



# CHANGING ATTITUDES TO LEARNING DISABILITY

A review of the evidence

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# Executive Summary

Improving attitudes to people with learning disabilities\* is a key priority for Mencap. This review was written to help Mencap and other bodies to define this area by providing an overview of attempts to change attitudes to individuals with learning disabilities, identifying gaps in the evidence and making suggestions for a way forward. Our conclusions can be summarised as follows:

- Increased community inclusion in countries such as the UK appears to have led to more positive attitudes to people with learning disabilities. Nonetheless, children and adults with learning disabilities are still frequently excluded from various fields of life, activities and opportunities, regularly have to face name-calling, bullying and being stared at, and are frequently the targets of hostility.
- There is very limited representative\*\* general population data to draw on as baseline of attitudes that interventions can be measured against.
- Confusion as to what 'learning disability' constitutes, and about different terms in use, appears widespread, as do misconceptions about the capabilities of people with learning disabilities.
- Attempts to change attitudes and counter discrimination have targeted children and adults in the general population, as well as specific groups more likely to come into contact with people with learning disabilities (care staff, teachers, health care providers), or those that have a potential role in countering negative attitudes and discrimination (the media, the police, employers, legislators). Most such interventions have been small-scale, used unrepresentative samples, and have not been rigorously evaluated, making it difficult to draw firm conclusions.
- Evidence from the learning disability field and others suggests that contact with people with learning disabilities has an important role in changing attitudes and reducing prejudice. At present we do not know what quality, quantity and type of contact is most likely to change attitudes.
- It is likely that contact needs to occur alongside education about learning disability, the range of abilities and needs of individuals with learning disabilities, and their capabilities to counter misconceptions and challenge negative stereotypes.
- The effects of attitude change interventions on real life behavior are very under-researched.
- In this report, we present a multi-level model that may help in planning and integrating future work that can do justice to address the complexity of changing attitudes to individuals with learning disabilities.

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\*In this report the term 'learning disability' is used as it is the most commonly used term in the UK to refer to what in many other countries is referred to as 'intellectual disability', i.e. significant impairments in cognitive and adaptive functioning of early onset.

\*\* Representative data or samples are those where the characteristics of the sample (the people interviewed or surveyed) accurately reflect those of the entire population of interest. For example, a representative sample of the UK population would contain people with the same range of demographic characteristics as the whole UK population.

# Introduction

Policies, service provision and societal views of people with learning disabilities have changed substantially over the last hundred years. Up to the 1970s large numbers of children and adults with learning disabilities were confined in institutions in the UK. Now almost all children with learning disabilities live with their families, and most attend inclusive schools\*. Among adults with learning disabilities many live in their own homes with varying levels of support, and few remain in segregated educational, day care or residential provision.

Despite increased physical integration, individuals with learning disabilities often still feel socially excluded and exposed to negative perceptions and unwelcome behaviours. Many are prevented from equal participation in education, employment, leisure and social pursuits. The fact that discrimination against people with learning disabilities is still an everyday reality is illustrated by estimates that only 7% of adults with learning disabilities are in any form of paid employment in the UK<sup>1</sup>. Furthermore, nine out of ten children and adults with learning disabilities report that they have been the target of bullying, almost five in ten that they have experienced verbal abuse and one in four has experienced physical

violence<sup>2</sup>. Not only are they often the easy targets of verbal and physical harassment and abuse, in some cases they are the victims of horrific hate crimes – seemingly for no reason other than appearing different and less able to defend themselves<sup>3 4</sup>. A recent review concluded that people with mental health problems and/or learning disabilities are the most likely section of the population to be affected by targeted violence and hostility<sup>5</sup>.

More needs to be done to tackle negative attitudes to individuals with learning disabilities, and to break down barriers that prevent people with learning disabilities from being accepted within society, and from accessing a wide range of opportunities and experiences taken for granted by people without disabilities. These aims are enshrined in the UN Convention on the Rights of Persons with Disabilities, which promotes a rights based perspective instead of, for example, the charity discourse so long applied to people with learning disabilities.

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\*The proportion of children educated in special schools stood at 0.75 per cent in 2007 but had risen to 0.80 per cent by 2013. This rise has been attributed to a change in the political climate away from inclusive education<sup>6</sup>.

## What do we mean by attitudes?

Attitudes are a psychological construct that refers to favourable or unfavourable evaluations of people, objects, places or activities. They are made up of three aspects: a cognitive component (how we think about X), an emotional component (how we feel about X), and a behavioural component (how we act towards X). While contemporary psychological definitions encompass these three aspects, in common parlance the term ‘attitudes’ is mostly used to refer to the cognitive component alone, and less so to emotions and actions or behaviours. A simple part of being human is that we develop attitudes about people, objects and activities we are exposed to in life. Many of these involve quick responses and are neutral or positive. Accordingly, when we refer to attitudes that limit the rights and opportunities afforded to people with learning disabilities, we should strictly refer to ‘negative attitudes’ that we wish to tackle, or conversely ‘positive attitudes’ that we wish to increase or spread.

In other fields, such as mental health and HIV/AIDS, the term ‘stigma’ has been used in preference to ‘attitudes’. The term originates in ancient Greek and was reintroduced into common parlance in the 1960s by Goffman who defined stigma as the process by which the reaction of others spoils normal identity<sup>7</sup>. More recently, stigma has been conceptualised as the co-occurrence of these stigma components: labeling, stereotyping (that is negative evaluation of a label), prejudice (that is endorsement of negative stereotypes), which lead to status loss and discrimination for the stigmatised individual or group<sup>8,9</sup>. Discrimination is a behavioural response to prejudice and can include the withholding of help, opportunities and access to, for example, employment and housing but also avoidance

of people<sup>9</sup>. Importantly, for stigmatisation to occur, power must be exercised<sup>8</sup>, a condition that is clearly met in the case of people with learning disabilities. The term stigma offers a distinct advantage of being more encompassing. In addition to a traditional, narrower understanding of attitudes (as mainly concerned with what people think but not with what they actually do), the concept of stigma invites us to explicitly focus on behavior (discrimination), and on the process and power relations involved in negative stereotyping and discrimination. However, we recognise that, to date, the term has rarely been used in the learning disabilities field. Hence, in this report we use the term attitudes when describing work in the learning disabilities field. At times, we intentionally make use of the term stigma to link to theory and evidence produced in other fields and to encourage us to learn from other fields, where appropriate.

