# Does intergenerational contact reduce Ageism? When and How Contact Interventions Actually Work?

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| ARTICLE INFO | ABSTRACT |
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| | Although the past two decades have seen concrete attempts to reduce ethnic and racial prejudice, relatively little has been done to diminish age related prejudice. In this paper, we review intergenerational contact interventions have been applied in a real world setting, the results are mixed. While contact interventions are not a panacea, they do constitute a main plank in efforts to redress ageism. We, therefore, examine the types of interventions that are effective, the processes underlying their enhanced impact, and clarifying *when* and *how* intergenerational contact can predict more positive attitudes towards the elderly. Finally, we highlight ways in which findings might be applied to the development of more effective interventions aimed at combating a pervasive stereotype of aging, drawing out lessons for theory and implications for practice. |

## Introduction

Although the term, ageism, was initially coined to describe negative attitudes held about the elderly (Butler, 1969), it is equally a measure of negative attitudes elder generations hold toward younger generations. It is suggested that negative attitudes towards the elderly develop early in childhood. Young children easily identify age categories and have negative stereotypes of age-related outgroups (Burke, 1981; Thomas & Yamamoto, 1975). Seefeldt, Jantz, Galper, and Serock (1977), for example, found that children aged 3-11 described the elderly people as sick, tired, and ugly, and expressed discomfort about the idea of growing older themselves (also see, Kite, Stockdale, Whitely & Johnson, 2005; Braithwaite, 1986; Coupland, Coupland, & Giles, 1991; Gold, Arbuckle, & Andres, 1994). Stereotyping of older adults has been a central issue to ageism; its importance has made it a topical issue. For this reason, we look at further explore the empirical research assessing interventions aimed at redressing it, and the lessons they provide in this paper.

As background, according to the stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002), our stereotypes of groups differ along two dimensions; *warmth*, which indicates whether the group intends help or harm, and *competence*, which reflects whether the group is capable or not of enacting their intentions. A number of studies have demonstrated that elderly people are stereotyped as being high on warmth, but are reported as being low on the competence dimension (Fiske et al. (2002). While one might expect these stereotypic views of the elderly to be confined to individualist western societies, because collectivist societies tend to place a greater emphasis on respect for elders, recent evidence suggests that elderly stereotypes are highly pervasive. Cuddy, Norton, and Fiske (2005) reported a study conducted with participants from Belgium, Costa Rica, Hong Kong, Japan, Israel, and South Korea, and found that across all samples, elderly people were seen as significantly more warm than competent. Fisk et al. (2002), likewise, found that warm, incompetent groups elicit emotions that have negative implications for the well being of elderly people.

Breaking this down and explaining the pattern, while 'warmth' results in positive behaviors are associated with an increase in pro-social, helping behavior (e.g., Zucker & Weiner, 1993), perceptions of incompetence result in people being disregarded and excluded. Consistent with this, studies have found that that physicians are less engaged, less respectful, less supportive, and less egalitarian when talking to elderly patients than when talking to young patients (Greene, Adelman, Charon, & Friedmann, 1989). In the workplace, older people have trouble finding and keeping jobs because they are presumed to be less productive than their younger counterparts (McCann & Giles, 2002). So, negative attitudes and stereotypes

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about elderly people are prevalent in Western societies, not because they are viewed as cold but because they are seen to have traits which lead to incompetence. It is, therefore, essential that we understand how these perceptions can be altered. One of the best known and most effective interventions to reduce prejudice is intergroup contact (Allport, 1954).

## Intergroup Contact as a Model for Investigating Age Relations

Contact hypothesis (Allport, 1954), argues that by bringing minority and majority groups together, in this case older adults and younger people, they can have high quality interactions which in turn will reduce prejudice between the groups These interactions fill in the missing or incomplete information that group members may have, which forms the basis for their stereotyping (see Pettigrew & Tropp, 2006). Moreover, Allport suggests that it is not sufficient to facilitate contact alone, but that the social exchanges between the individuals and groups is most effective if a set of 'optimal conditions' are met. These conditions include: equal group status (i.e., having the same socio-economic status or academic background), common goals (i.e., working on a shared task), intergroup cooperation (i.e., working together whilst limiting intergroup competition), and institutional support (i.e., having customs and laws that support the interaction between the groups ). Also, studies have shown that the conditions aid in decreasing stigmatization of minority groups, because they can function together to have a facilitatory effect (Pettigrew & Tropp; Heinke, Carslaw & Christian, 2013). The key question is under what conditions is it most effective?

## How does intergenerational contact reduce prejudice?

From the mid-1980s there has been a widespread use of intergenerational educational programs (Ames & Youatt, 1994; McCrea & Smith, 1997). This type of intervention typically involve bringing together younger and older people to interact with one another on co-operative tasks, with the joint goals of encouraging cross-generational bonding and providing an enhanced support systems for both groups. Many of these interventions involve educational programs among school children and university students, and others develop intergenerational contact through voluntary work. (See Table 1.)

*Intergenerational daycare programs.* Intergenerational daycare programs are often used because they simultaneously address the issues of isolation among the elderly and the need for good quality childcare. However, several of studies have also investigated whether they help, through intergenerational contact, to reduce prejudice. Middlecamp and Gross (2002) compared children who attended an intergenerational daycare program, in which elderly people and children were looked after together, to children who attended traditional daycare programs where only children were cared for. Here, the programs involved the children and elderly people taking part in a series of structured activities together, including listening to music, making crafts, and taking field trips. These activities constituted 'high-quality contact', meaning that they met the optimal conditions proposed by Allport (1954). There were, however, no significant difference between children in the intergenerational daycare program, and those in the traditional daycare program -- in terms of their attitude towards elderly people following the sustained contact.

