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Making Intergenerational Connections – an Evidence Review

What are they, why do they matter and how to make more of them

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This report was written by Lisbeth Drury, Prof Dominic Abrams and Dr Hannah J. Swift from Centre for the Study of Group Processes at the University of Kent. It was supported by grants to the authors from Age UK, the Economic and Social Research Council ES/J500148/1, and from the European Commission EC-FP7 320333.

Any views expressed do not necessarily reflect those of Age UK.

This report should be referenced as: Drury, L., Abrams, D., & Swift, H. J., (2017). Making intergenerational connections: What are they, why do they matter and how to make more of them. London: Age UK

Date: 2017

ISBN 978-0-9568731-9-4

Published by Age UK, London **www.ageuk.org.uk**

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Acknowledgements

We would like to acknowledge Sujata Ray at Age UK for her feedback and guidance during the development of this report.

CONTENTS

1	Executive Summary	6
1.1	How Positive Intergenerational Contact Works.....	6
1.2	Recommendations for Intergenerational Contact Programmes.....	7
1.3	Recommendations for Policy	8
1.4	Summary and Key Findings.....	9
2	Introduction	11
2.1	Aims of this Review	11
3	The Psychology of Contact Between Groups	13
3.1	Direct Contact.....	13
3.2	Indirect Contact	18
3.3	Summary of Intergroup Contact Theory	21
4	Intergenerational Contact	23
4.1	Scope of the evidence review.....	23
4.2	Direct Contact.....	23
4.3	Friendships	27
4.4	Coworker Relationships.....	28
4.5	Health and Social Care.....	30
4.6	Family Members	33
4.7	Indirect Intergenerational Contact.....	39
4.8	Summary of Intergenerational Contact Research	42
5	Review of Intergenerational Contact Programmes	48
5.1	Scope of the Evidence Review	48
5.2	Description of Intergenerational Contact Programmes	48
5.3	Do Intergenerational Contact Programmes use Principles of Successful Intergroup Contact?	49
5.4	Outcomes of Intergenerational Contact Programmes	49
5.5	Successful Intergenerational Contact Programmes	52
5.6	When and How are Intergenerational Contact Programmes Successful?	53
5.7	Unsuccessful intergenerational contact programmes.....	55
5.8	Summary of intergenerational contact programmes	57
5.9	Which Conditions are Key?	57
5.10	Conclusions and Recommendations for Best Practice	59
6	Checklist of Recommendations for Intergenerational Contact Programmes:.....	60
7	Suggested Policy Implications and Directions	61
7.1	Business/Employment	61
7.2	Health and Social Care.....	62
7.3	Education and wider Policy Implications.....	63
8	References	64
9	Glossary	68
10	Appendix	69

FOREWORD

Intergenerational programmes are often seen as ‘nice to have’ rather than necessary. So in a time of restricted funds, priorities turn to other, more pressing needs.

However, social psychological research has been gathering evidence over decades which highlights the key benefits arising from promoting good relationships between seemingly opposing social groups. These social groups can (and do) include ‘the old’ and ‘the young’. The evidence has been disparate, however, and the whole notion of an age group comes with problems. How old do you have to be to be ‘old’? At what age does someone stop being ‘young’? Answers to these questions are so dependent on context that perhaps the notion of an age group at all becomes difficult. Yet we do make some judgements of each other and ourselves, based on our age. Ageism has a host of negative effects for older and younger people, and for society as a whole.

For the first time, this review by Drury *et al* pulls together the peer-reviewed research on contact between people of different generations. Psychologists view ‘contact’ in a broader way than we might expect – in this literature, for example, imagining a conversation with someone constitutes ‘indirect’ contact. Knowing that your friend is friends with an older person also constitutes ‘indirect’ contact, and produces measureable benefits.

The many benefits of good contact between old and young include better attitudes towards older people, less stereotyping and less anxiety about ageing. Some fairly new research even shows better job satisfaction for care workers. But contact in the wrong conditions can result in more negative attitudes, and the review firmly establishes the desired conditions which are more likely to lead to good outcomes. This gives us a set of principles and guidelines to work with in policy and practice.

Paying attention to good intergenerational contact, in all settings ranging from the workplace to more informal activities, is more than just ‘icing on the cake’. There are always difficult decisions to be made about funding, and specific programmes bringing together people of different ages may well be beyond the current capacities of many service providers. However, this review offers new information and the potential for cost effective, creative ideas, for better contact between generations.

Jane Vass
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1 EXECUTIVE SUMMARY

Improving intergenerational attitudes and relationships is a public policy focus in many countries around the world. In response to this, many organisations arrange intergenerational contact programmes in which younger and older people interact, with the aim of fostering improved attitudes reducing ageism and other beneficial outcomes.

Many psychological research projects have examined the nature of social contact between different age groups, but evidence from these has never been synthesised to inform the design of intergenerational contact programmes. Consequently, practitioners have not benefited from optimal use of evidence which could reliably inform practice and policy. This review, for Age UK, aims to address the evidence-practice gap. We synthesise international evidence generated from 48 peer reviewed research studies and evaluate 31 intergenerational contact programmes to explore what aspects make them more or less successful and provide useful insights for programme design and public policy.

1.1 How Positive Intergenerational Contact Works

There are many different ways that individuals can interact and have experience of others from different age groups. In this review, the social psychological framework of intergroup contact is used to explore opportunities offered by 'intergenerational' contact. A primary distinction made by researchers is between 'direct' and 'indirect' contact. Direct contact describes face-to-face interaction, and the review examines direct contact occurring in various contexts. The contexts include;

- Contact during the course of everyday life
- Contact via friendships
- Coworker interactions
- Family contact
- Contact in health and social care settings

Direct contact works to reduce negative attitudes towards older adults by reducing young people's anxieties about interacting with older people and worries about growing older themselves.

The most powerful type of contact, with the highest potential to improve attitudes, is direct contact via intergenerational friendship. However, such friendships are relatively uncommon in Britain (Abrams, Eilola, & Swift, 2009). Other types of direct contact provide an extensive range of benefits, such as promoting helpful attitudes and behaviours. Intergenerational contact in the workplace reduces age stereotypes about older adults. Contact within family reduces loneliness and depression in older adults. Health and social care contact can improve care workers' positive attitudes towards work.

Psychologists use the term indirect contact to describe a situation wherein people do not actually interact with each other, but 'contact' is psychological, i.e. interaction with someone of a different age group is brought to mind. Examples of

this include when a friend of similar age is known to have friends in the other age group (this is called ‘extended’ contact) or when a person imagines having an interaction with someone from the other age group (this is termed ‘imagined’ contact).

‘Extended contact’ also works by reducing anxieties about contact and ageing and it also increases the social acceptability of intergenerational friendships by making them seem more widespread and familiar. It is particularly useful for people who have experienced little direct contact with the other age group.

When young people imagine having contact with an older person it improves their attitudes towards older adults in general and makes the likelihood of direct intergenerational contact in the future more probable. Additionally, when older adults imagine a positive encounter with a younger adult it can improve older adults’ performance on cognitive tests.

1.2 Recommendations for Intergenerational Contact Programmes

The review revealed that particular aspects of intergenerational contact programmes affect their likelihood of success, and therefore should be considered when planning intergenerational programmes.

Programme design and preparation

- Use groups of equal numbers of people of different ages
- Locate the project in a neutral environment
- Provide frequent contact between participants
- Use a pre-intervention tool (extended or imagined contact)¹
- Use extended contact as a post programme intervention

Content/activity design

- Choose an activity that requires cooperation between age groups and reduces competition
- Sharing goals between the two groups is one way of encouraging cooperation
- Design activities that encourage sharing of personal information
- Allow or encourage the groups to learn about each other as individuals

Evaluation

- When possible evaluate the programme
- Identify the outcomes the programme aims to achieve
- Find or create measures to gauge the outcomes
- When possible use a control group
- When using a control group, randomly assign participants
- Treat participant feedback confidentially

¹ There is a guide for practitioners in Crisp, Stathi, Turner, & Husnu (2009)

Features to avoid

- Patronising communication towards any participant
- Communication from older adults that is overtly personal
- Unequal groups (either size, or status)
- Situations where individuals can avoid contact altogether
- Situations where one group is dominant over the other
- Environments unfamiliar to, or uncomfortable for, either group
- Situations or tasks that confirm negative stereotypes of either group
- Observers or onlookers who are not participating in the programme

Points to consider

- Stereotypes (images and assumptions about a group) are often widely recognised across society and may be harder and slower to change than individuals' personal attitudes about older people and age.
- Short programmes can still be successful if carefully designed
- Aim to create intergenerational friendships
- Be aware of, and aim to reduce, anxieties about interacting with each other
- Be aware of, and aim to reduce, young adults' anxieties about their own ageing

1.3 Recommendations for Policy

Overall, policies that enable positive intergenerational relationships across society can benefit society as a whole, promoting more mutual engagement across generations and hence throughout people's lives.

There are significant advantages to adopting well-designed practice and explicit policy to support intergenerational contact. This contact will produce more benefits if it enables older and younger people to mix as equals, highlights important similarities and not just differences, and if it focusses on common objectives. Policy can be strengthened specifically in the areas of employment, health and social care, and education, as well as more broadly.

- Employers can gain productivity, retention and improved climate and commitment through strategies to promote intergenerational contact
- In health and social care there are benefits for younger people's own psychological health, ability to plan for active ageing, and their morbidity and mortality. Policies to promote positive, and limit negative, quality of contact between younger carers and older patients or clients will also provide benefits for both.
- In education, promoting age diverse learning will extend working lives, and facilitate older people's ability to perform optimally as well as having associated benefits for younger people's attitudes to and planning for ageing.

1.4 Summary and Key Findings

Intergenerational contact successfully reduces ageism towards older adults and takes both *direct* and *indirect* forms. Face-to-face *direct contact* can take place through *everyday contact* between members of the public, *intergenerational friendships*, contact between *coworkers*, *contact in health and social care settings* and within the *family*.

Everyday contact helps to control young people's overt and more subtle ageist stereotypes and attitudes. It is linked to helpful behaviours (e.g., charity donations, volunteering) and reduces ageist behaviours (e.g., patronising speech). The quality of *everyday contact* is more important than its frequency. It works by reducing young people's worries about interacting with older adults and anxiety about their own ageing.

Intergenerational friendships are the most influential type of contact. In addition to being linked to young people's positive attitudes towards older adults, *intergenerational friendships* are associated with positive perceptions of providing health and care for older people and an interest in studying ageing. Having at least one older friend can decrease stereotyping of older adults. However, in both the UK and across Europe *intergenerational friendships* are relatively uncommon. Furthermore, the likelihood that people will have *intergenerational friendships* is affected by social factors such as their gender, country and whether they live in an urban area.

Intergenerational contact between *coworkers* improves young people's attitudes towards older coworkers and older adults more widely (beyond retirement). *Coworker contact* also improves occupational outcomes, such as reducing young workers' turnover intentions and promoting positive attitudes towards age-diverse workplaces. It is linked to younger coworkers' reduced anxieties about ageing and more positive attitudes towards caring for older adults. Unlike other types of intergenerational contact (where having good quality contact is required in order to improve attitudes), just having more frequent contact with older coworkers is linked to more positive attitudes towards older adults.

Intergenerational *contact in health and social care settings* is also linked to less ageist attitudes towards older adults, although the research findings are mixed. Generally, staff working with older adults have more positive attitudes towards older people and good quality contact in these contexts is linked to higher job satisfaction and positive attitudes towards employers. However, some studies find no associations between *contact in health and social care* and attitudes towards older adults, whilst other research suggests it increases patronising, benevolent stereotyping. Negative contact experienced in the social care context is linked to subtle ageism towards older adults in the wider community. Health and social care professionals with more work experience and higher quality of contact also have more positive attitudes towards older adults.

Most research on intergenerational *family contact* has focused on grandchild-grandparent contact. *Family contact* is associated with a wide range of outcomes including; positive attitudes towards older adults, greater interest in gerontology, more understanding of elder abuse and older adults' sexuality and more support for policies that help older people. *Family contact* may also have beneficial effects on older people's own cognitive or physical performance. The quality of contact is more important than the frequency of contact in the family context, and multi-generational living can be both advantageous and disadvantageous; whilst it is linked to better well-being of older adults, it is also related young adults' increased anxiety about their own ageing.

In addition to face-to-face *direct* contact, intergenerational contact can also take place *indirectly*, such as when people are aware of a friend's intergenerational contact experiences (*extended contact*) or they imagine having an intergenerational contact encounter (*imagined contact*). *Extended contact* is linked to increased acceptability of *intergenerational friendships*, making them appear more widespread and familiar. *Imagined contact* enhances young adults' intergenerational communication skills and increases their intentions to have future intergenerational contact. Both types of *indirect* contact can also protect older adults against the negative effects of stereotypes on their cognitive performance. Similar to *direct contact*, *indirect contact* decreases ageism by reducing young people's anxiety about intergenerational interactions and about their own ageing. However, *extended* and *imagined contact* offer unique benefits; in age segregated contexts, where opportunities for direct intergenerational contact may be limited, they can provide cost effective pre-intervention tools to enhance the positive outcomes of direct contact in organised intergenerational contact programmes.

Future intergenerational contact research should consider differences across older adults. For example, workers are considered older from age 50 upward, whilst older hospital patients may be nearer to 80 or 90 years old. The variation in ages and contexts of these older adults are likely to differentially affect attitudes. Intergenerational research should also consider middle-aged adults, who are largely missing from the literature but are especially important as they are more commonly in high status roles with the capacity to influence the lives of older and younger people. Understanding for whom and in which locations/circumstances intergenerational friendships are successful is also important to help shape and encourage the development of intergenerational friendships.

2 INTRODUCTION

Intergenerational contact programmes involve bringing children or young people and older adults together with the aim of improving intergenerational relationships. Often, the focus of programmes is to change young people's attitudes towards older adults, although some projects consider the attitudes of, and implications for, older adults themselves. The problem addressed in this review is that intergenerational contact programmes are often designed by practitioners without reference to research evidence that could inform practice and policy (Statham, 2009).

A theory that could underpin many intergenerational contact programmes is "intergroup contact theory" (Allport, 1954), which predicts that under the right conditions, positive contact between people from different social groups reduces prejudice. Not only does contact improve attitudes about the contact partner, but also the contact partner's entire social group. Therefore, it can reduce prejudice towards a wide range of people. Intergroup contact theory can be applied to relations between people from different age groups, thus becoming *intergenerational* contact. Many social psychological studies have examined intergenerational contact, yet the evidence has rarely informed the design of intergenerational contact programmes.

2.1 Aims of this Review

This review examines 'intergenerational contact' which describes a number of ways that people in different age groups might come into contact with each other. It is important to be aware that the terms 'older', 'young' and 'intergenerational' can mean quite different things in different contexts. Within a typical workplace, the term intergenerational refers perhaps to contact between early career people often in their early twenties, mid-career, usually middle-aged people, and later career people, often in their mid-to late fifties and beyond. In a family context 'intergenerational' may mean grandchildren, parents and grandparents. In health care settings, the term 'older' could describe people who are post retirement and also relatively healthy or those who are very old and/or with very acute needs. What we focus on in the review is the way people perceive and attend to age differences within particular contexts that makes the connections 'intergenerational', rather than specific age categories.

A further note is needed about the term 'contact'. Intergenerational contact can range from a longstanding close friendship involving regular face-to-face meeting to occasional and rather incidental experiences with people who are perceived to belong to a different age group than one's own. Different contexts afford different types, amounts and quality of contact, and our focus in this review is the impact of these various forms of contact on important social and personal outcomes. In particular, we want to address how relationships and understanding across age boundaries can be improved for the benefit of all. We begin, therefore, by considering the nature of ageism.