Returning to attitudes, recent research distinguishes between explicit and implicit attitudes. Explicit attitudes are evaluations that are consciously available to the person holding them and are generally measured through questionnaires, whereby respondents self-report what they think, feel or intend to do. In contrast, implicit attitudes are said to be largely outside of conscious awareness and are typically measured in timed word sorting tests that assess whether a respondent shows an implicit positive or negative bias towards a category, such as ‘learning disability’. (To experience implicit attitude measures first hand, readers are directed to <https://implicit.harvard.edu/implicit/takeatest>.) While self-report attitude measures are at risk of inviting responses that are socially desirable, yet may bear little relation to someone’s true values, implicit attitude tests are fairly robust against

faking (although not immune to it). Recent evidence suggests that explicit and implicit attitude measures jointly provide the best prediction of behavior<sup>10</sup>. To date implicit attitude measures have only been used in a handful of studies in the learning disabilities field<sup>11</sup>. For socially sensitive topics, which one may presume attitudes to disability fall under, explicit measures provide particularly poor predictions of behaviour, while implicit measures provide a better indication of someone's behaviour.

# Attitudes to learning disability

Before we can outline what is known about attitudes to learning disability it is important to address how people understand the very concept of 'learning disability'. We know relatively little about the general population's understanding of the concept and associated terminology. The few studies that have taken place suggest that there is widespread confusion about the concept, and different terminology in use<sup>12 13</sup>. In a survey conducted by Mencap in 2008, 73% of lay people were not able to give an accurate example of a 'learning disability'<sup>14</sup>. In other recent research, only 28% of lay people in the UK were able to recognise signs that someone might have a mild learning disability<sup>15</sup>, with men and members of Black and minority ethnic communities showing much lower awareness of such signs. It has been suggested that misconceptions about the capabilities of people with learning disabilities may be common, such as that most have severe disabilities or can do few things for themselves. In reality more than 80% of people who meet criteria for 'learning disability' have mild or moderate learning disabilities and can be largely independent in their everyday lives

Importantly, there is little robust evidence about how basic or developed an understanding of learning disability is required to promote more positive attitudes. Put differently, education about learning disability will likely need to be one component of efforts to improve attitudes. It is unclear by how much we need to increase people's understanding about learning disability, and perhaps more importantly what type of understanding of learning disability we should promote to generate more positive attitudes. Furthermore, focusing efforts to educate the public should draw on a range of terms in use nationally and internationally and should not rely on any one

specific label, such as "learning disability", not least as labels are changeable.

Looking at changes over time, the limited data available<sup>16 17</sup> support the impression that attitudes have become much more favorable of the inclusion of people with learning disabilities in educational and social settings than they were some 50 or 100 years ago. Of note, this does not hold true for many countries, particularly low income ones, where a mixture of poor access to education and resources in general, and stigmatising beliefs regarding the causes of disability often continue to leave people with learning disabilities outcast from their communities. Even in countries where inclusion has become more widely accepted, learning disability appears to be more stigmatised than physical and sensory disabilities, but less stigmatised than severe mental health problems<sup>16 17 18</sup>. In a 2009 UK survey of a representative sample of 3421 adults, only 41% of respondents said they would feel very comfortable if their child had a class mate with a learning disability (compared to 76% for physical and sensory disabilities)<sup>16</sup>. A similar survey of 1039 adults in Ireland<sup>17</sup> also found that a fifth of respondents would object if children with learning disabilities or autism were in the same class as their child. While this view was partly informed by concerns about insufficient support provided to such children, half of respondents were concerned that inclusion would impede the progress of children without disabilities. Asked how comfortable they would feel working alongside people with different disabilities, the lowest comfort levels in the Irish survey were recorded for colleagues with learning disabilities and mental health problems.



It has been suggested that a reluctance to interact with people with learning disabilities may arise from misconceptions, in particular that people with learning disabilities have few capabilities, as well as discomfort related to lack of familiarity and insecurity about how to interact with someone with a learning disability<sup>18 19 20</sup>. Others hold that society is deeply hostile towards its most vulnerable members<sup>3</sup>, and that “aversive disablism” prevails<sup>21</sup>. This refers to a process whereby someone may at one level believe that people with disabilities should be treated equally, while behaving in subtly prejudiced ways which in fact reinforce negative stereotypes. An example would be supporting inclusion of people with learning disabilities in society, but opposing inclusion of children with learning disabilities in one’s own child’s class. Of course, one motivation for aversive disablism may well be the desire to avoid discomfort in the face of lack of familiarity.

Misconceptions, negative attitudes and discrimination affect the daily lives of people with learning disabilities, the opportunities

available to them, and whether they are active participants within their local communities and society at large, or confined to the margins. They can also lead to low self-esteem, a sense of helplessness and general fear in going about one’s daily life<sup>22</sup>. A recent report notes that many people with learning disabilities fear being victimised and, as a consequence, avoid certain places and adjust when and where they travel<sup>23</sup>.

Beyond the individual him or herself, family carers of individuals with learning disabilities may also experience negative attitudes and responses from the public. In addition, it has been suggested that within non-Western cultures parents at times may be subjected to negative attitudes and blame from within their own extended families and communities<sup>22</sup>. Family carers may feel blamed for younger children’s disobedience, and experience disapproval, being stared at in public, and lack of acceptance when older children behave inappropriately in public. Many parents report restricting their activities and avoiding public places as a result<sup>24 25</sup>.

# What has been done to tackle negative attitudes?

The first question facing any attempt to tackle negative attitudes and discrimination directed at people with learning disabilities is who to target. Possible targets include the general public, the media, those influencing legislation, policy and law enforcement, employers, and groups most likely to have contact with children and adults with learning disabilities, such as children and young people in inclusive schools, teachers, health and social care providers, carers, co-workers, and neighbours of supported living schemes, or indeed parents and siblings of people with learning disabilities.

Few interventions designed to change attitudes have targeted the general public as part of research. Many large organisations and charities in the learning disability field, such as Mencap and the Foundation for People with Learning Disabilities in the UK, or Inclusion International and Special Olympics in the international arena, provide education and messages designed to promote inclusion and more positive attitudes via their websites, leaflets and social media. However, it is likely that these only infrequently reach an audience not already positively inclined towards people with learning disabilities, and their impact on attitudes has not been consistently measured. Other interventions targeting the public have often focused on students and convenience\* samples. They have mainly included educational approaches that attempt to challenge misconceptions by providing factual information. Two recent studies examined the effects of brief film interventions which explained what a learning disability is

and showed people with learning disabilities in positive roles while also highlighting injustices they experience<sup>26 27</sup>. Elsewhere, researchers compared the effects of showing a drama or documentary film on students' attitudes to people with Down's Syndrome<sup>28</sup>. Such studies have reported some, albeit very small benefits of education and indirect (film) contact as a route to increasing knowledge<sup>29</sup>. However, evidence from other fields suggests that educational approaches on their own frequently produce improvements in attitudes that are only short-lived and of limited magnitude<sup>30 31</sup>.

