

Psychological interventions for women with intellectual disabilities and forensic care needs: a systematic review of the literature

M. Hellenbach,¹ M. Brown,¹ T. Karatzias^{1,2} & R. Robinson³

¹ Faculty of Health, Life and Social Sciences, Edinburgh Napier University, Edinburgh, UK

² NHS Lothian, Edinburgh, UK

³ Learning Disability Forensic Service, Royal Edinburgh Hospital, Edinburgh, UK

Abstract

Objective Research evidence to date concerning offending by people with intellectual disabilities (ID) has concentrated on male perpetrators and little is known about their female counterparts. This systematic literature review examines evidence on psycho-social therapies for the female intellectually disabled population within healthcare forensic facilities.

Methods A search of health, psychology and social science databases was conducted, using a varying combination of search words to detect relevant literature for this review. Four studies published between 2001 and 2012 were identified for inclusion. Articles were organised and compared in relation to study characteristics, sample, kind of treatment, instruments used to measure treatment impact, and study findings.

Findings In total, four studies were identified that met the inclusion criteria. A range of Cognitive

Behaviour Therapy (CBT)-orientated group interventions for people with learning disabilities were evaluated and in most studies improvements were reported in relation to reducing problem behaviour. Evidence that has been generated by the studies is, however, limited in its explanatory value because of study design and related methodological issues.

Conclusions This review has identified a significant gap in relation to research-based therapies for women with ID and forensic care needs. In particular, more research is needed focusing on women with a dual diagnosis of ID and psychiatric disorder who present challenging or criminal behaviour.

Keywords forensic care, female offenders, intellectual disability, treatment

Introduction

In recent years, offenders with intellectual disabilities (ID) have been acknowledged as a distinct group with particular care and support needs. This has been mirrored in legislation, such as the Mental Health (Care & Treatment) (Scotland) Act (2003)

Correspondence: Professor Michael Brown, Faculty of Health, Life and Social Sciences, Edinburgh Napier University, Sighthill Campus, Sighthill Court, Edinburgh EH11 4BU, Scotland, UK (e-mail: m.brown@napier.ac.uk).

and English Mental Health Act (2007), in addition to increased research activity in this area (Lyll *et al.* 1995; Cockram 2005; Hayes 2005, 2007; Jones 2007; Talbot 2008). Little is known, however, about the mental health of people with ID who offend. Furthermore, when focusing on individuals who are impaired in their intellectual functioning, researchers have failed to distinctively pay attention to male and female offenders or exclusively concentrated on male perpetrators. Hence, knowledge is restricted in relation to evidence-based treatment for offending and challenging behaviour displayed by women with ID and mental illness.

Previous research has outlined that people with ID are overrepresented in the prison population compared with the general public (Hall 2000; Talbot 2008; Jones & Talbot 2010). It is estimated that 20–30% of offenders have ID or difficulties that impact on their ability to cope within the criminal justice system (Loucks 2007). The prison setting has been demonstrated to be unsuitable for people with ID. A study by the Prison Reform Trust (2012) has revealed that over half of prison staff do not believe that adequate support is available to this population. Instead, prisoners with ID are often excluded from offending behaviour programmes which require attendants to have an IQ of 80. Furthermore, detainees with learning impairments may experience discrimination and abuse by fellow inmates.

High rates of self-injurious behaviour by women indicate that this population is more affected than men by inappropriate living conditions resulting from imprisonment. Women account for 47% of all recorded incidents of deliberate self-harming, while representing only 5% of the total prison population (Corston 2007). In a recent study by the Ministry of Justice (2012) it was revealed that during the 12-month period following their release, 51% of female offenders were reconvicted, confirming the absence of adequate services to tackle female offending behaviour.

In December 2012, the prison population in England and Wales comprised 85 250 offenders, of which 4053 (5%) were female prisoners, many (83%) of them with long-standing illnesses (Ministry of Justice 2012). More than half (51%) of female inmates have severe and enduring mental

illness; 47% a major depressive disorder, 6% psychosis and 3% schizophrenia (Cabinet Office Social Exclusion Task Force 2009). Upon their arrival at prison, 73% of women were on medication, predominantly benzodiazepines (42%), methadone (36%), antidepressants (14%) and sleeping medication (10%). Overall, 30% of female prisoners compared with 10% of men were known to psychiatric services previous to being sentenced to imprisonment.

If a transfer from prison to a healthcare forensic service is assessed as necessary, women are often unreasonably referred to high security services (Coid *et al.* 2000; Beber 2012). It is estimated that in total, women constitute 25% of the overall population in forensic mental health services (Woods & Collins 2003; Thomas *et al.* 2004; Alexander *et al.* 2010). Precise accounts of prevalence rates vary and range from 11% for Ashworth, Broadmore and Rampton (Bland *et al.* 1999) to 19% in health service medium secure units (Hassell & Bartlett 2001).