Despite ageism being the most commonly experienced form of prejudice in Britain (Abrams et al., 2009) and the likelihood that everyone will experience ageism at some point in their lives, it remains an understudied area. (See Abrams, Swift,

Lamont, & Drury, 2015 for a review of ageism). Fortunately, a growing body of research is now examining how contact between age groups can reduce prejudice which indicates that intergenerational contact is likely to be one of the best vehicles for reducing and preventing ageism.

The aim of this review is to provide guidance for practitioners designing intergenerational contact programmes and policy makers involved in intergenerational issues by independently reviewing the research evidence.

This review briefly overviews the general psychology of contact between social groups (*intergroup contact theory*), providing details about different types of contact, their benefits, plus when and how they are most successful. We then examine how this framework applies to *intergenerational* contact, and we critically review and summarise the available evidence. This is followed by an examination of intergenerational contact programmes and analysis of whether findings from these projects confirm the positive expectations from intergroup contact theory. Lastly, best practice advice for the development and running of intergenerational contact programmes is given.

Across the review we consider two generational groups; children or young people (age 11 upwards) and older adults. Although very limited, we also consider middle-aged adults. As mentioned above, middle-aged adults can be termed as ‘old’ when in a workplace context and a very small body of research examines their contact with older adults.

The review has three components:

- 1) The General Psychology of Contact Between Groups (Intergroup Contact Theory): We describe intergroup contact theory (Allport, 1954; Pettigrew & Tropp, 2011), explain the different types of contact that can occur and the psychological processes that are engaged, to lay the ground for considering how this approach can best be applied to contact between age groups.
- 2) Review of Intergenerational Contact Research: We review and synthesise findings from academic peer-reviewed research examining quantitative evidence about the effects of contact on attitudes and relationships between different age groups. We consider the effects of different types of contact and evidence about when and how they work best.
- 3) Review of Intergenerational Contact Programmes: There are many intergenerational contact programmes but less scientific analysis of their impact or effectiveness. Focusing mainly on children or young people (aged 11 upwards) and older adults, we review evidence from peer-reviewed research on intergenerational contact programmes to assess how well they support the conclusions of, or raise new questions about, the value of intergenerational contact.

After these sections we propose some best practice advice for the development and running of intergenerational contact programmes and for intergenerational contact more broadly. The final section provides suggested policy implications and a glossary of terms used throughout the report is provided.

3 THE PSYCHOLOGY OF CONTACT BETWEEN GROUPS

This section presents the theoretical background of **intergroup contact theory** (Allport, 1954) and explains different types of contact.

Intergroup contact is a well-established concept in social psychology that has been studied widely as a vehicle for reducing prejudice. Concerned mainly with racial prejudice, in 1954, social psychologist Gordon Allport set out the intergroup contact hypothesis, which stated that personal contact between members of different groups could reduce prejudiced attitudes between those groups. Allport outlined four key conditions for successful (or 'positive') contact:

- **equal status** between the two groups (i.e. people in one group should not be seen as of higher or lower status just because of belonging to that group),
- both groups of people work towards a **common goal** or goals (e.g. learning a skill, staging a play, cleaning up a local area, etc.)
- **cooperation** or working together, and
- **institutional support** (i.e. the intergroup contact project or programme being funded, organised or otherwise supported by an established authority).

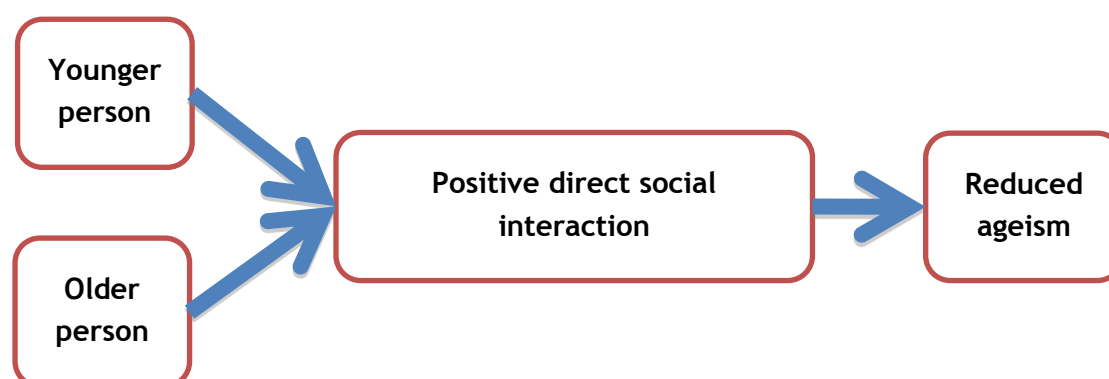
Intergroup contact forms the basis of many prejudice reduction strategies, such as the Sharing Education Programme designed to unite Catholic and Protestant school pupils in Northern Ireland (Hughes, Lolliot, Hewstone, Schmid, & Carlisle, 2012).

Intergroup contact can happen in different ways. Direct contact means that people from different groups directly encounter each other and have some level of interaction. Indirect contact does not entail actual contact and can happen in two ways, firstly where someone is aware that someone from their own social group has a friend who belongs to the other social group (extended contact), and secondly where the person imagines having personal contact with someone belonging to the other group (imagined contact). Other types of contact (e.g. via social media, email or television) are less well defined and under researched.

3.1 Direct Contact

The most common type of positive intergroup contact takes place when members of different groups have a social interaction together, for example, when two people from different racial groups have a face-to-face social encounter. Figure 1 demonstrates the process of intergenerational direct contact as might apply to people who initially have ageist attitudes.

Figure 1. Processes of direct intergenerational contact



3.1.1 Benefits of direct contact

The notion that direct positive contact reduces prejudice is intuitive and simple, yet not only does it reduce prejudice towards the specific individuals who are directly involved in the contact, but also towards the entire social group they represent. As we grow to like individuals from other groups more, our favourable attitudes generalise to their wider social group. This effect has been established across 1164 different studies of intergroup relations between various types of groups (Pettigrew & Tropp, 2006). Therefore, we should expect that a successful intergenerational contact programme based on intergroup contact could improve young people's attitudes towards the older adults taking part in the project *plus* older adults in general. It is important to note, however, that the conditions under which the contact occurs can have an important effect on whether these benefits actually emerge.

3.1.2 Under which conditions is direct contact beneficial?

An overview of Allport's key conditions

Equal status occurs when neither group is viewed as superior to the other. When contact partners have unequal status; higher levels of prejudice are likely to be reported (Mullen, Brown, & Smith, 1992). However, this only occurs for artificially created groups and is not the case for groups that already exist (i.e. they had met before and would meet in the future). For an intergenerational contact programme this means if the groups of younger or older people participating already exist (i.e. classes of school pupils), it may be less important to ensure equal status than if the groups consisted of individual participants brought together specifically for the project.

Cooperating and working towards common-goals fosters support between groups, which improves relations (Pettigrew & Tropp, 2011). The classic Robbers Cave summer camp study (Sheriff, Harvey, White, Hood, & Sheriff, 1961) highlighted the importance of these conditions. Boys at a summer camp were organised into two teams. Initially the teams competed against each other, which made the groups hostile. The teams then cooperated on tasks with benefits for both groups; the hostility between the groups reduced and boys from the different teams became

friends. For intergenerational contact programmes, this means encouraging cooperation on tasks that benefit both younger and older adults alike.

Institutional support (e.g. from authorities, law or custom) enhances positive contact because it provides standards of equality, endorses social contact between the groups and can provide guidelines of appropriate behaviour. During desegregation in American schools in the 1960s, when teachers told pupils about their support for interracial contact, pupils were more likely to adopt positive attitudes towards classmates from other racial groups (Patchen, 1982). Therefore, organisers of intergenerational contact programmes should consider how they express their support for the project and the support of the wider authorities.

In addition to the conditions described above, **personal contact** is also important for positive contact, e.g. younger and older people getting to know each other well rather than having superficial contact.

A summary analysis of over 500 contact studies showed that Allport's (1954) conditions improved the success of contact, but were not always *necessary* for successful contact (Pettigrew & Tropp, 2006). Although studies adhering to the conditions improved attitudes more than those that did not, intergroup contact projects lacking the conditions still reduced prejudice. There are also times when even though one or more of the four conditions is in place, prejudice is not reduced. For example, institutional support is important for successful contact, but this condition on its own is unlikely to work. If competition between groups develops or if equal status is not ensured, contact may actually result in poorer outcomes regardless of institutional support.

Thus, the four conditions should be treated as a package of 'best practice' guidance, but not as either necessary or sufficient for success. Importantly, attaining some conditions may not be possible within the design of some intergenerational contact programmes. Therefore it is essential to understand *when* and *how* intergroup contact reduces prejudice.

Intergroup friendship

Friendship embodies many of the conditions outlined above, and is the most likely type of contact to reduce prejudice (Pettigrew, 1998). For example Europeans with friends from other social groups, also report lower preference for (bias towards) their own group (Pettigrew, 1998). As well as changing attitudes, intergroup friendship also increases sympathy towards, and admiration of other social groups (Pettigrew, 1997). Two important aspects of friendships are the amount of time friends spend together and extent to which they share personal information with each other (Davies, Tropp, Aron, Pettigrew, & Wright, 2011). Therefore, intergenerational friendships should be the most advantageous form of intergenerational contact.

There are obstacles, however, in the formation of intergroup friendships. Initially, there must be an opportunity to form friendships. If segregation between groups exists (for example in communities where old and young live and socialise separately and rarely come in contact with each other), contact may not be possible, so friendships cannot develop. Also, powerful social norms can discourage

intergroup friendships. Social norms are rules about behaviour that are accepted by a group or society. Taking the example of intergenerational contact, the norms of a young person's social group may be that it is 'uncool' to have older adult friends. When group members go against the social norms of their group, they might experience ostracism or stigmatisation.

In summary, to foster intergenerational friendships it would be necessary for younger and older people to spend regular time together and share personal information (e.g. life stories, experiences, interests). Also, it would be preferable to create environments away from stigmatising norms so that such friendships could develop.

Awareness of social identities

The benefits of intergroup contact can be altered when the contact partners are aware of their social identities during contact. For example, when an older person has the sense of being old and a young person is aware of being younger.

Social identity is the way people define and value themselves in terms of the groups they belong to. Each person has numerous social identities, such as race, gender and age. Different situations trigger awareness of different social identities, therefore the importance people attach to an identity varies depending on the surroundings. For example, an older adult may become aware of their age identity at a pop concert, but not in situations with more mixed age groups.

Social identity is linked to prejudice and self-esteem. When we are aware of a particular social identity, and it is different from others around us, we may be motivated to assert our identity and belittle others' identities in order to increase our self-esteem (Hogg & Abrams, 1990, p.33). So, awareness of social identities has important implications for intergroup contact and the reduction of prejudice and can be treated in different ways:

Reducing awareness of social identities during contact can encourage more personal relationships. This reduces prejudice by allowing us to see that members of other groups can be different from each other and similar to us (Brewer & Miller, 1984). Reducing awareness can be achieved by pointing out differences between the members of another social group, focusing attention on people's individual characteristics or by sharing personal information (Harrington & Miller, 1992; Fiske & Neuberg, 1990; Miller, 2002).

Being aware of social identity differences also has benefits. Acknowledging that individuals belong to different groups, and that both groups have strengths and weaknesses, can avoid a need to differentiate one's group from other groups therefore reducing the likelihood of prejudice (Hewstone & Brown, 1986).

Being aware of common identities can also improve outcomes of contact (Gaertner, Mann, Murrell, & Dovidio, 1989). As well as recognising important and obvious differences (e.g. age differences), it is highly effective to focus people's attention on identities that they have in common, to create the feeling of belonging to one overarching social group. This helps to reduce psychological barriers to interacting and therefore promotes positive contact. For example, if an older and

younger person become aware that they both share a passion for the same football team, the barrier of their age differences is likely to melt away as they engage in a discussion of their team's fortunes and this is framed by their common identity as a supporter of that team. Recent thinking about intergroup contact has suggested that it is sometimes helpful to view contact in terms of a gradually deepening relationship (Abrams & Eller, 2017; Pettigrew, 1998). If initial meetings or encounters are just person to person with no focus on group differences it reduces people's apprehension about such differences, but as they get to know one another better it becomes easier and useful to consider these differences. As the relationship develops it is then likely to be useful to focus on shared (common) identities, which helps to cement longer term friendships and understanding.

3.1.3 What factors might affect how people view one another in intergenerational encounters?

One factor is the settings or cues in situations which can intentionally or inadvertently trigger people's awareness of their own and others' age. Another is whether steps are taken to actively acknowledge the presence of both older and younger age groups and to explicitly highlight what each group has to offer. The third is to explicitly or indirectly draw people's attention to shared group memberships that cue a common identity.

So far, we have outlined learning from intergroup contact research which details when contact is more likely to reduce prejudice, but other evidence also informs us *how* contact can improve attitudes - the psychological mechanisms or processes that make attitude change possible. This work has identified that improvements in people's anxiety, empathy, perspective taking, knowledge and sharing personal information all provide independent stepping-stones from positive contact to improved attitudes.

Intergroup anxiety

Intergroup anxiety is anxiety about meeting someone from another social group (Stephan & Stephan, 1985) and is experienced either prior to anticipated contact, or during contact (Greenland & Brown, 1999). It arises from an uncertainty of the other groups' customs and norms of behaviour, and expectations that contact may lead to misunderstandings, embarrassment, discrimination and rejection (Stephan & Stephan, 1985). As well as increasing prejudice, anxiety can encourage an avoidance of contact situations. Many research studies show that positive intergroup contact reduces intergroup anxiety (Pettigrew & Tropp, 2008). When applied to intergenerational contact we could expect that positive contact would lead to a reduction in young peoples' anxieties about having contact with older adults and vice versa.

Empathy

Empathy is an emotional reaction which acknowledges that both one's own social group and another group share aspects of life experience and destiny (Brown & Hewstone, 2005). Intergenerational contact should increase the ability to appreciate

that the member of the other age group experiences similar emotions to oneself, which in turn reduces prejudice.

Perspective taking

Perspective taking is the ability to imagine situations from another person's point of view. In a contact situation if a person can take the perspective of the other person this can reduce prejudice (Aberson & Haag, 2007). Applied to intergenerational contact this means that contact should result in an increased ability of younger people to see things from older adults' points of view, which in turn leads to improved attitudes towards older adults – and vice versa.

Knowledge

Knowledge about the other group should, in principle, increase following positive contact. In turn, such knowledge should help to reduce prejudice (Allport, 1954). However, research has tended to find that the gains in knowledge are less influential than improvements in anxiety, empathy and perspective taking (Pettigrew & Tropp, 2008). Therefore, whilst learning about older adults may be beneficial for younger people, it may not always present a clear pathway from contact to improved attitudes.

Sharing personal information

Sharing personal information between members of different groups during contact has benefits for both parties. It decreases their intergroup anxiety or uncertainty about the other person and also allows a degree of control over the information that is shared (Brown & Hewstone, 2005). At the same time, it creates opportunities to increase empathetic understanding between groups and seems to be one of the mechanisms that explains how friendships between members of different groups reduce prejudice (Davies, Wright, Aron, & Comeau, 2013; Pettigrew & Tropp, 2008). For intergenerational contact programmes, the implication is that rather than just learning facts about one another, an important aspect of the contact should be sharing of personal information such as stories that can build a shared sense of experience.