Direct contact with people with learning disabilities as a route to attitude change has been employed as part of student training programmes. Such programmes have included activities such as didactic teaching, discussion, disability awareness tasks and workshop exercises led by a facilitator with learning disabilities<sup>32</sup>. Another study provided interpersonal contact by getting students to house and entertain individuals with learning disabilities and their support staff over a 2.5 day period<sup>33</sup>. In other studies the impact of volunteering at sporting events, especially via the Special Olympics, on volunteers' attitudes was examined<sup>34 35</sup>. These contact based interventions mostly showed positive effects on attitudes, but because they target volunteers could be seen as "preaching to the converted"<sup>29</sup>.

Given that in many instances it may be difficult to provide direct contact, and control

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\*A 'convenience' sample consists of anyone the researchers could reach and thus is unlikely to reflect the characteristics of the entire population of interest.

the quality of that contact, some attempts have been made to use indirect contact, for example through film-based interventions, to improve attitudes. Studies that examined indirect contact with individuals with learning disabilities have simulated contact through the use of photographs and films with documentary or drama footage delivered to participants in a classroom or experimental site<sup>27 28 37 38</sup>, or via the internet<sup>26</sup>. Another means of indirect contact has used experiential learning by having student teachers interview families of children with disabilities<sup>39</sup>.

An important route to influencing attitudes of the public and those who may have few opportunities for interacting with people with learning disabilities is through the media. Guidance for the media on portrayals of people with learning disabilities has emphasised the need to present them in realistic terms, not just as victims or heroes in the face of adversity, to show them in roles not defined by their disability, and involve them directly in programming<sup>40 41</sup>. There are few data on the use of such guides by media personnel or the impact of this guidance when it is implemented.

Although the very low proportion of people with learning disabilities who are in some form of employment is a big concern, surprisingly few studies have been reported that attempt to change attitudes among employers or co-workers. This may reflect an institutionalised perception that people with learning disabilities really cannot work, or are not a priority in addressing employment discrimination. An attempt in the late 1980s used repeated information mail-outs to influence attitudes among managers and bosses in industry<sup>42</sup>. At present, Mencap provide resources designed to encourage employers to consider persons with learning disabilities for work placements and paid employment<sup>43</sup>. However, the effect of such resources on potential employers' attitudes does not appear to have been formally tested.

Few would question that placing children with learning and other disabilities alongside their peers without disabilities within inclusive schools is important in principle and may also affect negative attitudes and discrimination. Comparative evidence, such as a recent study from Greece, suggests that children in inclusive schools show more positive attitudes towards peers with learning disabilities than children in non-inclusive schools<sup>44</sup>. Reports of bullying and feeling excluded within inclusive environments<sup>45 46 47</sup> indicate that this alone is not enough and that more should be done to combat negative attitudes and behavior and actively promote social interactions. One argument against such efforts, common among teachers, is that active interventions draw attention to the disability and enhance notions of difference<sup>48</sup>. Accordingly, children and young people in inclusive schools may receive interventions aimed at raising disability awareness and reducing bullying, including work targeting bullying of peers with disabilities, such as a current large programme funded by the Department for Education<sup>49</sup>. However, few efforts address negative attitudes to peers with learning disabilities more specifically or tackle reluctance to engage closely with them. Of note, more interventions have been reported in the literature that aim to educate children and young people about autism or tackle negative attitudes towards peers with autism. One such example involved a six to eight-session anti-stigma programme that combined education with both direct and video contact with individuals with high functioning autism. The intervention was shown to have a positive effect on the knowledge and attitudes of adolescent boys, but had no effect on their behavioral intentions towards peers with autism<sup>50 51</sup>.

Looking at interventions that have targeted school aged children but are not specific to learning disabilities, a recent review of 42 disability awareness interventions concluded that multi-media and multi-component

## What has been done to tackle negative attitudes? (continued)

approaches involving a range of activities are most likely to be effective in improving children and young people's attitudes and peer acceptance<sup>52</sup>.

Attempts have also been reported to increase trainee teachers' understanding of learning disability, for example through a half-day training event<sup>53</sup>, and a mix of formal teaching and experiential learning which improved teachers' attitudes to teaching children with learning disabilities within inclusive environments<sup>54</sup>. These included university educational lecture programmes, and use of educational vignettes. A recent Scottish study examined student teachers' attitudes to inclusion at the beginning and end of a 1-year diploma course which emphasised inclusion. Teachers' attitudes and beliefs towards the principles of inclusive education remained positive throughout the course and were largely undiminished by school experience. The authors noted that this contradicts findings reported elsewhere, whereby student teachers' attitudes may become more negative following experience in schools<sup>55</sup>. It is likely that the impact of teaching practice in inclusive schools is affected by a broad range of factors that go beyond the scope of this review but that should be considered closely in ensuring that such experiences do not have negative effects on (trainee) teachers' attitudes.

In responding to concerns about inadequate healthcare delivered to people with learning disabilities, attempts to increase knowledge of learning disability and tackle negative attitudes among health care providers, alongside efforts to increase their skills in providing healthcare to this population have shown positive effects<sup>32</sup>. In one study, medical students had a 2-hour meeting with the families of children with

disabilities, including learning disabilities, during which they interviewed the parents about their experiences of parenting the respective child. The students subsequently wrote an account of the visit and their insights and showed increased understanding and empathy with these parents<sup>56</sup>.

Attempts have also been made to educate police officers about the needs of people with learning disabilities and shift their attitudes towards them in a positive direction<sup>57</sup>. In the wake of changes to disability hate crime legislation in the UK, in many places police officers are receiving training related to the reporting of and responding to instances of possible disability hate crimes perpetrated against people with learning disabilities. One study evaluated the effects on police officers of a 45 minute intervention consisting of didactic awareness training and indirect contact via film. While officers' self-rated knowledge and confidence in interacting with someone with a learning disability increased, there was no change in their attitudes to people with learning disabilities<sup>58</sup>.

Elsewhere, a study of neighbours' views of residential facilities for people with learning disabilities found that visiting the facility did not have a positive effect on attitudes across all participants, but only for some neighbours. Positive effects were observed, for example, on neighbours who had young children and visited the facility, perhaps because the visit alleviated fears they may have had for the welfare of their children<sup>59</sup>.

