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Universal Preschool- and School-based Education Programmes for Reducing Ethnic Prejudice and Promoting Respect for Diversity among Children Aged 3-11: A Systematic Review and Meta-Analysis

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BACKGROUND

The Problem

Abrams (2010: p.8) describes prejudice as an outcome of categorisation based on a 'bias which devalues people because of their perceived membership of a social group'. Prejudice is most often understood to be a negative attitude (antipathy), directed towards an out-group. The preconceived opinions which build to produce prejudice are extremely variable both in nature and presentation and are generally believed to be composed of three major elements: 1) a cognitive component (belief); 2) an affective component (dislike/distaste); and 3) a behavioural component (action) (Beelmann & Heinemann, 2014). Fiske, Cuddy & Glick (2007) propose that the well-documented keywords of 'stereotyping', 'prejudice' and 'discrimination' reflect these cognitive, affective, and behavioural reactions to people from another group, respectively.

Ethnic prejudice is a particular form of prejudice characterised by negative attitudes towards other ethnic groups. An 'ethnic group' refers to any social group that regards itself as distinctive, and that is also regarded by others as distinctive, due to sharing common ancestral, social, cultural and/or national backgrounds that are passed on from one generation to the next (Jenkins, 2008). The signifiers that mark ethnic difference are varied and can include: language, religion, distinct cultural practices, birthplace, shared history and/or skin colour. Where an ethnic group is signified, at least in part, by skin colour then that group can also be referred to as a 'racial group'. Whilst 'race' is therefore a distinct strand of the wider notion of ethnicity, this is not to deny the specific experiences of particular racial groups. The notion of ethnicity and the term ethnic group are therefore used simply to refer to the general processes by which differences emerge between particular social groups; the precise ways in which this happens, and the specific experiences of those involved and how this impacts upon their lives and social worlds, will differ and can only be understood in context (Donald & Rattansi, 1992).[1]

The demonstration of prejudice towards an ethnic group may be explicit or implicit, intended or unintended and can range from overt acts of violence and name calling through to routine social exclusion and a wide range of subtle and often unintended practices based upon stereotypical beliefs (Anas, 2002). Among the detrimental effects of suffering social exclusion as a child are: a lack of motivation to flourish in school (Hartley & Sutton, 2013;

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[1] Such processes have been captured in concepts such as 'the process of racialisation' (Miles, 1993) and 'racial formations' (Omi and Winant, 1995). While both of these concepts place emphasis on race they also stress the nature by which different groups become 'racialised' and how the signifiers that emerge for such groups can vary and include skin colour but also other markers of difference, such as nationality or culture, reflecting the particular socio-political and economic contexts involved.

Ogbu 2003,); psychological instability such as anxiety and depression (Juvonen & Graham, 2001); and challenging relationships with peers (Spradlin & Parsons, 2007). Moreover, a child who is consistently excluded by classmates or peers may ultimately find it difficult to establish relationships (Abrams & Killen, 2014).

Whilst some prejudices may be subtle and/or unintentional, they can nevertheless have serious and damaging consequences for members of minority ethnic groups (Shelton, Richeson, Salvatore & Hill, 2006). Some of the consequences of ethnic prejudice include: ethnic segregation and the social inequalities borne from this (Anas, 2002); the labelling of students from particular ethnic groups in school and their subsequent allocation to lower streams and sets and their consequent underachievement (Woolfe, Cave, Greenhalgh & Dacre, 2008); discrimination in the workplace (Bertrand & Mullainathan, 2004); and consequent negative health outcomes (Loring & Powell, 1988).

Moreover, the behavioural consequences of prejudice are not only damaging to the social growth of those subject to it, but also potentially debilitating to the perpetrators. Being a person who consistently discriminates may lead to group or individual avoidance and this, in turn, can deprive a perpetrator of the possibility of rich and valuable intergroup relationships and may inhibit their broader social development (Baerveldt, Duijn, Vermeij & Van-Hemert, 2004).

Respect for Diversity

Ethnic prejudice, and an understanding of the many debilitating outcomes which arise from it, place an important responsibility on educationalists to move beyond a focus on simply reducing prejudice to a more proactive and preventative stance of building an awareness of and respect for ethnic diversity (Freed, 1993).

Whilst challenging existing stereotypes and the prejudiced attitudes and behaviours that arise from these is important, this notion of respect for diversity therefore requires more than this. In particular, it can be understood as comprising at least two key strands. The first is a focus on increasing awareness and understanding of other ethnic groups and thus on recognising the legitimacy of other ethnic identities and of the variations and diversities that exist within each of these. The second is an emphasis on developing a broader value base that is committed to social justice and thus actively engaged in combating inequalities and divisions. Critically, this includes not just challenging individual manifestations of prejudice and discrimination but also understanding and working to address the wider, more ingrained and often institutionalised processes and practices that tend to reinforce and sustain ethnic inequalities and divisions (Bloch, Neal & Solomos, 2013).

The recognition of this need to move beyond a simple commitment to non-prejudice has been characteristic, to varying degrees, of many approaches that have been variously labelled intergroup contact, multiculturalism, anti-racism and critical multiculturalism which will be discussed further in this background review (May, 1999).

Ethnic Prejudice and Young Children

Within the context of diversity and with particular regard to prejudice acquisition in children, a large body of research has provided clear and consistent evidence that children are able to recognise racial differences from two years old and display ethnic prejudices based upon these from as early as three years of age (Aboud, 1989; Aboud & Levy, 2000; Milner, 1983).

This body of work dates back to the 1920s and most of it has focused on young children's attitudes towards 'race'. Unfortunately, there is much less research on children's attitudes towards ethnic groups categorised by non-visible signifiers such as nationality, culture or religion. One exception to this is the work of Bar-Tal (1996) that has explored this phenomenon of ethnic prejudice in the absence of physical cues within the Israeli context by studying when Jewish children are first able to distinguish between themselves and 'an Arab', which cues they rely on to make the distinction and the outcomes of this early categorisation. The author reports that children are able to understand the concept of 'an Arab' from 2.5-3 years old and to view them as being different from Jews at this same developmental age. When questioned about the characteristics of an Arab, children tended to describe them in broad and negative terms including labelling them as 'murderers' and 'killers'. The important point that Bar-Tal noted in relation to this was that such conceptions of Arabs as a distinct group and the projection of negative attitudes and prejudices towards them did not rely upon Jewish children believing they were physically different. Indeed, and for the most part, Jewish children at this age when asked to draw an Arab and a Jewish child were not able to distinguish between them. It was only by the age 5-6 that the children were likely to begin recognising visible cues stereotypically indicative of an Arab. These older children relied on cues such as language, clothing and facial hair while admitting that some had only ever seen an Arab on television.

Similarly, Connolly, Kelly & Smith (2009) found that Catholic and Protestant children in Northern Ireland were also able to develop an understanding of the ethnic divisions that exist between the two majority ethno-religious traditions, and to attribute negative attitudes towards the other, from the age of three. By the age of six, their research estimated that about a third of children were aware of the ethnic divide and identified with one of the two main traditions, whilst one in six expressed overtly sectarian attitudes towards those from the other tradition without prompting. Further research by Connolly, Muldoon & Kehoe (2007) of 10-11 year olds demonstrated how the children's levels of understanding of ethnic difference had become more sophisticated with age and how in-group preferences were a more significant influence on friendships choices than out-group prejudices.

More generally, research has shown that it is erroneous to assume that prejudice in children is simply an innocent imitation of their adult guides. Aboud (1989), for example, reports that prejudice may be an example of the child's own personal preference and that it is an age-related level of functioning. Moreover, a number of qualitative, ethnographic studies of

children at the beginning of primary/elementary school have clearly demonstrated the active role that they can play in appropriating, re-working and adapting racist discourses to suit their own peer-group relationships (see Troyna & Hatcher, 1992; Connolly, 1998; Feagin & Van Ausdale, 2013). Moreover, adult behaviour is widely accepted within the psychological literature to be consequential of the social experiences and learning established in childhood (Bandura, 1969). Continuing on from this, some researchers have suggested that children who exclude others based on prejudicial views are more likely to become adults with similar embedded ideologies based on those biases and unfair stereotypes acquired during childhood (Abrams & Killen, 2014).

Overall, there are three broad types of explanation that have been put forward for the development of these patterns of ethnic prejudice among children: the first emphasises internal processes (cognitive); the second focuses on external factors through inter-personal interactions (social learning); and the third also places an emphasis on external factors but seeks to locate the acquisition of prejudice within wider societal dynamics (ecological). It is worth briefly outlining each of these in turn.

Cognitive Explanations

Cognitive explanations for the development of prejudice go some way to increasing our understanding of how these attitudes can arise from an automatic and often universal habit of mind (Fiske & Russell, 2010). This approach studies the underlying thought processes that can instigate and maintain bias. Research in this field has suggested how some social behaviours are not malleable by conscious control and do not entail much cognitive reasoning. Lippmann (1922) introduced the term *stereotype* to describe this cognitive component of prejudice. Arguments that researchers provide concerning the persistence of prejudices are that although we can teach an understanding of the importance of diversity, it is cognitively much easier to stereotype and compare differences (Fiske, Cuddy & Glick, 2007). It is reported that the discrepancy between what people say (explicit) and how they behave (implicit) reflects simple cognitive processes that do not rely on much conscious thought. To put it simply, it is easier to rely on stereotypes to make quick decisions regarding the actions of another person (Fiske, Cuddy & Glick, 2007; Olson & Zanna, 1993) and this may go some way to explain why prejudice is still a stubborn and repetitive factor in todays advanced society. Allport (1979: 20) observed that: 'The human mind must think with aid of categories … Categories are the basis for normal prejudgement. We cannot possibly avoid this process. Orderly living depends upon it.'