3.2 Indirect Contact

Contact is defined as indirect when exposure to the other group happens without a direct or face-to-face encounter. Indirect contact has less impact on attitudes than direct contact, but can be especially useful when direct contact is not possible (e.g., in segregated societies) or as an initial stepping-stone to enable people to feel willing to have direct contact. Research has mainly examined two types of indirect contact; 'extended contact' or 'imagined contact'. Other less researched indirect contact routes include vicarious, virtual and parasocial contact.

3.2.1 Extended contact

Extended contact works via the idea that *a-friend-of-yours-is-a-friend-of-mine* (Wright

et al., 1997). For example, when a young adult knows that his or her same-aged friend has a friend who is an older adult, the knowledge of this intergenerational friendship can reduce ageism towards older adults in general. Figure 2 illustrates extended contact involving people from different age groups.

Figure 2. Extended intergenerational contact.



Extended contact reduces prejudice towards other social groups in similar ways to direct contact, but a particular strength of extended contact is that it challenges our idea of what members of our social group find acceptable. Further advantages are that it requires much less direct contact and avoids problems of unequal group sizes.

When is extended contact beneficial?

Previous experience of members of other social groups. Extended contact is more effective for people who have had little direct contact with the other social group (Christ et al., 2010; Cameron, Rutland, Hossain, & Petley, 2011). For example, it should be particularly effective for young people with little experience of older adults because it helps to reduce anxieties about whether the contact might go well.

Awareness of social identities. Extended contact is most successful when contact partners are aware of their own and others' social identities. For example, an intervention in which able-bodied children were read stories about able-bodied children's friendships with disabled children was most successful when the groups' social identities (different group memberships) were highlighted in the stories (Cameron & Rutland, 2006). This type of evidence suggests that extended intergenerational contact will be most successful when both younger and older adults are conscious of their differences in age.

How is extended contact beneficial?

Challenging what is and isn't 'socially acceptable'. Watching or learning about an intergroup friendship allows us to infer that members of both groups may approve of these friendships. Therefore, providing information about young people who have friendships with older adults can communicate to adolescents that their peers find friendships with older adults acceptable. In turn, this should decrease anxiety about judgement from peers and provide a platform for intergenerational friendships. For example, in Cameron et al.'s (2011) research, the extended contact was more effective amongst preadolescents (who are more likely to be concerned about their social reputation) than amongst younger children.

Inclusion of others as part of one's own self-concept. Another way that extended contact works is by creating 'inclusion of others in the self' (IOS: Aron, Aron, Tudor, & Nelson, 1991). This means that because our friends contribute to our sense of who

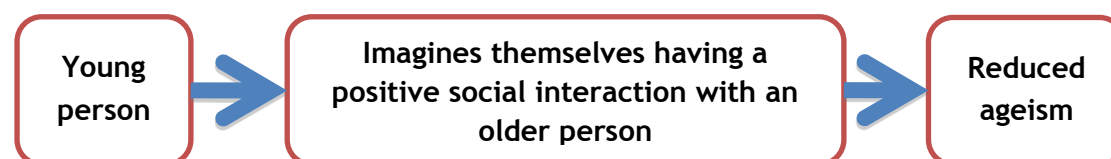
we are, they form a psychological link between ourselves and their friends. People are generally inclined to view themselves positively, so when others become connected to ourselves, psychologically, this positivity extends to those people. So, extended intergenerational contact should lead younger adults to link older adults to their self-concept, which in turn should generate more favourable attitudes towards older adults.

Intergroup anxiety and shared personal information. Similar to direct contact, extended contact also reduces prejudice by reducing the uncertainty that lies behind intergroup anxiety and by increasing intentions to share personal information with members of the other group (Turner, Hewstone, & Voci, 2007).

3.2.2 Imagined contact

Imagined contact (Turner, Crisp, & Lambert, 2007) works simply by asking people to imagine having a positive encounter with a stranger from another social group. For example, young students who imagined a positive encounter with an older adult stranger reported less prejudice toward older adults compared to students who imagined an outdoor scene. The process of imagined intergenerational contact is illustrated in Figure 3.

Figure 3. Imagined intergroup contact.



When is imagined contact beneficial?

A review of over 70 experiments concluded that imagined contact was most effective when participants were instructed to imagine lots of details about the encounter (Miles & Crisp, 2014). It made no difference how long they spent imagining the encounter, nor whether they were instructed to imagine a “*positive encounter*” or just an “*encounter*”.

How is imagined contact beneficial?

Surprisingly, the power of imagination can be almost as good, and sometimes better, than the real thing. Imagined contact works in a similar way to direct contact. It reduces intergroup anxiety and increases perspective taking, which in turn reduce prejudice (Husnu & Crisp, 2015; Turner, West, & Christie, 2013). Research shows that it also works by increasing trust in members of the other social group. Unlike direct contact, imagined contact also removes potentially negative elements from an encounter and is completely under the control of the person doing the imagining. For this reason it offers a safe, easy to use, and simple approach that can be adapted to almost any circumstance.

3.2.3 Other indirect routes for contact

Vicarious intergroup contact is a somewhat diluted form of extended contact and operates on similar principles. The difference is that it does not have to involve one's own friends, but merely observing a member of one's own social group having positive contact with a member of a different social group. For example, German students reported more positive attitudes towards Chinese people after watching a video clip of a positive social interaction between a German and a Chinese student (Mazziotta, Mummendey, & Wright, 2011). Similar research has demonstrated an improvement in heterosexual people's attitudes towards gay or lesbian people after watching television programmes depicting positive contact or friendships between heterosexual people and lesbians or gay men (Ortiz & Harwood, 2007). For intergenerational contact, this means that showing young people footage of positive intergenerational contact or friendships should improve their attitudes towards older adults.

Virtual intergroup contact (Amichai-Hamburger & McKenna, 2006) refers to contact between members of different groups via a computer-based communication system. For example, studies testing contact via email and Facebook have shown that virtual contact also reduces prejudice (Schumann, van der Linden, & Klein, 2012; Tavakoli, Hatami, & Thorngate, 2010). Therefore, virtual intergroup contact could occur via friendships developed through email or social media.

Parasocial contact refers to exposure to minority groups depicted in familiar media material such as films or television (Schiappa, Gregg, & Hewes, 2005). It is unclear exactly what mechanisms are involved in connecting media exposure to attitude change because most media content is extremely mixed (e.g. including both positive and negative stereotypes as well as irrelevant material) and is unlikely to involve a consistent portrayal of intergroup contact.

3.3 Summary of Intergroup Contact Theory

Positive intergroup contact is an established method of prejudice reduction, which has been tested in hundreds of psychological experiments, surveys of naturally occurring contact and interventions. Both direct and indirect types of contact can be effective and are suited for use in different types of situations. In Table 1 we summarise the types of contact, the conditions under which they work best and the processes through which they work. We also highlight the advantages of each type of contact and potential barriers to their success.

Table 1. Summary of types of intergroup contact and their relationship with reduced prejudice

Types of contact	When it works best and favourable conditions	How it works	Advantages	Barriers and conditions that affect success
Friendship	Regular, personal contact.	Sharing personal information	The strongest type of contact.	Lack of opportunities for personal contact. Social norms that discourage friendships.
Direct contact	Equal group status, cooperation, institutional support and common goals. Personal contact. Awareness of social identities.	Reduces anxiety about contact. Increases empathy. Increases perspective taking. Increases knowledge of the other group. Allows personal information sharing.	Can lead to friendships. Translates into prejudice reduction programmes / interventions. Can be encouraged in institutional settings e.g. the workplace.	Segregated societies. High vs. low status groups. Large vs. small groups. Superficial contact. Social norms that discourage contact. Anxiety about direct contact.
Extended contact (<i>Having a friend who has a friend in the other social group.</i>)	Awareness of social identities. Less experience of the other social group.	Positively challenges social acceptability of being friends with other social groups. Inclusion of the other in the self. Reduces anxiety about contact.	Useful in segregated societies. Provides a first step to direct contact via reducing anxiety.	Lack of friends. Lack of friends with friends in the other social group. Weaker effects than direct contact.
Imagined contact (<i>Imagining an encounter with a person from the other social group.</i>)	Imagining the encounter in great detail.	Reduces anxiety about contact. Increases empathy. Increases trust.	Useful in segregated societies. Provides a first step to direct contact via reduction of anxiety. Useful when no friends have contact with the other social group. Easily and economically translated into prejudice reduction interventions.	Weaker effects than direct contact.

4 INTERGENERATIONAL CONTACT

This section reviews research specifically addressing intergenerational contact. We explain how the review was conducted and describe its findings.

4.1 Scope of the Evidence Review

A literature search for peer-reviewed articles published before 2014 was performed using two databases; Psycho Info and EBSCO Host. The criteria used for article selection were as follows:

1. Research based on the intergroup contact theory framework.
2. Statistical analysis of quantitative measures (i.e. excluding qualitative research).
3. Contact between adolescents or younger people (minimum age 11 years old) and older adults.

Forty-eight articles that fitted the selection criteria were reviewed. These articles also included forthcoming research evidence that we were directly aware of but which had not come up in the literature search. Analyses of the research findings are grouped according to the type of intergenerational contact reviewed, these include

- contact between members of the general public, for example incidental contact between a young person and an older person in everyday life;
- intergenerational friendships;
- work-place contact between colleagues of different ages;
- contact in health and social care settings between younger professionals and older people;
- family contact, including grandchild with grandparent, adult child-with an older parent and cohabitation of family generations;
- indirect contact, including extended and imagined contact.

4.2 Direct Contact

4.2.1 Can direct intergenerational contact be beneficial?

In this section we refer to direct intergenerational contact as the contact young people have with older adults in their everyday lives.

Reducing ageist attitudes

Young people's attitudes towards older adults are more positive following good quality direct intergenerational contact. Good quality contact is that which is closer, deeper, more natural, pleasant and cooperative - rather than distant, superficial, forced, unpleasant and competitive. Research has considered the effects of direct contact on both explicit and implicit attitudes.

Direct contact improves young people's explicit (openly expressed) attitudes towards older adults (Bousfield & Hutchison, 2010; Drury, Hutchison, & Abrams, 2016; Knox et al., 1986). It also dispels young peoples' stereotypes and assumptions (Schwartz & Simmons, 2001; Hale, 1998; Hawkins, 1996).

Direct intergenerational contact also improves implicit attitudes, i.e. those held beneath one's consciousness. For example, research has tested this idea using the implicit associations test (IAT; Greenwald et al., 1998), which measures the degree to which young people automatically associate older and younger names (e.g. Elsie/Zoe) with positive and negative words (e.g. pleasant/unpleasant). Implicit ageist attitudes are indicated when participants are faster to pair young names with positive words and old names with negative words (Tam, Hewstone, Harwood, Voci, & Kenworthy, 2006).

Increasing helpful behaviours and reducing ageist behaviours

Direct intergenerational contact is also linked to various positive behaviours. Young people experiencing more contact have stronger intentions to donate to older adults' charities, help older adults, spend time with them, volunteer and help others more generally (Bousfield & Hutchison, 2010; Kessler & Staudinger, 2007). Similarly, the more intergenerational contact young people experience, the more willing they are to have such contact in the future (Hutchison, Fox, Laas, Matharu, & Urzi, 2010).

A field experiment testing patronising verbal communication showed that young people who experience contact with older adults are also less likely to patronise them (Hehman, Corpuz, & Bugental, 2012). Students were randomly selected to help either a) another younger person or b) an older person with campus directions, and their speech was recorded and analysed. Students who had experienced little contact with (non-family) older adults patronised older strangers more than younger strangers. However, the amount of contact experienced with older family members did not affect how much they patronised. This suggests that infrequent contact with older adults outside the family is a risk factor for patronising treatment of older adults. However, we should consider that the older adults the students experienced contact with may not have been typical of older adults in general. It is likely they were professionally active older people (e.g. lecturers, professors, mature students). In summary, direct contact between younger and older people is associated with more positive explicit, indirect and implicit attitudes towards older adults. Additionally, intergenerational contact is linked to behaviours that positively impact older people's lives, and the wider community.

Benefits for older adults

Although most research has focused on young people's attitudes and behaviours, some studies have measured older adults' attitudes following intergenerational contact. In one such study adolescent girls and older women collaborated on a task where the older women were more experienced. The researchers found that this type of contact improved the older adults' cognitive-emotional regulation (Kessler & Staudinger, 2007), which is their ability to recognise and combine both positive and negative emotions.

4.2.2 When is direct intergenerational contact beneficial?

Quality of contact matters more than frequency

The quality of intergenerational contact is more impactful than frequency. Younger people who have more frequent contact show less patronising behaviour (Hehman et al., 2012), but not necessarily different attitudes (Bousfield & Hutchison, 2010; Drury et al., 2016; Harris & Fielder, 1988). In comparison, multiple studies suggest that younger people who experience higher quality contact show consistently more positive attitudes (Drury et al. 2016; Hale, 1998; Knox et al., 1986; Schwartz & Simmons, 2001), regardless of how frequent the contact is. This is noteworthy in relation to the design of intergenerational contact programmes. Longer programmes may be desirable for many reasons, but regardless of the length, any programmes may be improved by facilitating the quality of the contact that occurs within them.

The influence of other group memberships

Older people are members of other groups defined by any number of characteristics. This potential intersectionality means that individuals may experience prejudice because of their membership of two or more social groups. For example, it is plausible that older women experience ageism differently from older men (perhaps suffering a double hit of ageism and sexism). It might also be that different situations bring one or other group membership to the fore so that the same person might be treated differently depending on which membership others use to judge them by. A recent review suggests that ageism and sexism combine to result in discrimination towards older women but only in certain contexts, such as the workplace, healthcare and media (Drury, Swift, Abrams, & Hopkins-Doyle, 2015).

At present there is only limited research testing how age group combines with other memberships, and the evidence is mixed. One study found that good quality contact with older men or with older women separately had similarly positive effects on people's attitudes towards older adults as a whole (Schwarz & Simmons, 2001). An earlier study, however, revealed that whereas people who had close contact with older adults also expressed positive attitudes towards older women who were aged 65 to 74, 74 to 99, or 100 and over, the same was only true for attitudes toward men in the two older age groups (Hawkins, 1996). Research outside the peer review literature focused on intergenerational contact between younger and older LGBT community members suggests that it may improve many outcomes, including attitudes towards older LGBT adults (Bamford, Kneale, & Watson, 2011; Potter, Bamford, & Kneale, 2011).

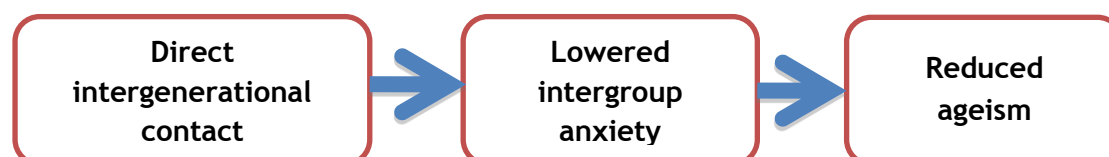
In summary, more research is needed to understand the effect intergenerational contact has on the combination of ageism with other types of prejudice but there is good reason to believe that it has at least some positive effect even when other group memberships are involved.

4.2.3 How is direct intergenerational contact beneficial?

Reducing intergroup anxiety

Similar to contact with other target groups, direct intergenerational contact also works by reducing people's intergroup anxiety (see Figure 4). Students who experienced higher quality contact with older adults reported feeling less awkward, nervous, self-conscious and more relaxed and happy about interacting with older adults. These lower feelings of anxiety were linked to more positive attitudes towards older adults, willingness to help older adults' charities, intentions to spend time with older adults and positive expectations about social interactions with older adults in the future (Bousfield & Hutchison, 2010; Drury et al., 2016; Hutchison et al., 2010).