A rather different approach to most interventions was taken in a recent study that investigated the impact of human rights awareness training on support staff in an NHS

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learning disability service<sup>60</sup>. The training, not surprisingly, increased knowledge of human rights. However, the training did not affect attitudes towards human rights, or views on the relevance of human rights to support staff members' everyday work with learning disabilities.

Few efforts have been made to use mass media to change attitudes towards people with learning disabilities. In contrast, large mass media campaigns have been employed in other fields in recent times, such as Time to Change in England and See Me in Scotland designed to combat negative attitudes towards people with mental health problems; or End the Awkward, designed to tackle anxiety relating to interactions with people with physical disabilities. Of note, End the Awkward assumes that negative attitudes and a reluctance to

interact with people with disabilities relate to unfamiliarity and the associated discomfort rather than to antipathy or deep-seated hostility.

Interventions at the level of legislation, policy and service delivery are manifold. Prominent and diverse interventions designed to challenge discrimination and exclusion, and thus arguably attitudes in an indirect fashion, include: (1) the widespread adoption of inclusive education; (2) the Equality Act 2010, which among other provisions has placed a duty on public sector bodies to ensure that reasonable adjustments are made to services to ensure that all sections of society, including people with disabilities, can access public services; and (3) the naming of 'disability' as one of the categories motivating hate crime under the UK's Criminal Justice Act 2003.

# Limitations of research on attitude change

As indicated by the wide range of studies referred to above, numerous interventions from different parts of the world have been reported that loosely aim to change attitudes towards people with (learning) disabilities, including disability awareness and disability equality training, anti-bullying work in education settings, and a host of mostly small scale, isolated, contact-based interventions. These interventions vary in target group, contents, methodology and intensity but without doubt are generally well intended, and at times have shown promising results. The scientific meaning and social impact of such interventions is limited at present because few have been formally evaluated. Those attitude change interventions that have been evaluated often show conceptual and methodological limitations. Therefore at present, it is premature to draw firm conclusions about 'what works' – instead it is important to note key limitations of the evidence that should be considered in the design of future interventions. Many interventions that have been tested or piloted, despite showing promising results, appear to have been one-off efforts that have not resulted in wider implementation. This indicates that closer attention needs to be paid to implementation (and collaboration), to avoid multiple small efforts that are short lived and of little impact in changing attitudes.

Key methodological limitations of interventions reported to date are:

- reliance on small samples, which limit the confidence with which we can draw conclusions;
- recruitment of students and volunteers rather than participants who are representative of the target population;
- failure to take repeated measures that would allow for more robust observations of change - instead participants receiving the intervention are often asked retrospectively to report on any changes, a notoriously unreliable means of evaluating any intervention;
- and failure to take follow-up measurements, that is after a significant passage of time.

Another methodological limitation concerns the poor measurement of attitudes to people with learning disabilities<sup>61</sup>. Most measures available fail to distinguish the three components of attitudes (cognition, affect and behavior). A recently developed measure, the Attitudes toward Intellectual Disability (ATTID) questionnaire, is a notable exception<sup>62 63</sup>. Some widely used measures, such as the Community Living Attitudes Scale- Intellectual Disability version (CLAS-ID)<sup>64</sup>, fail to reflect the great diversity of the learning disability population. For example, when asked to indicate to what extent they endorse items such as “People with learning disabilities can be trusted to handle money responsibly” many well informed individuals would likely wish to respond with “well, it depends...” rather than with a definite answer.

Finally, another crucial methodological limitation with existing research is that most studies have failed to test the impact of attitude change interventions on actual behavior. Although the effects of an intervention on behavior are much more difficult to measure than asking someone to complete a self-report questionnaire, it is how people behave in relation to individuals with learning disabilities that has perhaps

the strongest effect on opportunities for equal participation in society. Studies that did consider change in behavioural intentions or actual behavior mostly found changes in knowledge and attitudes but there was often little indication that the intervention affected how someone acts or might act in real life interactions with people with learning disabilities.

Concerning conceptual limitations, many interventions have not been based in a coherent fashion on theories of attitude and attitude change, despite these being abundant in the field of social psychology. Without clear theoretical underpinnings that guide intervention design, that is a statement of how attitude change is expected to happen,

any changes observed are vulnerable to unconvincing, post-hoc explanations. Detailed consideration of attitude change theories is beyond the scope of this document. However, as noted earlier, interventions should pay close attention to the three components of attitudes and explicitly state at which of these the intervention is targeted and how change is projected to occur. Intergroup contact theory<sup>65</sup>, or a version thereof that more closely represents 'mere exposure', appears to underpin many of the interventions in the learning disabilities field. However, theories that have informed attitude change in other fields, such as **attribution theory**<sup>66</sup> or **social norms theory**<sup>67</sup>, have found little attention in the learning disabilities field to date.

# What can we learn from efforts to improve attitudes to learning disability reported to date?

Despite the limitations noted above, some conclusions do appear justified based on the wider literature and evidence from efforts to improve attitudes to learning disability reported to date. Research fairly consistently points to the role of contact with members of an outgroup as one of the most promising routes to improving attitudes, with the proviso that contact should be positive and challenge negative stereotypes rather than reinforce them. With regard to the need to challenge stereotypes, we may draw on evidence from other fields to suggest that exposing people to individuals who moderately or strongly disconfirm common stereotypes, and who vary in terms of their backgrounds, life roles and the challenges they face<sup>68 69</sup> is likely to be most effective. These suggestions should be tested in relation to attitudes to people with learning disabilities. Given that common stereotypes of people with learning disabilities portray them as childlike, dependent, and in need of protection, there is clear scope for exposure to individuals who challenge such stereotypes. This will need balancing carefully with not denying the needs of people with severe and profound learning disabilities who may be at risk of being further marginalised.

At present, we cannot say with certainty what quantity, quality or type of contact is optimal in improving attitudes to learning disability. One important conclusion from existing research is that contact based interventions need to be carefully planned to minimise the risk of unintended, adverse consequences. A 10-week course on learning disability delivered to students that combined lectures with a minimum of 20 hours of contact, for

example, resulted in more negative attitudes among some of the 37 recipients<sup>70</sup>. A similar warning has emerged from studies conducted in Japan, namely that negative contact experiences, especially in childhood, may in fact increase the social distance that people wish to maintain<sup>71 72</sup>. Furthermore, a study into the effects of volunteering at the Special Olympics suggested that a moderate amount of contact, as opposed to no or ample contact, had the strongest association with more positive attitudes and willingness to interact, and that the perception of individuals with learning disabilities as competent may be key to attitude change<sup>34</sup>. These types of findings have very important implications for the design of future contact based interventions. They indicate that further research is needed that pays close attention to the multi-faceted nature of contact, and the conditions within which it occurs, in testing the effects of contact based interventions.