Like their 'sisters' in prison, these female patients often have multiple psychiatric disorders, such as schizophrenia, delusional disorders, anxiety disorders, depression or personality disorder and present high rates of deliberate self-harming (Vaughan 2003; Taggart *et al.* 2008; Alexander *et al.* 2010). Compared with male offenders, index offences of women are on average less violent and most frequently include arson, assault, inappropriate sexual behaviour and prostitution (Lindsay *et al.* 2004; Taylor *et al.* 2006; Beber 2012).

Female offenders significantly differ from their male counterparts in relation to offending and psychiatric diagnoses and resulting mental health needs. Specialised service provision for female offenders with ID and mental illness is, however, insufficiently provided and a lack of evidence-based interventions and treatments has been identified (Coid *et al.* 2000; Vaughan 2003; Beber 2012). There is therefore a missed opportunity to specifically address the complex and multiple distinct needs of these women within the controlled environment that secure forensic health services can offer. Effective therapy is vital if length of stay is to be minimised while reducing reoccurrence of offending behaviours after discharge from treatment.

In this context, the present paper will examine the existing body of research in relation to evidence-based treatment for women with a diagnosis of ID and mental illness that have forensic care needs. By critically reviewing evidence on interventions that especially address the needs of this population, the authors seek to make a unique contribution to policy, practice, education and future research regarding the provision of forensic health services for women with ID.

Methods

A systematic literature review (Bryman 2008) was conducted for the purpose of assessing the evidence on care and treatment currently provided to female offenders with a diagnosis of learning disability and mentally ill health.

The literature review concentrated on research-based, peer-reviewed publications between 2000 and 2013. It was decided that this period reflects the most recent significant changes in legislation and service development in relation to people with learning disabilities. Between December 2012 and February 2013, a search was conducted by using the following databases: ProQuest, CINHALL, MEDLINE, Psychology and Behavioural Sciences Collection, PsycINFO and ScienceDirect. The literature search was conducted using database specific index terms in relation to the subject of this article. Search terms included, intellectual disab*, learning disab*, mental retardation, mental handicap or mentally ill offenders in connection with prison, forensic facilities and correctional facilities.

The search included descriptive designs, correlational studies, quasi-experimental or experimental designs. The inclusion criteria for the studies are listed below:

- 1 The study is a peer reviewed paper, published in English, between 2000 and 2013;
- 2 The study focuses on evidence regarding the use of Cognitive Behaviour Therapy (CBT) in the treatment of offending by women with forensic care needs who have a dual diagnosis of ID and mental illness; and/or
- 3 The study gives evidence-based advice on service development.

The initial search of the six databases revealed a total of 2124 articles. Following initial screening,

98% of the articles based on the title and controlling for the year of publication and gender were excluded, reducing the number to 138 papers which appeared to meet the inclusion criteria.

Further 10 studies were excluded after a manual analysis of the abstracts was conducted. Duplicate articles across databases were identified and considered once in relation to the database in which they first appeared. The number of duplicates was not calculated for the purposes of this review. The remaining articles were manually evaluated, initially by the lead author, with the search strategy, review process and analysis of the results verified by the other research team members in relation to the inclusion criteria. Studies were also excluded when no direct link could be identified in relation to treatment and management of intellectually disabled women with forensic care needs. A total of 134 papers were reviewed by title and abstract and were excluded as they did not meet inclusion criteria. This left a total number of four articles to be considered in this review. The search process and literature identification process is set out in Fig. 1.

Findings

All studies were organised in a table format in relation to author, sample, study aims, design, including the theoretical framework, strengths and weaknesses, forensic setting and key findings and suggestions for policy development (Table 1).

Characteristics of studies

All the studies included in this review were conducted in Scotland and England. In none of the publications was the source of funding reported.

Sample characteristics

The institutional setting from which patients were recruited significantly varied. Of the four studies that focused on convicted offenders, one was conducted in a secure hospital (Taylor *et al.* 2006), one in a low-secure National Health Service (NHS) unit (Taylor *et al.* 2002) and one in a day-attender and outpatient forensic ID service (Allen *et al.* 2001).

