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Psychological interventions for anger and aggression in people with intellectual disabilities in forensic services

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ABSTRACT

This systemic review investigates the current evidence for the effectiveness of anger and/or aggression interventions for people with intellectual disabilities (ID) in receipt of forensic mental health services. Due to the prevalence within this population of difficulties with anger and aggression, and the associated substantial individual and societal consequences, the provision of psychological interventions has become increasingly common. However, no critical synthesis of the empirical evidence relating to their effectiveness has previously been conducted. Sixteen peer-reviewed controlled trials or case series designs published between 2001 and 2016 met the inclusion criteria. The results highlight an emerging evidence base for the use of CBT in improving anger regulation, and for a range of psychological therapies in reducing aggressive behaviour. However, consistent methodological shortcomings limit the generalisability of findings and currently preclude firm conclusions on effectiveness. Recommendations are made for future research to address these shortcomings, including clearly-defined adaptations, adequately powered sample sizes, carefully designed baselines and follow-up periods. Despite the current status of evidence, the review provides an accessible and objective foundation to inform decision-making by service commissioners and clinicians providing anger and aggression interventions to people with ID.

1. Introduction

Problem anger and aggressive behaviour are the most common reasons for admission to forensic services for people with intellectual disabilities (PWID) (Lindsay et al., 2013). Indeed, prevalence studies have found international rates of aggression for people in forensic ID services (PFID)[1] that are 2–3 times higher than for ID adults residing in the community (Taylor, Novaco, & Brown, 2016). While aggressive behaviour is typically the precursor to their involvement with forensic services, anger has been noted as a significant predictor of physical assaults perpetrated by PFID following admission to a secure hospital, controlling for other salient variables (Novaco & Taylor, 2004). Furthermore, research highlights that PFID perpetrate a significantly greater proportion of aggressive incidents (Dickens, Picchioni, & Long, 2013), and are more frequently secluded for actual or attempted assaults (Turner & Mooney, 2016), than detained individuals who do not have intellectual disabilities.

Problem anger and aggression are significant predictors of PFID being subject to prolonged periods of detention in out of area placements (Allen, Lowe, Moore, & Brophy, 2007), prescribed medications with serious potential side-effects (Lundqvist, 2013), and the use of physical restraint (Merineau-Cote & Morin, 2013). ID individuals who display aggression are also reportedly less satisfied with their lives than those who do not (Murphy, 2009).

In addition to increasing the likelihood of physical and emotional harm for the individual, a systematic review of ID adult aggression found it elicits in staff feelings of hopelessness, anger, fear and disgust, manifesting as increased indifference and restrictive practices (Lambrechts, Petry, & Maes, 2008). Furthermore, Kozak, Kersten, Schillmöller, and Nienhaus (2013) found a significant association between perceived stress and burnout in staff exposed to aggression by PWID, with the majority of respondents having experienced physical aggression (64.3%) and verbal aggression (81.2%) from service users in the previous 12 months. Consequently, the aggression displayed by PFID may place further strain on already under-resourced services through the associated costs of providing greater staffing levels to manage incidents and cover sick leave following incidents or burnout, injury compensation, and recruitment due to high staff turnover (Singh

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[1] Although the terminology *ID offender* is frequently employed within the literature, this review instead utilises *people in forensic ID services* (PFID) in reference to intellectually disabled adults who are subject to forensic service pathways. This distinction acknowledges that many such individuals have not committed or been convicted of criminal offences but are deemed to have forensic needs due to judgments around the risk of harm they pose to others.

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et al., 2008). These personal and financial ramifications make addressing anger and aggression through effective interventions of vital importance (Tenneij & Koot, 2008).

Historically, interventions targeting anger and aggression in PWID both in the community and forensic settings involved psychopharmacological treatment. However, a review by Willner (2015) concluded "there is no reliable evidence that antidepressant, neuroleptic or anticonvulsant drugs are effective treatments for aggression" in PWID (p. 82). Weak evidence was suggested for an antipsychotic that has significant side-effects and, in one study, was less effective than a placebo (Tyrer et al., 2008). Given the at best equivocal evidence coupled with potential toxicity and expense (Unwin, Deb, & Deb, 2016), in the UK the National Institute for Health and Care Excellence[2] (NICE, 2015) recommend antipsychotic medications should only be prescribed should psychosocial interventions prove ineffective.

Such psychosocial interventions typically draw on applied behaviour analysis (ABA), with meta-analyses having shown some evidence of the effectiveness of such behavioural approaches in reducing aggression (Heyvaert, Maes, Van den Noortgate, Kuppens, & Onghena, 2012). However, this evidence is largely drawn from interventions for individuals with severe ID, targeting self-injurious and stereotypic behaviours. This has led Taylor and Novaco (2005) to question the transferability of behavioural approaches to PFID who tend to be relatively high functioning and display more outwardly-directed aggression. Furthermore, interventions guided by ABA are usually implemented by staff, limiting opportunity for PFID to develop self-regulation skills, which are commonly a necessary requisite to achieve progression to lower conditions of security or community discharge (Kitchen, Thomas, & Chester, 2014).