While most research has considered direct personal contact, recent evidence from both the mental health<sup>68 73 74</sup> and learning disabilities<sup>26</sup> fields suggests that indirect contact through film exposure may have a role to play in improving attitudes, although its effects appear weaker than direct contact. Film interventions may be of use when integrated into more wide-ranging efforts to change attitudes, but are unlikely to produce significant positive change on their own.

The tensions inherent in balancing key aims of interventions designed to improve attitudes should not be underestimated. For example, encouraging empathy, highlighting injustices



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experienced by people with disabilities, evoking positive emotional responses, and portraying the capabilities of people with learning disabilities at the same time as providing a realistic picture of their abilities and needs and avoiding the reinforcement of negative stereotypes, is a challenge.

Another conclusion that is reasonable to make concerns the value of involving people with learning disabilities in delivering attitude change interventions. Evidence from the mental health field suggests that first person narratives have greater impact than narratives by family members or carers. We need to explore whether this holds for the learning disabilities field. Tentative support for the power of first person accounts comes, for example,

from a recent study where a first-hand account by a man with learning disabilities of bullying and violence both in childhood and adulthood evoked strong emotional responses in film viewers and showed modest improvements in attitudes<sup>26</sup>. However, whether such accounts are more powerful than those, for example, of parents when matched on emotional impact is a question for further research. Also, importantly, reliance on first person narratives will inevitably privilege the experiences of people with mild to moderate learning disabilities. Although they constitute the majority of people with learning disabilities, the extent to which they can appropriately represent people with severe and profound learning disabilities is questionable.

# Conclusions and recommendations for action

As will be apparent from the overview presented here, there is a need to do more to tackle attitudinal barriers within society at large and among groups that are more likely to have contact with people with learning disabilities. The available evidence on interventions designed to improve attitudes and reduce discrimination in relation to people with learning disabilities is not sufficiently robust to recommend one type of intervention over another at the present time. The positive results reported in many studies should be viewed with some caution as most effects reported were small, and most studies drew on convenience samples, mostly consisting of students and volunteers. Furthermore, much of the research conducted to date has significant methodological and conceptual limitations that limit the usefulness of the findings.

In moving forward in a coherent fashion in designing interventions and evaluating their success, we believe a multi-level model of countering negative attitudes, such as that proposed by Cook and colleagues<sup>75</sup> (see Figure 1), can serve as a useful framework or roadmap. While Cook and colleagues applied this model to mental health stigma, we believe it has a lot to offer in providing a framework for the range of interventions that should be considered in aiming for greater acceptance and equality for people with learning disabilities.

The model distinguishes interventions that target stigma at the intrapersonal, interpersonal and structural levels, and emphasises that efforts at different levels are

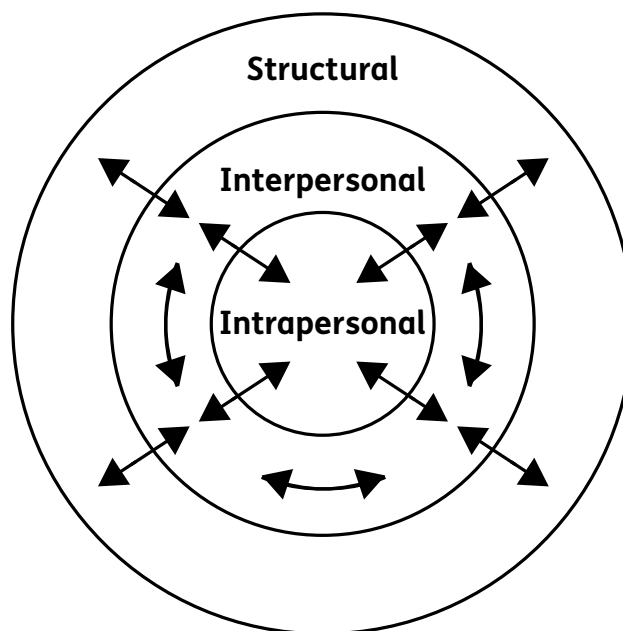


Figure 1. Multi-level Model by Cook and colleagues<sup>77</sup>.\*

related and reciprocally affect one another. Interventions at the intrapersonal level focus on the persons themselves who are affected by stigma, and aim to help them cope with the negative consequences of stigmatisation, such as internalised or self-stigma. Interventions at the interpersonal level target social interactions between the stigmatized (i.e. those who are the target of negative attitudes and discrimination), and the stigmatisers (i.e. those who hold negative attitudes or discriminate against the stigmatized). Most of the initiatives that have been attempted to date in the learning disabilities field have been at the interpersonal level. Finally, interventions at the structural level aim to change social conditions that give rise to stigma, for example, by tackling barriers to equal access to education,

\*Reprinted from Social Science & Medicine, 103, Cook, J. E. et al., Intervening within and across levels: A multilevel approach to stigma and public health, 101-109, 2014, with permission from Elsevier and the authors.

healthcare, and housing, or by using mass media to produce large scale change. These initiatives aim to reach a large audience. Some examples of structural level interventions are mass media campaigns designed to raise awareness about learning disability or influence attitudes, implementation of legislation and policy arising from the UN Convention on the Rights of People with Disabilities, legislation against disability hate crime, and the 2010 Equality Act which requires public bodies to make reasonable adjustments for people with learning disabilities.

To provide a useful roadmap for the learning disabilities field, a multi-level model needs to take careful note of the importance of parental and family reactions, while also accounting for stigma experienced by parents and family members as a result of having a son, daughter or sibling with a learning disability, an area that has found only little attention in research<sup>22 76</sup>. Furthermore, the potential positive as well as negative effects of parental reactions on attitudes towards people with learning disabilities cannot be underestimated. Parental advocacy continues to play a very important role in improving perceptions of learning disability, and attention to their rights. Conversely, negative family reactions, such as shame about having a child with a disability, can have detrimental effects on the individual concerned and do little to challenge negative attitudes.