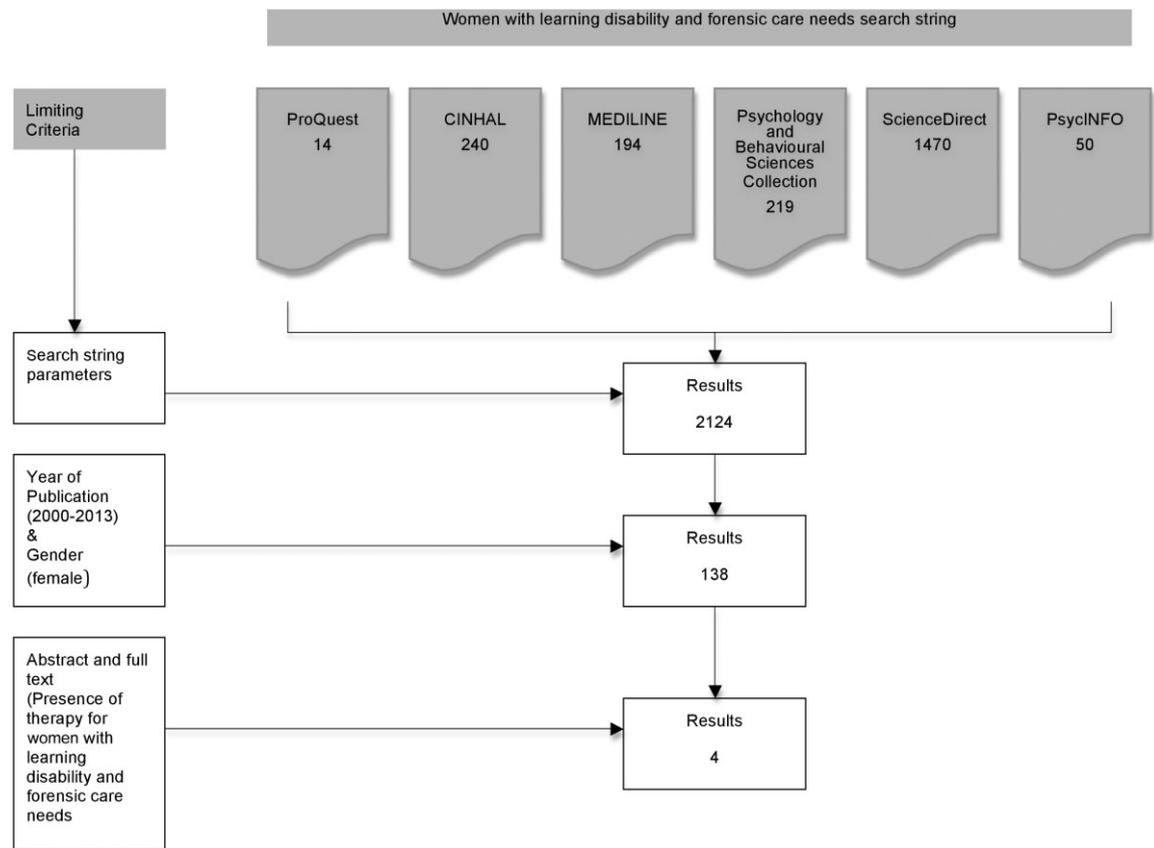


Figure 1 Search process and literature identification process.

Lindsay *et al.* (2004) did not report about where their study took place.

In two of the four studies the sample comprised women and men, whereby male respondents were always in the majority. In none of the studies were potential gender effects scrutinised. Only Taylor *et al.* (2006) and Allen *et al.* (2001) exclusively focused on therapeutic approaches for women with ID and forensic care needs. The samples utilised in these two studies were, however, small ($n = 6$ and 5), as was the case in the other studies. The largest study was realised by Lindsay *et al.* (2004), which involved a total of 47 participants. The ages of participants ranged from 18 to 50 years, whereby the mean age in most studies tended to range from 25 to 35.

Of the four studies, respondents had committed crimes of arson (Taylor *et al.* 2002, 2006) or violent offences (Allen *et al.* 2001; Lindsay *et al.* 2004).

However, not all of the participants had been convicted of their offences. The studies (Allen *et al.* 2001; Taylor *et al.* 2002, 2006; Lindsay *et al.* 2004) involved participants with mild or borderline ID (IQ 50–84) as measured by Wechsler, Wechsler Adult Intelligence Scale (WAIS)-III and WAIS-R scales. Two studies (Taylor *et al.* 2002, 2006) included participants with coexisting mental disorders such as schizophrenia or psychosis; no further details about specific diagnoses were provided. Allen *et al.* (2001) point out that some of their respondents presented a history of substance misuse.

Design

Of the four reviewed studies, one was a quasi-experimental design (Lindsay *et al.* 2004), while in the other three studies a single group design was

