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POLICE OFFICER DISABILITY SENSITIVITY TRAINING: A SYSTEMATIC REVIEW

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Abstract: This paper presents a systematic research review regarding disability sensitivity training programmes provided to police officers. Thirteen databases between 1980 and 2015 were searched. After records screened, 19 full-text studies were assessed. Three studies met the eligibility criteria. Quality appraisal was undertaken using the McMaster tool. Data were synthesised qualitatively using narrative summaries. Limited evidence for the effectiveness of training programmes in improving knowledge and skills of police officers towards people with disabilities exist. This review highlights the need for custom designed training with a demonstrated evidence base. Further research should be conducted to develop, implement, and evaluate such programmes.

Keywords: disability, law enforcement officers, police, training.

1. INTRODUCTION

Globally, the prevalence of disability is estimated at about 15 per cent (Mitra and Sambamoorthi, 2014, World Health Organisation, 2011), which is larger than earlier predictions (Murray and Lopez, 1997). While variations and limitations among methods used to classify and measure disability can make accurate descriptions of global disability profiles difficult, as well as regional differences, it appears that issues with mobility and participation restrictions, cognition, independent living, vision, communication, and self-care are probably among the most common types (Centers for Disease Control and Prevention, 2015). There is increasing emphasis on the inclusion of people with disabilities into full and effective participation in society. Generally speaking, for the one billion people worldwide with disabilities, positive health and social inclusion outcomes for them can be optimised by improving community knowledge and attitudes toward disability (Scior, 2011). There is evidence which suggests that education and training programmes can successfully improve disability-related knowledge and attitudes (Murray *et al.* 2011, Scior, 2011). It is therefore vital to improve communities' understanding of disability and confront negative attitudes, beliefs and perceptions about people with disabilities. Among other interventions such as legislation and creation of services for people with disabilities, training programmes can play an important role in fostering the acceptance and inclusion of people with disabilities in the wider community (World Health Organisation, 2011).

People with disabilities are more likely to come into contact with the criminal justice system (including contact with police officers) than members of the general population (Hughes *et al.* 2011, Primor and Lerner, 2012). While the reasons for this are complex and multifactorial, it appears that increased vulnerability arising from developmental and communication difficulties, ignorance, stereotypes, stigma and negative beliefs are all factors that can increase a person's risk of becoming a victim of crime (Hughes *et al.* 2011, Jones *et al.* 2012, Modell and Mak, 2008, Primor and Lerner, 2012). In fact, it is known that the prevalence and risk of crime and violence against both children and adults with disabilities is substantially greater than those which are estimated for the general population (Hughes *et al.* 2012, Jones *et al.* 2012). Difficulties associated with and experienced by police officers when confronted by people with disabilities pose a significant challenge for modern policing. Many negative attitudes, perceptions, beliefs and stereotypes exist around disabilities, stemming from limited knowledge, information and exposure to people with disabilities (Daruwalla and Darcy, 2004, Modell and Cropp,

2007). These barriers contribute to, for example, incomplete information gathering from people with disabilities who are victims of crime, and compromise the successful apprehension and prosecution of perpetrators (Hughes *et al*. 2011, Victorian Equal Opportunity & Human Rights Commission, 2014). Irrespective of whether police officers have contact with people with disabilities as victims, witnesses or perpetrators, they need to be sensitised, educated and trained to understand and recognise the features of disability, and be equipped with skills to handle any challenges that may arise (Daruwalla and Darcy, 2004, Victorian Equal Opportunity & Human Rights Commission, 2014). Results from this review will be used to develop a disability sensitivity training programme based on existing research evidence of best training content, pedagogy and principles (e.g. related to group size, duration of training and training format) to achieve optimal outcomes.