Given the rather piecemeal nature of interventions and research reported to date, we suggest a greater emphasis on collaboration between those implementing interventions and researchers, and between research teams, is needed to develop a strong evidence base. Where such collaboration involves multi-national efforts, close attention should be paid to exploring universal change processes alongside methods tailored to local and national circumstances, demands and resources.

With regard to general population attitudes to learning disability, more research is needed to decipher which specific components of interventions are effective drivers for change, which make best use of limited resources and which are most capable of reaching large audiences, while being effective. More research is also called for on the effects of interventions on real-life behaviours. Above all, closer attention is called for in the design of interventions to psychological theories of attitude and behaviour change. A 2009 review of evidence on prejudice reduction across different fields provides some useful pointers to attitude change processes informed by theory<sup>77</sup>. Their conclusions note: (a) that intergroup behaviour appears more closely linked to social norms than personal beliefs – accordingly, conveying social norms and using peer influence to transmit clear messages that prejudice towards group X is not normative within a given social group helps to reduce prejudice; (b) the value of perspective taking and empathy – accordingly, perspective taking exercises focused on emotions (such as filmed first-hand accounts of bullying and abuse and their impact<sup>26</sup>, or interviews with parents of children with disabilities and subsequent reflective accounts<sup>56</sup>) can increase desire to interact; (c) the risks inherent in direct instruction- being told to suppress a stereotype in fact increases the salience of said stereotype.

# Recommendations

Our recommendations for specific priorities for intervention and research are:

- In view of apparent widespread confusion about what a learning disability is, and misconceptions about the capabilities of people with learning disabilities, attempts to educate the general public should be part of efforts to counter prejudice and discrimination. The media clearly have a role to play in providing more positive portrayals that refrain from depicting people with learning disabilities as incapable, childlike or pitiable victims. In the UK, the BBC's aim to quadruple the representation of people with disabilities on screen by 2017 should be seen as an opportunity to increase the volume and diversity of presentations of people with learning disabilities in the media. Where possible the impact of different types of media portrayals on attitudes should be tested with representative samples.
- Lack of direct contact with or exposure to people with learning disabilities may leave many feeling uncomfortable and unsure how to interact with someone with a learning disability. To counter the risk that such discomfort prompts avoidance, more exposure to people with learning disabilities, directly where possible, and indirectly where this is not feasible (rather than not at all), is called for. For the general public this is most likely to be facilitated by the media, for children and young people through inclusive activities and inclusive education, and for those more likely to be in regular contact with people with learning disabilities as part of training and continuing professional development. We note that some training programmes already provide this, but more consistency is needed. Similarly, there are already e-learning training opportunities available that include exposure to and first-hand accounts of people with learning disabilities. However, at present their dissemination is limited and their effects on attitudes and real life behavior are often poorly understood. Importantly, the effects of direct and indirect contact both through face-to-face interactions and e-learning should be tested using robust methods to advance our understanding of the conditions under which contact with individuals or groups of people with learning disabilities leads to positive attitude change.
- Ultimately though, only through supporting the rights of people with learning disabilities to equal participation in education, employment, social and leisure pursuits will the general public have more opportunities for, and benefit from, direct contact. Thus, fighting for the right of people with learning disabilities to have increased access to community resources must be part of efforts to change attitudes.
- Efforts to educate and challenge the formation of prejudice directed at individuals with learning disabilities should start at an early age. While there are many disability awareness programmes in place that target children, they usually aim to change attitudes towards peers with physical (or sensory) disabilities, and mostly appear to do little to affect attitudes and acceptance of peers with learning disabilities. Similarly, anti-bullying work is commonplace but little of this is specific to peers with learning disabilities whose disabilities may often be hidden and poorly understood.

- Interventions and awareness projects from all stakeholders, including charities, should have carefully designed evaluation built in from the outset, to develop our understanding of the best routes to tackling negative attitudes to learning disability. Recent evidence suggests that explicit and implicit attitude measures should be combined to measure outcomes as they jointly provide the best prediction of behavior for socially sensitive topics, such as attitudes to disability, where self-report measures alone provide particularly poor predictions of behaviour.

# References

1. Emerson, E., Hatton, C., Roberston, J., Roberts, H., Baines, S., Evison, F., & Glover, G. (2012). People with Learning Disabilities in England in 2011. Durham: Improving Health and Lives: Learning Disabilities Observatory.
2. Mencap (2000). Living in Fear. London: Mencap.
3. Quarmby, K. (2008). Getting away with murder: Disabled people's experiences of hate crime in the UK. London: Scope.
4. Quarmby, K. (2011). Scapegoat: Why we are failing disabled people. London: Portobello Books.
5. Sin, C. H., Hedges, A., Cook, C., Mguni, N., & Comber, N. (2009). Disabled people's experiences of targeted violence and hostility. Manchester: Equality and Human Rights Commission.
6. Times Educational Supplement (2014). Increase in number of special school pupils reverses trend towards inclusion. Times Educational Supplement Connect, 10/Aug/2014. Retrieved from <https://news.tes.co.uk/b/news/2014/08/08/increase-in-special-school-numbers-reverses-trend-towards-inclusion.aspx>
7. Goffman, E. (1963). Stigma: Notes on the Management of Spoiled Identity. London: Prentice-Hall.
8. Link, B.G. & Phelan, J.C. (2001). Conceptualizing Stigma. Annual Review of Sociology, 27, 363-385.
9. Corrigan, P.W. & Watson, A.C. (2002). Understanding the impact of stigma on people with mental illness. World Psychiatry, 1, 16-20.
10. Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test III: Meta-analysis of predictive validity. Journal of Personality and Social Psychology, 97, 17-41.
11. Wilson, M. & Scior, K. (2014). Implicit attitudes towards individuals with disabilities as measured by the Implicit Association Test: A Literature Review. Research in Developmental Disabilities, 35, 294-321.
12. Scior, K. (2011). Public awareness, attitudes and beliefs regarding intellectual disability: a systematic review. Research in Developmental Disabilities, 32, 2164-2182.
13. Gordon, P. A., Feldman, D., Tantillo, J. C., & Perrone, K. (2004). Attitudes regarding interpersonal relationships with persons with mental illness and mental retardation. Journal of Rehabilitation, 70, 50-56.
14. Mencap (2008). Lack of knowledge of learning disability revealed. Retrieved from <https://www.mencap.org.uk/node/6998>.
15. Scior, K., Potts, H. W., & Furnham, A. F. (2013). Awareness of schizophrenia and intellectual disability and stigma across ethnic groups in the UK. Psychiatry Research, 208, 125-130.
16. Staniland, L. (2011). Public Perceptions of Disabled People: Evidence from the British Social Attitudes Survey 2009. London: Office for Disability Issues.
17. National Disability Authority (2011). A National Survey of Public Attitudes to Disability in Ireland 2011. Dublin: National Disability Authority.
18. MacDonald, J. D., & MacIntyre, P. D. (1999). A rose is a rose: Effects of label change, education, and sex on attitudes toward mental disabilities. Journal of Developmental Disabilities, 6, 15-31.
19. McCaughey, T. J., & Strohmer, D. C. (2005). Prototypes as an indirect measure of attitudes toward disability groups. Rehabilitation Counselling Bulletin, 48, 89-99.
20. Ouellette-Kuntz, H., Burge, P., Brown, H. K., & Arsenault, E. (2010). Public attitudes towards individuals with intellectual disabilities as measured by the concept of social distance. Journal of Applied Research in Intellectual Disabilities, 23, 132-142.
21. Deal, M. (2007). Aversive disablism: Subtle prejudice toward disabled people. Disability and