Table 1 Overview of studies included in the review

Author	Sample	Aims of study	Design (theoretical framework)	Strengths and weaknesses	Context (high, medium, low security)	Key findings Policy and service development
Taylor <i>et al.</i> (2006) UK Funding not reported	100% female, $n = 6$ Mean age 34.4 Mild and borderline LD WAIS-R full-scale IQ 74 ($n = 2$ IQ 55–70, $n = 4$ IQ 71–85) participants had been convicted for arson Some participants had coexisting psychiatric disorders (e.g. psychotic illnesses, schizophrenia) 5 participants reported experience of sexual abuse Dropout 0% Inclusion/exclusion criteria not specified	<ul style="list-style-type: none"> • Motivation for fire-setting • Treating criminogenic factors related to fire setting (interests and attitudes towards fire-setting) • Improving coping and interpersonal skills 	<ul style="list-style-type: none"> • Single group design • CBT • Group intervention • Manualised (specified) • Participants received education about danger and costs associated with fire-setting • 40 sessions of 2 h, twice weekly over 6 months • 2-year follow-up • Assessment: pre- and post-treatment, 2-year follow-up • Outcome measures: Self-rated • Fire Interest Rating Scale (FIRS; Murphy & Clare 1996) • Goal Attainment Scales (GAS) • Novaco Anger Scale (NAS; Novaco 2003) • Culture-Free Self Esteem Inventory-2nd edn, FormAD (CFSEI-2; Battle 1992) • Beck Depression Inventory-Short Form (BDI-SF; Beck & Beck 1972) • Assessor rated • Patient rating forms completed by therapists 	<ul style="list-style-type: none"> • Small group • Great variations of outcomes among participants • No control group 	Secure hospital (no further specifics are given)	<p>Significant improvements on GAS</p> <p>Though not significant, there was an indication of improvements in relation to self-esteem, anger and depression</p> <p>No reoccurrence of fire-setting behaviour during 2-year follow-up</p>

Table 1 Continued

Author	Sample	Aims of study	Design (theoretical framework)	Strengths and weaknesses	Context (high, medium, low security)	Key findings Policy and service development
Taylor <i>et al.</i> (2002) UK Funding not reported	43% female (n = 6) 57% male (n = 8) Age range 20–48 years Mean age 33.7 Mild and borderline LD Full-scale IQ range 64–84 Participants had been convicted for arson 10 participants had coexisting psychiatric disorders Inclusion/exclusion criteria not specified Dropout 0%	<ul style="list-style-type: none"> Reducing fire interest and attitudes associated with fire-setting behaviour Improving coping and interpersonal skills by targeting anger, self-esteem and depression 	<p>Single group design CBT</p> <p>Group intervention (one female group, n = 6; and two male groups, n = 4) Manualised (specified)</p> <ul style="list-style-type: none"> Comprehensive multifaceted programme based on Jackson (1994) consisting of analysis of participants' offence cycles in relation to antecedent setting factors and triggers, cognitions, emotions and behaviours experienced at the time of fire-setting and positive/negative consequences of fire-setting Participants received education about danger and costs associated with fire-setting 40 sessions of 2 h, twice weekly over 6 months <p>Assessment: pre- and post-treatment Outcome measures Self-rated</p> <ul style="list-style-type: none"> FIRS Fire Attitude Scale (FAS; Muckley 1997) GAS NAS CFSEI-2 BDI-SF 	<ul style="list-style-type: none"> No gender-specific data analysis Lack of baseline and follow-up assessment data Lack of comparison group Outcome measures with limited psychometric evaluation data available 	Low-security NHS unit	<p>Significant improvements for male and female participants in all areas addressed, excluding depression</p> <p>In addition, satisfactory mean score of 2 following treatment on the 'relationships' and personal responsibility GAS</p>

M. Hellenbach *et al.* • Women with intellectual disabilities and forensic care needs

Allen <i>et al.</i> (2001) UK Funding not reported	100% female, $n = 5$ Borderline ID ($IQ < 76$) on WAIS All participants had committed violent crimes of medium severity, though not all had been convicted or charged in relation to violent behaviour 2 participants had experienced sexual, and 3 physical abuse All participants attended at least 32 of 40 sessions Inclusion/exclusion criteria not specified Drop out 0%	<ul style="list-style-type: none"> • Anger management training • Reducing violent and aggressive tendencies 	<p>Single group</p> <p>CBT</p> <p>Group interventions in mixed-sex groups Manualised (not specified)</p> <ul style="list-style-type: none"> • Based on Novaco's (1975, 1994) approach concentrating on cognition, expectation and appraisal of situations, the combination of external circumstances, physiological arousal, and cognitive mediation crucial to situations involving anger and aggression • Intervention started with a period of relaxation treatment followed by a period of anger management including cognitive reappraisal • 40 sessions of 40–60 min each over 9 months <p>Assessment: twice at baseline and every 3 months throughout the 9-month treatment, at 3- and 9-month follow-ups</p> <p>Outcome measures</p> <p>Self-rated</p> <ul style="list-style-type: none"> • NAS (Novaco 1986, 1994) 	<p>• Small sample</p> <ul style="list-style-type: none"> • Lack of control group 	Day-attender and outpatient forensic learning disability service	Minor improvement following relaxation phase of treatment, significant reductions in anger were achieved after cognitive part of intervention had been implemented
---	---	---	---	---	--	--