Many researchers believe that stereotypes are born from one of two sources. The first source is through an acceptance of a real difference between groups and in being so it is actually a correct representation, such as men as a whole are physically stronger than women. It is this process of stimuli simplification in the context of categorisation which allows the perceiver to depend and fall back on previous information. It becomes a stereotype however when a person applies the group level characteristic to individual members of groups, thus assuming

for example that a person is strong because they are a man or that they are invariably going to be weaker because they are female. In addition, the second source of stereotyping arises when beliefs are formed quite independent of observable group differences. This faulty generalisation will often lead to the perceiver making a quick judgement across many additional facets (Hilton & VonHippel, 1996).

It is important to note that humans vary immensely in how they exhibit and feel prejudices. Individual differences in how much someone will accept/endorse a prejudiced attitude suggests that being prejudiced is an inherent personality trait. It has been found that individuals who are likely to exhibit prejudiced tendencies towards an ethnic out-group are also more likely to develop and exhibit prejudices towards other social groups as well, whether defined in terms of disability or gender for example (Son-Hing & Zanna, 2010). In this regard, inner state theory of prejudice suggests that individuals with a very strict upbringing by critical parents were most likely to develop an authoritarian personality (Adorno, Frenkel-Brunswick, Levinson & Sanford, 1950). Entrenched authoritarian personality traits were consequently found to create a tendency for individuals to be prejudiced; being more likely to be hostile to those who hold, in their view, inferior status, but also more obedient to those with elevated status. Authoritarian personality types are believed to be fairly rigid in their opinions and beliefs and fairly traditional, upholding long-established values. This personality type was also more likely to categorise people into "us" and "them" groups while seeing their own group as superior. Finally, it is important to note that there is also considerable evidence that minority group members can also harbour prejudice towards majority group members. However, much of this prejudice could be described as reactive, reflecting anticipation of being discriminated against by majority group members (Johnson & Lecci, 2003).

As has been highlighted, inherent cognitive and social-cognitive abilities such as personality, classification skills, categorical structures and perspective taking are notable contributors to inter-group attitude development in children. An awareness of one's own ethnicity, a perception of their groups' elevated status and the ability to highlight stereotypical differences between themselves and others in turn could predispose that child to develop a negative attitude or prejudice towards those people who are in a different category (Allport, 1954; Quadflieg, Mason & Macrae, 2010).

Socialisation and Group Process Explanations

In contrast to the explanations outlined above that tend to focus on internal, cognitive processes, a second set of theories of prejudice tend to focus on the influence of externally-oriented inter-personal processes. For example, one strand of social psychology has been concerned with understanding the predictability of people in favouring their in-group while displaying negative bias towards the out-group (Brown, 1995); especially where mere membership of a group can influence equality and fairness, even in cases where the separation between groups is meaningless (Tajfel, Bilig, Bundy & Flament, 1971). In this

respect, social reflection theory suggests that people adopt attitudes and stereotypes about groups that correspond to the relative power and status held by those groups. Any negative attitudes and thoughts about ethnic groups are thus thought to simply reflect the structure of society (Sayers, 1983).

One theory emerging from this is based on the widely accepted belief that humans possess a desire to increase self-esteem by viewing themselves in a positive light (Crisp & Turner, 2010). Since part of their personal identification is directly influenced by the groups to which they belong, it is believed that there is a general predisposition to make biased decisions which will value more highly the characteristics of the in-group. It is suggested that there is also a tendency to make comparisons related to superiority between groups often to the detriment of the out-group (Brown, 1995). However, the study by Connolly, Muldoon & Kehoe (2007) mentioned earlier is an example of how it would be erroneous to assume that in-group preferences will inevitably lead to out-group prejudice. While they showed that children will actively engage in in-group activities they found little evidence that this led to any notable intended prejudice towards the out-group. In this sense they found that in-group preference was not reflective or indicative of prejudiced attitudes on the part of the children involved. Crucially however, the unintended outcomes of in-group preference, in relation to social exclusion and divisions, can still have negative consequences for the out-group.

Maass & Schaller (1991) offer some explanations for this general trend. They propose that participants approach the task with an inherent belief that the group to which they belong is more favourable (in-group). However, and as highlighted above, this in-group preference does not automatically lead to out-group derogation. This belief of the in-group being better will however increase effort from the participant and elicit greater pride in their group. This finding is presented in a study by Rabbie & Horwitz (1969) where chance allocation meant that one arbitrary group would receive a prize while the other would not. Even in this random context, subjects displayed significant bias in positive trait evaluations even when their team 'lost'.

It is suggested that negative and competitive relationships between groups will be more likely to produce prejudice and discrimination whereas inter-group interdependence and cooperative interaction that leads to successful outcomes reduces intergroup biases (Sherif, Harvey, White, Hood & Sherif, 1954).

The most prominent theoretical concept to be developed from social learning explanations is the inter-group contact theory. This theory, also known as the 'contact hypothesis', is based on the work of Gordon Allport (1954). The contact hypothesis is based on the idea that positive contact and relationships between children from differing ethnic groups will lead to reduction in prejudice and increased respect for diversity.

The traditional contact hypothesis outlines specific conditions that need to be in place between groups in order for inter-group contact to lead to prejudice reduction, such as the groups: sharing equal status; working towards common goals; working cooperatively; and

having support for the initiative from those in authority. By strengthening bonds between groups through contact it is proposed that there should be an increase in appreciation and understanding that, in turn, should diminish prejudice and promote respectful attitudes through friendship (Pettigrew & Tropp, 2006).

Intergroup Conflict and Societal Explanations

The third set of theories of prejudice acquisition are those that tend to explain prejudice by reference to broader structural and sociological factors rather than individual psychological processes. Rather than focusing on the causes of prejudice being intrinsic – whether being due to the effects of an individual's cognitive functioning or perceptions emerging directly from inter-personal encounters – the focus here is on extrinsic factors. In this sense, such theories tend to emphasise structural inequalities and power relations as evident in employment, housing and education (Williams & Collins, 2001; Bertrand & Mullainathan, 2004) and also reflected and reinforced through the media and popular political discourses that can tend to demonise and develop moral panics surrounding particular minority ethnic groups (Bloch, Neal & Solomos, 2013).

Whilst prejudice may reflect particular cognitive processes and/or be the result of experiences gained through inter-personal encounters, such explanations tend to be unable to account for why it tends to be certain ethnic groups that are targeted and for the consistency of the negative attitudes that others tend to hold towards them. In this sense, it is contended that ethnic prejudice among children can only be fully understood against the wider sets of societal processes and structures – informed by economic, political and social changes – that tend to create inequalities between ethnic groups and thus generate and sustain ethnic divisions and conflicts (Troyna, 1993; Gillborn & Youdell, 2000).

The key point for advocates of an ecological approach to understanding prejudice is that such negative attitudes and behaviours are unlikely to be addressed fully until the wider societal contexts that give rise to ethnic inequalities and divisions are also addressed (Tomlinson, 2008). As such, researchers adopting this more sociological perspective tend to emphasise the need to address broader structural factors that create and sustain inequalities and divisions, within the school and beyond, as well as dealing directly with children's attitudes (Troyna, 1987, 1993; Dixson & Rousseau, 2006).

How interventions might reduce prejudice and promote respect for diversity

Interventions aimed at prejudice reduction amongst children have a long history from 1954 after the integrative school systems movement (Brown Vs Board of Education) began in the United States, for example, and from the 1970s in the UK following significant levels of post-war immigration (Tomlinson, 2008). This history, coupled with the complexity of ethnic prejudice, has led to a diverse range of interventions based upon a number of differing theoretical perspectives. We would suggest that there are five broad types of intervention that have arisen with the aim of reducing ethnic prejudice and promoting respect for

diversity. These five types are not mutually exclusive and it is possible that any educational intervention may be informed by two or more of these types. What distinguishes the five types of approach are their differing underlying assumptions regarding the nature of prejudice acquisition. As such, each of the five types of approach can be understood as being underpinned by one or more of the three types of explanation of prejudice acquisition mentioned above (cognitive, socialisation and societal). It is worth briefly discussing each of these in turn.

Cognitive Development Approaches

The first type of approach aimed at reducing prejudice and promoting respect for diversity derive from the cognitive explanations of prejudice acquisition outlined above. As discussed, complex cognitive features such as stereotyping and prejudice can be derived from the innate human tendency to categorise. Some ways to counteract the rigid thinking pattern caused by categorisation are to: redefine the group; change the linguistic descriptors of the group; challenge the memory recall of what this group means; and/or change the group membership. An outline of some of these techniques will be discussed briefly.