So, why is this type of intervention ineffective? Although the intervention reported here appear to involve high quality contact (Middlecamp & Gross, 2002), the intervention has one crucial problem: It involved limited and unstructured contact between the two groups, those being the youths/children and the elderly adults. There was no cooperative element built into the tasks between the groups. Furthermore, for children visiting the elderly in nursing homes (Kocamik & Ponzetti, 1986), the adults are presumably in an institutional environment because they were physically or mentally incapacitated. Thus, contact with them could potentially confirm existing negative stereotypes that 'elderly people are infirm, weak and helpless', thereby undermining the intention of the program

There are instances of interventions that have been well implemented and are therefore noteworthy. For example, Caspi (1984) compared segmented of children (aged 3-6 years old), with the children attending two child care facilities (i.e., one that offered intergenerational contact and another which did not). There was one important difference between this study and prior work: In this case, the adults worked as teaching aides to the children rather than being cared for alongside the children. Caspi found that children who attended nursery schools in which there were elderly teaching aides had more positive attitudes towards the elderly than children who attended traditional nursery schools. The reason being that children who

encountered elderly people whom had the skills to teach them form experienced, in which the disconfirming the negative stereotypes about the elderly as being incompetence did not apply.

*Intergenerational educational programs.* A number of programs involving contact between younger and older people have been developed and tested in educational settings. These fall into two main categories, those being workshops or courses and partnering initiatives (i.e., partnering younger and older adults to work together on shared activities.) Recent studies with undergraduates and children tested the effectiveness of classes that to varying degrees involve contact between younger and older participants. Murphy-Russell, Die, and Walker (1986) compared three different methods of improving attitudes towards elderly people. Undergraduate students each took part in three workshops, with the order in which they were completed counterbalanced. One involved a quiz and a discussion about elderly people, another involved watching a film about elderly people, and a third involved a question-and-answer session with an elderly couple. Participants showed significant positive attitude change following each session. However, it emerged that direct experience with an elderly couple was the most effective means of producing positive attitude change.

In another example, Angiullo, Whitbourne, and Powers (1996) asked undergraduate students to complete a questionnaire regarding their knowledge of the ageing process. In so doing, they rated their attitudes towards the elderly during the first week and the last week of a course on the "psychology of ageing". Members of the class also volunteered weekly with disabled elderly people, and their attitudes were compared to those who had limited or no contact with the elderly. Although students' knowledge about attitudes toward the elderly significantly improved over the course of the semester, there were no differences between those who had volunteered and the other groups. Additionally, in a study where children and high school students interacted with elderly adults in an educational workshop setting, participants largely retained their negative stereotypes of the elderly people even after the intervention (Couper, Sheehan & Thomas, 1991). As with the intergenerational day care programs, these findings highlight that short-term volunteering efforts do not always result in positive attitude change. However, there have been examples of effective intergenerational education programs where the intervention run long-term (9 months), and involved the formation of close relationships with elderly adults (Aday, Sims, Rice, McDuffie & evans, 1996a; Aday, Aday, Arnold & Bendix, 1996b; Pettigrew, 1997). In these programs, the effects of the intergenerational contact were significant and detectable even after 5 years (Aday et al., 1996b). Thus, the formation of such close bonds between members of different groups is critical and effective for producing lasting alterations in behaviour (Pettigrew, 1997).

*Intergenerational volunteer programs.* Practitioners have used volunteering programs to bring younger and older people together. In general, however, these schemes have had a mixed impact on attitudes. For example, Dooley and Frankel (1990) investigated secondary school students who were volunteers in a Student Outreach to Seniors (SOS) program. As part of the study, the young students visited an elderly person once a week, in the elderly person's home, over a period of 24 weeks. During the visit, the students helped their elderly counterparts with chores. The pattern of findings suggests that the students held significantly more positive attitudes towards the elderly following the intervention. The long-term nature of the program and the opportunity to develop a one-on-one relationship with an elderly person may why this program had a positive impact.

Chapman and Neal (1990) also evaluated the effectiveness of two intergenerational programs, both that involved bringing younger and older participants together to help one another. One program centered around younger participants (aged between 9 and 19 years) doing household work and garden chores for older adults, whilst the other involved older adults helping young people in an educational and recreational capacity. Across these two programs, Chapman and Neal considered whether helping, or being helped, by the other age group led to more positive age-related attitudes. They found that young participants who had helped older people subsequently reported more enjoyment at spending time with older people, decreased social distance from older people, and more positive perception of older people's attitudes towards the young. However, young people who were the recipient of elderly help, and elderly adults who either gave or received help, showed no change in attitude. In sum, the evidence here suggests that volunteer schemes are more effective at changing young people's attitudes than elderly people's age-related attitudes.

*Intergenerational recreation programs.* Another area of popular application has been that of recreationally-based activities for all ages. (Darrow, Johnson, and Ollenberger, 1994 Doka, 1985-1986; Pinquart, Wenzel,

& Sorensen, 2000; Bowers (1998) conducted a study in which the effectiveness of a program in which older adults who belonged to a choir and younger adults who were enrolled on music course took part in choir activities together. The design was similar to Chapman and Neal's in that attitudes of both groups were ascertained before and after the program; and members of both age groups showed a significant and positive change in attitudes towards the other age group. Surprisingly, the greatest changes occurred in the attitudes of older adults, with their attitudes of the young people increasing substantially as a result of the contact. Again, reinforcing that working on a common interest task enjoyed by both age groups, over a sustained period, is an effective way to generate more positive attitudes towards other social group.

However, not all recreational programs lead to positive attitude change (Pinquart, Wenzel & Sorensen, 2000; Doka, 1985-1986). As an example, Doka (1985-1986) reported the consequences of a two-day history project in which 12 to 16 year olds had a discussion and a local history tour with older adults, and also an interview with an older adult regarding changes during their lifetime. Although participants expressed enthusiasm for the project and admiration for the individual they had interviewed, their attitudes towards the elderly did not significantly change. This is, perhaps, not surprising given that the intervention was short-term and did not provide the opportunity for close relationships to develop between young participants and older adults. Similar problems with other interventions have included elderly adults and children who created, participated, rehearsed, and performed a puppet show together. Initially the children's attitudes towards the elderly were more positive, but this effect vanished after seven weeks (Pinquart, Wenzel & Sorensen, 2000). Thus the study exemplifies the limitations of short term contact.