Table 1 Continued

Author	Sample	Aims of study	Design (theoretical framework)	Strengths and weaknesses	Context (high, medium, low security)	Key findings Policy and service development
Lindsay <i>et al.</i> (2004) UK Funding not reported	Experimental group <i>n</i> = 33 Mean age 28.4 25% female 85% male IQ 65.4 WAIS-R full-scale or WAIS 3rd edn. Inclusion/exclusion criteria not specified Dropout not reported	Reducing anger Teaching and enhancing coping skills to deal with stressful situations	Quasi experimental design (no random group assignment of participants) CBT Group intervention (mixed sex) Manualised (specified) 40 weekly sessions, 40–60 min each, over 9 months Treatment consisted of relaxation and anger arousal reduction phase, simulation of anger-causing situations during role plays Assessment: • All assessments were conducted at baseline, pre- and post-treatment and follow-up • 3 months for 33 participants • 9 months for 31 participants • 15 months for 13 participants • 21 months for 12 participants Outcome measures Self-rated • Dundee Provocation Inventory (DPI) was conducted every 2 weeks • 2 weeks of self-reports were gathered Assessor rated • Assessor rated during anger provoking role plays by observing and documenting participants' display of anger	<ul style="list-style-type: none"> Demographic disparity between treatment and control group Self-reporting assessments were inconsistently completed by participants 	Not specified	Though not statistically significant, 30.6% reduction in the scores of the treatment group on DPI

LD, Learning Disability; WAIS, Wechsler Adult Intelligence Scale; CBT, Cognitive Behaviour Therapy; NHS, National Health Service.

employed (Allen *et al.* 2001; Taylor *et al.* 2002, 2006).

In one study, success of treatment was measured at post-treatment time only (Taylor *et al.* 2002). In the other papers, one or more follow-up assessments are reported between 3 and 12 months after treatment. Lindsay *et al.* (2004) provide information on four follow-up assessments which were conducted 3, 9, 15 and 21 months after treatment.

Treatment characteristics

The studied interventions aimed at reducing problem behaviours, exhibited by people with ID by addressing issues related to aggression, self-esteem, improving interpersonal and social skills as well as enhancing participants' skills to cope with stressful situations. This was done by using a range of different CBT-orientated, group-based techniques, such as relaxation, brainstorming and role-play (Allen *et al.* 2001; Taylor *et al.* 2002, 2006; Lindsay *et al.* 2004).

Taylor *et al.* (2002, 2006) evaluated a CBT-orientated group intervention to stop fire-setting behaviour by people with ID. In the study, the authors addressed interests and attitudes towards fire setting in 40 sessions over a period of 6 months. Despite having recruited female and male participants for the study, the authors did not conduct a gender-specific analysis of their findings and thus failed to report on gender effects of their intervention. Allen *et al.* (2001) evaluated interventions related to the cognitive reappraisal of anger-provoking situations, cognitive reappraisal of personal arousal and arousal reduction strategies. Lindsay *et al.* (2004) evaluated treatment of the arousal reduction phase using behavioural relaxation techniques, followed by phase two involving establishing links between behaviour, cognition and physiological systems of emotion, with phase three focusing on problem-solving examples and finally stress inoculation involving role play.

All studies were manualised in the way treatment was delivered, with the majority including details about the standards used. Furthermore, all reported on short-term models of up to 9 months duration with one or two weekly sessions of mostly 30 to 60 min. The longest sessions were delivered by Taylor *et al.* (2002, 2006), which lasted 2 h. No

dropouts and significant improvements in the measures used for fire setting behaviours, measured by Fire Interest Rating Scale, Fire Attitude Scale in both studies, suggest a high acceptability as well as effectiveness of their intervention to reduce fire-setting behaviour by people with mild and borderline ID.

Effectiveness of interventions was measured by using self-rated and assessor rated standardised questionnaires (Lindsay *et al.* 2004; Taylor *et al.* 2006). In two studies, the authors exclusively utilised self-reports provided by participants during standardised or semi-standardised interviews (Allen *et al.* 2001; Taylor *et al.* 2002).

Depending on the particular research aims, a range of scales were used to measure changes in participants' behaviours and attitudes following treatment. Intensity of aggressive tendencies, for example, was predominantly measured using Novaco's (1994) Provocation Index or the Novaco Anger Scale (1994, 2003), while attitudes towards fire setting were assessed by using the Fire Interest Scale and Fire Attitude Scale (for more detailed study specifics see Table 1).

Outcome

All reviewed studies reported improvements following treatment, although progress was not always statistically significant (Lindsay *et al.* 2004). In the single group design studies, significant improvement was reported. Findings, however, suggest that progress following therapy can vary extensively among patients, which highlights the complex and often traumatic histories of women with ID (Allen *et al.* 2001). In addition, the literature suggests that reducing anger by applying relaxation techniques appears to be non-effective. This implies that women's aggressive behaviour is not the result of arousal in a particular situation but might be more deeply rooted in the women's biographies (Allen *et al.* 2001).

All studies used group interventions to treat problem behaviours such as arson. The studies reported improvements on the measures used while 0% drop out rates demonstrate a high acceptability of these interventions. Nevertheless Taylor *et al.* (2002) recommended part of their group intervention to be reviewed and revised as

some group dynamics appeared to reinforce rather than challenge motivations for female fire-setting behaviour.