Some researchers have suggested that introducing people with multiple dimensions rather than as a single category can lead to a reduction in intergroup bias (Crisp, Stone & Hall, 2006). This is known as the multiple categorisation model and in essence will describe a person with multiple labels rather than just one. Instead of simply belonging to a gender group female/male, for example, the person may be reclassified across many dimensions: female, Chinese, young, astrologist, golfer. Another popular model is known as the common in-group identity model. Within this people are reclassified as belonging to one larger, over-arching group. For example, schoolchildren belonging to the categories 'Catholic' or 'Protestant' could be reclassified as being Christian.

It has also been suggested that the use of non-neutral group labels such as 'us' and 'them' are a linguistic catalyst to unconsciously instigate intergroup biases. In a study conducted by Perdue, Dovidio, Gurtman & Tyler (1990) participants had these words linked to previously neutral stimuli. The application of the words 'us' and 'them' lead to participants showing tendencies to bias and a propensity to elicit corresponding evaluative material from semantic memory, particularly negative trait memories when prompted by the word 'them' and positive trait memories when prompted by the word 'us'. A crossed categorisation model was developed by Doise (1978) that suggests that one categorisation tends to be primary and so adding another dimension should lead to intergroup differences weakening. Findings from further researchers demonstrated that bias was virtually eradicated if the participants shared membership of at least one group, however, bias increased against those who shared no common categories (Brown & Turner, 1979; Diehl, 1990; Vanbeselaere, 1991).

Brown (1995) suggested that these findings may be useful and significant to policy makers, as in theory the results show that the arrangement of social situations to contain two or more categories should encourage the persistent prejudices along any of these dimensions to be

reduced. These briefly outlined studies also show that whilst the complexities of groups and the importance of these categories have real implications for understanding and interpreting the efficacy of crossed categorisation programmes, there is a need to test the models with a greater focus on the conditions in which crossed categorisation works best.

One major criticism surrounding interventions based on intentional category change is presented by Park & Judd (2005) who emphasise that it is neither feasible nor helpful to attempt to eliminate social categories. They point out that there is very little evidence to suggest that stronger group boundaries leads to an increase in out-group hostility and so weakening group boundaries would do little to alleviate the outcomes of prejudice. They state a more useful approach would be to promote inter-group harmony based on a respect for diversity and inclusion.

Socio-Emotional Development Approaches

A second approach to reducing prejudice that also derives from broadly intrinsic explanations of prejudice focuses on promoting healthy socio-emotional development. It is believed that through this, a child will be better able to understand the perspectives of others and thus empathise with them. It is believed that this, in turn, would make these children less likely to be prejudiced or to discriminate or exclude others (Bischof-Kohler, 1991).

Interventions that fall into this category are based on elements that attempt to increase children's own emotional self-awareness, their ability to recognise and regulate their own emotional states and a greater appreciation of, and thus empathy for others. By focusing on the development of empathy, children are expected to be more able to take on the viewpoint of the other person and react to the emotional behaviour of that person, thus reducing prejudices and encouraging a greater respect for diversity. In this regard, higher rates of empathy in children have been found to be indicative of pro-social attitudes in behaviour whereas low rates were associated with anti-social behaviour (Stephan & Finlay, 1999). Moreover, increasing empathy has been shown to lead to a promotion of more positive inter-group relations. One approach is the 'jigsaw classroom', based on similar principles to the contact theory in that when children work closely together they will learn to take on the perspective of the other and foster friendships which will increase empathy scores in those children (Bridgeman, 1981).

Explanations for the success of empathy as a method for reducing prejudice and encouraging respect for diversity has been suggested to be due in part to its tendency to reduce perceived differences and threat. Stephen & Finlay (1999) suggest that it may also be due to the adoption of cognitive dissonance. Festinger (1962) hypothesised that an individual who behaves in ways that are opposed to their own pre-held beliefs will experience feelings of discontent and negativity. Inherently individuals will then strive to solve the negative feeling of dissonance and may alter their attitudes to better suit their behaviours. This decision to change will be more likely when the behaviour is counter to a pre-existing belief or belief structure. Individuals hold the cognitive ability to recognise this imbalance and alter their

behaviour to match their attitudes even at preschool age (Aronson & Carlsmith, 1963). Children's early ability to empathise with peers will directly influence their behaviours through the experience of cognitive dissonance.

Social Learning Approaches

A third area which has provided the basis for various interventions arises broadly from socialisation and social learning explanations of prejudice acquisition and suggests that prejudice is learned in the same way any other attitude or value is acquired, through modelling of behaviour, association of the group with a negative stereotype, and reinforcement of the occurrence of this behaviour (Bandura, 1977). In earlier studies Bandura, Ross & Ross (1961, 1963) found that children who witnessed models acting verbally and physically aggressive towards a doll displayed twice as many aggressive behaviours as those children who witnessed a subdued model or no model at all. Authors also direct the reader to other factors involved in this type of learning. Children when observing the aggression being punished were less likely to show these same negative tendencies. This theory would suggest that a child who observes adults or peers who show discriminatory behaviours are likely to imitate these behaviours, especially when these behaviours go unchecked.

Social learning approaches to reduce ethnic prejudice therefore encourage and rely on positive role models. This responsibility can fall to the individual, such as the school teacher, or to a whole group, such as a group of peers. Cooperative learning techniques suggest that functional relations between groups are critical in determining inter-group attitudes.

The contact hypothesis, outlined earlier, has in turn, led to a number of interventions based on promoting positive inter-group contact. Prejudice-reduction interventions that focus on group contact can be viewed as being informed by social learning approaches given that they focus on modelling out positive relationships that it is hoped that children learn. This theory however also incorporates cognitive development elements as it is believed that through supporting exposure to out-groups in a proactive way children's existing rigid categorisations and the stereotypes which often accompany these will diminish.

The contact theory has proven useful in certain settings, most notably schools (Pettigrew, 1998). Examples of structured contact interventions include cooperative learning techniques, integrated schooling and public campaigns such as the use of high profile individual/s from out-groups to promote inclusion messages. The contact hypothesis remains one of the best-supported theories in social psychology with hundreds of studies showing that the positive effects apparently hold for a variety of different situations, settings and samples (Dovido, Gaertner & Kawakami, 2003).

The contact theory has gained some criticism in recent research, in part due to the lack of evidence associated with the need to meet the strict criteria originally associated with positive inter-group contact and as specified by Allport (1954) and as outlined earlier. In

particular, a meta-analysis carried out by Pettigrew & Tropp (2006) provided evidence that the traditional 'optimal' conditions were not always necessary to achieve positive outcomes. The authors individually tested each of the four optimal conditions and found that individually each of these outcomes did not emerge as a significant or independent indicator of contact success. This finding was supported by 94% of the included samples showed an inverse relationship between inter-group contact and prejudice when only 19% involved using the traditional conditions in the structure encouraged by Allport. The authors conclude that when these conditions are used collectively they do generally enhance the success of the intervention, however, a true knowledge of the conditions essential to reduce prejudice require rigorous testing in order for a more comprehensive theory of contact to emerge. Researchers also point out that the processes involved in making contact successful is a cognitive issue, and that the underlying cognitive issues that will make contact successful is under-addressed and misunderstood within the literature (Rothbart & John, 1985).

Awareness-Raising Approaches

A fourth type of approach is based on the belief that prejudice is caused by a limited understanding of other ethnic groups and so attempts to reduce prejudice need to include a focus on increasing their awareness and understanding of different cultures, histories, traditions and religions. In this regard, there is now a substantial body of work first summarised by Stephen & Stephen (1984) that suggests that prejudice can arise from ignorance. This theory is supported by empirical findings including an early study that suggested that increased knowledge surrounding the history and demography of black students led to positive intergroup relationships towards black college students (Reckless & Bringen, 1933) and later studies, such as that by Stephen & Stephen (1984), indicating that contact between white and Chinese students promoted a transfer of knowledge about different cultures and actively reduced prejudice

Critiques of the awareness-raising approach tend to point out that mere exposure to diversity is insufficient to produce respect and nor does it predict a decrease in ethnic prejudice. Studies have found that promoting positive information about an out-group is simply not sufficient for change and these styles of intervention require advanced development (Bigler & Liben, 2006).

Multicultural education is perhaps the most common type of intervention in schools aimed at reducing prejudice and encouraging respect for diversity. Informed largely by the types of awareness-raising approaches described above, multicultural education has sought to reduce ignorance and thus prejudice by exposing children to, and educate them about, other cultures. This can be done through directly teaching about other religions and cultures alongside promoting the sharing of cultural idiosyncrasies throughout the classroom. Whilst placing an emphasis on awareness-raising, multicultural education also includes social learning elements as it tends to approach prejudice reduction indirectly through increasing awareness and modelling out good relations. In addition, it can include a socio-emotional

learning component as well in encouraging an identification with, and thus empathy for, other groups.

Multiculturalism has been criticised for being based on a simplistic view of racism as being the result of cultural misunderstandings. Moreover, it has been suggested that, ironically, teaching about other ethnic cultures, especially if done tokenistically, can risk actually increasing children's stereotyping of and prejudices towards others (Bennett, 1995; Kincheloe & Steinberg, 1997). This, it has been suggested, can be further exacerbated by the reliance upon teachers to deliver the teaching who may well hold prejudices themselves and thus (albeit unintentionally and unwittingly) pass on misunderstanding and ignorance to their students (Lawrence, 1997). It is with this in mind that the importance of training that seeks to encourage teachers to explore their own attitudes has been stressed. In particular, Chou (2007) has suggested that a higher standard of teacher training prior to qualification will ultimately lead to better practices within the classroom which will have a direct impact on student learning.