- Society, 22, 93-107.
22. Ali, A., Hassiotis A, Strydom A, King M. (2012). Self-stigma in people with intellectual disabilities and courtesy stigma in family carers: a systematic review. *Research in Developmental Disabilities*, 33, 2122-2140.
  23. Beadle-Brown, J., Guest, C., Richardson, L., Malovic, A., Bradshaw, J., & Himmerich, J. (2013). *Living in Fear: Better Outcomes for people with learning disabilities and autism*. Canterbury: Tizard Centre, University of Kent.
  24. Power, A. (2008). Caring for independent lives: Geographies of caring for young adults with intellectual disabilities. *Social Science & Medicine*, 67, 834-843.
  25. Ryan, S. (2005). 'Busy behaviour' in the 'land of the golden M': Going out with learning disabled children in public places. *Journal of Applied Research in Intellectual Disability*, 18, 65-74.
  26. Walker, J., & Scior, K. (2013). Tackling stigma associated with intellectual disability among the general public: A study of two indirect contact interventions. *Research in Developmental Disabilities*, 34, 2200-2210.
  27. Iacono, T., Lewis, B., Tracy, J., Hicks, S., Morgan, P., Recoche, K., & McDonald, R. (2011). DVD-based stories of people with developmental disabilities as resources for inter-professional education. *Disability & Rehabilitation*, 33 (12), 1010-1021.
  28. Hall, H., & Minnes, P. (1999). Attitudes towards persons with Down's syndrome: The impact of television. *Journal Developmental & Physical Disabilities*, 11, 61-76.
  29. Seewooruttun, L., & Scior, K. (2014). Interventions aimed at increasing knowledge and improving attitudes towards people with intellectual disabilities among lay people. *Research in Intellectual Disabilities*, 35, 3482-3495.
  30. Corrigan, P. W., Morris, S. B., Michaels, P. J., Rafacz, J. D., & Rüsçh, N. (2012). Challenging the public stigma of mental illness: A meta-analysis of outcome studies. *Psychiatric Services*, 63, 963-973.
  31. Corrigan, P. W., & Kosyluk, K. A. (2013). Erasing the stigma: Where science meets advocacy. *Basic and Applied Social Psychology*, 35, 131-140.
  32. Tracy, J., & Iacono, T. (2008). People with developmental disabilities teaching medical students: Does it make a difference? *Journal of Intellectual & Developmental Disabilities*, 33, 345-348.
  33. Nosse, L. J., & Gavin, K. J. (1991). Influence of direct contact on college students' attitude towards adults with mental handicaps. *College Student Journal*, 25, 201-206.
  34. Freudenthal, J. J., Boyd, L. D., & Tivis, R. (2010). Assessing change in health professions volunteers' perceptions after participating in Special Olympics healthy athlete events. *Journal Dental Education*, 74, 970-979.
  35. Roper, P. (1990). Changing perceptions through contact. *Disability, Handicap & Society*, 5, 243-255.
  37. Varughese, S. J., & Luty, J. (2010). Stigmatised attitudes towards intellectual disability: A randomised crossover trial. *Psychiatric Bulletin*, 34, 318-322.
  38. Varughese, S. J., Mendex, V., & Luty, J. (2011). Impact of positive images of a person with intellectual disability on attitudes: Randomised controlled trial. *The Psychiatrist*, 35, 404-408.
  39. Campbell, J., Gilmore, L., & Cuskelly. (2003). Changing student teachers' attitudes towards disability and inclusion. *Journal of Intellectual & Developmental Disability*, 28, 369-379.
  40. Special Olympics (2005). *Changing Attitudes Changing the World: Media's Portrayal of People with Intellectual Disabilities*. Available at [http://www.specialolympics.org/uploadedFiles/LandingPage/WhatWeDo/Research\\_Studies\\_Description\\_Pages/Policy\\_paper\\_media\\_portrayal.pdf](http://www.specialolympics.org/uploadedFiles/LandingPage/WhatWeDo/Research_Studies_Description_Pages/Policy_paper_media_portrayal.pdf)
  41. Foundation for People with Learning Disabilities. *Tips for broadcasters*. Available at <http://www.learningdisabilities.org.uk/content/assets/pdf/publications/tips-for-broadcasters.pdf>