2. METHOD

2.1 Search strategy

The systematic search aimed to identify a comprehensive list of published literature on training programmes regarding disabilities provided to police officers. The search strategy was developed using a hybrid of conceptual (Sampson *et al.* 2009) and objective (Hausner *et al.* 2015) approaches and pilot tested across two different databases (Academic Search Complete and Criminal Justice Abstracts). The search strategy followed the PICO format (population, intervention, control or comparator and outcome), and employed keywords and MeSH terms related to each of these four components. With input from an academic librarian (Sampson *et al.* 2009), 13 electronic databases were considered relevant and thus searched during December 2015 from their year of first availability (1980), namely: Academic Search Complete; Criminal Justice Abstracts; ERIC; EJournals; Family Social Science; Index to Legal Periodicals; Teacher Reference Centre; Emerald, Proquest; Scopus; SAePublications and Oxford Journals. Additional sources included those pearled from reference lists of screened records and searches of relevant grey literature using Google Scholar.

2.2 Study eligibility

A summary of the eligibility criteria is presented in Table 1. Studies were eligible for inclusion in this review if they met the following criteria:

Table 1: Inclusion and exclusion criteria based on each of the PICO components

Component	Inclusion criteria	Exclusion criteria	Rationale
Population	Police and law enforcement officers active in any police service departments, either as new recruits or in-service officers	People from other professions who work with police, including those who work in drug enforcement; traffic officers; dog handlers; hostage negotiators	Focus on disability sensitivity training for police who are likely to be first responders and have direct contact with people with disabilities
Intervention	Training programmes related to any of the following types of disability, namely: Autism Spectrum Disorders Children, adults and elderly with disability Congenital and/or acquired disability Intellectual disability Learning disability Physical disability Sensory disability (deafness and/or blindness) Speech, language & communication disabilities Victims, suspects and perpetrators with disability	Training programmes related to suicide; physical training; drug dependency; alcoholism Conduct disorders Human trafficking (if not specific to disability) Medical conditions (cardiovascular disease, diabetes, obesity, HIV, tuberculosis) Mental illness/mental health disorders (mood disorders, anxiety disorders, personality disorders) Training programmes not focussed on police officers	Training programmes tailored to the needs of police officers but not related to disability Mental disorders and mental health issues were not regarded as the focus of this study as it was felt the needs of these individuals are highly specialised and may differ from those of people with other forms of disability People with disability as defined by the present study is a vulnerable and often neglected group
Comparator/ Control	All studies were included irrespective of the presence or absence of comparator or control groups		
Outcome	Different types of outcomes (knowledge, skills, attitude, awareness, perceptions, beliefs and behaviour concerning individuals with disabilities) were included if the study focussed on disability issues	Studies not reporting any outcomes	Given the scope of this review, it was considered important to capture a broad range of different outcomes assessed in existing literature

2.2.1 Study design, publication date and focus

All relevant published scholarly studies using qualitative, quantitative or mixed-methods designs were eligible for inclusion. Only empirical studies reporting on original data regarding the effect of disability sensitivity training programmes presented to police officers were included. Review articles and editorials reporting secondary data were excluded, as were studies relating to policies or policy implementation. Studies also needed to be published in English, between January 1980 and December 2015, and report on disability sensitivity training programmes provided to police officers as part of induction of new recruits or as part of in-service continuing education. No restrictions were placed on the type of training programmes in terms of content, duration or outcome.

2.2.2 Participants

Participants were police officers at any level of experiential training and development, which implied that they could be new recruits or experienced police officers.

2.2.3 Intervention

All forms of training programmes which focussed on or covered a broad range of disability types affecting individuals of all ages (children, adults and the elderly) were included. Due to the lack of an internationally accepted definition for disability, people with disabilities were defined as people with a physical (including sensory) or intellectual disability that substantially limits one or more of the major life activities, for example, walking, standing, seeing, speaking or hearing (National Council for Support of Disability Issues, 2009). Disability types included congenital and acquired disabilities, such as autism spectrum disorders, intellectual disability, learning disability, physical disability, sensory disability (deafness and/or blindness), as well as speech, language and communication disabilities. Mental disorders (also referred to as mental illnesses or psychiatric disorders) were excluded from this review. A mental disorder is a diagnosis of a behavioural or mental pattern that can cause suffering or a poor ability to function in ordinary life, and would include mood disorders, anxiety disorders and personality disorders (American Psychiatric Association, 2013). Training programmes could focus on victims, suspects and perpetrators with disability.

2.2.4 Comparator/control

All studies were included irrespective of the presence or absence of comparator or control groups.