Discussion

There is very limited evidence on the effectiveness of psychological interventions for women with learning disabilities and forensic needs. This review has identified four publications that report on the efficiency and effectiveness of psychological therapies for women with ID and offending behaviours. All studies focused on group interventions using CBT (Mahoney & Karatzias 2012). A potentially biasing limitation of all the studies related to the failure to control for concurrent treatment that participants received. It is plausible that respondents may have received other treatment at the time, such as medications, given the co-morbidity of health conditions that can exist (Cooper *et al.* 2007, 2009; Kwok & Cheung 2007; Lowe *et al.* 2007; de Winter *et al.* 2011). Overall, findings from these studies must be treated with caution because of small sample size and absence of control groups.

It is concerning that only four studies concentrated on women with ID who had committed an offence and were diverted from the criminal justice system because of their mental impairments. Furthermore, only two studies focused exclusively on female offenders with forensic care needs (Allen *et al.* 2001; Taylor *et al.* 2005). In all the other studies, samples also consisted of male participants. The lack of research attention that women with ID with forensic care needs have experienced appears to mirror the disadvantaged and often marginalised position of this population in forensic care in general.

Women with ID who offend significantly differ from their male counterparts in relation to index offences, mental health needs, challenging behaviour while in captivity and personal characteristics such as sexual abuse and anger issues (Willner *et al.* 2002; Peckham 2007; Taggart *et al.* 2008; Cambridge *et al.* 2011). Undoubtedly, this should constitute a strong argument that therapies provided to this population take account of their distinct needs for help and support and the blend of therapies and treatments provided, such as treatment for

trauma resulting from the consequences of prostitution and sexual abuse (Sequeira & Hollins 2003; Cambridge *et al.* 2011). This is necessary because the offences, life histories and therapy needs of the women are different from those of men with ID who comprise the majority of offenders. Yet women's distinct forensic care needs are being overlooked in the research literature and within current clinical practice, thereby potentially leading to further disadvantage.

All studies in this review evaluated interventions that had been developed for male perpetrators. Criminological and psychiatric research of offenders with ID has increased considerably, yet so far the distinct needs of women with ID has received limited attention (Allen *et al.* 2001). This can be confirmed by the present systematic review, as gender effects were not reported in any of the studies where data were generated from mixed-gender samples.

Consequently, it remains uncertain how informed and evidence-based current healthcare practice is in relation to effectively meeting the needs of women with ID who have offended. If found unsuitable to be dealt within the criminal justice system on the grounds of their ID and impact of mental illness, offenders are diverted into healthcare systems to appropriate, evidence-based treatment and interventions will be provided that address their criminogenic needs and other vulnerabilities (cf. Mental Health Act, 2007, Part 1, Section 4). In reality, this may not be in fact the case. This is a gap in the current evidence-base and is an area where further research is required.

Previous research has demonstrated that in practice, women are frequently unnecessarily transferred to high security facilities because of a lack of alternatives. Often the needs of women with ID remain unmet in these settings because of insufficient specialist services to provide appropriate treatment and interventions (Thomas *et al.* 2004; Beber 2012). Particularly, women with a dual diagnosis of ID and a mental illness are affected by longer stays in secure settings (Long & Dolley 2012).

Taylor *et al.* (2002, 2006) state that some of their participants had coexisting psychiatric disorders, such as anxiety and depression, yet did not detail how this may have affected the willingness and ability of patients to engage in therapy.

This is surprising, considering previous research findings which identified high rates of often multiple psychiatric disorders among intellectually disabled women with forensic care needs (Gorsuch 1998; Vaughan 2003; Taggart *et al.* 2008, 2009; Alexander *et al.* 2010).

Considering the high costs of a secure placement of up £300 000 per year (Centre for Mental Health 2012), it is important to only utilise such placements appropriately with interventions suitable for the needs of women that take account of their forensic and personal history, such as sexual abuse. There are therefore issues that need to be recognised and addressed by commissioners of services. These issues include the prevalence rates and distinct needs of women with ID with forensic care needs and the adjustments that may be required to deliver therapy, treatment and support (Brown & Marshall 2006). This may require local, regional and national approaches to service availability to ensure that there is access to services that comprise practitioners with the appropriate knowledge and skills to meet the needs of these women (Beber 2012). Thus, future relevant research should pay more attention to female offenders with ID, particularly to those with multiple coexisting presentations.

Conclusion

Research informed therapy is the key to making effective and efficient use of available resources, yet the evidence base in relation to women with ID with forensic care needs is limited. There are methodological issues regarding the studies that are reported in this systematic review and there is scope to address such in future research. The evidence-base that exists highlights the different needs of women with ID with forensic care needs. Access to service with knowledgeable and skilled practitioners is necessary to provide effective evidence-based practice to help to appropriately support women with ID who have forensic care needs in the future.