Figure 4. How direct contact with older adults improves attitudes via reduced intergroup anxiety



Reducing ageing anxiety

Ageing anxiety is a fear of older people associated with anxiety about one's own ageing, such as fear of losses to psychological ability, physical competence and appearance due to the ageing process (Lasher & Faulkner, 1993). Recent student surveys show that young people who experience good quality contact with older adults are less anxious about their own ageing, which in turn reduces ageism (Drury et al., 2016). This interesting and important consequence of contact (a more positive attitude to one's own ageing as well as to others' old age) is unique to the ageing context and suggests an important potential benefit for younger participants in intergenerational contact programmes.

4.2.4 Summary of benefits of direct intergenerational contact

Young people who experience direct contact with older adults in general have more positive explicit, indirect and implicit attitudes towards older adults. Also, they are less likely to stereotype or patronise older adults, and are more likely to help them and have contact in the future. For older adults, direct intergenerational contact can improve cognitive-emotional regulation.

High quality direct intergenerational contact appears to be more powerful than high frequency of contact. Although contact with older men or women is equally successful at changing attitudes towards older adults, limited evidence suggests that contact with older adults in general changes attitudes towards a wider range of older women than men. Pathways between direct intergenerational contact and improved attitudes towards older adults involve a reduction in anxiety about interacting with older adults and reduced anxiety about own ageing.

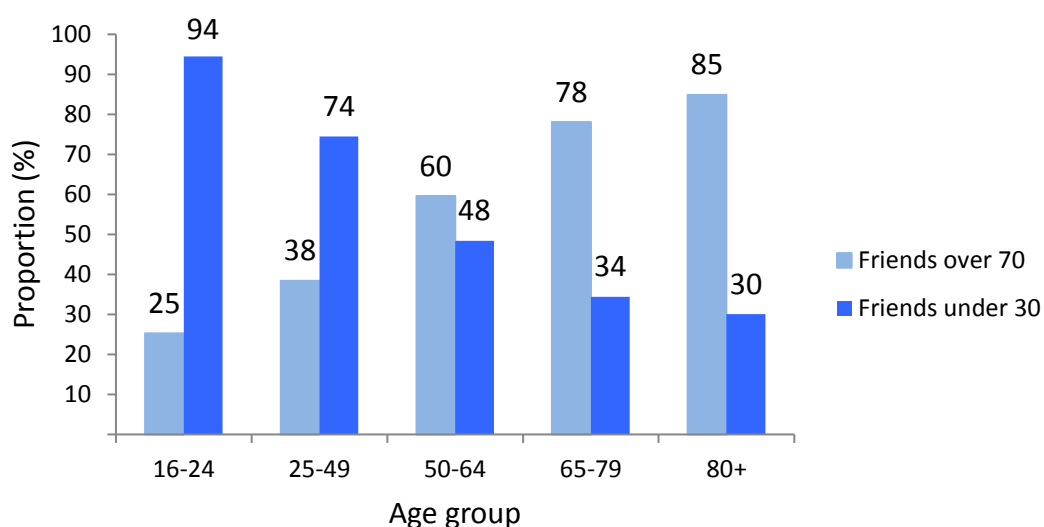
4.3 Friendships

4.3.1 Can intergenerational friendships be beneficial?

Friendship between members of different social groups is the most influential type of intergroup contact. The success of intergenerational friendship is supported by findings from a survey of 548 American students (Van Dussen & Weaver 2009). Researchers measured how much contact students had with various groups of older adults including friends, coworkers, teachers, clients or volunteer partners. Intergenerational friendship was related to more positive outcomes than any other type of intergenerational contact. Those with more intergenerational friendships were likely to view older adults as more capable, view care of older people as uplifting, and agree that studying gerontology is relevant for all types of professions. They were also less likely to perceive older adults as demanding and critical of the young, or view care of older people as difficult and tedious.

Various surveys have examined intergenerational friendships in Britain and Europe (Abrams et al., 2009; Tasiopoulou & Abrams, 2006; Vauclair, Abrams, & Bratt, 2010). Most people's friends are within an age range close to their own (even in the workplace), see Figure 5. People with more intergenerational friendships have more positive attitudes towards older adults, stereotype them less and are less likely to perceive that competence declines with age. Notably, even amongst people aged 50 or over those with more friends aged over 70 held more positive attitudes towards older adults. This research suggests that intergenerational friendships, even those bridging middle to later life, affect the ageist attitudes of a wide age range of adults. As longevity increases it is important to be aware that the potential span of intergenerational contact is growing and the complexity of ageist attitudes is also changing, thus the attitudes of middle-aged adults may require more attention in future research.

Figure 5: Percentage of British survey respondents from different age groups who had friendships with people over 70 and under 30



4.3.2 Where are intergenerational friendships prevalent?

The probability of having intergenerational friendships depends on various demographic characteristics (Vauclair et al., 2010). For example, British women are more likely to have older friends than are British men, whereas across Europe as a whole women are less likely to have intergenerational friendships than men. Wealthier countries have a high proportion of older adults and intergenerational friendships are more common. But intergenerational friendships occur less in countries that have a larger proportion of people living in urbanised areas. This type of evidence shows that intergenerational friendships are not simply a matter of choice – they are made more or less possible by other features of society and demography (Abrams, Vauclair, & Swift, 2011).

4.3.3 How are intergenerational friendships beneficial?

Although little research has examined the ways intergenerational friendships influence attitudes towards older adults, we can infer from the large volume of other research on intergroup friendship that the same mechanisms such as self-disclosure, empathy and perspective taking all play an important role.

4.3.4 Summary of intergenerational friendships

Intergenerational friendships, although relatively uncommon, are related to a wider range of positive attitudes than other types of intergenerational contact. People with at least one older friend generally hold more positive attitudes toward older people. However, the likelihood of having older friends is affected by other factors such as one's gender, country and locality. The potential impact of intergenerational friendships, along with awareness of the contextual factors that might inhibit or facilitate them, highlight the value of connecting people of all ages through multigenerational social spaces and events, where genuine friendships can be built.

A neglected issue has been middle-aged adults' contact with, and attitudes towards, older adults. Intergenerational tensions and intergenerational contact are almost always researched within the framework of young people versus older adults, overlooking the role of middle-aged adults. Middle-aged adults, however, are generally viewed as high status compared to younger and older adults (Foner, 1984; Pampel, 1998) and usually hold more power in relation to work, economy and family. Therefore, their role in intergenerational relationships should not be overlooked and more research is required in this area.

4.4 Coworker Relationships

Intergenerational coworker contact describes occupational contact between younger and older workers. This section details how intergenerational coworker contact is related to attitudes towards older coworkers and older adults outside the workplace.

4.4.1 Can intergenerational coworker contact be beneficial?

Intergenerational coworker contact can affect a wide range of outcomes. Surveys of young Belgian employees at two financial institutions and a hospital found that those who experienced good quality coworker contact held more 'positive' stereotypes of older coworkers, were more likely to help out and be cooperative with older coworkers and less likely to resign (Iweins, Desmette, Yzerbyt, & Stinglhamber, 2013). Those with better coworker contact also held a more 'organisational multi-age perspective', which could be likened to supporting age-diversity in the workplace. As retaining staff is important to organisations and high turnover is costly and can damage productivity (Glebbeek & Bax, 2004), it appears that encouraging intergenerational coworker contact could be both socially and financially advantageous.

We note that in these surveys older coworkers were defined as adults over the age of 50, whereas most intergenerational contact research defines older adults as over 65 years old. Furthermore, the older workers in these studies may have occupied a high status via workplace hierarchy. The effects of intergroup contact can vary depending on the groups' relative status (Tropp & Pettigrew, 2005). Therefore, comparisons between this evidence and the other research which focused on contact or attitudes involving people aged over 65 (e.g. between adolescents and retired adults) are not straightforward.

A separate body of research examines coworker contact and attitudes towards older adults outside the workplace (Allan & Johnson, 2009; Tuckman & Lorge, 1958; Van Dussen & Weaver, 2009). People who had more intergenerational coworker contact held more favourable attitudes towards, and less stereotypic perceptions of, older adults. They also held more positive attitudes towards elder care and experienced lower ageing anxiety.

4.4.2 When is intergenerational coworker contact beneficial?

Frequency of coworker contact may be sufficient to change attitudes

In addition to the positive effects of good quality coworker contact on stereotypes and workplace behaviours (Iweins et al., 2013), many studies reviewed in this section provide evidence that frequent coworker contact also has a positive impact on attitudes (Allan & Johnson, 2009; Tuckman & Lorge, 1958; Van Dussen & Weaver, 2009). This is not in line with the findings of direct contact with older adults in everyday life, where contact frequency per se was unrelated to outcomes and contact needed to be of good quality in order to affect attitudes (Bousfield & Hutchison, 2010; Drury et al., 2016; Harris & Fielder, 1988; Schwartz & Simmons, 2001).

4.4.3 How is intergenerational coworker contact beneficial?

As mentioned above, intergenerational coworker contact reduces ageing anxiety, which in turn reduces ageism (Allan & Johnson, 2009). Yet, the same study found

that contact at home (living with one or more older family members) increased ageing anxiety, which in turn increased ageism. This suggests a superiority of contact in the workplace. However, 'older' family members are likely to belong to a different age group than older workers, as previously discussed. They may also be living with family because of care or support needs, and so in this case, 'intergenerational' may be describing contact between young people and a range of different older age groups.

4.4.4 Summary of intergenerational coworker contact

Intergenerational coworker contact is linked to positive attitudes towards older coworkers and work itself. Young people who experience frequent intergenerational coworker contact have favourable attitudes towards older adults, are more positive about caring for them and less anxious about their own ageing. Unlike intergenerational contact with older adults in the general public, the *frequency* of intergenerational coworker contact alone may be sufficient to improve attitudes. One reason workplace intergenerational contact reduces ageism is because it reduces ageing anxiety.

In summary, the benefits of intergenerational coworker contact seem to flow from different features than the benefits of other types of contact and therefore, it is possible that it operates differently. Older coworkers may be younger than older adults encountered in other intergenerational contact. Some may also have higher status roles (e.g. managers) that are inconsistent with negative and benevolent age stereotypes (e.g. incompetence, dependency), although many older employees do not work in senior positions and the prevailing problematic stereotype is of low competence in older workers.

Furthermore, it could be argued that employment regulation and policy obliges workplaces to support Allport's (1954) ideal conditions; co-operation, working to common goals, institutional support for equal opportunities (which implies equality across age too) and in some cases, equal status. Similarly, working together may provide the opportunity to develop intergenerational friendships or high quality contact that is not available in everyday encounters. Collectively, these factors may account for why mere frequency of coworker contact is sufficient to bring about positive outcomes. It may be that more often than in other situations, coworker contact is good quality contact. However, this supposition has yet to be tested and more research is required to compare the effects of coworker contact to general and family contact in order to isolate if, when and how coworker contact is superior. This type of research has particular importance for influencing policies relating to equal employment opportunities and the benefits of age diversity in organisations.

4.5 Health and Social Care

Health and social care settings offer unique opportunities to study intergenerational contact in which an older person (perhaps in their 80s or older) is dependent upon another person (perhaps typically in their 20s-50s) for care and support. This

section describes evidence from research on contact involving older adults and doctors, nurses, care workers and healthcare students. (For more information about ageism in healthcare settings see Swift, Abrams, Drury, & Lamont, 2016.)

4.5.1 Can intergenerational contact in health and social care be beneficial?

The range of studies examining intergenerational contact in health and social care settings have yielded positive, inconclusive or negative outcomes.

Positive attitudinal outcomes

Nurses' and nursing students' intergenerational contact in healthcare settings is related to their positive attitudes towards older adults. For example, nurses working in geriatric medicine have slightly less negative attitudes towards older adults compared to nurses who work with other age groups (Meyer, Hassanein, & Bahr, 1980). Similarly, nursing students with experience of working with older patients report more positive attitudes than nursing students without such experience (Wang et al., 2010). A further study examining dental nurses' intergenerational contact found the frequency of intergenerational contact at work predicted positive attitudes towards older adults whilst intergenerational contact outside of work had no effect (Nochajski, Davis, Waldrop, Fabiano, & Goldberg, 2011). Collectively, these studies suggest that those health workers who have more frequent intergenerational contact will hold more positive attitudes towards older adults.

Studies of care workers' attitudes towards older adults are rare, but recent research has found that more positive contact with care home residents is related to slightly less negative attitudes towards care home residents. Drury, Abrams, Swift, Lamont, & Gerocova (2017) found that care workers view contact as positive when it is friendly, cooperative, involves interesting conversations and humour that is shared and when carers learn something new from the residents (Cuthbert & Abrams, 2013). This positive contact is also linked to more empathy, perspective taking and sharing of personal information with the care home residents. It has a potentially positive impact on care workers themselves and the care home organisations as it is related to more job satisfaction and help offered to coworkers and employers. This study has implications for care home managers and social care policy. If opportunities for positive contact, shared humour and sharing personal information are provided, they may result in more positive attitudes towards care home residents, older adults and the workplace.

Inconclusive outcomes

Contact research in healthcare has also produced inconclusive results. Two studies found no associations between student nurses' intergenerational healthcare contact and their attitudes towards older adults (Hweidi & Al-Obeisat, 2006; Pan, Edwards, & Chang, 2009).

Negative outcomes

Some research has also revealed negative associations between healthcare contact and attitudes towards older patients. Compared to physicians who experienced low levels of contact with older patients, those with high levels of contact rated 83 year old patients relative to 53 year old patients as less independent and in greater need of information and support (Revenson, 1989). This suggests that high contact frequency with older patients might result in more ‘benevolent’ (patronising) stereotyping. Also, it indicates that when physicians have caseloads with relatively high proportions of older patients, they may develop these potentially harmful ‘benevolent’ stereotypes of all older patients. This study shines a light on how the proportion of time spent in contact with older patients impacts upon physicians’ attitudes towards patients generally. Additionally, it has implications for understanding how the relationship between contact and stereotyping works within healthcare.

4.5.2 When is health and social care intergenerational contact beneficial?

Work experience

The length of healthcare professionals’ work experience can contribute to how intergenerational contact affects their attitudes towards older adults. In the studies reviewed in this section work experience is used as an indicator of accumulated time spent in contact with older adults in healthcare settings. Studies of healthcare professionals and students found more work experience was linked to more positive attitudes towards older adults (Meyer, et al., 1980; Wang et al., 2010). However, further studies conducted with just healthcare *students*, reported no relationship between work experience and attitudes (Hweidi & Al-Obeisat, 2006; Pan et al., 2009). It is possible that as students are likely to have shorter work experience overall, the relationship between contact and positive attitudes is not yet sufficiently strong to be consistent.

Frequency versus quality of contact

Research that measures the amount of negative contact in social care settings offers some understanding of relationships between the quality of contact and outcomes (Cuthbert & Abrams, 2013; Drury et al., 2017). This survey of British care workers found that negative contact was more likely to be reported by care workers who worked long shifts. Care workers who experienced more negative contact had stronger intentions to leave, higher perceptions of unfairness in the workplace and expressed less job satisfaction. Although negative contact was experienced much less frequently than positive contact, the more frequently it occurred, the less favourable were care workers’ attitudes towards care home residents, older adults and work.