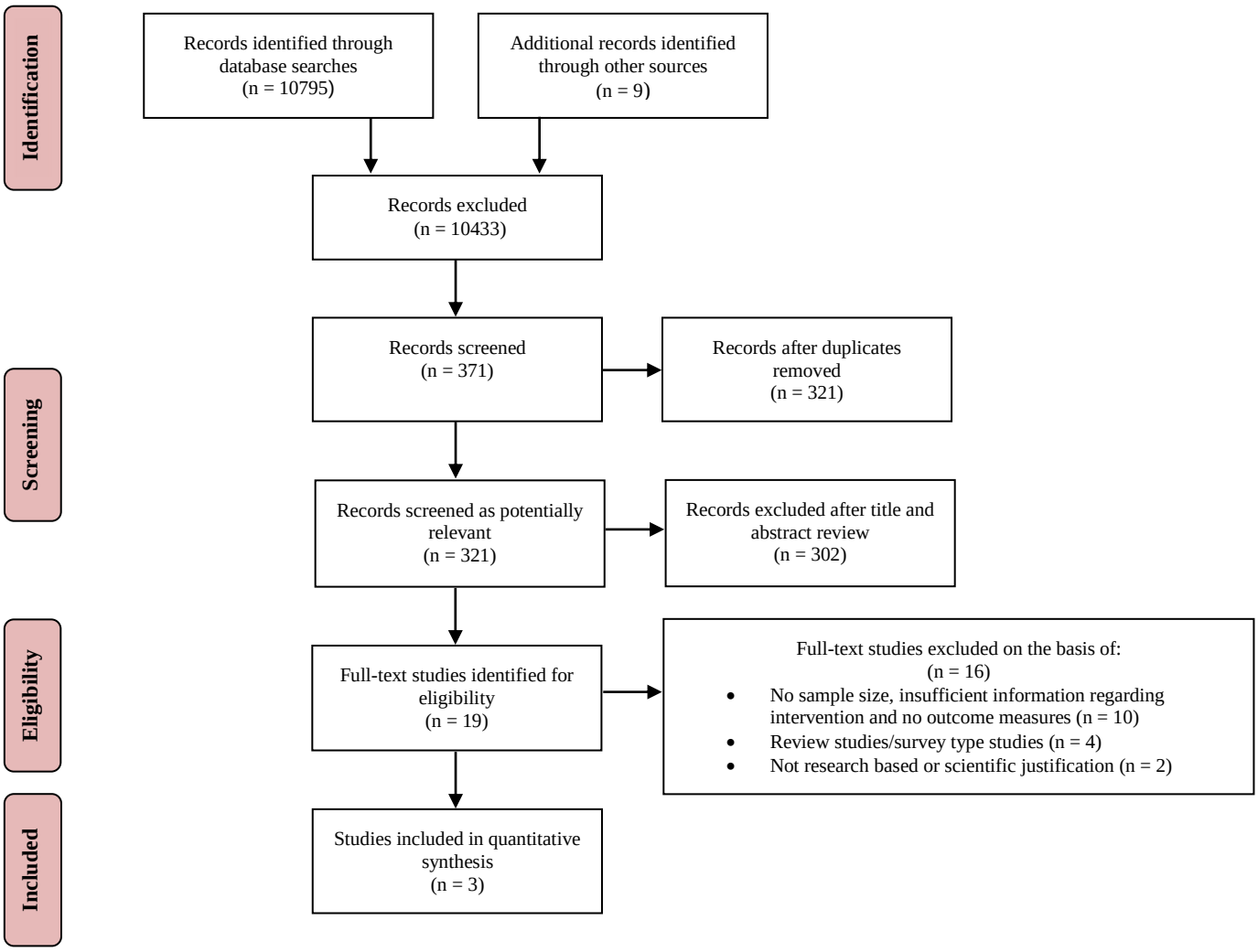
2.2.5 Outcomes

No restrictions were placed a priori on the type of outcomes. Due to the scoping nature of this review, all possible outcomes were included (e.g. knowledge, skills, attitude, awareness training, perceptions, beliefs and behaviour) with the proviso that the study focussed on disability issues.

2.3 Study selection

A four-phase process was used to assess studies for inclusion and is presented as a PRISMA flow diagram (Figure 1).