References

- Alexander R. T., Green F. N., O'Mahony B., Gunaratna I. J., Gangaharan S. K. & Hoare S. (2010) Personality disorders in offenders with learning disability: a comparison of clinical, forensic and outcome variables and implications for service provision. *Journal of Learning Disability Research* **54**, 650–8.
- Allen R., Lindsay W. R., Macleod F. & Smith A. H. W. (2001) Treatment of women with intellectual disabilities who have been involved with the criminal justice system for reasons of aggression. *Journal of Applied Research in Intellectual Disabilities* **14**, 340–7.
- Battle J. (1992) *Culture-Free Self-Esteem Inventory*. Pro-Ed, Austin: Texas.
- Beber E. (2012) Women with learning disability in secure settings and their mental health needs. *Advances in Mental Health and Learning Disabilities* **6**, 151–8.
- Beck A. T. & Beck R. W. (1972) Screening depressed patients in family practice: A rapid technic. *Postgraduate Medicine*, **52**, 81–5.
- Bland J., Mezey G. & Dolan B. (1999) Special women, special needs: a descriptive study of female special hospital patients. *Journal of Forensic Psychiatry* **10**, 34–45.
- Brown M. & Marshall K. (2006) Cognitive behaviour therapy and people with learning disabilities: implications for practice. *Journal of Psychiatric and Mental Health Nursing* **13**, 234–41.
- Bryman A. (2008) *Social Research Methods*. Oxford University, Oxford.
- Cabinet Office Social Exclusion Task Force (2009) *Short Study on Women Offenders*. Home Office, London.
- Cambridge P., Beadle-Brown J., Milne A., Mansell J. & Whelton B. (2011) Patterns of risk in adult protection referrals for sexual abuse and people with intellectual disability. *Journal of Applied Research in Intellectual Disabilities* **24**, 118–32.
- Centre for Mental Health (2012) *Pathways for unlocking secure mental health care*. London: Centre for Mental Health. Available at: http://www.centreformentalhealth.org.uk/criminal_justice/forensicservices.aspx (accessed 17 February 2013).
- Cockram J. (2005) Justice or differential treatment? Sentencing of offenders with an intellectual disability. *Journal of Intellectual and Developmental Disability* **30**, 3–13.
- Coid J., Kahtan N., Gault S. & Jarman B. (2000) Women admitted to secure forensic psychiatry services: I. Comparison of women and men. *The Journal of Forensic Psychiatry* **11**, 275–95.
- Cooper S. A., Smiley E., Morrison J., Williamson A. & Allan L. (2007) Mental ill-health in adults with intellectual disabilities: prevalence and associated factors. *British Journal of Psychiatry* **190**, 27–35.
- Cooper S. A., Smiley E., Allan L., Jackson A., Finlayson J., Mantry D. *et al.* (2009) Adults with intellectual disabilities: prevalence, incidence and remission of self-injurious behaviour and related factors. *Journal of Intellectual Disability Research* **53**, 200–16.