4.5.3 How is intergenerational contact in health and social care beneficial?

To date, no research has examined the processes that link intergenerational contact in health and social care to positive attitudes towards older adults.

4.5.4 Summary and implications of intergenerational contact in health and social care

Although the picture is a little mixed, intergenerational contact in health and care settings is linked to professionals' improved attitudes towards older service users and older adults in general, particularly for professionals with more work experience in the sector. Unfortunately, there is evidence that this type of contact may also reinforce benevolent (patronising) stereotypes, though this is likely to be affected by the quality of the contact.

Health and social care settings may offer the opportunity for regular, personal contact that could be friendly and positive. However such positive outcomes may arise because the professionals and students who are motivated to work with older adults may already have positive attitudes. Other areas of intergenerational contact research confirm that voluntary contact is strongly related to positive attitudes. In a study of young people who varied by the type of intergenerational contact they had experienced (e.g. friendships, coworkers, with teachers, with clients, as volunteers), those who experienced more contact during voluntary work held more positive attitudes than those who had more contact via coworkers or teachers (Van Dussen & Weaver, 2009).

However, we should consider that older people who receive health and care services may not be seeking intergenerational contact; rather their motivations might be to maintain a certain level of independence, health, or wellbeing. Indeed, such contact can serve to reinforce patronising stereotypes in the minds of the health and social care professionals. Moreover, some caring jobs are considered low status (and low paid) and may not be the workers' ideal choice of occupation. These caveats chime with wider evidence from intergroup contact research highlighting that when contact is involuntary on the part of either contact partner, it increases detrimental outcomes of negative contact (Pettigrew & Tropp, 2011).

These many contributing factors, some of which are unique to intergenerational contact in health and social care settings, and the inconsistent outcomes of these studies suggest that more research is necessary to understand the relationships between the quality of contact in these settings and attitudes. Similarly, research is required to examine the experiences and attitudes of older adults in the context of these contact relationships.

4.6 Family Members

Family relationships assessed in this section include grandchild-grandparent contact, adult child-parent contact and relationships with undefined older family members.

Some research compares family contact to other types of intergenerational contact and some studies examine cohabitation with older adults (likely to be family members).

4.6.1 Can intergenerational contact with family members be beneficial?

Attitudes towards older adults

More frequent contact with grandparents does not affect young people's attitudes towards older adults (Ivester & King, 1977), but higher quality grandchild-grandparent contact is linked to positive attitudes (Downs & Walz, 1981; Harwood, Hewstone, Paolini, & Voci, 2005, Harwood, Soliz, & Lin, 2006; Soliz & Harwood, 2006). Attitudes measured in these studies include general evaluations, evaluations of the characteristics of older adults, and stereotypes of older adults. These findings correspond with those from research examining contact with older adults in general everyday life; that contact quality is more effective than contact frequency.

Interaction with Grandparents

Grandchild-grandparent interactions also form an important link between intergenerational contact with, and attitudes towards, older adults (Tam et al., 2006) and this link could be bi-directional. Young people who had experienced good quality contact with older adults also said they were more likely to express their feelings and disclose personal information to their grandparents. Self-disclosure to grandparents was linked to less anxiety about interacting with their grandparents and increased empathy towards them. This suggests that good quality communication between grandchildren and grandparents are part of the same system of attitudes and behavior that connects intergenerational contact to attitudes towards older adults in general.

Attitudes towards own ageing

Intergenerational relationships also have some potential psychological costs for younger people in terms of views of their own ageing. Young people living with an older family member report high ageing anxiety (which is also related to more ageist attitudes), whereas those who work with older coworkers, and who have good quality intergenerational contact in their everyday lives report lower ageing anxiety (Allan & Johnson, 2009; Drury et al., 2016). Collectively, these findings suggest that living with, versus working with, older adults have different implications. This may be due to the perceived dependency of the older adults involved in the contact. Living with older adults who are cared for by family members could result in a generalised view that older adults are dependent, leading to anxiety about own ageing. Conversely, working with independent older adults, who may also be less distant in terms of age, could create the impression that older adults are competent, and not trigger ageing anxiety. However, further evidence to support this conclusion is needed, for two reasons. First, the research does not specify whether the workplace contact included health and social care, where the contact would have been with dependent older

adults. Second, a coworker is defined as 'older' when over the age of 50 years old, whilst most people believe old age starts at 62 years old (Abrams et al., 2009). Therefore, differences in working and living with older adults could be due to a difference in the perceived age of these two groups.

It is important to note that there are likely to be cultural differences which could be associated with norms about the status and respect deserved by older people, or where intergenerational living is more common. For example, attitude surveys of Jordanian and Chinese nurses and student nurses showed that those who had lived with, or been cared for by an older person held more positive attitudes (Hweidi & Al-Hassan, 2005; Wu, 2011).

Knowledge about ageing processes

It does not appear to be the case that people who have more contact with older adults in everyday life necessarily have more knowledge about ageing (Allan & Johnson, 2009) but family-based contact does seem relevant. For example, young people that had grandchild-grandparent contact were more knowledgeable about ageing sexuality, and in turn held less restrictive views about ageing sexuality (Hillman & Stricker, 1996).

Another study revealed that students' contact with older family members was related to their initial interest in studying ageing, whilst their contact with older non-family individuals was related to their interest in pursuing a career in gerontology (Gorelik, Damron-Rodriguez, Funderburk, & Solomon, 2000). It is possible that family contact prompts the initial interest, whilst contact experienced whilst studying (non-family contact) prompts an interest in a gerontological career path. These findings highlight that particular social relationships are important in determining what is learned and how it affects attitudes.

Attitudes towards elder abuse

Good quality (but not frequent) grandchild-grandparent contact may affect people's understanding about elder abuse within caregiver-older adult parent interactions. Mills, Vermette, and Malley-Morrison (1998) asked students to judge scenarios representing established forms of elder abuse including physical abuse, forced sedation, psychological abuse and financial abuse. Students who had infrequent and uninvolved contact with their grandparents rated the actions of an aggressive hypothetical caregiver as more justifiable and less abusive than students who had infrequent but involved contact. This suggests that in relation to judgements of elder abuse, quality but not quantity of grandparental contact is important.

Supporting public policies for older people

People who have more grandparental contact are also less concerned about the extent to which older adults' contribute to the cost of their benefits. In a US national survey, people under 25 were more concerned about whether the older population made a fair contribution to the cost of their benefits than were people aged over 25 (Silverstein & Parrott, 1997). However, if during childhood the young people had

experienced high levels of grandparental contact, the differences in levels of concern disappeared. Young people were also less supportive of older adults' benefit entitlements, but this support was not increased by more grandparental contact. The researchers suggest the entitlement attitudes were not softened by grandparental contact because compared to contributory policies, these have more impact on young people's economic lives in relation to the distribution of state resources.

Older adults' cognitive performance and well-being

Ageism towards older adults can create a barrier to active ageing (Swift, Abrams, Lamont, & Drury, 2017), but this can be alleviated by intergenerational family contact. For example, older adults' performance is affected by grandchild-grandparent contact. This has been demonstrated in experimental studies examining the effects of the 'stereotype threat' (Lamont, Swift, & Abrams, 2015). Stereotype threat is experienced when an individual worries that they may confirm a negative stereotype about their social group in a situation linked to that stereotype (Steele & Aronson, 1995). This anxiety leads to poor performance on tasks or tests related to the stereotype. Research testing older adults' mathematic and cognitive abilities (recall, comprehension and verbal facility) showed that those experiencing positive contact with grandchildren were less likely to be negatively affected by stereotype threat (Abrams et al., 2008; Abrams, Eller, & Bryant, 2006). These studies demonstrate how grandchild-grandparent contact can benefit older adults' performance. Stereotype threat seems likely to have particular relevance in health and occupational testing situations where older adults' may feel under threat from incompetency or dependency stereotypes. For example, being asked one's age before taking a cognitive function task in a health setting may induce stereotype threat and reduce performance. This research suggests that grandchild contact may go some way to minimising this effect.

Research also demonstrates that family contact may contribute positively to older adults' health and well-being (Tsai, Motamed, & Rougemont, 2013; Wu & Rudkin, 2000). National Taiwanese surveys carried out between 1993 and 2007 suggest that family intergenerational contact can help protect older adults against mental health problems. In the earlier surveys older adults living with offspring were less likely to suffer from loneliness, and in the later surveys those caring for grandchildren were less likely to suffer from depression. The researchers suggest that mental health protection once provided by living with offspring has changed over time and is now provided by caring for grandchildren. Co-residence, or regular contact with adult children, is also positively linked to older adults' general health status. In a Malaysian national survey, older adults who were vulnerable to chronic stress were more likely to assess their health as good when they also had daily visits from, or lived with, their adult children.

These two studies do not allow a strong causal inference but the evidence is consistent with other theory and research suggesting that more contact helps to reduce depression. Also, we should be cautious generalising these findings to older adults in other countries or cultures. Both studies were conducted in collectivist cultures where family relations and attitudes towards older adults may differ from western cultures.

In summary, positive family intergenerational contact appears to have beneficial effects on a variety of outcomes including younger people's attitudes and behaviours, and the performance, health and well-being of older adults.

4.6.2 When is intergenerational contact with family members beneficial?

Frequency and quality of contact affect different outcomes

Research suggests that in order for good quality family contact to positively affect attitudes towards older adults it also needs to be frequent and the young people need to be thinking about the age difference between themselves and their grandparents during their time together (Harwood et al., 2005). This is in contrast to good quality contact with older adults in everyday life, which even when experienced infrequently, leads to positive attitudes towards all older adults (Schwartz & Simmons 2001). These findings have implications for programmes designed to improve intergenerational relationships. They suggest that for young people who do not have high quality family intergenerational contact, interventions promoting even a limited amount of contact with older adults in general could be highly effective.

Research measuring different outcomes, however, finds that frequent grandchild-grandparent contact is not necessary to change attitudes. Mills et al. (1998) find that high quality, even if infrequent, contact with grandparents improves sensitivity in relation to judgements such the extent to which elder abuse is ignored, tolerated or tackled.

Conversation topics

The positive effect of grandchild-grandparent contact on attitudes towards older people can be enhanced when the grandparent talks about the past (Harwood et al., 2006). This suggests that interventions designed around grandchild-grandparent contact could be improved if conversation topics included story telling about the older adults' life experiences. Indeed, many intergenerational contact programmes include 'history telling' as part of the schedule (Allen, Allen, & Weekly, 1986; Couper, Sheehan & Thomas, 1991; Dorfman, Murty, Ingram, & Evans, 2002).

Family contact versus intergenerational contact in other contexts

It appears that family and non-family intergenerational contact may be beneficial for different outcomes. For example, family intergenerational contact stimulates younger people's interest in working with older adults (Gorelik et al., 2000), whilst those who have contact with older adults in general hold more positive attitudes, and engage in less patronising behaviour (Hehman et al., 2012; Knox et al., 1986).

A small body of research compares the effects of intergenerational cohabitation to intergenerational contact in other contexts. It appears that intergenerational cohabitation can have positive or negative effects depending on whether it is experienced by a younger or older person. Although intergenerational cohabitation

is not related to young people's attitudes towards older adults (Drake, 1957; Hawkins, 1996), young people living with an older adult are more anxious about their own ageing compared to those working with older adults (Allan & Johnson, 2009). However, older adults living with family members are less lonely or depressed and in better health (Tsai et al., 2013; Wu & Rudkin, 2000).

4.6.3 How is intergenerational contact with family members beneficial?

Harwood et al.'s (2005) research tested the psychological stepping-stones from good quality grandchild-grandparental contact to lowered stereotyping of older adults. The steps include increased self-disclosure to, and individuation of, grandparents, reduced intergroup anxiety, less accommodating speech and increased perspective taking. Individuation is learning about unique aspects of other social groups and seeing other people as individuals. Speech accommodation occurs when conversation partners adjust their style of communication in excess of what is required (e.g. when young people use baby talk with older adults) or when they fail to make necessary adjustments (e.g. when older adults divulge too much personal information). The route from contact to attitudes was enhanced when young people were more conscious of the age difference between themselves and their grandparents.

Research by Soliz and Harwood (2005) explored the role of parental encouragement and shared family identity. Parental encouragement is the support of good relations and communication between children and grandparents (Harwood et al., 2006), which echoes Allport's (1954) "institutional support". Grandchildren who identified more strongly with their family, whose parents encouraged relationships with grandparents, and who shared more personal communication (such as social support and self-disclosure) with their grandparents also had more favourable perceptions of older adults in general. However, grandchildren that experienced negative communication (e.g. negative accommodation) were more conscious of age differences and had more negative views of their own ageing.

Taken together, these studies reveal various psychological routes through which good quality grandchild-grandparent contact affect attitudes and stereotypes towards older adults and attitudes towards one's own ageing. When young people are more conscious of age differences during their interactions with older people, positive contact seems to be even more effective in promoting positive attitudes towards older people generally. This age awareness, however, can also amplify the negative effect of poor or patronising intergenerational communication on older people themselves.

4.6.4 Summary of intergenerational contact with family members

Positive outcomes related to family intergenerational contact involve a more positive orientation to issues such as social care and social policy; elder abuse, older adults' sexuality, older adults' public policies, interest in gerontology, and older people's cognitive performance. Good quality intergenerational family contact helps to reduce younger people's ageism and improve their stereotypes of older adults.

Intergenerational cohabitation, however, may be a mixed blessing. On the one hand it may be detrimental for young people due to its link with ageing anxiety. In turn ageing anxiety is related to ageism, which negatively impacts older adults. On the other hand, cohabiting with family is beneficial for older adults' loneliness and health.

Intergenerational family contact *quality* is likely to have a stronger effect on attitudes than does contact *frequency*, ideally contact should be both good quality and frequent. The effect of contact is enhanced by increased awareness of age differences, and when grandparents talk about the past. Benefits are created via the influence family contact has on perspective taking, good quality communication with grandparents, viewing them as individuals and having low anxiety about interacting with them. Parental encouragement and shared family identity are further factors paving the way from family contact to positive outcomes.

4.7 Indirect Intergenerational Contact

4.7.1 Extended Intergenerational Contact

Extended intergenerational contact occurs when a young person knows that one or more of their friends of similar age have a friendship with an older person.

Can extended intergenerational contact be beneficial?

Across three studies Drury et al. (2016) found that regardless of their own experiences of contact, young people who had more same age friends with older friends held more positive attitudes towards older adults. Thus, even for those with little direct contact with older adults, having friends who have intergenerational friendships can improve the attitudes of young people towards older people. Research also shows that extended intergenerational contact combined with other types of intergenerational contact protects older adults against stereotype threat. Older adults' cognitive performance was less likely to be reduced by stereotype threat when they had experienced a combination of extended, direct and family intergenerational contact (Abrams et al., 2006).

When is extended intergenerational contact beneficial?

Research has yet to test the circumstances under which extended intergenerational contact is most beneficial.

How is extended intergenerational contact beneficial?

Having friends who have intergenerational friendships can improve young people's attitudes towards older adults via three pathways: reducing their anxiety about intergenerational contact, reducing their ageing anxiety, and increasing their perception that other young people find intergenerational contact to be socially acceptable (Drury et al., 2016). Therefore, similar to extended contact with other

social groups, extended intergenerational contact works by reducing young people's intergroup anxiety and positively affecting social norms, and similar to direct intergenerational contact, it works by reducing ageing anxiety.