## When and how does intergenerational contact reduce prejudice?

The majority of applied intergenerational contact interventions are relatively a theoretical and considerable emphasis has not been placed on their design, because the programs have been largely implemented by educational practitioners rather than by psychologists. This has led to mixed findings, with some interventions effectively reducing ageism and others having little or no impact. Recently, however, there have been a number of cross-sectional studies that have looked at what types of intergenerational contact work best (a) what processes mediate their effect, and (b) when they are most likely to lead to prejudice reduction based on social psychological principles. We believe that an integration of what has been learned from existing intergenerational contact programs and what psychologists have demonstrated may help us to develop more effective ways to reduce prejudice. With this in mind, we now review the findings here Firstly, these studies fall into two overlapping categories – those that demonstrate the benefits of different types of intergenerational contact, and those that demonstrate how and when intergenerational contact is most likely to reduce ageism. Both are important, but understanding that there are differences could be potentially critical for those implementing such interventions.

## Quantity and quality of contact

Allport (1954) argued that contact would not reduce prejudice if it was wholly superficial. Superficial contact may increase prejudice towards other groups, because of lack of experience with the out-group members. Those embarking on casual intergroup contact will behave in a defensive manner that leads to an unpleasant rather than a pleasant interaction. Although there is some evidence that *quantity of contact* is associated with reduced prejudice (e.g., Islam & Hewstone, 1993), Amir (1969) argued that relationships that emerged could well be an artifact of more intimate contact rather than an effect of casual contact per se. If the *quality of contact* is high, however, greater quantity of contact may reduce prejudice. High quality contact might be defined as contact that is close rather than casual.

Picking up on these points, Schwartz and Simmons (2001) had undergraduate students complete a questionnaire regarding their contact frequency, contact quality, and attitudes towards the elderly. Frequency of contact had no effect on attitudes towards the elderly, whereas participants with high quality of contact had significantly more positive attitudes than those with low quality of contact, regardless of the frequency of contact they had experienced. Similarly, Knox, Gekoski, and Johnson (1986) considered the impact of a broad range of intergenerational contact measures, and found that quality of contact was the strongest predictor of attitudes towards the elderly among undergraduate students.

In a similar vein, Tam, Hewstone, Harwood, Voci, and Kenworthy (2006) conducted a study in which participants completed a measure of implicit attitude towards the elderly, measured using the implicit association test (IAT; Greenwald, McGee, & Schwartz, 1998). Essentially, this measure captures how quickly participants associate "elderly" and "young" with positive and negative traits. Implicit age bias on this measure is reflected by a greater ease at categorizing "young" alongside positive traits, and "elderly" alongside negative traits. Tam et al. found that the greater the quality of younger adults' contact with elderly people (how well they got on with elderly people, how emotionally close they felt to elderly people), the more positive explicit attitudes they held towards elderly people in general. Specifically, the greater quantity of contact participants had had with elderly people, the less they implicitly favoured young people over elderly people. This suggests that the *content* of the contact experience rather than the contact experience per se that is important in changing explicit, self-reported attitudes towards the elderly. Unlike the deliberate behaviors associated with explicit outgroup attitudes, behaviors associated with implicit attitudes may be difficult to monitor and inhibit, yet may influence others' perceptions of us. Knowing that intergroup contact, through mere exposure, is predictive of a more positive implicit outgroup attitude allows us to be more optimistic about our ability to avoid negative non-verbal behaviors and their consequences.

## Grandparent – grandchild contact

Earlier, we noted that close interpersonal relationships between members of different groups are particularly effective at improving outgroup attitudes (Pettigrew, 1998). A number of studies have recently considered whether the strength of a unique intergenerational relationship, between a grandchild and their grandparents, is important in forming attitudes about the elderly. This focus is important for four reasons. First, owing to an increasingly aging population and increased longevity, more young people have living grandparents today than at any other time in history (Mares, 1995). Second, the grandparent relationship provides many people with their first and most frequent contact with older adults (Ng, Liu, Wetherall, & Loong, 1997). Third, grandparent – grandchild contact is likely to satisfy a number of facilitating conditions described in intergroup contact research, for example, the contact is likely to be cooperative, have institutional support, and be intimate and long-term (Pettigrew, 1998). Finally, close grandparent – grandchildren relationships may be particularly effective at improving attitudes towards elderly people in general because the relationship is both interpersonal and intergroup in nature (Williams & Nussbaum, 2001). Although family relationships are often close on an interpersonal level, as grandparents often talk about historical events and dispense wisdom, the age difference between the grandparent and grandchild is also likely to be salient (Harwood, 2000; Nussbaum & Bettini, 1994). Brown and Hewstone (2005) have argued that contact that is high on both *interpersonal* and *intergroup* dimensions should be particularly effective at reducing prejudice. As the contact is more intimate, it should be associated with greater interpersonal liking. But, because age differences are salient, this positive evaluation is more likely to generalize to the wider population of elderly people.

Accordingly, cross-sectional studies show that grandparent – grandchild contact is effective at reducing prejudice. Past contact with grandparents and their grandchildren has been associated with greater support for policies that financially support to enhance quality of life for older adults (Silverstein & Parrott, 1997). Specifically, these results indicate that the greater the quality an individual's relationship with a close grandparent, the more positive the attitudes towards elderly adults in general (Harwood; Hewstone, Paolini & Voci, 2005; Study 1). These studies demonstrate that maintaining positive attitudes towards elderly populations, first begins with forming a close relationship with one's grandparent as a child, and then the age difference of the dyad must be salient to each member to have the most powerful effect on reducing poor attitudes.