Figure 1: PRISMA flow diagram indicating the flow of included and excluded studies



- Phase 1 - Identification: Two reviewers (E.V. and J.B.) independently screened all the identified potential studies at title level. They discussed their recommendations and reached consensus on the title level of studies for inclusion.
- Phase 2 - Screening: The two reviewers (E.V. and J.B.) independently screened studies at abstract level to determine relevance for this review, utilising the same procedure as in Phase 1. Consensus was reached at abstract level of the studies for inclusion by the reviewers.
- Phase 3 - Eligibility: This phase comprised the extraction of full text studies to be reviewed by the reviewers (E.V., J.B. and L.W.) Data from the 19 studies identified were extracted onto a specifically designed template. The first reviewer (E.V.) screened all 19 studies for consistency, and formed a pair with the second

(J.B) and third (L.W.) reviewers, who screened 10 (E.V. and J.B.) and nine (E.V. and L.W.) articles respectively.

- Phase 4 – Included studies.

2.4 Data extraction

Data was extracted onto a specifically designed data extraction protocol. Data was extracted independently by each of the reviewers (E.V., J.B. and L.W.) and recorded on the data extraction protocol. Any disagreements in the data extraction process were resolved by discussion and consensus reached between the reviewers. The following information was extracted verbatim from each included study and noted on the data extraction protocol:

- Publication demographics: author, year of publication, country of study and study design
- Participants: police officers at induction level or continuing education, law enforcement officers and group size
- Intervention: training aims, target group, training format, training content and training duration
- Control: details of control conditions
- Outcomes: description of training outcomes, constructs measured, training evaluation, limitations and suggestions for future training.

3. RESULTS

This section will present information in four sub-sections according to (i) search results; (ii) study demographics, (iii) critical appraisal for bias of the included studies, and (iv) main findings.

3.1 Search results

Full texts on the 19 studies were retrieved and assessed for eligibility according to a data extraction protocol of inclusion criteria. Of these, 16 studies did not meet the inclusion criteria. Four studies were identified as review/survey studies; two studies were not research based, scientific or peer reviewed and offered no interventions; and 10 studies did not include any sample size, contained insufficient information regarding interventions and lacked details regarding outcome measures. The paired reviewers

reached a consensus in identifying three studies eligible for inclusion (two from 10 reviewed by E.V. and J.B., and one from nine reviewed by E.V. and L.W).

3.2 Study demographics

A summary of data extracted from the three studies is given in Table 3. All three studies were conducted within the last 15 years and in high-income Westernised countries. Study 1 (Bailey *et al*. 2001) and Study 2 (McAllister *et al.* 2002) were conducted in Northern Ireland, while Study 3 (Engelman *et al.* 2013) was conducted in the United States (US). The Northern Ireland studies were published in consecutive years (2001 and 2002), and involved two of the same authors. The US-based study was the most recent (2013). Both Study 1 and Study 2 employed quasi-experimental designs with the presence of a control group. In contrast, Study 3 conducted a pilot mixed-methods evaluation of a training workshop using two semi-structured focus groups. Additional information regarding data on the PICO constructs is provided below.

3.2.1 Population

Studies varied in terms of the diversity of participants recruited, from a relatively homogenous group of police officers at similar stages of post-foundation training (Study 1), to police officers and other law enforcement personnel (Study 3), and a transdisciplinary group which also included social workers (Study 2) (Table 3). Samples were not described in much detail – background information such as age or ethnicity was not provided. The overall sample size among studies was small, ranging from 28 (Study 2) to 65 (Study 1) participants with variable comparability in the number of participants allocated to treatment and control groups (e.g. 31 versus 34 in Study 1 and 17 versus 11 in Study 2). A total of 34 participants took part in Study 3.

3.2.2 Intervention

In Study 1, an awareness training event was conducted by the Royal Ulster Constabulary to measure the impact of training on police officers' attitudes towards people with intellectual disability (ID). In Study 2, an evaluation of a pilot scheme training event was conducted by the Police Service of Northern Ireland and the Homefirst Community Trust to examine the impact of training for police officers and social workers on attitudes towards people with learning disability (LD). In Study 3, an evaluation of a law enforcement training event in Oakland, California was conducted to

promote a better response to domestic violence emergencies involving the deaf and hard of hearing (Deaf/HH).