Summary of extended intergenerational contact

The few studies on extended intergenerational contact indicate that it is likely to improve attitudes towards older adults. Extended intergenerational contact's ability to improve social norms about contact with older adults may prove particularly beneficial for adolescents who identify strongly with their peer group. Extended intergenerational contact also has implications for school intergenerational contact programmes. If young people who take part in direct intergenerational contact programmes subsequently share their positive experiences with friends and peers, this could multiply the effects of the original intervention. Importantly, extended intergenerational contact provides a way of improving the attitudes of young people whose lives are more age-segregated and are unlikely to have the opportunity to experience direct intergenerational contact. Finally, extended contact experienced by older people themselves helps to inoculate them against the potentially harmful effects of stereotype threat on their cognitive performance (Abrams et al., 2006).

4.7.2 Imagined Intergenerational Contact

Can imagined intergenerational contact be beneficial?

Attitudes. Merely imagining a positive interaction with an older person improves university students' attitudes towards older adults in general (Turner & Crisp, 2010). In imagined contact experiments (for a practitioners' guide see Crisp et al., 2009) participants are randomly assigned to either a control group that is asked to imagine a pleasant scene or an intervention group that is asked *"to take a minute to imagine yourself meeting an older adult stranger for the first time. Imagine that the interaction is positive, relaxed and comfortable"*. In order to reinforce the effects of the imagined encounter, all participants are then asked to write the details of what they imagined. This simple method typically causes young people in the intervention groups to report less ageist attitudes (explicit and implicit).

Future contact intentions. Imagined contact also reduces young people's bias towards their own age group (Turner et al., 2007). When asked if they would prefer to collaborate with a younger or older adult on a subsequent task, those who had imagined contact were less likely to choose a young partner. A further study confirmed that this effect is caused by imagined contact rather than just by thinking about older adults.

Communication skills. Not only does imagined contact increase young people's willingness to engage in direct intergenerational contact (Crisp & Husnu, 2011; Husnu & Crisp, 2011) it can also improve intergenerational communication (Birtel & Crisp, 2012). In a laboratory experiment young people were asked to record a video message introducing themselves to an older adult stranger. For young people anxious about their performance, an independent quality rating of the video

messages found their communication skills were better when they had imagined intergenerational contact before the recording than when they had not.

Benefits for older adults. Imagining a positive encounter with a young person also protects older adults against stereotype threat (Abrams et al., 2008), mimicking the effects of direct grandchild-grandparent contact (Abrams et al., 2006, 2008). Compared to those who imagined an outdoor scene, older adults who imagined intergenerational contact performed better on a subsequent mathematics test.

When is imagined intergenerational contact beneficial?

Variations on the standard imagined contact instructions described above can further improve the outcomes. For example, ‘elaborated’ contact, which involves additionally asking people to imagine *when* and *where* the contact might occur, led young people to estimate they would have a higher number of acquaintances with older adults in the future (Husnu & Crisp, 2011). The effects of elaborated contact also last longer than standard imagined contact. Another useful variation is to change the perspective from which the contact is imagined (Crisp & Husnu, 2011). Participants are asked to view the contact from a third party’s perspective.... “*see the event from the visual perspective of an observer.... see yourself in the scene from an external viewpoint*”. This perspective increased young people’s intentions to have contact with older adults more than the usual first-person perspective. Closing one’s eyes during the standard task can also strengthen the effect.

How is imagined intergenerational contact beneficial?

Imagining contact from a third-person perspective reinforces people’s sense that they have positive attitudes towards members of the other social group, which in turn increases their intentions to have contact with that group. This means that when young people picture themselves interacting with an older adult it makes them feel more positive towards and comfortable about interacting with older adults (Crisp & Husnu, 2011).

Summary of imagined intergenerational contact

Imagined intergenerational contact is an effective intervention with a range of positive outcomes, particularly promoting young people’s intentions to have direct contact. After imagined contact, young people expect to know more older adults in the future, are more willing to interact with them and are more efficient in their contact communication skills. Simulating more elaborate encounters, or imagining interactions from a third-person perspective can enhance the impact of imagined intergenerational contact.

Imagining intergenerational contact before taking part in a direct intergenerational contact programme should lead to reduced anxiety about the impending contact and therefore create an easier path to actual contact. It is a straightforward and cost effective technique, which can help improve the likelihood and smooth running of future intergenerational contact.

4.7.3 Other Indirect Routes for Intergenerational Contact

There is a lack of research examining intergenerational contact via other the types of indirect contact; vicarious contact and virtual contact (the observation of others involved in positive intergenerational contact via film and television or contact via computer-based communication, respectively). However, an intergenerational contact programme has been conducted via email contact, and the results are reported in the following section: Review of Intergenerational Contact Programmes. These alternative routes of intergenerational contact require more research in the future.

4.8 Summary of Intergenerational Contact Research

Table 2, summarises what is known about the beneficial outcomes of direct and indirect intergenerational contact reviewed in this section and when and how they are most successful. Table 2 includes insights that may be relevant for practitioners that are organising intergenerational projects. We also suggest implications for policy makers. There is more research for some types of contact than others (e.g. there are more studies on family contact than intergenerational friendships) so the table does not necessarily imply equal weight on all points or conclusions.

Table 2. Summary of evidence from intergenerational contact research

Type of intergenerational contact	Outcomes	When it works best	How it works	Value for intergenerational contact programmes	Policy value
Contact with non-family older adults in everyday life	<p>More positive explicit attitudes about older adults.</p> <p>More positive implicit attitudes about older adults.</p> <p>More positive stereotyping of older adults.</p> <p>More intentions to donate to older adults' charities.</p> <p>More intentions to help older adults (e.g. tax increases to help older adults, donation to older adults charity or direct help; crossing the road, carrying shopping).</p> <p>More intentions to spend time with older adults.</p> <p>More positive expectations about future contact.</p> <p>More intentions to volunteer in general.</p> <p>More intentions to be helpful to others in general.</p> <p>Less patronising speech towards older adults.</p> <p>Improves older adults' cognitive and performance.</p>	<p>Good quality contact (regardless of frequency).</p> <p>Frequent contact alone not sufficient.</p>	<p>Reduces intergroup anxiety.</p> <p>Reduces ageing anxiety.</p> <p>Reduces intergroup anxiety</p> <p>Increases self-disclosure</p> <p>Increases empathy</p>	<p>If contact cannot be regular, ensuring that it is high quality contact can help improve outcomes.</p>	<p>Reducing ageism, and wider prosocial effects such as increased charity donations and volunteering.</p> <p>Prevents stereotype threat, therefore preserves older people's cognitive performance under test conditions.</p>

Type of intergenerational contact	Outcomes	When it works best	How it works	Value for intergenerational contact programmes	Policy value
Friendships	More positive explicit attitudes towards older adults. More positive stereotyping of older adults. Less benevolent stereotyping (e.g. patronizing) of older adults More positive perceptions of providing elder care and studying ageing.	More likely for British women than men. More likely for European men than women. More likely in wealthy countries with high proportion of older adults. Less likely in urbanised areas.	No evidence.	Most powerful type of direct intergenerational contact. Likelihood varies depending on personal and societal characteristics.	Most powerful type of direct intergenerational contact, yet under-researched. Intergenerational friendships are relatively unusual. Important influence on positive perceptions of providing health and social care for older people and studying ageing.
Coworker contact	More positive explicit attitudes towards older adults. More positive stereotyping of older coworkers and older adults in general. Less benevolent stereotyping (e.g. patronizing) of older coworkers and older adults in general. More intentions to help and cooperate with coworkers. More support of age-diversity at work. More positive attitudes towards elder care. Less ageing anxiety. Less turnover intentions.	Frequency of contact (independently). Good quality of contact.	Reduces ageing anxiety.	More frequent contact at work is beneficial. NB: Older adults involved likely to be closer to middle-age.	Demonstrates value of age-diversity in the workplace. Positive outcomes for organisations.

Type of intergenerational contact	Outcomes	When it works best	How it works	Value for intergenerational contact programmes	Policy value
Health and social care (H&SC) contact	More positive explicit attitudes towards older adults in general. More positive explicit attitudes towards older people receiving care (e.g. care home residents). More benevolent stereotyping of older patients More intentions to help and cooperation with coworkers. Higher job satisfaction.	More contact at work linked to more positive attitudes. When contact is positive. Negative contact increases ageism of care home residents and older adults in general.	Increases empathy. Increases shared humour. Increases perspective taking. Increases sharing personal information with older adult H&SC contact partners.	Important outcomes for well-being and shared understanding if good quality intergenerational contact is enabled as part of workplace management	Understanding of contact in H&SC contact is required as it can have both positive and negative outcomes. Can have positive outcomes for health and social care organisations, which may help retain staff and increase work harmony. More research required on experiences of older adults in H&SC. Research findings have potential to influence 'care partnership' model of care. H&SC workers with long experience are important to retain.

Type of intergenerational contact	Outcomes	When it works best	How it works	Value for intergenerational contact programmes	Policy value
Family contact	<p>More positive explicit attitudes towards older adults.</p> <p>More knowledge about ageing.</p> <p>Potentially more ageing anxiety in younger people.</p> <p>Less tolerance of elder abuse.</p> <p>More support for older adults' public policies.</p> <p>Improves older adults' cognitive performance, mental and general health.</p> <p>Less loneliness and depression in older people.</p> <p>More positive attitudes towards older adults' sexuality.</p> <p>More interest in studying ageing.</p> <p>Protects against stereotype threat.</p>	<p>Contact needs to be both good quality and frequent.</p> <p>Greater parental encouragement.</p>	<p>Increases awareness of age differences.</p> <p>When older adults story telling about the past.</p> <p>Increases perspective taking.</p> <p>Improves communication quality.</p> <p>Encourages viewing grandparents as individuals.</p> <p>Reduces anxiety about interaction with grandparents.</p> <p>Increases perception of shared family identity.</p>		<p>Intergenerational cohabitation has positive effects for older adults but negative effects for younger adults (increases ageing anxiety).</p> <p>Working with older adults (age-diversity) has a larger impact on positive attitudes towards older adults than family contact.</p>
Extended contact	<p>More positive explicit attitudes towards older adults.</p> <p>Improves older adults' cognitive performance.</p> <p>Protects against stereotype threat.</p>	<p>No evidence.</p>	<p>Reduced intergroup anxiety.</p> <p>Reduced ageing anxiety.</p> <p>Increased perception that other young people believe it is positive and acceptable to have friendships with older adults (social norms).</p>	<p>Using extended contact before intergenerational contact programmes could reduce anxiety and form a valuable 'first-step' to contact.</p> <p>Extended contact can be used to expand the benefits of programmes to a wider audience. Post-programme peer communication of positive experiences during the direct intergenerational contact programmes can positively influence a wider range of young people's attitudes.</p>	<p>Awareness of peers' intergenerational friendships can reduce anxiety about future intergenerational contact and anxiety about growing older, and thus make future contact more likely.</p> <p>Preserves older people's cognitive performance.</p>

Type of intergenerational contact	Outcomes	When it works best	How it works	Value for intergenerational contact programmes	Policy value
Imagined contact	Improves explicit attitudes towards older adults. Improves implicit attitudes towards older adults. Increases positive stereotyping of older adults. Increases intentions to have future intergenerational contact. Improves intergenerational communication skills. Improves older adults' cognitive performance. Protects against stereotype threat.	Imagine the encounter in detail (elaborated contact). Imagine contact with eyes closed. Imagine contact from a third-person perspective.		Using imagined contact before intergenerational contact programmes could reduce anxiety and form a valuable 'first-step' to contact. It is cost effective and easy to run.	Imagined contact can protect against stereotype threat - useful in healthcare situations, so preserves older people's cognitive and physical performance.

Note: This is an overview of the literature. Please refer to the narrative sections of this report to specify which favourable conditions etc. relate to which outcome

5 REVIEW OF INTERGENERATIONAL CONTACT PROGRAMMES

This section reviews the available reliable evidence about the impact of intergenerational contact programmes on attitudes, well-being and other relevant outcomes. We examine how the ideal conditions and psychological processes of intergenerational contact have been adapted for use in intergenerational contact programmes. Using the intergroup contact framework, we also explore why certain programmes may have been successful whereas others were unsuccessful, and provide guidance for designing robust programmes. Finally, we draw together the evidence from all sections of this review to suggest recommendations for best practice.

5.1 Scope of the Evidence Review

A literature search was performed using two databases; Psych Info and EBSCO Host and 31 relevant peer-reviewed articles published before 2014 were selected for review (for full details see the Appendix: Table A1). To ensure the evidence was robust and comparable, three criteria were used to select the articles; the programmes should feature;

1. Statistical analysis of quantitative measures.
2. Contact between adolescents or young people (minimum age 11 years old) and older adults.
3. Attitudes towards older adults, or stereotyping of older adults as the outcome of the programme. (Where programmes featured additional outcome measures, these have also been reported and reviewed.)

It should be noted that there are many other reports about intergenerational contact programmes that have not been published in peer-reviewed academic journals. Thus, this review covers a subgroup of programmes from which there is robust evidence, rather than an exhaustive account of all programmes.

5.2 Description of Intergenerational Contact Programmes

There were two main types of intergenerational contact programmes in our sample. Fifteen studies examined service-learning programmes, which involved students enrolled on health, social care or gerontological courses. The programmes tracked changes in the students' attitudes following their experience of intergenerational contact that arose as part of their training or educational course. Service-learning programmes usually take place in older adults' environments. Twelve studies examined programmes based in educational settings (we review only secondary schools) where younger people and older adults are brought together. The review also assessed other programmes types such as voluntary, recreational and email interventions.

The duration of the programmes varied greatly from one 50-minute workshop to repeated sessions over an 11-month period. Most younger participants were undergraduate students, although some studies used school children.

The programmes included in the review took place from 1976 to early 2013, five during the 1970s, nine during the 1980s, 12 during the 1990s, three in 2000s and two since 2010. Therefore, there appears to have been a reduction in the number of programmes that were evaluated following the 1990s. Most studies measured attitudes before and after the programme, and determined the success of the programme by the statistical difference between attitudes at these two time points. Some studies also featured a control group that did not participate in the intervention.

5.3 Do Intergenerational Contact Programmes use Principles of Successful Intergroup Contact?

The majority of studies were not designed to test the intergroup contact hypothesis (c.f. Jarrott & Smith, 2011) but some feature elements of Allport's (1954) ideal conditions (institutional support, cooperation, common goals and equal status) and the other variables known to improve intergenerational contact. Institutional support was a regular feature of intergenerational contact programmes because it was generally provided by the presence of the organisation that coordinated the programme. Cooperation and working towards common goals also featured frequently, especially when the activities of the programme were designed to encourage younger and older people to work together on tasks. Equal status was rarer, and difficult to achieve. Often the programmes took place in environments that were more familiar to one group than the other (e.g. school or nursing home). This probably affected the perceived relative status of the groups, which would have had implications for the outcomes of the programme. Status is also affected by the comparative size of the two groups taking part. A large group may be perceived as having higher status than a small group, and in turn this is likely to vary the group dynamics of the intervention and affect outcomes.

Other conditions known to foster positive outcomes of intergenerational contact, such as close contact and story-telling did feature in some intergenerational contact programmes, as did some behaviours and psychological processes that form stepping-stones between intergenerational contact and positive attitudes towards older adults (e.g. self-disclosure and knowledge about ageing). Table 3 shows examples of how the intergenerational contact programmes provided some of the conditions and psychological processes identified as successful in the review of direct intergenerational contact.

