthermore, the treatment was undertaken at a number of different sites, where there were different combinations of services (e.g., some sites were entirely treating men detained in secure services), and the CBT groups evaluated here spanned almost a decade. Nevertheless, the samples of men were extremely similar, as were the outcome data for Samples 1 and 2, and the SOTSEC-ID programme had been consistent throughout the 10-year period. Men with ID and autism were very slow to start to use social media, to own computers or i-phones, and so cyber-crime did not appear in these samples at all (this has changed in recent years and since 2017 there has been an up-dated version of the SOTSEC-ID programme, see Sinclair et al., 2017, but data reported here pre-dated this). Overall, this study suggested that the adapted form of group CBT employed, SOTSEC-ID, was a promising form of treatment for this very hard-to-treat group. Clearly there is a need for larger samples of men where regression analysis could be used to examine the impact of variables on further HSB. In addition, as a number of systematic reviews have concluded recently (Cohen & Harvey, 2016; Heppell et al., 2020; Jones & Chaplin, 2019; Marotta, 2017), it is time to undertake a proper randomized controlled trial.

## AUTHOR CONTRIBUTIONS

**Glynis Murphy:** Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; supervision; writing – original draft. **Neil Sinclair:** Data curation; writing – review and editing. **Clare Melvin:** Data curation; writing – review and editing. **Peter E. Langdon:** Data curation; writing – review and editing.

## CONFLICT OF INTEREST STATEMENT

None.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding authors upon reasonable request.

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