In both Study 1 and Study 2, role-play exercises were conducted in which police officers in the treatment group were allocated roles as people with intellectual or learning disabilities. Observation by remaining participants and discussions followed. Training content reported in these two studies primarily covered the exploration and discussion of potential stereotypes held about and experienced by people with disabilities, specifically during investigative processes, as well as wider issues they may experience in the community (Study 1 and Study 2). In Study 3, a two-hour educational outreach and training certification workshop approach was employed. While the study did not specifically report the training content of their intervention programme, its focus was aimed at promoting better responses to domestic violence emergencies involving people who were deaf or hard of hearing.

3.2.3 Comparator/control

Two studies (Study 1 and Study 2) included a control group. The control conditions comprised no specific information or training related to vulnerable people and those with disabilities (Study 1 and Study 2), and no training regarding the new Joint Investigation of Crimes Committed Vulnerable Adults protocol and policy (Study 2).

3.2.4 Outcome measures

All three studies evaluated the effect of the training programmes on attitudes towards people with a range of disability types (intellectual, learning and hearing) as the primary outcome. In addition, Study 3 reported outcomes on knowledge of communication and translation needs of people with deafness as well as outcomes regarding knowledge of federal and state-level policy and law.

Both Study 1 and Study 2 used a validated measuring instrument, namely the Attitude towards Mental Retardation and Eugenics (AMRE) scale as a pre- and post-measure. Use of the AMRE scale is supported by acceptable psychometric properties with a high level of reliability among items on the scale and a high degree of internal consistency (Antonak *et al.* 1993). In contrast, Study 3 developed a purpose-designed instrument which was pilot-tested with experts in and affiliated to the people living in the community with deafness. The items within the survey included a measurement of attitudes, including perceived capabilities of deaf people, with six items such as “Deaf

people can make their own life decisions" and efficacy when working with the Deaf/HH, with 10 items such as "I feel confident I could figure out a way of communicating with Deaf people in an emergency". This data was supplemented with data collected via two post-training focus groups conducted with six and 13 of the training participants respectively.

3.3 Critical appraisal for bias of the included studies

The McMaster quantitative and qualitative critical appraisal tools were used for appraisal of the studies. All 15 domains on the McMaster tool were allocated a score (1 = Yes; 0 = No or not addressed) (Table 2). There was 100 per cent agreement between the scores' two reviewers (E.V. and K.T.) for this phase of the process. Critical appraisal scores ranged from 8 (53.33%) to 11 (73.33%) out of a maximum of 15 (mean 9.3,

Table 2: Quality scores for critical appraisal for bias of the included studies

McMaster critical appraisal tool items	Included studies		
	Study 1 Bailey et al., (2001)	**Study 2** McAllister et al., (2002)	**Study 3** Engelman et al., (2013)
1. Was the purpose clearly stated?	1	1	1
2. Was relevant background literature reviewed?	1	1	1
3. Was the study design described?	1	1	1
4a. Was the sample described in detail?	0	0	0
4b. Was the sample size justified?	0	0	0
5a. Were the outcome measures reliable?	1	1	0
5b. Were the outcome measures valid?	1	1	0
6a. Was the intervention described in detail?	1	1	0
6b. Was contamination avoided?	0	0	0
6c. Was co-intervention avoided?	0	0	0
7a. Results were reported in terms of statistical methods?	1	1	1
7b. Were the analysis method(s) appropriate?	1	1	1
7c. Was clinical importance reported?	1	1	1
7d. Were dropouts reported?	1	1	1
8. Conclusions were adequate given the study methods and results?	1	0	1
Total score (/15)	**11 (73.33%)**	**9 (60.00%)**	**8 (53.33%)**

The key to scoring was set out as: 1 = Yes; 0 = No or not addressed, and the item was deducted from the overall score for not applicable. A total maximum score of 15 could be allocated.

62.2%) (Table 2). Common methodological problems across all three studies related to inadequate description and justification of the sample size, and insufficient reporting about the avoidance of contamination and co-intervention.