*Indirect forms of contact.* What about in cases where there is no grandparent or a poor relationship exists with the grandparent? A recent advance in contact research is the idea that even indirect forms of contact - thinking about social interactions with someone whom you know, or those interactions don't actually involve face-to-face contact with members of another group - can reduce intergroup prejudice. *Extended contact* is the idea that the you can directly benefit from vicarious experiences of friendship – the knowledge that ingroup members have friends in another group (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997), whereas *imagined contact* is the idea that simply imagining interacting with members of another group can have effects comparable to face-to-face contact (Turner, Crisp, & Lambert, 2007a). Although there is

growing evidence that extended contact reduces prejudice in the context of interethnic relations (e.g., Paolini et al., 2004; Turner, Hewstone, & Voci, 2007b), this has not yet been investigated in relation to ageism. Recent research has, however, shown that *imagined contact* can be used as a means of reducing ageism.

In an example of imagined contact, Turner et al. (2007a) instructed participants (aged 18-20 years) to spend a few minutes imagining interacting with an elderly person; or in a control condition, she asked them to imagine an outdoor scene. Participants were then offered the opportunity to take part in a "conversation study" in which they could choose to talk to a young person or an elderly person. Participants who had simply imagined an outdoor scene showed intergroup bias – they were significantly more likely to want to interact with a young person than an elderly person – but participants who had imagined interacting with an elderly person showed no intergroup bias, demonstrating that thinking about interactions can be a powerful tool for decreasing negative perceptions

How does this psychological process work? It can be argued that imagining contact should reduce prejudice, because it activates concepts, such as feeling more comfortable and less apprehensive, that we normally associate with successful interactions with members of unknown groups. In addition to these relatively automatic activations, when people imagine intergroup contact they are also likely to engage in conscious processes that parallel the processes involved in actual intergroup contact. For example, individuals may actively think about what they would learn about the outgroup member (e.g., elderly person), how they would feel during the interaction, and how this would influence their perceptions of that outgroup member and the outgroup more generally. In turn, this should lead to more positive evaluations of the outgroup (elderly people as a whole), similar to the effects of face-to-face contact (e.g., Paolini et al., 2004).

## How and when does intergenerational contact work?

Recent research has begun to identify *how* intergenerational contact reduces ageism, and *when* such an effect is likely to occur. These studies have focused primary on the grandparent – grandchild relationship which, as we outlined above, may be an important means of reducing ageism. Soliz and Harwood (2005) investigated two processes involved in grandparent – grandchild relationships that predict attitudes towards elderly people. The first process is communicative accommodation. According to the communication accommodation theory (CAT; Harwood & Giles, 2005), when interacting with one another older and younger adults often over-accommodate (i.e., alter communication in excess of what is needed) or under-communicate (i.e., fail to adjust communication) to one another in interaction. There are a number of ways in which people may do this. For instance, younger people may over-accommodate when talking to older adults who are perceived as incompetent adopting patronizing "baby talk" (Hummert, Garstka, Ryan, & Bonnsen, 2004), for example. On the other hand, older people may under-accommodate, making excessive self-disclosures about their health problems or loneliness to younger people (Bonnesen & Hummert, 2002; Coupland, Coupland, Giles, & Henwood, 1998) or over-accommodate, talking in a patronizing way to younger people (Harwood, 2000). The second process is parental encouragement. Parents typically encourage grandchildren to communicate and develop relationships with their grandparents (Harwood et al., 2006), with such encouragement constituting "institutional support", a key condition of the contact hypothesis for decreasing bias (Allport, 1954).

Soliz and Harwood (2005) first considered the grandparent with whom the grandchild had the most contact. They found that family identification, parental encouragement, and personal communication (indicated by social support and self-disclosure) were associated with higher levels of shared family identity. In turn, having a shared family identity predicted more positive perceptions of older adults in general. Poor intergroup communication (as indicated by the presence of over and under accommodative behaviors) was associated with increased age salience, which was in turn negatively associated with perceptions of ageing. These findings help us to understand the processes that operate *during* grandchild – grandparent interactions and how they influence intergroup relations Soliz and Harwood (2005) showed that age salience during contact, as a result of poor communicative accommodation, can increase ageism. But other recent findings show that age salience may in fact be a necessary component of contact if positive attitudes towards known elderly individuals are to generalize to other elderly people (Harwood et al., 2005). Quality of contact in high frequency grandparent relationships predicted attitude toward older adults, but this relationship was moderated by the perceived salience of age during contact (Soliz & Harwood, 2005). Specifically, while the quality of participants' contact with grandparents who they saw

frequently positively predicted attitudes towards elderly people when age salience was high, this relationship did not emerge when age salience was low. These findings suggest that it is not only necessary to have high quality, positive contact with the grandparent, but the participant must also be aware of their respective ages during the contact in order for their positive experiences with the grandparent to generalize to elderly people in general.

In a second study, Harwood et al. (2005) asked undergraduate students specifically about their most active grandparent relationship. They considered the impact of contact on not only attitude towards the elderly but also the perceived variability among elderly people. They then considered a number of processes that might underlie the relationship between grandparent contact and attitude towards the elderly. Specifically, they included affective mediators (anxiety during interaction with the grandparent and perspective taking, seeing things from their grandparents' point of view), a cognitive mediator (individuation, learning something unique about the grandparent), and communicative mediators (self-disclosure, expressing personal feelings to outgroup members, and communication accommodation, adapting conversations to suit their grandparent). In line with the findings from their first study, experience of high quality contact in one's most active grandparent relationship predicted more positive outgroup attitudes, but only when age were salient during the contact. High quality contact also predicted greater perceptions of variability among elderly people. Considering the processes underlying these relationships, Harwood et al. (2005) found that high quality contact predicted greater perspective taking, less anxiety, and more accommodation, which in turn were associated with more a positive attitude towards the elderly, and greater perceptions of variability among elderly people. This is important because perceptions of group variability are associated with reduced stereotyping, reduced memory for stereotype-consistent information, and enhanced likelihood of positive stereotype change (Hewstone & Hamberger, 2000; Ryan, Judd, & Park, 1996).