5.4 Outcomes of Intergenerational Contact Programmes

Table 4 summarises the features and outcomes of the intergenerational contact programmes reviewed. These features include the groups compared, sample, setting, programme activities, optimal contact met by programme, duration and

findings/outcome. The majority of programmes reviewed (27 out of 31) reported all or some positive outcomes. Nine programmes found no change in outcomes after the intervention and four reported all or some negative outcomes (e.g. deterioration of positive attitudes). Therefore, although these intergenerational contact programmes did not have a consistently positive effect on outcomes, the majority did produce benefits. The next section examines reasons for the success or failure of the programmes by comparing their design to the findings of the evidence presented in the review of intergroup and intergenerational contact research (refer to Table 4 for a summary and list of possible factors leading to outcomes).

Table 3. Practical examples of ideal conditions and psychological processes of intergenerational contact

Conditions and psychological processes	Examples in intergenerational contact programmes
Close contact / good quality contact	Interviews. Getting to know each other exercises. Contact with same person repeatedly. One-to-one contact. Shared tasks/activities designed to foster close contact. Pairing up. Small groups. Massage. Buddy system.
Frequent contact	Programmes often consist of a one-off intense event, or a series of multiple meetings. Using the existing evidence as a guideline, frequent contact would be either more than 8 hours (e.g. 2 long sessions) or shorter weekly sessions lasting longer than 4 weeks.
Institutional support	Practitioners and organisations that run intergenerational contact programmes provide institutional support, especially via their physical presence and verbal guidance during the programmes.
Cooperation	Helping with chores. Arts and crafts projects. Intergenerational choirs. Physical activities. Talent shows. Shared activities; painting, music, cooking.
Equal status	Both parties doing the same task. When tasks are not easier for one party more than the other. Intergenerational sharing programmes. Intergenerational choir. Buddy system. Same number of older and young participants. Neutral environments. Tasks or environments that do not communicate negative stereotypes of either group.
Shared goals	Exercises with shared goals. Helping with chores. Arts and crafts projects. Intergenerational choirs. Talent shows.
Story telling	Reminiscence classes. Common life experience discussion.
Knowledge	Ageing course. Seminars. Lectures. Quizzes. Discussions. Films. Interviews. Getting to know each other exercises.
Self-disclosure	Getting to know each other exercises. Interviews. Intergenerational sharing programmes. Small group discussion on lifespan issues. Bonding activities. Buddy scheme. Email exchange. Common life experience discussion.

Table 4. Summary of outcomes and possible contributing factors in intergenerational contact programmes.

Outcome	Number of studies	Types of outcomes	Types of programmes	Possible factors contributing to outcomes
Positive	27	Attitudes, stereotypes, behavioural intentions, intentions to work with older adults.	Service learning with healthy or dependent older adults. Visits to older adults' day centers. Mentor programmes. Educational/ classroom. Voluntary visits to older adults' homes. Email exchanges. Recreational programmes.	Working on common goals. Cooperation. Learning about ageing (knowledge). Neutral status environments. Structured group exercises, problem-solving tasks, common life experience discussion, self-disclosure exercises. Communication about values. Sharing feedback. Reminiscing groups. Producing and performing arts / crafts shows. Contact partners paired based on common interests. Close contact. Regular contact.
Ineffective	8	Attitudes, stereotypes.	Visits to nursing homes/residential homes/adult services centers.	Unequal status (environment only familiar to one party). Unequal group size. Dependency of older adults. Infrequent contact. Short interventions. Deep-rooted stereotypes may be more difficult to change than attitudes. Lack of opportunity for close contact.
Negative	4	Attitudes, future contact intentions, perceptions of ageing, stereotypes.	School visits by older adults. Health and well-being classes delivered at older adults' centers.	Unequal status (environment only familiar to one party). Unequal group size. Disproportionate interaction between older adults and teachers. Older adults disclosing too much personal information. Lack of opportunity for close contact. Dependency of older adults. Impersonal contact.

5.5 Successful Intergenerational Contact Programmes

From the 27 intergenerational contact programmes that resulted in positive outcomes we selected two case studies to illustrate how their designs and methods capture the processes that our reviews of intergroup and intergenerational contact research identified as relevant.

5.5.1 Case study one

Aday, McDuffie, & Sims (1993) conducted an eight-week programme featuring 19 young people (16-18 year olds) and 19 older adults (average 71 years old), which successfully improved the young people's attitudes towards older adults. The regular contact featured in this programme would have helped facilitate 'close contact' and allowed bonds to develop between the two groups. Furthermore, the equal number of participants in each age group would have avoided differences in group status due to group size. The younger and older adults were partnered based on common interests to take part in activities during the programme. Matching the contact partners would have further helped to develop bonds and possibly lead to intergenerational friendships. (As previously mentioned, intergenerational friendship is the most powerful type of contact.) The structured activities organised by the programme designers included; getting to know partners, informal sharing (photographs etc.), reminiscing groups, puppet show preparation, making baskets, painting to music and the puppet show production. Getting to know partners and informal sharing can be a proxy for self-disclosure, which creates a stepping-stone from contact to positive attitudes. The reminiscing groups would have provided an opportunity for older adults to tell stories about the past, which the evidence shows can improve contact. The puppet show preparation and production would have allowed the opportunity for cooperation and working towards shared goals; therefore fulfilling two of Allport's (1954) optimal conditions for successful contact. Institutional support (another of Allport's conditions) would also have been provided by the presence of the programme organisers themselves. In sum, the success of this intervention can be linked to the combination of conditions and processes inherent in successful intergroup contact; institutional support, cooperation, shared goals, equal group status, regular contact, close contact and self-disclosure.

5.5.2 Case study two

Couper, Sheehan, & Thomas (1991) ran a short (one day, five hour) intervention that positively affected young people's attitudes towards older adults. It included various elements identified as important ingredients for successful intergenerational contact. First, the programme featured structured group exercises and problem-solving tasks. These elements reflect two of Allport's (1954) four optimal conditions; cooperation and working towards common goals. Additionally, the programme included discussions of common life experiences. This task would help to foster empathy for the other group, which in turn reduces ageism. Some tasks included self-disclosure exercises, which would encourage shared disclosure between the two groups. Research demonstrates that shared disclosure (the mutual exchange of personal information) also reduces ageist attitudes. Moreover, it is likely to provide foundations for close, high quality contact or even friendship. In addition, the

programme featured an activity designed to encourage communication about values with the aim of fostering acceptance of different beliefs. The programme closed with sharing feedback on personal strengths of group members. These two activities encourage participants to view each other as individuals (individuation) and appreciate positive aspects of the two different age groups. Research shows that individuation and appreciating differences are important processes that help improve attitudes towards members of different groups. Therefore, although Couper et al.'s (1991) programme was short it included many aspects identified within the evidence reviews as key to successful intergroup and intergenerational contact.

This programme is a good example of how even a short intervention can be successful when it includes design aspects that reflect the processes central to intergroup contact theory. Although the programme improved attitudes, it did not change stereotypes of older adults. This is understandable because the deep-rooted and often implicit nature of stereotypes means they can be more difficult to change. Programmes that extended over longer periods of time, featuring regular and repeated contact, had more success changing stereotypes (Olejnuk & LaRue, 1981; Shoemaker & Rowland, 1993). This may be because they facilitated closer contact, whereby the young people became better acquainted, or even friendly, with the older adults and could appreciate the older adults' individual characteristics that dispelled commonly held old-age stereotypes.

5.6 When and how are Intergenerational Contact Programmes Successful?

5.6.1 Ideal conditions and processes to foster

Many of the interventions that have proven successful feature close contact. In order for contact to be close it is likely that it also needs to be regular to allow the development of close relations. Cooperation and self-disclosure also feature regularly in successful interventions. Self-disclosure is an aspect that requires careful design. From the evidence we know that older adults telling stories about the past facilitates successful contact (Harwood et al., 2006), but when older adults divulge too much personal information this can lead to poor communication and negative outcomes (Soliz & Harwood, 2006). It would be important for the design to include balanced amounts of self-disclosure from both parties (in order to maintain equal status) and for the stories of the past not to be disproportionately personal.

Tasks that feature a shared outcome (such as a puppet show or singing concert) can provide opportunities for cooperation and planning shared goals. Again, working together in this way also creates equal status, where both parties contribute to the outcome. However, it is important to ensure that tasks do not favour the skills of either group. For example, a technological task could favour younger people and create an unequal status.

Fostering intergenerational *friendships* should also be a key aim of intergenerational contact programmes as this is the most successful type of contact. Again, this involves close contact and self-disclosure. Some programmes encourage these by including bonding activities in which common life experiences are discussed, getting

to know each other exercises, or buddy systems. It is important, however, to recognise that in order to facilitate intergenerational friendships, any initial anxiety about contact would need to be overcome. For this purpose pre-programme interventions such as imagined contact or extended contact could be useful, as could organising ice-breaking sessions in which cooperation and working together tasks are set. Also, programme designs should consider how to avoid unintentionally prompting young people's anxieties about their own ageing.

5.6.2 Ideal design methodologies

All of the intergenerational contact programmes reviewed asked participants to complete the same questionnaire measuring attitudes before and after the intervention. Comparing the average responses at these two time points indicates whether there has been a change in attitudes. Another robust way to test changes in attitudes is to include a 'control group' in the programme design (e.g. Aday et al., 1993). A control group is identical to the intervention group, except that it does not take part in the intervention. Participants in the control group also complete the questionnaires before and after the intervention. Comparing the responses of the intervention group to the control group after the intervention has taken place allows any attitude changes to be attributed to the intervention rather than another unknown factor. In some programmes (e.g. Angiullo, Whitbourne & Powers, 1996), whilst the intervention groups' attitudes improved after the intervention, the same occurred in the control group. In such cases the attitude change cannot be attributed to the intervention because this positive outcome occurs for both groups. However, without the presence of the control group this would not be known.

A key element of designs using an intervention and control group method is that participants are *randomly* assigned to either group. This avoids any bias involved in participants choosing to join one group or the other, or being selected to be in either group due to some existing criteria or characteristics. The idea behind random assignment is to have a control group and intervention group that are identical in all respects other than one group takes part in the intervention and one does not. In practice this can be hard to achieve. Some characteristics to check for consistency within the groups are; age, gender, number of participants, pre-existing relationships with each other, prior experience of the other age group (including family relationships). Matching the groups entirely is not always possible, for example when running interventions using classes of school children. In such cases, it is advisable to try to match the control to the intervention group on as many characteristics as possible. Either create a control group from students at the same school (perhaps a different year group), or from a school that is very similar. Inevitably, designing research or interventions in real-world situations involves some compromise. It is important to consider which differences are most likely to confound the outcomes of the intervention (i.e. whether the children are different ages from the same school or the same age but from different schools) and limit these where possible.

Another design feature that may make it difficult to compare programmes is that they measure outcomes in different ways. For example, focus groups can provide an environment where participants can explore their experiences together, but the presence of other individuals may inhibit frankness. Providing a vehicle for, and

encouraging, participants to provide open and honest feedback that is comparable across time (pre versus post) and/or across groups (intervention versus control) is therefore more ideal. If questionnaires are used, responses should be treated confidentially, and confidentiality should be stressed to the participants. It may also help to provide an environment where the questionnaires can be completed away from other onlookers, especially participants from the other age group.

5.7 Unsuccessful intergenerational contact programmes

In this section we examine the components of unsuccessful programmes and consider whether their outcomes are likely to be explicable in terms of intergroup contact theory.

5.7.1 Conditions and processes to avoid

Two studies that resulted in negative outcomes were conducted in school settings. An intervention involving shared learning (older adults learning alongside young people in class) led to a deterioration in attitudes towards older adults (Auerbach & Levenson, 1977). A second school study in which older adults ate their lunch with the young people in the school cafeteria resulted in the young people having less intention to have contact with older adults in the future (Olejnuk & LaRue, 1981).

It is likely that the contexts of both interventions created a barrier to positive contact. First, both environments create unequal status for the two groups due to disproportionate numbers (i.e. few older adults but many younger people). Also, whereas the younger adults would have been familiar and comfortable with the environment, the older adults may have felt out of place and uncomfortable. It is likely that this difference in a sense of belonging to, and familiarity with, the environment would have affected anxiety about the forthcoming contact for older adults. As the evidence demonstrates, anxiety about contact (intergroup anxiety) is a key process which links the effects of contact to positive attitudes. Therefore, creating an environment where anxiety is increased is likely to hamper the aims of the intervention. A further feature that may have negatively impacted both programmes was that the young people may have been inhibited by social norms of their peer group (prohibiting contact with the older adults). If the consensus, or even perceived consensus, among the younger people was that it was 'uncool' to interact with the older adults, even those wanting to take part in the programme may have been discouraged. Again, groups of equal size are important here, and ensuring that interactions between people do not have any potentially judgemental onlookers.

In the classroom study (Auerbach & Levenson, 1977), attitudes towards older adults deteriorated in the intervention group from pre to post intervention, but not in the control group, providing clear evidence that the negative outcome was due to the intervention. Pupils felt the older adults identified too much with teachers, overdid their class work and spent too long talking about their personal lives in class. Talking about personal lives is a feature of the accommodating communication process. Negative accommodation is partly due to older adults sharing information that is too personal, and is known to damage the success of intergenerational contact. Lastly,

a key detrimental feature of both studies was that neither provided opportunities for one-to-one contact (such as working collaboratively on a task). It is possible that little meaningful interaction took place between individuals from the two groups, as neither intervention required interactive or cooperative behaviour. The researchers suggested that smaller groups in the cafeteria may have facilitated more personal contact, but specifically designed activities that facilitated closer, personal contact may have decreased or avoided the negative outcomes.

Another study that produced negative perceptions of ageing involved unequal status between the older and younger participants (Reinsch & Tobis, 1991). In this service learning intervention the younger people encountered older adults when they delivered classes and collected data about the older adults' health and well-being. In this situation the younger people represented the more knowledgeable, professional group, creating unequal status between the two groups. Furthermore, focusing on the older adults' health and well-being may have highlighted negative stereotypes of infirmity, incompetence or dependency. Results found that compared to the control group, the young people taking part in the intervention thought that older adults were more accident-prone. Again, this intervention can be criticised for not encouraging personal contact nor working towards common goals.

Some interventions conducted in environments in which older adults can be perceived as dependent (nursing/residential homes) have been unsuccessful at changing attitudes (Angiullo et al., 1996; Eddy, 1986; Chapman & Neal, 1990; Dorfman, Murty, Ingram, Evans, & Power, 2004; Gordon & Hallauer, 1976; Ward, Duquin, & Streetman, 1998). It is possible that these contexts reinforce negative stereotypes (Caspi, 1984). A programme involving young university students based at older adults' service centers (Shoemaker & Rowland, 1993) improved physical stereotypes (e.g. poor vision, poor hearing) but did not alter other stereotypes (e.g. perceptions of older people's helpfulness, sociability, ignorance). The researchers suggest the reason for successfully altering physical, but not other, stereotypes was because of the different nature of physical stereotypes. As physical characteristics are often the first features noticed in a person, it is easy to make generalisations across an entire group of people. Furthermore, it could be that physical stereotypes can be changed without the personal, close contact required to change interpersonal and cognitive stereotypes. Although the contact in this study was regular, it may be that the care setting confirmed implicit stereotypes of dependency, or that the contact was not sufficiently close to change stubborn stereotypes.

In addition to highlighting older adults' dependency, conducting programmes in care settings has the potential to create an unequal status because the younger people are likely to be outnumbered by older adults and are in an environment that is unfamiliar to them. Disproportionate group sizes will reduce opportunity for personal contact for all individuals involved. One study that did not change stereotypes used mixed-age teams of 8-10 people, but these were not balanced and at times featured only 2 representatives from a particular age group (Couper et al., 1991).