Anti-Bias Approaches

The fifth, and final, type of approach to prejudice reduction arises from the more ecological and sociological explanations of ethnic prejudice outlined earlier and places emphasis on directly recognising and addressing prejudice and discrimination (Gillborn, 1995). Given the focus on wider societal processes and practices, these approaches that have been labelled as 'anti-racist education' and/or 'critical multiculturalism', tend to occur at a number of different levels. Firstly, they requires teachers not to ignore instances of prejudice among children but instead to challenge these in a constructive way; through getting the children to think through what they have said, understand that it does not make sense, and to reflect upon how prejudiced/racist attitudes make others feel.

Secondly, and at another level, they require a focus on the curriculum, with an emphasis on using opportunities available to increase children's awareness of racism and ethnic prejudices and discrimination and to encourage them to develop a value base that promotes social justice and inclusion and respects diversity (May, 1999). This can be done in English, for example, through stories that encourage children to appreciate other people's experiences of prejudice and discrimination. In subjects such as geography and history there are opportunities to increase children's understanding of the slavery, migration and how inequalities and divisions arose and have been sustained. Similarly, citizenship education provides clear opportunities to explore issues relating to inequality and injustice and also to examine the efficacy of differing approaches to addressing these.

Thirdly, and at further level, an anti-bias approach would also tend to include a focus on wider structures and practices within the school with the aim of identifying and addresses inequalities that may exist (Troyna, 1987; Gillborn, 1995). This could include monitoring the placement of children into sets and streams and working proactively with children and parents from particular ethnic groups should they be found to be over-represented in low

attainment classes. It is also likely to involve explicit training and support for teachers to help them reflect upon their own attitudes and beliefs and be equipped with the skills to address instances of prejudice in a constructive manner with children when they arise.

Although empirical evaluations of programmes that include anti-bias approaches are generally positive, showing that a reduction in biased judgement processes and prejudice can be achieved (Aboud & Fenwick, 1999), it should be pointed out that this type of intervention can only be effective if tailored to the specific cognitive development and emotional maturity of the child, so that a programme aimed at a 3 year old, for example, would have a different approach and content than that aimed at an eleven year old.

Whilst anti-racist/critical multiculturalism interventions tend to be largely informed by the types of anti-bias approach outline above, they can also include other elements such as social learning where teachers model out positive behaviour in relation to the unacceptability of prejudice and racism and also multiculturalism, where children are encouraged to appreciate the cultures and identities of others. As regards this latter point, for example, Ukpokodu (2003: p. 19) describes critical multiculturalism as:

> learning paradigm in which teachers and students consciously engage in the construction of knowledge, critique the various forms of inequities and injustices embedded in the educational system, and strive to gain the empowerment needed to engage in culturally responsive and responsible practice.

Advocates of critical multiculturalism feel it is necessary to confront bias and promote empathy within groups of students, in order to make it possible to change attitudes of prejudice within the school system. Aboud & Fenwick (1999) found through their study that a peer's negative reaction to a derogatory slur or racial joke has a significant impact on the future occurrence of discriminative behaviours. This type of intergroup dialogue is an emergent intervention being used within classrooms that promote critical multiculturalism. This dialogue is designed to facilitate participants with a group environment that is safe, structured and designed to promote optimal understanding between groups. Students are able to freely discuss differences between ethnic groups based on openness, trust, authenticity and the removal of any preconceived ideas or assumptions of the group. Nagda (2006) states that this type of intervention is important in promoting appreciations of diversity while improving critical self-reflection and alliance building.

Those researchers who evaluate the use of anti-racist techniques within the classroom suggest that racial harassment, the under- recruitment of minority staff in schools, inability or refusal to tackle stereotypes and the inappropriateness of the curriculum for a multi-ethnic society are the underlying catalysts for prejudice persistence (Short & Carrington, 1996). Fullan (1991) additionally warns that a main component often overlooked is the inability of the teacher to fully internalise the problem. The author suggests that if the teacher does not fully understand and believe in the reasons behind the changes then anti-racist education will not be effective in that context.

However, Fullinwider (2008) suggests that teachers lack confidence that they will be able to approach the issues in a way which will encourage a positive intergroup student experience. Moreover, Aboud & Fenwick, (1999) point out that difficulty may arise when implementing anti-racist strategies as parents and teachers are often reluctant to discuss such sensitive issues. There is thus a need to see an anti-racist approach as including engagement with parents and wider communities, reflecting the ecological approach to seeing prejudice as having a structural/societal cause. Some curriculum interventions based on anti-bias literature have produced promising outcomes including a respect for diversity in children (Adams & Ebbeck, 1997). In addition, there has been some research into how the family can influence children's levels of respect towards other ethnic groups although these findings remain inconclusive. While one paper reports that children's ability to handle racism is directly influenced from family discussion (Coll et al., 1996) another reports that children over five take more cues from their social surroundings when making preferences rather than basing their decisions on parental values (Aboud & Doyle, 1996).

Why it is important to do the review

As outlined in the background section, there is an abundance of available literature on ethnic prejudice among children that spans almost a century. Many different theories have now been proposed to explain the nature and extent of ethnic prejudice in children. These theories, in turn, have led to a number of different approaches being developed to reduce prejudice and promote respect for ethnic diversity. While there have been a number of attempts to review and synthesise this literature, each has been restricted in one or more respects. Five major and recurring limitations are evident in relation to the existing evidence base that are worth briefly outlining here.

Firstly, existing studies tend not to be systematic in their approach to identifying the relevant literature. For example, in their meta-analysis, whilst Beelmann & Heinemann (2014) attempted to ensure inclusion of relevant evaluation studies, the keywords used within the literature search were extremely limited. For the population keywords the authors only included *child** and *adolescen**. If the reader now refers to Appendix A, Table 3 of this protocol it can be seen that the term *child** only produces three unique and relevant papers while *adolescen** does not produce any. It can therefore be assumed that many relevant papers have been excluded due to the unsystematic nature of the keyword development.

Secondly, some reviews do not use meta-analytic techniques. For example, the systematic review by Aboud *et al. (*2012) sought to evaluate the effects of interventions to reduce ethnic prejudice in young children. Following searching, 32 studies were screened for overall effects on attitudes and peer relations following the intervention. Unfortunately, this systematic review did not include a meta-analysis of the 32 final studies included and so the strength of findings was merely estimated by comparing effects based on codings of positive, non-significant and negative. The review also did not exclude those studies where the age was not

made explicit. It is therefore possible that effects reported within this systematic review may then have been due to inclusion of children older than 8 years.

Thirdly there are reviews that are not always specific to education. Paluck & Green (2009), for example, presented an extended review of the practice of prejudice reduction techniques across all settings, populations and methodologies. However, this review was not systematic in its approach and was too broad as it covered the entire range of interventions with both children and with adults across various settings including laboratories and field experiments. As such, any final conclusions on the efficacy of an intervention within the educational system are impossible to reach.

Fourthly, there are reviews that tend to be focused on one particular intervention technique. Dovido, Gaertner & Kawakami (2003), for example, were very specific in their review that looked at the history and development of the contact hypothesis. Similarly, Brown & Zagefka (2011) reviewed work inspired by the acculturation framework and looked more specifically at that relationship in terms of a dynamic intergroup process. Also, Curry, De Amicis & Gilligan (2010) have registered a protocol with the Campbell Collaboration for a review that focuses specifically on the effects of cooperative learning on inter-ethnic relations in school settings.

Fifthly and finally, there are reviews that focus on more general outcomes such as social exclusion across many forms of prejudice and so fail to provide a direct understanding of ethnic prejudice specifically. Abrams & Killen (2014), for example, focused on 12 specific papers to look at how the social exclusion of children can develop into prejudice. Similarly, Bennett (2014) also compiled a literature review on social exclusion in children and calls for research on the role that social identity plays in the understanding of inclusion and exclusion.

In contrast, this proposed review will be thorough and systematic in its approach to identifying eligible studies and also wide-ranging and inclusive in seeking to compare the effectiveness of all school-based approaches to reducing ethnic prejudice and promoting respect for diversity among children aged 3-11.

OBJECTIVES

The proposed review will seek to answer the following core research question: What role can schools play in reducing ethnic prejudices and promoting respect for ethnic diversity among children aged 3-11?

Within this, the review will address the following more specific questions:

1. To what extent can school-based education programmes assist in reducing ethnic prejudice and promoting respect for ethnic diversity?

2. Is there a relationship between ethnic prejudice reduction and an increase in respect for ethnic diversity?

3. Which school-based programmes are most effective in reducing ethnic prejudice and promoting respect for ethnic diversity, and which characteristics may influence their efficacy?

4. Does the effectiveness of programmes vary with regard to the children's age, gender, socio-economic background and racial/ethnic background?

METHODOLOGY

Criteria for including and excluding studies

Types of study designs

The study must report programme effects for at least one outcome variable, measured on the subjects, representing either: 1) a reduction in ethnic prejudice; and/or 2) an increase in respect for ethnic diversity.