Additionally, Tam and colleagues (2006) found that younger adults' quality of contact with elderly people was associated with higher levels of self-disclosure to their closest grandparent, and that they held more positive attitudes towards elderly people. Quantity of contact with elderly people was also associated with greater amount of self-disclosure to one's grandparents. The relationship between self-disclosure to one's closest grandparent and attitude towards elderly people was mediated by two processes. First, empathy played an underlying role. When someone discloses personal information to us, we are likely to feel empathy, a vicarious emotional state triggered by witnessing and understanding the thoughts and feelings of another (Stephan & Finlay, 1999). When empathy is experienced towards an outgroup member, such feelings are incompatible with negative intergroup attitudes, resulting in reduced prejudice (e.g., Batson et al., 1997). Self-disclosure also changed outgroup attitudes because it was associated with lower levels of intergroup anxiety. The more someone discloses to an individual, the more likely they are to understand and predict the discloser's behavior (Berger & Bradac, 1982), and the more control they feel over the situation, and subsequently the less anxious they feel. In line with previous findings, the less anxiety people feel, the more positive their outgroup attitudes are (e.g., Islam & Hewstone, 1993).

Finally, rather than considering the factors that moderate contact, a recent study by Abrams, Eller, and Bryant (2006) considered intergenerational contact as a moderator of stereotype threat. According to stereotype threat theory (Steele & Aronson, 1995), when a group believes that there is a negative stereotype about them (e.g., that they are less competent or less intelligent), they experience a threat which negatively affects their performance on tasks related to that stereotype. Steele and Aronson, for example, found that when the stereotype was made salient, African Americans underperformed on an intelligence test compared to European Americans. Bringing this back to our context of ageism, among elderly people, stereotype threat effects have been shown to detrimentally affect mathematical (Hess, Auman, Colcolmbe, & Rahhal, 2003) and memory performance (Hess, Hinson, & Statham, 2004). That is, the effect of making a stereotype salient on performance on stereotype-related tasks is thought to be mediated by anxiety, apprehension at the prospect of conforming to the negative group stereotype (Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995). Also, Abrams et al. (2006) found that older adults who have had positive experiences with intergenerational were less likely to exhibit stereotypical behaviour, and performed much better on cognitive tasks than their counterparts who have had negative experiences with intergenerational contact. These findings highlight the benefits of sustaining intergenerational relationships for elderly people – elderly people who have positive contact with young people are more likely to be buffered from the negative effects of stereotypes against their group regarding cognitive abilities

## Conclusions and future directions

In this paper, we have his reviewed studies that have explored the conditions under which interventions to tackle ageism have been most successful. What is clear from the evidence is that short-term intergenerational intervention programs have produced mixed results. Programs designed around longer-term, more sustained contact have resulted in more positive attitudes towards elderly people. However, those interventions structured around shorter-term contact appear to have had no impact, or in the worst case scenario appear to have resulted in more negative attitudes than those previously held. Thus, when developing interventions, the research suggests that practitioners should ensure that there is the potential to develop close interpersonal relationships over time. Interventions encouraging acquaintances to empathize with one another, to disclose information of a personal nature to one another, to work on communication accommodation so that interactions are comfortable and enjoyable, and to focus on what makes one another unique, will all help to generate positive, successful interactions (Harwood et al., 2005; Soliz & Harwood, 2005; Tam et al., 2006).

We also draw out some outstanding issues that still need redressing. Specifically, with very few considering studies have largely focused on the effect of intergenerational contact on younger people (cf. Abrams et al., 2006; Bowers, 1998; Chapman & Neal, 1990; Darrow et al., 1994; Meshel & McGlynn, 2004). This is somewhat surprising given that in recent years there are growing body of literature on the negative perceptions of young people, a concern which should be explored further. Such an avenue – attitudes of elderly adults - might also yield interesting ideas and possible routes in to further tackling ageism. In light of the advances made on the use of indirect contact with extended contact (Wright et al., 1997) and imagined contact work (Turner et al., 2007a), it would seem beneficial to employ these techniques in the context of intergenerational contact interventions more widely. Such techniques could potentially lead to many innovative and cost effective interventions for those who design and monitor social programs.

Table 1: *Intergroup Contact Studies*

| Study/Category of Study | Context and Target Group(s) | Type of contact | Outcome Measures |
|---|---|---|---|
| *Intergroup contact between older adults and children* | | | |
| Cummings, Williams, & Ellis (1981) | 4th Grade children and older adults; educational tasks in classroom | Direct | + Attitudes and behavioral |
| Carstensen, Mason, & Cadwell (1982) | 6-7 year old children and older adults; reading tasks | Direct | + Attitudes |
| Caspi (1984) | 6 year olds and older adults; learning tasks with adults as the teachers | Direct | + Attitudes |
| Doka (1985-1986) | Middle-High School students and older adults; local history discussion | Direct | + Affect; no change for attitudes |
| Kocarnik, & Ponzetti (1986) | 5 year olds (daycare) and older adults; recreational activities | Direct | No change in attitudes |
| Murphy-Russell, Die, & Walker (1986) | University students and older adults | Direct & Indirect | + Attitude with direct contact |
| Seefeldt (1987) | 4-5 year olds and older adults; nursing homes | Direct | - Attitudes following visits to homes |