1.1. Psychological interventions

Within non-ID forensic services, the most frequently delivered approach to addressing problem anger and aggression are psychological interventions (Howells et al., 2005). These typically utilise cognitive behavioural therapy (CBT) and have amassed a substantial evidence base producing medium-large effect sizes (Henwood, Chou, & Browne, 2015). In comparison, PWID in both the community and forensic services have historically been denied access to direct psychological therapy, although this is now improving in the UK (Beail, 2016). The interventions available tend to mirror those for the general population, yet if delivered without adaptation can prove inaccessible, obstruct treatment gains and increase attrition (Pitman & Ireland, 2003).

An evidence base for adapted psychological approaches for PWID is emerging, within which the treatment of anger has become one of the most widely researched areas (Willner, 2007) and includes a number of systematic reviews (see Ali, Hall, Blickwedel, & Hassiotis, 2015; Borsay, 2013; Hamelin, Travis, & Sturmey, 2013; Nicoll, Beail, & Saxon, 2013; Vereenooghe & Langdon, 2013). However, none of these reviews have focussed specifically on PFID and some have actively excluded studies employing forensic samples due to the differences that this population and their environment present. Narrative reviews that have been undertaken relating to interventions for PFID (Lindsay & Taylor, 2005; Taylor, 2002) have tended to focus on the author's own studies, and provide no rigorous quality assessment of the evidence on which they base their conclusions. No published systematic synthesis of the available empirical evidence has been conducted, despite the clear need for evidence-based interventions at the individual, service and societal levels.

Thus, the aim of this review is to systematically locate and summarise current relevant research through a methodologically rigorous investigation. In doing so, the review addresses the question: What is the evidence for the effectiveness of psychological interventions targeting anger and/or aggression in PFID?

2. Method

To ensure rigour and transparency, the review was guided by recommendations of the Centre for Reviews and Dissemination (CRD, 2009) and the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA; Moher, Liberati, Tetzlaff, & Altman, 2009), with all PRISMA systematic review checklist items reported on.

2.1. Inclusion/exclusion criteria

To be included in the review, articles had to: (a) be published in English language; (b) have recruited a sample of adults (≥18 years) with ID; (c) have recruited participants in community or inpatient forensic services, and (d) report on the effectiveness of a psychologically-based intervention addressing anger and/or aggression.

Articles were excluded if they: (a) did not report on an intervention (e.g. descriptive papers), (b) did not provide outcome data relating to anger or aggression, or (c) included undifferentiated data from both forensic and non-forensic services.

2.2. Search procedure

Relevant studies were identified by means of comprehensive searches of the electronic databases PsycINFO, Academic Search Complete, Scopus, PubMed and Web of Science, up to and including May 2016. Databases were selected for providing comprehensive coverage of the literature published in this area.

The key concepts under review—ID, anger and aggression interventions, and forensic settings—were explored, where available, within database thesauri to identify the subject headings used to index these concepts and generate search terms for explosion. Subject headings and their exploded terms differed according to specific database indices. Free text searches were also performed using three sets of terms (see Table A.1) drawn from examination of related reviews and their included studies.

For both the thesaurus and free text searches, sets were linked with the Boolean operator "AND" and the terms within linked with the instruction "OR" and a truncation asterisk applied to account for permutations. With awareness of the variability of terminology and general paucity of research within the relatively new field of forensic ID, coupled with this being the first systematic review in this area, no restrictions other than that of adult participants were applied.

The thesaurus/subject mapped searches yielded 665 papers, while the free text searches produced 713 articles, published between June 1914 and May 2016. After duplicated papers and those not published in English language were removed, 194 articles remained. Subject headings and free text terms were combined, with search sets again linked by "AND" and terms within linked with "OR" and truncation asterisks applied. The combined search yielded 823 articles; however, after duplicates and non-English language papers were removed, the combined compared against the original search provided no new articles. The grey literature, book chapters and Cochrane Library were explored: No new articles were highlighted.

The 194 articles generated were screened using the inclusion criteria, leading to 138 exclusions. Hand searching the reference sections of relevant reviews and the papers selected for inclusion, followed by examination of their citations, authors and of two journals commonly publishing relevant articles, identified a further 25 potential articles; 16 of which were excluded following screening. The full text papers of the remaining 65 studies were assessed, and further exclusions guided by inclusion criteria resulted in 16 studies being included in this review. An overview of this process using the PRISMA flow diagram template is depicted in Fig. A.1.

[2] The UK's National Institute for Health and Care Excellence (NICE) produce guidelines for health and social care services and practitioners, which provide evidence-based recommendations on a wide range of topics.