Results must be reported in a manner that permits a reliable calculation of effect sizes. No date restrictions will be applied to studies.

Only those studies that use a control group design will be eligible. The study must contain an intervention group and at least one untrained control group. These groups (intervention and control) can be assigned randomly or non-randomly. Non-random studies will be coded in relation to how matched the two groups are at pre-test and also whether attempts were made to control for pre-test differences in the analysis. The potential impact of study design on effect sizes will be explored as part of the subgroup analyses and any significant influences will be controlled for as part of the meta-analysis through meta-regression (see below).

Control groups can include placebo, no treatment, waitlist, or treatments vs 'treatment as usual'. Any study which includes one group pre-test/post-test or in which a treatment group is only compared to another treatment group will not be eligible for inclusion.

Types of interventions

Interventions that will be included within this systematic review will be any universal, standardised intervention programme delivered on a whole-class basis in preschool or primary/elementary school to children aged 3-11 and that includes an explicit objective of reducing ethnic prejudice and/or promoting respect for ethnic diversity.

Types of participants

The interventions must be delivered to children aged 3-11. This age range has been selected to be inclusive of the first stage of compulsory schooling i.e. primary school stages in the UK (Years 1 to 6) and will include elementary school stage in the USA (Grade 1 – Grade 6). Also, as ethnic prejudices are first visible in children in early education settings at age three (Aboud, 1989; Aboud & Levy, 2000), and an increasing number of interventions have been designed for this initial phase in preschool and kindergatern, it is logical to include this age-range also.

If a study includes children older than 11 then the authors will first attempt to extract only the results associated with those in the eligible age range. If the results cannot be isolated due to either the author pooling the results or not being explicit with the age group then this study will be excluded.

Types of outcome measures

Primary outcomes of interest within this review are those that relate to ethnic prejudice and also respect for ethnic diversity. Those that relate to ethnic prejudice may include outcomes such as: reductions of in-group favouritism and out-group derogation; a decrease in discriminatory behaviour; and increased inter-ethnic friendships. Those that are related specifically to a respect for ethnic diversity may include: an increased knowledge of other ethnic groups; improved awareness of ethnic inequalities and discrimination; and increased commitment to social justice and inclusion.

Tools which may be used to report changing attitudes include, but are not limited to: Preschool Racial Attitude Measure 2 (PRAM2) (Williams, Best, Boswell, Mattson & Graves, 1975); Multi-Response Racial Attitude Test (MRA) (Doyle & Aboud, 1995); and Reported and Intended Behaviour Scale (RIBS) (Evans-Lacko et al., 2011). There will be a list of the most popular outcome measures provided within the final coding manual.

As there are less known standardised measures for the outcome 'respect for diversity,' it is expected that the team will find a number of bespoke measures used in studies. Acceptable outcome measures that will be included in the meta-analysis will be those that have details concerning their reliability and validity included within the empirical paper or enough detail so this could be reported by the coder.

If the measures of effect are not reported within the study and cannot be ascertained by calculating reported outcome measures then the review team will contact the author directly to request this raw data. In the circumstance where this is not possible then the paper will be excluded from the meta-analysis on intervention effects but may be included for subgroup analysis. In addition, a relevant study will also be excluded from the meta-analysis if the outcomes are not measured at all.

Once a final list of outcome measures has been identified from the eligible studies identified, these will be organised into a number of coherent outcome domains for the purpose of the meta-analyses.

Types of settings

The interventions must be delivered in a preschool or primary (elementary) school setting during normal school hours. Afterschool programmes will not be included as interventions outside of school hours are vulnerable to a range of uncontrolled factors which can introduce extraneous variability which may influence outcomes and validity.

Search strategy

Creation of Search Terms

The number of relevant articles is finite and so keywords should be selected to make the literature search as inclusive as required, but specific enough to make the study feasible. One search strategy which has been proven effective in locating the most relevant and inclusive keywords uses the 'pearl harvesting' method (Sandieson, 2006; Sandieson, Kirkpatrick, Sandieson & Zimmerman, 2010). This method follows exact guidelines in order to find all relevant keywords that will locate relevant articles and has been used successfully in a previous Campbell Review (Waddington, Snilstveit, Hombrados, Vojtkova, Anderson & White, 2012). The first author has received extensive training in the method directly from the developer. The process comprises a number of steps that are explained more specifically in Appendix A but outlined briefly below.

STEP 1: The first step involves choosing some relevant studies that meet the pre-determined inclusion criteria (these are referred to as 'the pearls'). These studies are usually found from a relevant systematic review/meta-analysis or through using obvious search terms in a relevant journal.

STEP 2: Then the researcher should extract the relevant keywords from the 'pearls'. By surveying a wide number of articles in this way it is possible to gain an insight into the terminology used by authors and the terminology used by indexers for database input. This will ensure a range of keyword terms that will produce the most comprehensive and relevant return on the topic.

STEP 3: Once an extensive list of keywords has been complied, the next step is to decide those terms that can be replaced with a truncation (*) e.g. cognition and cognitive could be replaced with cogniti*

These terms will then be searched within a database to look for those that produce high precision (relevant articles). This will be done over two databases, namely ERIC and psycINFO, as a type of pilot test to decide on the final keyword list, it may be that some

terms 'prejudice' produce a high recall into the tens of thousands (psycINFO) but low precision of those which are actually relevant to the study.

Once the list of specific terms has been determined, this is called the 'synonym ring' and those final keywords included on this list are defined by those keywords which uniquely produce relevant articles and which cannot be retrieved by any other term

STEP 4: The fourth step is then to validate the search keywords in the synonym ring. This will be achieved by comparing to the key terms presented in the protocol by Curry, De Amicis & Gilligan (2010) and in the systematic review by Aboud *et al.,* (2012) and measuring the difference in relevant articles achieved. A further step will be facilitated by comparing with a pre-existing list of terms available on database thesauri.

For the proposed review there will be three synonym rings:

1. Population targeted (children aged 3-11)

2. Minority group terms (ethnic group involved in the study)

3. Prejudice terms (risks/outcomes, treatment/evaluations)

It is expected that literature will be widely scattered due to the multidisciplinary nature of the title and the many differences within terminology. There is also a lack of similarity used within bibliographic databases for indexing keywords (Dixon-Woods *et al.,* 2006). The indexes of the database alongside the authors' keywords must then be used in a standalone technique as described in step two of the pearl harvesting method (Sandieson, 2006) in order to find those words which match the description.

Key words for the proposed study may include many combinations and permutations of the following types of keywords: 'prejudic*, ethnic*', 'Grade 1, Grade one, pre-school' or 'contact theory, cooperat*, collaborat*'.

The full procedure for the generation of the three synonym rings, and the final synonym rings themselves, will be described in detail in the full review so that it can be fully and precisely replicated.

Databases

Comprehensive searches will be carried out on several specialist databases. ERIC and PsycINFO will be searched for educational and psychological interventions respectively. Psychological abstracts, PsycINFO, PsycLIT, Social Science Citation Index and Sociofile will also be searched to ensure inclusivity of all subject-specific indexing.

Due to the universal approach of the review, several regional databases will also be included. The British Education Index, The Australian Education Index and The CBCA education database (which includes Canadian research) will be searched to ensure maximum inclusion.

Every effort will be expended to retrieve all empirical studies that meet the predetermined and explicit inclusion and exclusion criteria. This includes studies that appear in non-published as well as published literature. Searches for unpublished studies will be carried out in the search engine Google, ProQuest Dissertation and Theses and Dissertation Abstracts International. Non-journal publications such as privately and publically funded research may be identified by searching relevant conference proceedings. The United Nations educational, scientific and cultural organisation (UNESCO) will be searched for relevant conference presentations and international ethnicity specific conferences such as 'world conference against racism' and 'overcoming racism' will be extensively searched. Government reports will be searched via the online portal such as GOV.uk for United Kingdom and the gao.gov for the US government accountability office.

To ensure consistent comprehensiveness of the search and to meet the requirement to use retrieval methods other than simple database searching, the bibliographies of previous reviews and meta-analyses in the area will be reviewed for studies that meet the eligibility criteria. Hand searches of all the relevant included studies will be conducted as well as specific journals such as psycEXTRA and ISI Index to social science specifically.

Finally, follow up searches of first and second authors of eligible studies will be conducted. These authors will then be approached via email to enquire whether there are ongoing studies or unpublished research. This will ensure that unpublished studies can be included for analysis and ongoing research can be included in the review update.

Studies identified will be retrieved online and via libraries at Queen's University Belfast (UK) and Peabody Research Institute, Tennessee (USA). In the event that a relevant paper is not accessible due to institution restrictions, then the team will request an inter-library loan or email the author directly.

All searches on electronic databases, journals, conference and government proceedings will be carried out before April 2016. Those studies which are not reported in English must be excluded due to language restrictions. The review team will include all relevant research papers from January 1980 through to May 2016.

Description of methods used in primary research

The relevant studies that will be included in the review will be selected due to their focus on evaluating an educational programme that aimed to either reduce ethnic prejudice and/or otherwise promote respect for diversity and positive intergroup relations between ethnic groups.