| | | | |
|---|---|---|---|
| Couper, Sheehan, & Thomas (1991) | Elementary school and high school children and older adults; educational task | Direct | No change in attitudes |
| Aday, Sims, Rice, McDuffie, & Evans (1996a) | 4th Grade children with older adults; educational tasks | Direct | + Attitudes |
| Aday, Aday, Arnold, & Bendix (1996b) | 4th Grade children with older adults; interdisciplinary education tasks | Direct Longitudinal follow up | - Affective (e.g., anxiety) and + attitudes |
| Pinquart, Wenzel, & Sörensen (2000) | 4th Grade children and older adults (M = 72 years); recreational task | Direct & indirect | + Attitudes but not sustained for either children or older adults |
| Middlecamp, & Gross (2002) | Daycare programs and older adults; recreational tasks | Direct | No differences in children's attitudes |
| Meshel, & McGlynn (2004) | Middle school children; triads (2 children; 1 older adult); recreational activities | Direct & indirect contact | + Attitudes; attitudes most enhanced in direct contact condition; older adults' attitudes enhanced following direct contact too |
| *Intergroup Contact between teenagers and older adults* | | | |
| Darrow, Johnson, & Ollenberger (1994)* | Teenagers and elderly; singing activity | Direct contact | + Attitudes for both youths and elderly people |
| | *Contact between target groups of adults and elderly persons* | | |
| Revenson (1989) | Doctors | Survey of previous contact | + Contact with older adults increased negative stereotypes held by doctors |
| Angiullo, Whitbourne, &Powers (1996) | University students | Direct & Indirect | No differences between direct and indirect contact groups |
| | *Undergraduate students perceptions of contact with the elderly* | | |
| Knox, Gekoski, & Johnson (1986) | University students | Survey of previous contact | + Quality of contact enhanced attitudes towards older people |
| Hawkins (1996) | University students | Survey of previous contact | - Stereotyping enhanced attitudes; contact no effect |
| Bowers (1998)* | University students and older adults; choir singing activity | Direct contact | + Attitudes, but attitudes of the older adults where more enhanced than the younger adults |
| Schwartz, & Simmons (2001) | University students | Survey of previous contact | + Attitudes correlated with quality and frequency of contact |

| Turner et al (2007a) | University students | Indirect/ Imagined Contact | - Reduced Bias |
|---|---|---|---|
| | *Evaluation Programs* | | |
| Dooley, & Frankel (1990)* | Middle school children with older adults; children visiting older adults in their homes | Direct | + Attitudes for younger people |
| Chapman, & Neal (1990)* | 9-19 year olds visiting older adults in their home; same age groups recreational context | Direct | + Attitudes for young people visiting older adults; little change in recreational group of younger adults. + attitude for older adults |
| | *Contact with grandparents and policy implications* | | |
| Silverstein, &Parrott (1997) | University students and their grandparents | Survey of Previous Contact | + Contact enhanced attitudes |
| Harwood et al. (2005) | University students and grandparents | Survey of Previous Contact | + Attitudes towards grandparent generalized to older adults as a whole |
| Soliz and Harwood (2005) | University students and grandparents | Survey of previous contact | - communication led to increased group bias |

### References

Abrams, D., Eller, A., & Bryant, J. (2006). An age apart: The effects of intergenerational contact and stereotype threat on performance and intergroup bias. *Psychology and Aging, 4,* 691-702.

Aday, R. H., Sims, C. R., McDuffie, W., & Evans, E. (1996a). Changing children's attitudes toward the elderly: The longitudinal effects of an intergenerational partners program. *Journal of Research in Childhood Education, 10*, 143-151.

Aday. R. H., Aday, K. L., Arnold, J. L., & Bendix, S. L. (1996b). Changing children's perceptions of the elderly: The effects of intergenerational contact. *Gerontology and Geriatrics Education, 16*, 37-51.

Allport, G. W. (1954). *The nature of prejudice.* Cambridge, MA: Perseus Books.

Ames, B., & Youatt, J. (1994). Intergenerational education and service programming. *Educational Gerontology, 20,* 755-764.

Amir, Y. (1969). The role of intergroup contact in change of prejudice and race relations. In P. A. Katz (Ed.), *Towards the elimination of prejudice* (pp. 257-277). Newbury Park, CA: Sage

Angiullo, L., Whitbourne, S. K., & Powers, C. (1996). The effects of instruction and experience on college students' attitudes toward the elderly. *Educational Gerontology, 22,* 483-495.

Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., & Imhoff, H. J., Mitchener, E. C., Bednar, L. L., Klein, T. R., & Highberger, L. (1997). Empathy and attitudes: can feelings for a member of a stigmatized group improve feelings toward the group? *Journal of Personality and Social Psychology, 72,*105-118.

Berger, C. R., & Bradac, J. J. (1982). *Language and social knowledge: Uncertainty in interpersonal relations.* London, England: Edward Arnold.

Bonnesen, J. L., & Hummert, M. L. (2002). Painful self-disclosures of older adults in relation to aging stereotypes and perceived motivations. *Journal of Language and Social Psychology, 21,* 275-301.

Bowers, J. M. (1998). Effects of an intergenerational choir for community-based seniors and college students on age-related attitudes. *Journal of Music Therapy, 35*, 2-18.

Braithwaite, V. (1986). Old age stereotypes: Reconciling contradictions. *Journal of Gerontology, 41,* 5353-360.

Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology, 37,* 255-343.

Butler, R. N. (1969). Age-ism: Another form of bigotry. *Gerontologist, 9,* 243-246.

Burke, J. L. (1981). Young children's attitudes and perceptions of older adults. *International Journal of Aging and Human Development, 14,* 205-221.

Carslaw, G., Heinke D., Christian, J. (2013). An agent-based simulation of destigmatization (DSIM): Introducing a contact theory and self-fulfilling prophecy approach. *Jouranl of Artificial Societies and Social Simulation*, 16 (4) 10-27.

Carstensen, L. L., Mason, S. E., & Cadwell, E. C. (1982). Children's attitudes towards the elderly: An intergenerational technique for change. *Educational Gerontology, 8,* 291-301.

Caspi, A. (1984). Contact hypothesis and inter-age attitudes: A field study of cross-age contact. *Social Psychology Quarterly, 47,* 74-80.

Chapman, N. J., & Neal, M. B. (1990). The effects of intergenerational experiences on adolescents and older adults. *The Gerontologist, 30,* 825-832.

Cohen, E. S. (1990). The elderly mystique: Impediment to advocacy and empowerment. *Generations: Journal of the American Society on Aging, 14,* 13-16.

Couper, D. P., Sheehan, N. W., & Thomas, E. L. (1991). Attitude toward old people: The impact of an intergenerational program. *Educational Gerontology, 17,* 41-53.