## References (continued)

42. Russell, T., & Ayer, F. E. (1988). The effects of a direct-mail informational campaign on attitudes of industrial managers toward the mentally retarded population. *Journal of Mental Deficiency Research*, 32, 183–191.
43. Mencap. Information for employers. Available at <https://www.mencap.org.uk/our-services/personal-support-services/work/information-employers>
44. Georgiadi, M., Kalyva, E., Kourkoutas, E., Tsakiris, V. (2012). Young children's attitudes toward peers with intellectual disabilities: effect of the type of school. *Journal of Applied Research in Intellectual Disabilities*, 25, 531-541.
45. Frederickson, N. (2010). Bullying or Befriending? Children's responses to classmates with special needs. *British Journal of Special Education*, 37, 4-12.
46. Mencap (2007). *Bullying wrecks lives: The experiences of children and young people with a learning disability*. London: Mencap Publications.
47. Emerson, E. (2015). *The determinants of health inequalities experienced by children with learning disabilities*. Public Health England.
48. Beckett, A.E., Buckner, L., Barrett, S., Ellison, N. & Byrne, D. (2009). Promoting positive attitudes towards disabled people – the views of schools and teachers. DEEPS Project Working Paper 2, School of Sociology & Social Policy, University of Leeds.
49. Anti-Bullying Alliance SEND. Developing Effective Anti-Bullying Practice. <http://www.anti-bullyingalliance.org.uk/send-programme>
50. Staniland, J. J., & Byrne, M. K. (2013). The effects of a multi-component higher-functioning autism anti-stigma program on adolescent boys. *Journal of Autism and Developmental Disorders*, 43, 2816-2829.
51. Ranson, N. J., & Byrne, M. K. (2014). Promoting peer acceptance of females with higher-functioning autism in a mainstream education setting: A replication and extension of the effects of an autism anti-stigma program. *Journal of Autism and Developmental Disorders*, 44, 2778-96.
52. Lindsay, S., & Edwards, A. (2013). A systematic review of disability awareness interventions for children and youth. *Disability & Rehabilitation*, 35, 623-646.
53. Rae, H., McKenzie, K., & Murray, G. (2011). The impact of training on teacher knowledge about children with an intellectual disability. *Journal of Intellectual Disabilities*, 15, 21-30.
54. Campbell, J., Gilmore, L.C., & Cuskelly, M. (2003). Changing student teachers' attitudes towards disability and inclusion. *Journal of Intellectual & Developmental Disability*, 28, 369–379.
55. Beacham, N. & Rouse, M. (2012). Student teachers' attitudes and beliefs about inclusion and inclusive practice. *Journal of Research in Special Educational Needs*, 12, 3-11.
56. Sharma, U., Forlin, C., & Loreman, T. (2008). Impact of training on pre-service teachers' attitudes and concerns about inclusive education and sentiments about persons with disabilities. *Disability & Society*, 23, 773-785.
57. Bailey, A., Barr, O., & Bunting, B. (2001). Police attitudes toward people with intellectual disability: An evaluation of awareness training. *Journal of Intellectual Disability Research*, 45, 344–350.
58. Raczka, R. & Theodore, K. & Williams, J. Can brief training have an impact on police attitudes towards people with intellectual disabilities? Presentation available at [https://www.bps.org.uk/system/files/user-files/Faculty%20for%20Learning%20Disabilities%20CPD%20event/paper\\_can\\_brief\\_awareness\\_training\\_impact\\_on\\_police\\_attitudes\\_towards\\_people\\_with\\_intellectual\\_disabilities.pdf](https://www.bps.org.uk/system/files/user-files/Faculty%20for%20Learning%20Disabilities%20CPD%20event/paper_can_brief_awareness_training_impact_on_police_attitudes_towards_people_with_intellectual_disabilities.pdf)
59. Schwartz, C., & Rabinovitz, S. (2001). Residential facilities in the community for people with intellectual disabilities: How neighbours'



- perceptions are affected by the interaction of facility and neighbour variables. *Journal of Applied Research in Intellectual Disabilities*, 14, 100–109.
60. Redman, M., Taylor, E., Furlong, R., Carney, G. & Greenhill, B. (2012). Human rights training: impact on attitudes and knowledge. *Tizard Learning Disability Review*, 17, 80-87.
  61. Werner, S., Corrigan, P., Ditchman, N., & Sokol, K. (2011). Stigma and intellectual disability: A review of related measures and future directions. *Research in Developmental Disabilities*, 33, 748-65.
  62. Morin, D., Crocker, G. A., Beaulieu-Bergeron, R. and Caron, J. (2013). Validation of the attitudes toward intellectual disability – ATTID questionnaire. *Journal of Intellectual Disability Research*, 57, 268–278.
  63. Morin, D., Rivard, M., Crocker, G. A., Boursier, C.P. & Caron, J. (2013). Public attitudes towards intellectual disability: a multidimensional perspective. *Journal of Intellectual Disability Research*, 57, 279–292.
  64. Henry D., Keys C., Jopp D. & Balcazar F. (1996). The Community Living Attitudes Scale, Mental Retardation Form: development and psychometric properties. *Mental Retardation*, 34, 149–58.
  65. Allport, G.W. (1954). *Intergroup Contact Theory*. Cambridge, MA: Perseus Books.
  66. Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92, 548-573.
  67. Berkowitz, A. (2004). *The Social Norms Approach: Theory, Research, and Annotated Bibliography*. Available at [www.alanberkowitz.com/articles/social\\_norms.pdf](http://www.alanberkowitz.com/articles/social_norms.pdf)
  68. Clement, S., van Nieuwenhuizen, A., Kassam, A., Flach, C., Lazarus, A., de Castro, M., McCrone, P., Norman, I., & Thornicroft, G. (2012). Filmed versus live social contact interventions to reduce stigma: Randomised controlled trial. *British Journal of Psychiatry*, 201, 57-64.
  69. Reinki, R. W., Corrigan, P. W., Leonhard, C., Lundin, R. K., & Kubiak, M. A. (2004). Examining two aspects of contact on the stigma of mental illness. *Journal of Social and Clinical Psychology*, 23, 377-389.
  70. Kobe, F. H., & Mulick, J. A. (1995). Attitudes toward mental retardation and eugenics: The role of formal education and experience. *Journal of Developmental & Physical Disabilities*, 7, 1–9.
  71. Narukawa, Y., Maekawa, H., & Umetani, T. (2005). Causal analysis of attitude formation towards persons with intellectual disabilities. *Japanese Journal of Special Education*, 42, 497–511.
  72. Tachibana, T. (2005). Attitudes of Japanese adults toward persons with intellectual disability: An exploratory analysis of respondents' experiences and opinions. *Education & Training in Developmental Disabilities*, 40, 352–359.
  73. Corrigan, P. W., Morris, S. B., Michaels, P. J., Rafacz, J. D., & Rüsck, N. (2012). Challenging the public stigma of mental illness: A meta-analysis of outcome studies. *Psychiatric Services*, 63, 963-973.
  74. Corrigan, P. W., & Kosyluk, K. A. (2013). Erasing the stigma: Where science meets advocacy. *Basic and Applied Social Psychology*, 35, 131-140.
  75. Cook, J. E., Purdie-Vaughns, V., Meyer, I. H., & Busch, J. T. (2014). Intervening within and across levels: A multilevel approach to stigma and public health. *Social Science & Medicine*, 103, 101-109.
  76. Werner, S. & Shulman, C. (2013). Subjective well-being among family caregivers of individuals with developmental disabilities: The role of affiliate stigma and psychosocial moderating variables. *Research in Developmental Disabilities*, 34, 4103–4114.
  77. Paluck, E.L. & Green, D.P. (2009). Prejudice reduction: what works? A review and assessment of research and practice. *The Annual Review of Psychology*, 60, 39-67.