Cameron, Rutland, Brown (2007) conducted a study which may be included in the systematic review. This empirical study measured the primary outcomes of children's intended behaviour and attitudes towards refugee groups and also measured in-group identification as a potential moderator. Three measurement tools were facilitated in this evaluation: an inter-group attitude measure (Cameron, Rutland, Brown & Douch, 2006); an identity measure (Verkuyten, 2001); and an intended behaviour measure (Cameron, Rutland, Brown & Douch, 2006).

The participants were 198 white school children drawn from seven schools and ranging in age from 6 to 11. Children were randomly assigned to one of four conditions; control (n=47), multiple classification (n=55), extended contact (n=51) and combined treatment (n=45). The participants received the intervention as a full class defined by condition. Participants in all four conditions were individually and randomly assigned.

Prior to the intervention the children were exposed to an explanation of what the term 'refugee' meant through a storybook as well as a brief discussion as to why people may want to come to live in England. The children were then measured on their perceptions of refugees and the authors determined that children perceived the characters contained within the refugee story as being typical of the out-group. The three intervention techniques facilitated through this study were, extended contact, multiple classification skills training and a combined intervention using both.

The authors found that following interventions involving extended contact, children displayed significantly significant positive attitudes towards the out-group when compared to the control condition, they also found that those children who identified highest with their in-group had most positive outcomes related to intended behaviours in both the extended contact and combined conditions.

This paper has been chosen as an example as it has not reported effect sizes, however, as it includes information relating to sample sizes, pre-test and post-test means and standard deviations it has been possible to use the David Wilson effect size calculator to convert into a standardised mean difference. For the measurement of intergroup attitude after the intervention of extended contact for example the standardised mean difference was calculated to be d= 0.77.

Criteria for determination of independent findings

Multiple reports of the same study will be included in the review reference list but only those results which detail the information of interest will be included for data analysis.

In cases where a study reports findings from two different interventions only those findings from the control groups and intervention groups which meet the eligibility criteria will be included. However, the addition of another intervention group will be reported in the table presenting study characteristics.

It is important to ensure that the effects of an individual intervention are only counted once. As such, where there two or more measures reported for the same outcome, this will be dealt with by calculating an average effect size within each study within an outcome domain.

Where the same outcome construct is measured but across multiple time domains, such as through the collection of both post-test and further follow-up data, the main analysis will focus on synthesising the evidence relating to effect sizes at immediate post-test. Any subsequent measures of outcomes beyond immediate post test will be meta-analysed and reported separately.

It is not expected that there will be many studies reporting multiple and dependent effect sizes. If this proves to be the case (i.e. occurring in more than 20 eligible studies) then robust variance estimation will be employed. This technique calculates the variance between effect sizes to give the variable of interest a quantifiable standard error. It has been proven to calculate correct results with a minimum of 20-30 individual studies (Hedges, Tipton & Johnson, 2010) although it performs better with an increased quantity of studies.

Details of study coding categories

Firstly, initial double-screening of the title and abstracts of the papers amassed from the search strategy will be undertaken and the titles which pass the initial screening will be transferred to bibliographic software for further evaluation. This process will be coordinated by Keenan and include the co-authors and one or more research assistants.

Secondly, Keenan and one or more research assistant will be responsible for independently screening the list of papers retrieved from the initial screening. Papers which match the inclusion criteria will be retained within the bibliographic software.

Finally, those papers which have passed the first two stages of screening will be retrieved for full-text analysis. Keenan and one or more research assistants will be responsible for independently coding the included studies. This method of duplication will increase internal consistency by reducing the risk of errors going unnoticed and coder bias. Connolly, Taylor and Stevenson will also code a random sample of included studies to allow a measurement of internal consistency.

Any discrepancies between the coders will be discussed in a fortnightly meeting, if these discrepancies cannot be resolved then Keenan will make a decision regarding final inclusion and a statement as to why it has been included/excluded will be contained within the final review.

Coding Eligible Studies

The major categories which will be coded include variables such as:

- Publication details

- Study design information

- Participant characteristics

- Intervention location/setting

- School/class information

- Parental involvement

- Delivery of programme/implementation

- Delivery personnel

- Dependent variable information/ outcomes

- Instrument used to measure outcomes/ data collection methods

- Effect sizes

The principal category of interest is the intervention type employed within the study. Due to the anticipated range and diversity of interventions which will be found within the systematic search, there is not an extensive list of all the possible types included here. However the review team will categorise the intervention into one or more of the following major classifications outlined above:

- Cognitive Development Approaches

- Socio-Emotional Development Approaches

- Social Learning Approaches

- Awareness-Raising Approaches

- Anti-Bias Approaches

Once the full set of eligible studies has been identified, a random sample of 20 studies will be selected to refine the intervention classification into subcategories and also to include coding of a number of minor elements. These minor elements will include variables such as, the name given to the intervention (jigsaw classrooms, perspective taking) the method through which the intervention is delivered (active trainer, group discussions), the materials used

within the intervention (storybooks, audio clips), the curriculum area (if any) the intervention was involved with (P.E., geography) and so forth.

The final coding instrument to be used within the review will be developed by Keenan and Connolly and will be modified for application within an online *filemakerPro* package. This *FilemakerPro* template was built and developed exclusively by researchers at the Peabody Research Institute who have graciously permitted its adaption for use within this review.

The Cochrane risk of bias tool (found here) will be used for assessing study quality and bias concerns.

Statistical procedures and conventions

When the final lists of papers are compiled, the authors will use a number of statistical techniques to gain a deeper knowledge of the published research. Reviewing the literature and becoming familiar with it will ensure that the team is able to predict all possible contextual and/or moderating factors that are likely to play a role in the study results.

During data collection the authors will extract information related to study design. Firstly, the type and method of assignment to group (random, random after matching, non-random and post-hoc) will be coded. The unit of assignment to the group will also be included as a variable (individual or group randomised). The degree to which groups were matched at pre-test will also be coded, as will whether the researchers attempted to control for this as part of their analysis. The final variable relating to study design will be to ascertain whether the observer was blind to the group assignment.

Results should be reported within the study in a manner that permits a reliable calculation of effect sizes. Most outcomes reported will be based upon continuous variables and so the effect size metric that will be used will be Hedges' *g*. It is likely that some effect sizes will have to be recalculated throughout these individual studies in order to transform them into this common standardized mean difference. To do this, the review team will use the [David Wilson practical effect size calculator](#). This tool allows calculation from a variety of statistics if the study authors have not reported means or standard deviations. If the study does not report statistics to compute using the effect size calculator, then the first author will contact the authors directly to request raw data. Group-allocated studies will be checked to assess whether the effects of clustering have been taken into account in the analysis using an appropriate method (i.e. robust standard errors or multilevel modelling). If not, the standard errors of estimates will be adjusted accordingly.

Given the diversity of programmes that will be analysed through this review, random effects models will be used as the basis for meta-analysis. The analysis will be conducted using Stata and R. Initially, the variation in effect sizes will be measured and reported through the Q, I^2 and Tau^2 statistics.

Initial subgroup analyses for each outcome domain will be conducted to assess whether study design has exerted a significant influence on the effect sizes reported. If there is evidence of a significant influence, dummy variables will be added to the meta-regression models (see below) to control for the influence of study design. The reference category for these dummy variables will represent randomised controlled trials and this will be used to produce unbiased estimates of effect sizes through the meta-analyses.

If there are individual studies that appear to exert an undue influence on findings, a sensitivity analysis will be conducted to compare findings with and without the studies included. This will also be undertaken for any eligible studies included in the analysis that have been undertaken by the review authors.

Further subgroup analyses will then be undertaken in relation to each outcome domain and the following categorical variables in turn: the five different types of intervention outlined earlier (pp.8-13); the participants' age; their ethnic group; gender; and socio-economic status. Where other intervention-related characteristics emerge from the review of eligible studies, these will also each be tested separately for each outcome domain.

If study design has been found to exert a significant influence on effect sizes, then each of these subgroup analyses will be undertaken using meta-regression instead. In each case, dummy variable(s) representing study design will be added alongside the dummy variables representing the categorical variables concerned. The reference category for the study design dummy variable(s) will be randomised controlled trials. The resultant models fitted will then be used to estimate average effects for each category, with the study design dummy variables set to zero, thus ensuring that variations in study design are controlled for. In each case, meta-regression will only be used if there are the minimum prerequisite of ten studies (Borenstein, Hedges, Higgins & Rothstein, 2009).

Where there are a sufficient number of studies, the above bivariate subgroup analyses will be extended through the use of meta-regression to consider potential interaction effects between each of the five types of intervention and participant characteristics for each outcome domain.

As there is often the tendency for only studies reporting a significant result to be published there can be an issue of potential publication bias, if the meta-analysis contains more than ten individual studies for analysis then the authors will use the funnel-plot technique to visually display the distribution of un-weighted contrast effect sizes by sample size.

Treatment of qualitative research

There is no plan to include qualitative research.

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ROLES AND RESPONSIBLIITIES

This systematic review and meta-analysis will form the basis for Keenan's PhD being undertaken through the Centre for Effective Education at Queen's University Belfast. Keenan has a three year full-time scholarship and will be responsible for all aspects of the systematic review and meta-analysis under the guidance of her supervisors (the co-authors). One of Keenan's supervisors moved to another University during the production of the protocol (Stevenson) and will be replaced by Dr Laura Taylor (School of Psychology, Queen's University Belfast). This protocol has been prepared under the supervision of Connolly and Stevenson. All subsequent aspects of the review will be undertaken under the supervision of Connolly and Taylor, with continuing inputs from Stevenson.