3.4 Main findings

A synopsis of various components of the three disability sensitivity training programmes is shown in Table 3. Studies consistently reported statistically significant improvements in participants' attitudinal scores following training, and in comparison with the control groups (Study 1 and Study 2).

Table 3: Analysis of relevant items for a disability sensitivity training programme

Authors	**Study 1** Bailey et al., (2001)	**Study 2** McAllister et al., (2002)	**Study 3** Engelman et al., (2013)
Country	Northern Ireland	Northern Ireland	United States
Study design	Quasi-experimental	Quasi-experimental	Mixed methods
Training aims	Evaluation of an awareness training event conducted by the Royal Ulster Constabulary in terms of its impact on the attitudes of police officers towards people with ID	Evaluation of a training event conducted by Northern Ireland Police and Homefirst Community Trust (social workers) exploring attitudes towards people with LD and skills development around investigative interviewing	Evaluation of a law enforcement training event in Oakland to promote better response to domestic violence emergencies involving the Deaf/HH
Target group	Trainee police officers undertaking post-foundation training during a statutory two-year probation period, all at a similar stage of their post-foundation training	Police officers and social workers	Police officers and other law enforcement personnel, including police dispatchers
Training format	Role-playing exercise where residents of a group home attended a community meeting Police officers in the treatment group were allocated a number of roles, including that of a person with ID Discussion group	Role-playing investigative interview with one participant playing an adult with LD and another playing a police officer Observation by the remaining participants Discussion which focussed on stereotypes and prejudice	Educational outreach/training certification workshop Focus group activities
Group size	65 participants Treatment group (n = 31) Control group (n = 34)	28 participants Treatment group (n = 17) Control group (n = 11)	34 participants
Training duration	Once-off training event	Duration not mentioned	Two-hour educational outreach/ training certification workshop
Training content	Exploration of stereotyped views held about people with ID Trusting witness accounts provided about people with ID Wider issues regarding living in community settings	Discussion of stereotypes and prejudice vulnerable adults may experience	Promoting of better response to domestic violence emergencies involving the Deaf/HH

Authors	**Study 1** Bailey et al., (2001)	**Study 2** McAllister et al., (2002)	**Study 3** Engelman et al., (2013)
Training outcomes	Attitudes of the treatment group were significantly more favourable to ID and eugenics post training as reflected in their AMRE scores compared to those of the control group (t = 2.98, p = 0.004). This shows significant impact by training on eugenics attitudes towards people with disabilities Treatment group scores changes significantly after training (t = 3.81, p = 0.001)	Positive association between training and favourable attitudes towards people with LD (t = 2.98, p = .004) Baseline attitude scores towards people with LD did not differ between the control and treatment groups AMRE score in the control group did not change (t = 0.68, p = 0.51) Treatment group scores changes significantly after training (t = 5.65, p = 0.00)	Participants gained cultural competency skills post-training. Perceived self-efficacy, and knowledge of communication and translation needs efficacy when working with the Deaf/HH also increased The attitudes subscale showed a positive impact on general attitudes towards the Deaf/HH, including perceived self-efficacy when working with Deaf/HH (t(33) = -05.02. p<0.01) reflective of cultural competence, but not on perception of capabilities of the Deaf/HH (t(33) = 0.34, p = 0.74)
Constructs measured	Attitude	Attitude	Attitude Knowledge
Training evaluation	Administration of AMRE questionnaire at the start of a two-week training course and repeated at the end of the programme	Administration of AMRE questionnaire 4 weeks before and immediately after the training programme	Pre and post-test survey administered immediately before and after training two semi-structured focus groups post-training
Limitations	Small sample size Only one area of the UK and from a discreet professional group The impact of attitudes on the actual behaviour of the police officers to people with ID is unclear Simulation exercise did not involve a person with ID directly	Small sample size Simulation exercise did not directly involve a person with LD	Small sample size Single evaluation of a training programme Newly developed evaluation instruments – not proven validity and reliability Attempts to strengthen instruments by pilot testing with experts in, and affiliated with the Deaf community Lack of theoretical justification for constructs
Suggestions for future training	Providing opportunities to meet people with ID Awareness exercise and assist police participants in recognising their own attitudes as well as how they stigmatise people who have ID A longitudinal study to gauge whether this improvement in police attitudes to ID is stable over time	General awareness-raising training is required in relation to LD and other vulnerable adults Specific specialist training is essential for police and other investigators Attitudes of staff to LD and sexual assault should be further explored in future research	Training events for emergency, police and law enforcement officers and first responders should include people with disability and the accessibility and involvement of the Deaf/HH in the training and exercises