- Corston J. (2007) *The Corston Report*. Home Office, London.
- Gorsuch N. (1998) Unmet need among disturbed female offenders. *The Journal of Forensic Psychiatry*, **9**, 556–70.
- Hall I. (2000) Young offenders with a learning disability. *Advances in Psychiatric Treatment*, **6**, 278–86.
- Hassell Y. & Bartlett A. (2001) The changing climate for women patients in medium secure psychiatric units. *Psychiatric Bulletin* **25**, 340–2.
- Hayes S. (2005) A review of non-custodial interventions with offenders with intellectual disabilities. *Current Issues in Criminal Justice* **17**, 69–78.
- Hayes S. (2007) Missing out: offenders with learning disabilities and the criminal justice system. *British Journal of Learning Disabilities* **35**, 146–63.
- Jackson H. F. (1994) Assessment of Fire-setters. In *The assessment of criminal behaviours of clients in secure settings* (eds M. McMurrin & J. Hodge). London: Jessica Kingsley Publishers.
- Jones G. & Talbot J. (2010) The bewildering passage of offenders with learning disability and learning difficulty through the criminal justice system. *Criminal Behaviour and Mental Health* **20**, 1–7.
- Jones J. (2007) Persons with intellectual disabilities in the criminal justice system: review of issues. *International Journal of Offender Therapy and Comparative Criminology* **51**, 723–33.
- Kwok H. & Cheung P. (2007) Co-morbidity of psychiatric disorder and medical illness in people with intellectual disabilities. *Current Opinion in Psychiatry* **20**, 443–9.
- Lindsay W. R., Allan R., Parry C., Macleod J. C., Overend H. & Smith A. H. W. (2004) Anger and aggression in people with intellectual disabilities: treatment and follow-up of consecutive referrals and a waiting list comparison. *Clinical Psychology and Psychotherapy* **11**, 255–64.
- Long C. G. & Dolley O. (2012) Factors predictive of length of stay for women in medium secure settings. *Journal of Psychiatric and Mental Health Nursing*, **19**, 10, 870–4.
- Loucks N. (2007) *Prisoners with Learning Difficulties and Learning Disabilities – Review of Prevalence and Associated Needs*. Prison Reform Trust, London.
- Lowe K., Allen D., Jones E., Brophy S., Moore K. & James W. (2007) Challenging behaviours: prevalence and topographies. *Journal of Intellectual Disability Research* **51**, 625–36.
- Lyall I., Holland A. J., Collins S. & Styles P. (1995) Incidence of persons with learning disability detained in prison custody: a needs assessment for service development. *Medicine, Science and Law* **35**, 61–71.
- Mahoney A. & Karatzias T. (2012) Violent Female Offending: An exploration of Repeat and One-Time offenders. *International Journal of Forensic Mental Health*, **11**, 191–202.
- Ministry of Justice (2012) *Offender Management Statistics Quarterly Bulletin. October to December 2011*. Home Office, London.
- Muckley A. (1997) Fire setting: Addressing offending behaviour. Unpublished manual, Redcar & Cleveland Psychological Service.
- Murphy G. H. & Clare I. (1996) Analysis of motivation in people with mild learning disabilities (mental handicap) who set fires. *Psychology, Crime and Law*, **2**, 153–64.
- Novaco R. W. (1975) *Anger Control: Development and Evaluation of an Experimental Treatment*. D. C. Heath: Lexington, MA.
- Novaco R. W. (1986) Anger as a clinical and social problem. In: *Advances in the Study of Aggression*, Vol. **2** (eds R. Blanchard & C. Blanchard). Academic Press: New York, NY.
- Novaco R. W. (1994) Anger as a risk factor for violence among the mentally disordered. In: *Violence and Mental Disorder: Developments in Risk Assessment* (eds J. Monahan & H. J. Steadman). University of Chicago Press: Chicago, IL.
- Novaco R. W. (2003) *The Novaco Anger Scale and Provocation Inventory (NAS-PI)*. Western Psychological Services: Los Angeles, CA.
- Peckham N. (2007) The vulnerability and sexual abuse of people with learning disabilities. *British Journal of Learning Disabilities* **35**, 131–7.
- Prison Reform Trust (2012). Bromley briefings prison factfile. June 2012. Available at: www.prisonreformtrust.org.uk (accessed 20 December 2012).
- Sequeira H. & Hollins S. (2003) Clinical effects of sexual abuse on people with learning disability. *British Journal of Psychiatry* **182**, 13–19.
- Taggart L., McMillan R. & Lawson A. (2008) Women with and without learning disability and psychiatric disorders: an examination of the literature. *Journal of Learning Disabilities* **12**, 191–211.
- Taggart L., McMillan R. & Lawson A. (2009) Listening to women with intellectual disabilities with mental health problems: a focus on risk and resilient factors. *Journal of Intellectual Disabilities* **13**, 321–40.
- Talbot J. (2008) *Prisoners' Voices: Experiences of the Criminal Justice System by Prisoners with Learning Disabilities and Difficulties*. Prison Reform Trust, London.
- Taylor J. L., Novaco R. W., Gillmer B. T., Robertson A. & Thorne I. (2005) Individual cognitive-behavioural anger treatment for people with mild-borderline intellectual disabilities and histories of aggression: A controlled trial. *British Journal of Clinical Psychology*, **44**, 367–82.

- Taylor J. L., Thorne I., Robertson A. & Avery G. (2002) Evaluation of a group intervention for convicted arsonists with mild and borderline intellectual disabilities. *Criminal Behaviour and Mental Health* **12**, 282–93.
- Taylor J. L., Robertson A., Thorne I., Belshaw T. & Watson A. (2006) Responses to female fire-setters with mild and borderline intellectual disabilities to a group intervention. *Journal of Applied Research in Intellectual Disabilities* **19**, 179–90.
- Thomas S. D., Dolan M., Johnston S., Middleton H., Harty M. A., Carlisle J. *et al.* (2004) Defining the needs of patients with learning disabilities in the high security psychiatric hospitals in England. *Journal of Learning Disability Research* **48**, 603–10.
- Vaughan P. J. (2003) Secure care and treatment needs of individuals with learning disability and severe challenging behaviour. *British Journal of Learning Disabilities* **31**, 113–17.
- Willner P., Jones J., Tams R. & Green G. (2002) A randomized controlled trial of efficacy of a cognitive-behavioural anger management group for clients with learning disabilities. *Journal of Applied Research in Intellectual Disabilities* **15**, 224–35.
- de Winter C. F., Magilsen K. W., van Alfen C., Willemsen S. P. & Evenhuis H. M. (2011) Metabolic syndrome in 25% of older people with intellectual disability. *Family Practice*, **28**, 141–4.
- Woods P. & Collins M. (2003) Exploring relationships between inside communication and social skills in mentally disordered offenders. *Journal of Psychiatric and Mental Health Nursing* **10**, 518–25.

Accepted 26 February 2014