All co- authors will be involved in literature and systematic review methods along with information retrieval. There will also be a research assistant hired to contribute to information retrieval and data extraction. Keenan and Connolly will work together on the statistical analysis and Taylor and Connolly will provide Keenan with added support in the interpretation of the findings and in the writing up of the review.

SOURCES OF SUPPORT

The review team would like to acknowledge that the first author's full PhD scholarship is funded by the Department of Education and Learning (DEL) in Northern Ireland.

The review team also applied for a small grant from the Smith Richardson Foundation, administered through the Campbell Collaboration Education Coordinating Group, to help with the costs of searching and data extraction. This funding was approved in July 2014.

The first author also received a small travel scholarship funded by First Trust that was used to travel to the Peabody Research Institute to receive extensive methods training.

DECLARATIONS OF INTEREST

Paul Connolly has undertaken and published a small number of trials in this area that may eventually be included in the final systematic review.

PRELIMINARY TIMEFRAME

Approval of protocol will instigate the searching procedures to commence with an aim to have the relevant studies collated by 31 March 2016. Data extraction and coding will be completed between April 2016 and June 2016 and the final review containing analysis and discussion will be submitted before 31 December 2016.

PLANS FOR UPDATING THE REVIEW

The review team plan to update the review every two years from first publication.

AUTHOR DECLARATION

Authors' responsibilities

By completing this form, you accept responsibility for preparing, maintaining and updating the review in accordance with Campbell Collaboration policy. The Campbell Collaboration will provide as much support as possible to assist with the preparation of the review.

A draft review must be submitted to the relevant Coordinating Group within two years of protocol publication. If drafts are not submitted before the agreed deadlines, or if we are unable to contact you for an extended period, the relevant Coordinating Group has the right to de-register the title or transfer the title to alternative authors. The Coordinating Group also has the right to de-register or transfer the title if it does not meet the standards of the Coordinating Group and/or the Campbell Collaboration.

You accept responsibility for maintaining the review in light of new evidence, comments and criticisms, and other developments, and updating the review at least once every five years, or, if requested, transferring responsibility for maintaining the review to others as agreed with the Coordinating Group.

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The support of the Coordinating Group in preparing your review is conditional upon your agreement to publish the protocol, finished review, and subsequent updates in the Campbell Library. The Campbell Collaboration places no restrictions on publication of the findings of a Campbell systematic review in a more abbreviated form as a journal article either before or after the publication of the monograph version in *Campbell Systematic Reviews*. Some journals, however, have restrictions that preclude publication of findings that have been, or will be, reported elsewhere and authors considering publication in such a journal should be aware of possible conflict with publication of the monograph version in *Campbell Systematic Reviews*. Publication in a journal after publication or in press status in *Campbell Systematic Reviews* should acknowledge the Campbell version and include a citation to it. Note that systematic reviews published in *Campbell Systematic Reviews* and co-registered with the Cochrane Collaboration may have additional requirements or restrictions for co-publication. Review authors accept responsibility for meeting any co-publication requirements.

I understand the commitment required to undertake a Campbell review, and agree to publish in the Campbell Library. Signed on behalf of the authors:

Form completed by: Ciara Keenan   **Date: 12/01/2016**

Appendix A

Population Search Terms

Firstly a postgraduate student who was blind to the objectives of the study randomly chose 10 systematic reviews through searching the Campbell Collaboration Library using the population terms child*, school*, ethnic*, rac* and prejudic*. Secondly, with those ten studies the first author extracted all the population keywords used by these reviewers. These keywords are included in table 1.

Table 1: Keywords Collected from the Campbell Collaboration Library:

Review Name	Population Terms used
"Kinship Care for the Safety, Permanency, and Well-being of Children Removed from the Home for Maltreatment."Project 51	{Child} or {girl} or {boy} or {adolescent} or {teen} or {baby} or {babies or {infant} or {preschool} or {pre school} or {young person} or {young people}
"Self-control interventions for children under age 10 for improving self-control and delinquency and problem behaviors."Project 111	"childhood" or "preschool" or "school"
"Early Intensive Behavioral Intervention (EIBI) for Young Children with Autism Spectrum Disorders (ASD): A Systematic Review"Project 338	(baby or babies or infant* or toddler* or child* or pre-school* or preschool* or boy* or girl*)
"Home-based Child Development Interventions for Preschool Children from Socially Disadvantaged Families"Project 190	baby or babies or infant* or toddler* or preschool* or pre school* or child* or kindergarten*
"Interventions in Developing Nations for Improving Primary and Secondary School Enrollment of Children: A Systematic Review"Project 123	youth* OR child* OR student* OR adolescent* OR teen* OR boy* OR girl* OR pupil* OR youngster* OR juveniles OR minors OR kids
"Families and Schools Together (FAST) for improving outcomes of school-aged children and their Families"Project 66	Protocol, no explicit search terms for population presented (author randomly chose another review).

"School-Based Interventions to Reduce Dating and Sexual Violence: A Systematic Review"Project 268	Authors did not express explicit search terms relevant to population however they informed the reader that search terms were created using relevant key words that represent the studies of 4-12 grade, high School and middle School
"Psychosocial Interventions for School Refusal Behavior With Elementary and Secondary School Students"Project 232	student* OR school* OR child* OR adolescen*
"Later School Start Times for Supporting the Education, Health and Well-being of High School Students"Project 230	Adolescent OR Students OR teen$ OR adolescent$ OR high school students OR "young person$" OR "young people" OR youth$ OR Schools OR high school education OR secondary education OR secondary school OR "junior high school$" OR middle school$ OR "senior high school"
"School Feeding for Improving the Physical and Psychosocial Health of Disadvantaged Students"Project 23	school$ or school-based or kindergarten or preschool or pre-school or daycare or day care
"Effects of Cooperative Learning on Inter Ethnic Relations in School Settings"Project 119	**child*, school*, grade*, class*, boy*, girl*, preschool*, pre-school*, adolescen*, preadolescen*, pre-adolescen*, youth*, young, pupil***

Thirdly, from this representative sample an extensive list of keywords was complied, those terms which could be replaced with a truncation symbol (*, $, #) were. E.g. child, children, childhood could be replaced with child*. Necessary amendments to keywords which produced too many articles were carried out at this stage. Eg. a previous author used pupil* as a keyword however the thesaurus shows that this returns many searches with the word 'pupillary' and so pupil and pupils should be retained as individual terms.

Fourthly, each individual term was then searched individually within the thesauri available in psychINFO, ProQuest education, ERIC and BEI databases. Interestingly, it became obvious that the use of grade* was not sufficient to capture those papers which reported on the population of first grade students e.g. Using the terms 'grade one', 'grade 1' and 'first grade', Age*5, 5 year* old*, Age*6, 6 year* old*, Age*7 and 7 year* old* all produced unique papers, which the other terms would not have found, thus, in order to be as comprehensive

as possible all permutations of these were included. Also, as the review is intended to be universal it was necessary to gain insight into the description of the modern class room across all countries, this final list is included in table 2. These terms were then included to the thesauri keywords which produced the finished list as follows:

Figure one: **Comprehensive keyword List:**

Child$4 OR girl$1 OR boy$1 OR adolescen$2 OR Preadolescen$2 OR Pre-adolescen$2 OR Teen$5 OR preschool$3 OR "pre school*" OR "young person$1" OR "young people" OR school$1 OR youth$1 OR pupil OR pupils OR Student$1 OR Kid$1 OR Toddler$1 OR Nurser* OR "early childhood education*" OR "primary education" OR "secondary education" OR Kindergarten OR Elementary* OR "Primary class*" OR "Primary school*" OR "reception class* " OR Post-primary OR "Post primary" OR "Secondary school*" OR "1st year*" OR "First Year* " OR freshm#n OR "Junior high " OR "Middle school " OR Age*3 OR "3 year* old* " OR Age*4 OR "4 year* old* " OR Age*5 OR "5 year* old* " OR Age*6 OR "6 year* old* " OR Age*7 OR "7 year* old* " OR Age*8 OR "8 year* old* " OR Age*9 OR "9 year* old* " OR Age*10 OR "10 year* old* " OR Age*11 OR "11 year* old* " OR "Junior infant* " OR "Senior infant* " OR "1st class " OR "2nd class " OR "3rd class " OR "4th class " OR "5th class " OR "6th class " OR "First Class " OR "Second Class " OR "Third Class " OR "Fourth Class " OR "OR "Fifth Class " OR "Sixth Class " OR Pre-kindergarten OR prekindergarten OR "Grade 1 " OR "Grade 2 " OR "Grade 3 " OR "Grade 4 " OR "Grade 5 " OR "Grade 6 " OR "Grade one " OR "Grade two " OR "Grade three " OR "Grade four " OR "Grade five " OR "Grade six " OR "1st Grade " OR "2nd Grade " OR "3rd Grade " OR "4th Grade " OR "5th Grade " OR "6th Grade " OR "First Grade " OR "Second Grade " OR "Third Grade " OR "Fourth Grade " OR "Fifth Grade " OR "Sixth Grade " OR "0th grade " OR "Grade 0 " OR "Grade zero " OR "Group 1 " OR "Group 2 " OR "Group 3 " OR "Group 4 " OR "Group 5 " OR "Group 6 " OR "Group one " OR "Group two " OR "Group three " OR "Group four " OR "Group five " OR "Group six " OR "1st Group " OR "2nd Group " OR "3rd Group " OR "4th Group " OR "5th Group " OR "6th Group " OR "First Group " OR "Second Group " OR "Third Group " OR "Fourth Group " OR "Fifth Group " OR "Sixth Group " OR "Standard 1 " OR "Standard 2 " OR "Standard 3 " OR "Standard 4 " OR "Standard 5 " OR "Standard 6 " OR "Standard one " OR "Standard two "OR "Standard three "OR "Standard four " OR "Standard five " OR "Standard six " OR "1st Standard " OR "2nd Standard " OR "3rd Standard " OR "4th Standard " OR "5th Standard " OR "6th Standard " OR "First Standard " OR "Second Standard " OR "Third Standard " OR "Fourth Standard " OR "Fifth Standard " OR "Sixth Standard " OR "Primary 1 " OR "Primary 2 " OR "Primary 3 "OR "Primary 5 " OR "Primary 6 " OR "Primary 7 " OR "Primary one " OR "Primary two " OR "Primary three " OR "Primary four " OR "Primary five " OR "Primary six " OR "Primary seven"