Key to abbreviations: ID: Intellectual Disability; LD: Learning Disability; HH: Hard of Hearing; AMRE: Attitudes towards Mental Retardation and Eugenics

4. DISCUSSION

There appear to be few primary research studies reporting and evaluating disability sensitivity interventions for police officers, as only three studies were identified by our search. All studies were published within the last 15 years (2001, 2002, 2013), and while

training programme target groups comprised predominantly police officers, participants also included other law enforcement personnel and social workers. Programme content and outcomes focused on three disability types, namely intellectual (Bailey *et al.* 2001), learning (McAllister *et al.* 2002) and hearing (Engelman *et al.* 2013).

Attitudes of training programme participants towards people with disabilities were the primary outcome of interest. All studies reported statistically significant improvements post-training (Bailey *et al.* 2001, McAlllister *et al.* 2002, Engelman *et al.* 2013) and in comparison to a control group (Bailey *et al.* 2001, McAllister *et al.* 2002). However, before drawing conclusions about these results it is important to consider caveats to these study findings. Sample sizes were uniformly small across all included studies, amplifying potential effects of participant self-selection bias (Nabatchi, 2012). Only two of the three included studies employed comparator conditions (Bailey *et al.* 2001, McAllister *et al.* 2002), which did not stipulate whether group allocation was randomised. The use of a placebo-type control intervention was also not reported, which makes it difficult to determine whether participants' attitudes improved as a function of Hawthorne and similar research participation effects versus the specific characteristics of the tested training programmes (McCambridge *et al.* 2014). Outcomes in all studies relied on self-reported measures and the measurement tools varied in their psychometric properties. A purposed-designed instrument was developed and used in the study by Engelman *et al.* (2013) which, although pilot-tested with experts in and affiliated with people with hearing disabilities, did not undergo formal validation testing procedures. Bailey *et al.* (2001) and McAllister *et al.* (2002) both used the Attitudes towards Mental Retardation and Eugenics (AMRE) scale, which assumes a single hypothesised construct for attitude and is reported to have high reliability and internal consistency (Antonak *et al.* 1993, Bailey *et al.* 2001). That said, in the decades that have passed since its development there have been substantial changes in the way society views disability, as well as advances in conceptualising attitude as a dynamic and multidimensional construct (Lam *et al.* 2010, Seewooruttun and Scior, 2014, Vilchinsky *et al.* 2010, Werner *et al.* 2012). This may bring into question the current internal and external validity of the AMRE as an outcome measure.

Collection of both quantitative and qualitative data across a range of outcomes can allow researchers to calibrate and compare study findings, as well as present perspectives and provide broad context for the phenomena of interest (Onwuegbuzie and Leech, 2005). In this review it is not possible to judge the real-life importance of study findings as

statistical analyses stopped short of effect size calculations and, where relevant (Engelman *et al.* 2013), content analyses of focus group data. Consequently, this precludes the ability to quantify and benchmark the magnitude of changes observed, or describe and explore wider pedagogical concepts and themes. Furthermore, the use of unidimensional repeated short-term pre-post measures of attitude did not offer the opportunity to investigate longitudinal patterns in this body of literature, or determine whether attitudes are associated with and can translate to objective changes in knowledge, behavioural and wider practical outcomes (Seewooruttun and Scior, 2014, Werner *et al.* 2012). This is a considerable constraint of studies in this review, given the plethora and range of tools now available to measure attitudes towards disability (Palad *et al.* 2016).