Coupland, N., Coupland, J., Giles, H., & Henwood, K. (1998). Accommodating the elderly: Invoking and extending a theory. *Language and Society, 17,* 1-41.

Coupland, N., Coupland, J., & Giles, H. (1991). *Language, society, and the elderly.* Oxford: Blackwell

Cuddy, A. J. C., Norton, M. I., & Fiske, S. T. (2005). This old stereotype: The pervasiveness and persistence of the elderly stereotype. *Journal of Social Issues, 61,* 267-285.

Cummings, S. M., William, M. M., & Ellis, R. A. (2003). Impact of an intergenerational program on 4th graders' attitudes toward elders and school behaviors. *Journal of Human Behavior in the Social Environment, 8*, 43-61.

Darrow, A., Johnson, C. M., & Ollenberger, T. (1994). The effect of participation in an intergenerational choir on teens' and older persons' cross-age attitudes. *Journal of Music Therapy, 31,* 119-134.

Derby, S. E. (1991). Ageism in cancer care of the elderly. *Oncology Nursing Forum, 18,* 921-926.

Doka, J. K. (1985-1986). Adolescent attitudes and beliefs toward aging and the elderly. *International Journal of Aging and Human Development, 22,* 173-187.

Dooley, S., & Frankel, B. G. (1990). Improving attitudes toward elderly people: Evaluation of an intervention for adolescents. *Canadian Journal of Aging, 9,* 400-409.

Ensari, N., & Miller, N. (2006). The application of the personalization model in diversity management. Group Processes and Intergroup Relations, 9, 589-607.

Fiske, S. T., Cuddy, A. J. C., Glick, P. S., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82,* 878-902.

Gaertner, S. L., & Dovidio, J. F. (2000). *Reducing intergroup bias: The common ingroup identity model.* Philadelphia: Psychology Press.

Gold, D. O., Arbuckle, T. Y., & Andres, D. (1994). Verbosity in older adults. In M. L. Hummert, J. M. Wicmann, & J. F. Nussbaum (Eds.), *Interpersonal communication in older adulthood: Interdisciplinary theory and research* (pp. 107-129).

Greene, M. G., Adelman, R. D., Charon, R., & Friedmann, R. (1989). Concordance between physicians and their older and younger patients in primary care medical encounters. *Gerontologist, 29,* 808-813.

Greenwald, A. G., McGee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74,* 1464-1480.

Harwood, J. (2000). Communicative predictors of solidarity in the grandparent – grandchild relationship. *Journal of Social and Personal Relationships, 17,* 743-766.

Harwood, J., Hewstone, M., Paolini, S., & Voci, A. (2005). Grandparent-grandchild contact and attitudes toward older adults: Moderator and mediator effects. *Personality and Social Psychology Bulletin, 31,* 393-406.

Hawkins, M. J. (1996). College students' attitudes toward elderly persons. *Educational Gerontology, 22,* 271-279.

Hawkley, L. C., Burleson, M. H., Berntson, G. G., & Cacioppo, J. T. (2003). Loneliness in everyday life: Cardiovascular activity, psychosocial context, and health behaviors. *Journal of Personality and Social Psychology, 85,* 105-120.

Hawkley, L. C., & Cacioppo, J. T. (2003). Loneliness and pathways to disease. *Brain, Behaviour, and Immunity, 17,* S98-S105.

Hess, T. M., Auman, C., Colcolmbe, S. J., & Rahhal, T. A. (2003). The impact of stereotype threat on age differences in memory performance. *Journal of Gerontology: Psychological Sciences, 58,* 3-11.

Hess, T. M., Hinson, J. T., & Statham, J. A. (2004). Explicit and implicit stereotype activation effects on memory: Do age and awareness moderate the impact of priming? *Psychology and ageing, 17,* 495-505.

Hewstone, M., & Brown, R. (1986). Contact is not enough: An intergroup perspective on the 'contact hypothesis'. In M. Hewstone and R. Brown (Eds.). *Contact and conflict in intergroup encounters* (pp. 1-44). Oxford, England: Blackwell.

Hewstone, M., & Hamberger (2000). Perceived variability and stereotype change. *Journal of Experimental Social Psychology, 36*, 103-124.

Hummert, M. L., Garstka, T. L., Ryan, E. B., & Bonnsen, J. (2004). The role of page stereotypes in interpersonal communication. In J. F. Nussbaum, & J. Coupland (Eds.), *Handbook of communication and aging research* (pp. 91-115). Mahwah, NJ: Lawrence Erlbaum Associates.

Islam, R. M., & Hewstone, M. (1993). Dimension of contact as predictors of intergroup anxiety, perceived out-group variability and out-group attitudes: An integrative model. *Personality and Social Psychology Bulletin, 19,* 700-710.

Kite, M. E., Stockdale, G. D., Whitley, B. E. Jr., & Johnson, B. T. (2005). Attitudes towards younger and older adults: An updated meta-analytic review. *Journal of Social Issues, 61,* 241-266.

Knox, V. J., Gekoski, W. L., & Johnson, E. A. (1986). Contact with and perceptions of the elderly. *The Gerontologist, 26,* 309-313.

Kocarnik, R. A., & Ponzetti, J., J., (1986). The influence of intergenerational contact on child care participants' attitudes toward the elderly. *Child Care Quarterly, 15,* 244-250.

Lasser, R., Siegel, E., Dukoff, R., & Sunderland, T. (1998). Diagnosis and treatment of geriatric depression. *CNS Drugs, 9,* 17-30.

Levy, B. R., Slade, M. D., Kunkel, S. R., & Kasl, S. V. (2002). Longevity increased by positive self-perceptions of aging. *Journal of Personality and Social Psychology, 83,* 261-270.

Mares, M. L. (1995). The aging family. In M. A. Fitzpatrick, & A. L. Vangelisti (Eds.), *Explaining family interactions* (pp. 344-374). Thousand Oakes, CA: Sage.