Table 2: **Universal labels for the modern classroom:**

United States/ Canada/ Australia/Brazil etc.	Malaysia/India	UK	Ireland	Netherlands
Pre-kindergarten	*Standard 1*	*"Reception class"*	Junior infant*	Group 1
Grade 1	*Standard 2*	*Nurser**	Senior infant*	Group 2
Grade 2	*Standard 3*	*Primary 1*	1st class	Group 3
Grade 3	*Standard 4*	*Primary 2*	2nd class	Group 4
Grade 4	*Standard 5*	*Primary 3*	3rd class	Group 5
Grade 5	*Standard 6*	*Primary 4*	4th class	Group 6
Grade 6	*Also*	*Primary 5*	5th class	Also
Also	*Standard one*	*Primary 6*	6th class	Group one
Grade one	*Standard two*	*Primary 7*	Also	Group two
Grade two	*Standard three*	*Also*	First Class	Group three
Grade three	*Standard four*	*Primary one*	Second Class	Group four
Grade four	*Standard five*	*Primary two*	Third Class	Group five
Grade five	*Standard six*	*Primary three*	Fourth Class	Group six
Grade six	*Also*	*Primary four*	Fifth Class	Also
Also	*1st Standard*	*Primary five*	Sixth Class	1st Group

1st Grade	*2nd Standard*	*Primary six*	**2nd Group**
2nd Grade	*3rd Standard*	*Primary seven*	**3rd Group**
3rd Grade	*4th Standard*	*Also can be P. "eg.*	**4th Group**
4th Grade	*5th Standard*	*Sam is in p.2"*	**5th Group**
5th Grade	*6th Standard*	N.B - the author	**6th Group**
6th Grade	*Finally,*	eventually	**Finally,**
Finally,	*First Standard*	removed these	**First Group**
First Grade	*Second Standard*	from the search	**Second Group**
Second Grade	*Third Standard*	string as it	**Third Group**
Third Grade	*Fourth Standard*	returned	**Fourth Group**
Fourth Grade	*Fifth Standard*	thousands of	**Fifth Group**
Fifth Grade	*Sixth Standard*	papers due to page	**Sixth Group**
Sixth Grade		numbers being	
Also, Denmark		abbreviated to p. 1	
and Poland		etc.	
include:		*Finally,*	
oth grade		*1st Year*	
Grade o		*First Year*	
Grade zero			

Fifthly, it was then necessary to find those keywords which uniquely produce relevant articles and which cannot be retrieved by any other term. This was achieved by searching each keyword while using the Boolean operator "NOT" against the rest of the compiled list. This enables an unprecedented insight into the most comprehensive population terms, the return of papers each term produces and importantly can be replicated and amended by future researchers to produce a superior return of articles.

Table 3: **Verification of keywords in the British Education Index:**

KEYTERM	UNIQUE PAPER
Child$4	3
girl$1	0
boy$1	0
adolescen$2	0
Preadolescen$2	0
Pre-adolescen$2	0
Teen$5	0
preschool$3	0
"pre school*"	406
"young person$1"	0
"young people"	0
school$1	16
youth$1	1
Pupil	22

Pupils	0
Student$1	2
Kid$1	0
Toddler$1	0
Nurser*	352
"early childhood education*"	402
"Primary education"	356
"secondary education"	726
Kindergarten	333
Elementary*	886
"primary class*"	183
"Primary school*"	2621
"Reception class*"	21
"Post-primary"	77
"Post primary"	0
"Secondary school*"	2693
1st year*	10
First Year*	719
freshm?n	52
"Junior high"	63
"Middle school"	286
Age*3	16
3 year* old*	12
Age*4	13
4 year* old*	16
Age*5	38
5 year* old*	17
Age*6	11
6 year* old*	29
Age*7	20
7 year* old*	32
Age*8	10
8 year* old*	20
Age*9	11
9 year* old*	18
Age*10	17
10 year* old*	25
Age*11	31
11 year* old*	59
Junior infant*	1
Senior infant*	0

1st class	0
2nd class	0
3rd class	0
4th class	0
5th class	0
6th class	0
First Class	5
Second Class	4
Third Class	0
Fourth Class	1
Fifth Class	0
Sixth Class	0
pre-kindergarten	0
Prekindergarten	3
Grade 1	3
Grade 2	2
Grade 3	8
Grade 4	8
Grade 5	3
Grade 6	4
Grade one	1
Grade two	0
Grade three	2
Grade four	2
Grade five	1
Grade six	3
1st Grade	0
2nd Grade	0
3rd Grade	2
4th Grade	1
5th Grade	0
6th Grade	5
First Grade	30
Second Grade	13
Third Grade	16
Fourth Grade	14
Fifth Grade	21
Sixth Grade	19
0th grade	0
Grade 0	0
Grade zero	0

Group 1	1
Group 2	2
Group 3	0
Group 4	0
Group 5	1
Group 6	0
Group one	0
Group two	0
Group three	0
Group four	1
Group five	0
Group six	0
1st Group	0
2nd Group	0
3rd Group	0
4th Group	0
5th Group	0
6th Group	0
First Group	0
Second Group	0
Third Group	0
Fourth Group	0
Fifth Group	0
Sixth Group	0
Standard 1	0
Standard 2	0
Standard 3	0
Standard 4	0
Standard 5	0
Standard 6	0
Standard one	0
Standard two	0
Standard three	0
Standard four	0
Standard five	0
Standard six	0
1st Standard	0
2nd Standard	0
3rd Standard	0
4th Standard	0
5th Standard	0

6th Standard	0
First Standard	1
Second Standard	1
Third Standard	0
Fourth Standard	0
Fifth Standard	0
Sixth Standard	0
Primary 1	0
Primary 2	0
Primary 3	0
Primary 4	0
Primary 5	0
Primary 6	0
Primary 7	0
Primary one	0
Primary two	0
Primary three	0
Primary four	0
Primary five	0
Primary six	0
Primary seven	0

Finally, all those Keywords which didn't produce unique papers (highlighted in red above) were removed. Below presents a final Synonym ring to represent all students aged 3-11 universally.

This was verified in the British Education Index on 5/11/14 and returns 11,355 papers on the most recent search as of 21/11/2014.

Figure 2: **Synonym Ring for Universal student population 3-11:**

Child$4 OR "pre school*" OR school$1 OR youth$1 OR pupil OR Student$1 OR Nurser* OR "early childhood education* " OR "primary education" OR "secondary education " OR Kindergarten OR Elementary* " OR "Primary class* " OR "Primary school* " OR "reception class* " OR Post-primary OR "Secondary school* " OR "1st year* " OR "First Year* " OR freshm#n OR "Junior high " OR "Middle school" OR Age*3 OR "3 year* old*" OR Age*4 OR "4 year* old*" OR Age*5 OR "5 year* old*" OR Age*6 OR "6 year* old*" OR Age*7 OR "7 year* old*" OR Age*8 OR "8 year* old*" OR Age*9 OR "9 year* old*" OR Age*10 OR "10 year* old*" OR Age*11 OR "11 year* old*" OR "Junior infant*" OR "First Class" OR "Second Class" OR "Fourth Class" OR prekindergarten OR "Grade 1" OR "Grade 2" OR "Grade 3" OR "Grade 4" OR "Grade 5" OR "Grade 6 " OR "Grade one " OR "Grade three" OR "Grade four " OR "Grade five" OR "Grade six" OR "3rd Grade" OR "4th Grade" OR "6th Grade" OR "First Grade" OR "Second Grade" OR "Third Grade" OR "Fourth Grade" OR "Fifth Grade" OR "Sixth Grade" OR "Group 1" OR "Group 2" OR "Group 5" OR "Group four " OR "First Standard" OR "Second Standard"