Consistent with other relevant literature, a range of training formats and intensities were used in our sample of included studies (Ison *et al.* 2010, Morgan and Lo, 2013, Seewooruttun and Scior, 2014, Scior, 2011, Shields and Taylor, 2014). Coupled with the variable levels of detailed reporting within this body of literature of training programmes which had already been developed, it is difficult to make comment on which programme components, characteristics and modalities are most effective (Cotton and Coleman, 2010). On a conceptual level, we can surmise that because the development of individuals' attitudes, knowledge and behaviours is hypothesised to be a function of the dynamic interplay of a complex range of factors, it may be reasonable to expect that time and repeated exposure to interventions may be required in order to effect a change (Seewooruttun and Scior 2014, Vilchinsky *et al.* 2010, Werner *et al.* 2012). That said, it would seem the duration of training in studies in this review was quite short, with once-off events employed by Bailey *et al.* (2001) and McAllister *et al.* (2002), and a single two-hour training and outreach programme used in the study by Engelman *et al.* (2013). Interestingly, while mostly variable in nature (Seewooruttun and Scior, 2014), some other disability sensitivity type programmes in the literature have reported intervention periods of up to eight (Shields and Taylor, 2014) to 12 weeks (Morgan and Lo, 2013). We found the use of role play by Bailey *et al.* (2001) and McAllister *et al.* (2002) to be somewhat surprising as a vehicle for effecting attitude change. There is some suggestion in the literature that simulated and imagined interactions can produce positive perceptions (Crisp and Turner, 2009) and reduce implicit prejudice (Turner and Crisp, 2010). However, stronger empirical evidence exists for direct and actual contact with people with disabilities to facilitate improvements in knowledge and attitudes (Seewooruttun and Scior, 2014, Shields and Taylor, 2014). Therefore, it would seem appropriate for training

programmes to include modules which allow practical experience and application of learnings over time.

5. PRACTICAL APPLICATION

This systematic review of published disability sensitivity training programmes has a number of practical implications for police training. Firstly, it shows that when attempting to train police officers, collaborative teaching approaches from multi-disciplinary professionals (e.g., mental health professionals, social workers, psychologists, police officers and people with a disability themselves) should be used (Coleman & Cotton, 2010; Hatfield, 2014; Vermette et al., 2005). Secondly, a problem-based and experiential learning approach should be used which combines information gathering activities and group discussions. While training programmes could include role-play, simulation and the use of video and film media (Coleman & Cotton, 2010; Hatfield, 2014), where available, direct contact with people with disabilities is preferable as it may promote longer-lasting training effects as well as opportunities for shared learning (Crisp & Turner, 2009). Thirdly, the disability training programme should cover a wide spectrum of disabilities to promote greater recognition and acceptance, while at the same time highlighting specific factors which may be unique, or of greater importance, to sub-groups within the population of people with disabilities. Ideally, training programmes should include comprehensive content on methods for recognition and techniques for how to respond effectively and empathetically to persons with a variety of disability profiles. Learning is not a one-time event and therefore renewal and reinforcement of material through ongoing and repeated exposure is recommended. Fourthly, studies should employ measures beyond those of attitudes alone, and include aspects such as knowledge, skills and behaviours of police officers towards people with disabilities. In the fullness of time, it may also be possible to investigate practical outcomes of interactions between police officers and people with disabilities (such as auditable records of reports and incidents), and levels of staff and community satisfaction.

6. LIMITATIONS OF THIS REVIEW

The findings of this review are limited to the components and scope of the review question, and therefore generalisations cannot be made outside of these contexts. Included studies varied in the standards with which they were conducted and reported, and

therefore findings are a reflection of these methodological issues. The overall approach of this review was, however, strengthened by the development of an *a priori* protocol and adherence to the PRISMA statement (Moher *et al.* 2009).

7. CONCLUSION

A comprehensive search spanning three-and-a-half decades of literature identified only three studies which empirically investigated the effects of disability sensitivity training programmes for police officers. A range of training programmes were employed and included studies were characterised by the use of short-term attitudinal measures only, methodological issues and variable standards of reporting. While this review has shown that more empirical evidence is needed in order to establish effective disability sensitivity training protocols for police officers, it is hoped that this body of work will help to raise awareness and act as the catalyst for further research in this area. Future research must incorporate the learnings from other related literature to explore longitudinal trends across a wider range of meaningful outcomes, test interventions which are collaborative, multifaceted and practically-based using rigorous study designs.

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