McCann, R., & Giles, H. (2002). Ageism in the workplace: A communication perspective. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice towards older people* (pp. 163-200). Cambridge, MA: MIT Press.

McConnell, A. R., & Leibold, J. M. (2001). Relations among the implicit association test, discriminatory behavior, and explicit measures of racial attitude. *Journal of Experimental Social Psychology, 37,* 435-442.

McCrea, J. M., & Smith, T. B. (1997). Types and models of intergenerational programs. In S. Newman, C. R. Ward, T. B., Smith, J. O. Wilson, & J. M. McCrea (Eds.), *Intergenerational programs: Past, present, and future* (pp. 81-93).

Middlecamp, M., & Gross, D. (2002). Intergenerational daycare and preschoolers' attitudes about aging. *Educational Gerontology, 28,* 271-288.

Murphy-Russell, S., Die, A. H., & Walker J. L. (1986). Changing attitudes toward the elderly: The impact of three methods of attitude change. *Educational Gerontology, 12,* 241-251.

Nelson, T. D. (Ed.), (2002). *Ageism: Stereotyping and prejudice against older people.* Cambridge, MA: MIT Press

Ng, S. H., Liu, J. H., Wetherall, A., & Loong, C. F. (1997). Younger adults' communication experiences and contact with elders and peers. *Human Communication Research, 24,* 82-108.

Nosek, B. A., Banaji, M., & Greenwald, A. G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration website. *Group Dynamics, 6,* 101-115.

Nussbaum, J. F., & Bettini, L. (1994). Shared stories of the grandparent-grandchild relationship. *International Journal of Aging and Human Development, 39,* 67-80.

Nussbaum, J. F., Pitts, M. J., Huber, F. N., Krieger, J. L. R., & Ohs, J. E. (2005). Ageism and ageist language across the life span: Intimate relationships and non-intimate interactions. *Journal of Social Issues, 61,* 287-305.

Oskamp, S., & Jones, J. M. (2000). Promising practice in reducing prejudice: A report from the President's Initiative on Race. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 319-334). Mahwah, NJ: Lawrence Erlbaum.

Pettigrew, T. F. (1998). Intergenerational contact theory. *Annual Review of Psychology, 49*, 65-85.

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90,* 751-783.

Pinquart, M., Wenzel, S., & Sörensen, S. (2000). Changes in attitudes among children and elderly adults in intergenerational group work. *Educational Gerontology, 26,* 523-540.

Revenson, T. A.. (1989). Compassionate stereotyping of elderly patients by physicians: Revising the social contact hypothesis. *Psychology and Aging, 4,* 230-234.

Ryan, E. B., Giles, H.,. Bartolucci, G., & Henwood, K. (1986). Psycholinguistic and social psychological components of communication by and with the elderly. *Language and Communication, 6,* 1-24

Ryan, C. S., Judd, C. M., & Park, B. (1996). Effects of racial stereotypes on judgments of individuals: The moderating role of perceived group variability. *Journal of Experimental Social Psychology, 32,* 71-103

Schwartz, L. K., & Simmons, J. P. (2001). Contact quality and attitudes toward the elderly. *Educational Gerontology, 27,* 127-137.

Seefeldt, C. (1987). The effects of preschoolers' visits to a nursing home. *The Gerontologist, 27,* 228-232.

Seefeldt, C., Jantz, R. K.,. Galper, A., & Serock, K. (1977). Children's attitudes toward the elderly: Educational implications. *Educational Gerontology, 2,* 301-310.

Silverstein, M., & Parrott, T., M. (1997). Attitudes toward public support of the elderly: Does early involvement with grandparents moderate generational tensions. *Research on Aging, 19,* 108-132.

Soliz, J.,& Harwood, J. (2003). Perceptions of communication in a family relationship and the reduction of intergroup prejudice. *Journal of Applied Communication Research, 31*, 320-345.

Spencer, S., Steele, C. M., & Quinn, D. (1999). Stereotype threat and women's math performance. *Journal of Experimental Social Psychology, 35,* 4-28.

Steele, C. M., & Aronson, J. (1995). Stereotype threat and intellectual test performance of African Americans. *Journal of Personality and Social Psychology, 69,* 797-811.

Stephan, W. G., & Finlay, K. (1999). The role of empathy in improving intergroup relations. *Journal of Social Issues, 55*, 729-743.

Tam, T., Hewstone, M., Harwood, J., Voci, A., & Kenworthy, J. (2006). Intergroup contact and grandparent-grandchild communication: The effects of self-disclosure on implicit and explicit biases against older people. *Group Processes and Intergroup Relations, 9*, 413-429.

Thomas, E. C., & Yamamoto, K. (1975). Attitudes towards age: An exploration of school age children. *International Journal of Aging and Human Development, 6,* 117-129.

Turner, R. N., Crisp, R. J., & Lambert, E. (2007a). Imagining intergroup contact can improve intergroup attitudes. *Group Processes and Intergroup Relations, 10,* 427-441.

Turner, R. N., Hewstone, M., & Voci, A. (2007b). Reducing explicit and implicit prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology, 93,* 369-388.

Turner, R. N., Hewstone, M., Voci, A., Paolini, S., & Christ, O. (2007c). Reducing prejudice via direct and extended cross-group friendship. *European Review of Social Psychology, 18,* 212-255.

Wilder, D. A., & Thompson, J. E. (1980). Intergroup contact with independent manipulations on in-group and out-group interaction. *Journal of Personality and Social Psychology, 38*, 589-603.

Williams, A., & Giles, H. (1996). Intergenerational conversations: Young adults' retrospective accounts. *Human Communication Research, 23,* 220-250.

Williams, A., & Nussbaum, J. F. (2001). *Intergenerational communication across the lifespan.* Hillsale, NJ: Erlbaum.

Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology, 73,* 73-90.

Zucker, G. S., & Weiner, B. (1993). Conservatism and perceptions of poverty: An attributional analysis. *Journal of Applied Social Psychology, 23,* 925-943.