Three of the studies that found no change in attitudes were short-term interventions lasting from 1 day to 5 visits. One intervention featured a 2-day oral history project in which younger and older adults participated in local history tours and discussions, plus an interview in which the older adults spoke about changes throughout their

lifetime (Doka, 1985). Although the younger people were enthusiastic about the project and admired the older people they had interviewed their attitudes did not change. This may be due to the short-term nature of the project that would have negated close contact or the development of friendships. It is possible however, that the young people who participated may (for some reason) have already held positive views of older people at the start of the intervention. As previously mentioned, it is worth noting that problems inherent in short-term interventions can potentially be overcome if the intervention includes a range of the optimal conditions for successful intergenerational contact.

A final study, which illustrates the necessity for the use of control groups, resulted in positive attitudes towards, but negative stereotyping of, older adults (Meshel & McGlynn, 2004). The programme was based on the contact hypothesis and provided equal status, opportunity for close contact, and cooperation was encouraged. Whilst it is disappointing that a programme based on sound evidence failed to change stereotypes, it should be noted that negative stereotyping of the older adults also occurred in the control group. As the negative outcomes happened in both groups, this means they cannot be attributed to a feature of the contact intervention. It is possible that there was an unknown factor that affected participants in both groups and led to the increase in negative stereotyping by all participants. This highlights the advantage of including a control group in the design of intergenerational contact programmes.

5.8 Summary of intergenerational contact programmes

Although many interventions were not explicitly based on intergroup contact theory, the theory provides a comprehensive framework to evaluate programmes and to reach recommendations of how to improve programmes. In this section we summarise the key aspects of intergroup contact which we believe contributed to the success of programmes.

5.9 Which Conditions are Key?

5.9.1 Equal status

A common feature of the unsuccessful programmes is the potentially unequal status between the younger and older age participants taking part. Such inequality probably has a negative impact on the participants' actions during the programme and their resulting attitudes. Unequal status can arise from unequal age group sizes, unequal familiarity with the environment, tasks favouring the skills of one group over the other, environments or tasks that communicate negative stereotypes (nursing homes or health assessments). Having lower status in a contact situation may exacerbate an existing anxiety the participant has about the contact itself, or may create stereotype threat.

5.9.2 Close contact

Unsuccessful programmes also tend to offer little opportunity for close contact. In order to achieve close contact it is important for programmes to ensure anxieties about contact are low, and to provide activities that facilitate personal contact. Organising tasks which build confidence in contact and encourage participants to share personal information with each other is key. It is also important to consider guiding the contact to ensure parties are engaging in meaningful rather than impersonal, superficial contact. This can be achieved via the type of tasks and guidance of conversation to ensure that it does not patronise either party. Encouraging each age group to see beyond stereotypes (negative or positive), appreciate individual characteristics and common identities is a pathway to close contact.

5.9.3 Contact frequency

The opportunity for close contact during interventions may depend partly on the frequency of contact. Ideally, programmes should feature close contact which occurs repeatedly over a number of occasions. However, even when programmes are short, they can be successful if they are sufficiently intense. The successful short programme reviewed here (Couper et al., 1991) featured 5 hours of very well organised activities that created and strengthened bonds between the two age groups. This suggests that even when repeated sessions of contact are not achievable, a programme that is well structured around the conditions and processes that facilitate high quality contact, can be effective.

5.9.4 Attitudes versus stereotypes

The programmes reviewed were more successful when attempting to change attitudes rather than stereotypes towards older adults. It is likely that stereotypes are far more deeply rooted than attitudes and therefore more difficult to change. Nonetheless, intergenerational contact research informs us that stereotypes do change following contact with older coworkers, older friends or older adults in everyday life. In an attempt to replicate these conditions it may be beneficial to provide activities in which older adults can behave in ways that dispel stereotypes and demonstrate strengths. To maintain an equal status situation it may be sensible to provide a similar task that enables younger participants to also display strengths and dispel stereotypes about their age group. Research also informs us that imagined contact can help reduce stereotypes of older adults. This a quick and cost effective intervention, which can be carried out prior to actual contact, and which may help to weaken initially negative attitudes or stereotypes.

5.9.5 Design methodology

We have highlighted the importance of including (where possible) control groups in the design of intergenerational contact programmes. This method clarifies when positive outcomes are, or are not, attributable to the intervention and also when negative outcomes result from the intervention rather than another unknown factor. Including control groups and randomly assigning participants to the intervention or

control group can greatly improve the interpretability of the evidence from intergenerational contact programmes.

5.10 Conclusions and Recommendations for Best Practice

Most of the programmes reviewed here were not developed to use or test intergroup contact theory but many met the conditions for successful contact and included psychological processes known to contribute to the positive effects of contact. Many employed activities and tasks to achieve good quality contact (see Table 3). For contact to be successful in improving intergenerational relations it needs to be sufficiently intensive. Therefore programmes should be planned to provide either an intense burst of contact or briefer but repeated contact over time.

Allport's (1954) classic requirements for successful contact are met to varying degrees by different programmes. Institutional support is easily achieved by the presence of the organising body. Working towards shared goals and cooperation are often achieved via activities and tasks set during the programmes. However, equal status can be unintentionally affected by the programme design and thus requires careful planning. Unequal group status was a common feature of unsuccessful intergenerational contact programmes.

The psychological processes through which intergenerational contact decreases ageism are apparent in the activities and tasks employed by many various programmes. These include story-telling tasks, learning about the other group and sharing personal information (see Table 3 for specific tasks). However, other processes that aid intergenerational contact could be adapted to create activities in an intergenerational contact programme. These include developing empathy and perspective taking, viewing older adults as individuals, guiding good quality communication (e.g. young people not patronising and older adults not divulging information that is overly personal), having parental encouragement and focusing on shared identities.

Contact can reduce ageism amongst younger people by reducing two forms of anxiety. First, contact can decrease their anxiety about interacting with older adults and second, it can decrease their anxiety about their own ageing. Aiming to reduce these anxieties at the start, or before programmes may help facilitate the pathway to positive outcomes. Both routes can be achieved via extended contact, so starting interventions by sharing information with young people about other young people that have taken part in programmes (extended contact) may improve the outcomes of programmes. Also, imagining an intergroup encounter (imagined contact) can reduce anxiety about contact and can form a cost effective pre-intervention tool. A further adaptation of the extended contact method that could increase the reach of intergenerational contact programmes is for young people who have taken part in programmes to conduct peer-to-peer communication of their positive intergenerational experiences.

An important and consistent finding from the evidence is that friendships are the most effective type of contact. Therefore, making intergenerational friendships the aim of any intergenerational contact programme is an ideal focus.

6 CHECKLIST OF RECOMMENDATIONS FOR INTERGENERATIONAL CONTACT PROGRAMMES:

Programme design

- Provide frequent contact
- Use groups of equal numbers
- Locate in a neutral environment
- Use a pre-intervention tool (extended or imagined contact)
- Use extended contact as a post programme intervention

Content/activity design

- Cooperation
- Shared goals
- Sharing personal information
- Older adults telling stories from the past
- Reducing anxiety about intergenerational contact
- Reducing anxiety about own ageing
- Learn about each other as individuals

Features to avoid

- Patronising communication
- Communication from older adults that is overtly personal
- Unequal groups (either size, or status)
- Situations where individuals can avoid contact altogether
- Situations where one group is dominant over the other
- Environments unfamiliar to, or uncomfortable for either group
- Situations or tasks that confirm negative stereotypes of either group
- Onlookers not participating in the programme

Evaluation

- When possible evaluate the programme
- Identify the outcomes the programme aims to achieve
- Find or create measures to gauge the outcomes
- When possible use a control group
- When using a control group, randomly assign participants
- Treat participant feedback confidentially

Points to consider

- Stereotypes may be harder to change than attitudes
- Short programmes can still be successful if carefully designed
- Aim to create intergenerational friendships

7 SUGGESTED POLICY IMPLICATIONS AND DIRECTIONS

This evidence review has highlighted significant advantages of well-designed intergenerational contact. In this section we suggest a few key implications for policy in the areas of business and employment, health and social care, and education more widely. In all of these areas, there will be clear gains for all if older and younger people are able to mix together in a way that treats them as equals, creates clear common objectives, supports their equal relationship through practice and example, and highlights important similarities and not just differences. Overall, policies that increase positive intergenerational contact across society should benefit society as a whole, promoting more mutual engagement across generations and hence throughout people's lives.

7.1 Business/Employment

There is a strong business case for implementing policies that encourage positive intergenerational contact in the workplace to create benefits for business and workers alike.

More contact with older workers is likely to increase younger workers' organisational commitment and hence reduce turnover (Iweins et al. 2013). This can reduce costs associated with replacement such as recruitment and training of new staff, and it capitalises on the accumulated experience of longer term staff. Intergenerational coworker contact may promote more cooperation between coworkers of different ages, which contributes to a more harmonious working environment and improved workforce outcomes (e.g. productivity).

Intergenerational coworker contact gives greater awareness of people who do not match negative stereotypes and so can help to change assumptions that people make about age because of their implicit (sometimes called 'unconscious') biases. These biases create barriers for older adults' employment, promotion and training (Posthuma & Campion, 2008).

Older adults are a good long-term investment for organisations as they are less likely to quit (Posthuma & Campion, 2008). As technology advances it is important that older workers are appropriately trained and confident to meet the needs of the workplace of the future and do not feel anxious or unsure about their engagement with newly required skills and expertise. By ensuring that there is good cross generational contact at work, employers are likely to be able to reduce the degree to which older adults are psychologically 'threatened' by negative stereotypes about their cognitive capabilities, and this means they will be better able to perform to their full potential. Establishing an age-diverse workforce can create an increasingly positive situation. Young people who experience positive intergenerational coworker contact are likely to become more supportive of age-diversity policies, and as the working environment becomes more age-diverse it provides further

opportunities for positive intergenerational coworker relationships. The workplace is somewhere that lends itself to these positive effects because employers have the levers (co-operation, common goals and institutional support) to enable relationship building and understanding between groups in their most beneficial forms. Therefore it is important that businesses encourage age-diverse team working and actively address age-diversity as part of their Equality and Diversity policies.

In summary, policies to ensure intergenerational coworker contact in age-diverse workforces can bring advantages to workers of all ages, and will also contribute to productivity, employee retention and commitment.

7.2 Health and Social Care

As life expectancy increases, policies for health and social care must embrace a much longer term perspective. As part of this, it is essential that young people have a positive view of ageing and that they engage in 'active ageing'. Ageism is harmful not only towards older people but because it limits people's ability to plan positively for their own future. People who internalise negative age stereotypes and their relevance in society are likely to have poorer health outcomes (such as cardiovascular events) and lower life expectancy (Levy, 2009). In other words, ageism inhibits active ageing (Swift et al., 2017). Intergenerational contact is a vital vehicle for improving young people's attitudes towards their own ageing because it can reduce their negative stereotypes, reduce their fear of ageing, and hence change their expectations and aspirations for their own future. Reducing people's anxiety about their own ageing also has the potential to positively shape approaches to other aspects of ageing such as care planning and pension planning. In this way promoting positive intergenerational contact has the potential to improve younger people's long term health and reduce pressure on the health care system.

In social care contexts, the majority of people providing care are younger than those receiving care. Yet little attention is paid to how carers' experiences affect them and those they work with. It is important to provide opportunities for positive contact in health and social care contexts. This means encouraging friendliness, cooperation, humour and interesting conversations such as sharing stories of life experiences, between staff and older service users. This type of contact is also likely to be reflected in greater job satisfaction, and cooperative attitudes towards co-workers and management (Cuthbert & Abrams, 2013). Ensuring that attention is paid to the positive quality of contact and not just the quantity of contact or the accomplishment of particular tasks, is likely to have benefits to all, including the 'care partnership' itself. It should improve the experiences of those being cared for, at the same time as making an important difference to the attitudes to older people that younger people (for example, student nurses) develop and share with others. This in turn seems likely to affect the motivation and quality of staff that can be recruited and their sense that their work is valuable.

In health and social care settings, it is clearly important to be aware that contact is potentially aversive or negative. Procedurally correct actions may still result in alienation, offense, or psychological harm. For example, it might be distressing when a care worker doesn't have time to engage in conversation with clients due to tight schedules. Therefore policy also needs to address the potential for negative contact because of the damage that may follow both for those being cared for and

for care workers for whom negative experiences are likely to be demotivating and to increase turnover rates. Establishing a responsibility to monitor and mitigate negative quality of intergenerational contact in health and social care contexts may therefore have important benefits. (For example, allowing more time for positive contact is likely to reduce contact that is unfriendly or involves conflicts and arguments.) Note that the focus should not be on single instances of contact, but on the nature of repeated or multiple interactions with older service users wherein health and social care workers' perceptions and assumptions about older patients and service users are expressed.

The challenges presented by ensuring increased positive and decreased negative intergenerational contact in health and social care contexts suggests that training and preparation of professionals working with the complex, challenging and potential highly rewarding issue of ageing is pivotal.

Providing training to increase awareness of age-related stereotypes and implicit biases may help employees to recognise and avoid their reliance on negative age stereotypes. It would be worthwhile evaluating the potential benefits of more active awareness raising methods, such as 'imagined contact' that could be incorporated into training and professional development in health and social care at relatively low-cost.

7.3 Education and wider Policy Implications

Efforts to widen access to education are made more difficult if older people themselves feel that they do not fit in the educational system. Changing funding arrangements and fee structures in higher education over the years have tended to segregate older students towards specialist institutions (U3A, OU, Birkbeck), and age-diversity is probably declining within most others. This seems a retrograde development because it reinforces the idea that older people and younger people are not equal in their learning needs or abilities. Evidence shows very clearly that implied comparisons between young and old create an anxiety-related psychological threat that suppresses some older people's performance levels across an array of tests and tasks (for a review see Lamont et al., 2015). It also shows that older people who have more positive intergenerational relationships are not vulnerable to these performance drops.

Intergenerational friendships and contact within families (e.g. grandchild-grandparent contact) can also have a positive influence on young people's attitudes towards studying ageing itself, and their interest in working in health and care of older people. This means that it is important for wider policies to encourage positive intergenerational contact outside of the workplace. One example is the creation of multi-generational social housing which recognises the factors that can enable different generations of families to live in the same place and that provide age-friendly public spaces which are fit for all ages.

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9 GLOSSARY

Ageing anxiety	Concerns or worries related to own ageing.
Ageism	Negative attitudes towards an individual or group based on their age.
Benevolent stereotypes	Generalisations about groups that are applied to individuals, which are thought to be positive but have the effect of supporting traditional, subservient roles for members of oppressed groups.
Bias	Prejudice, or preference for or against one person or group.
Cognitive tests	Test examining mental capabilities (e.g. maths, reading).
Cognitive- emotional regulation	The ability to recognise and combine both positive and negative emotions.
Common identities	When individuals from two separate social groups share membership of a further social group.
Contact partners	Individuals from opposing social groups participating in contact.
Cross-group friendship	A friendship between two people from different social groups.
Direct contact	Face-to-face contact.
Equal status	When groups, or members of groups, hold neither a higher nor lower social status than each other.
Explicit attitudes	Attitudes that are consciously expressed.
Extended contact	When you are aware that a friend from your social group is friends with someone from different social group.
Field experiment	An experiment conducted in a real-life setting.
IAT	Implicit Association Test. A method for testing unconscious attitudes.
Imagined contact	A mental simulation of a direct contact encounter.
Implicit attitudes	Attitudes that are held beneath consciousness.
Indirect attitudes	Attitudes that are consciously expressed by their meaning is not fully recognised (e.g. benevolent stereotypes).
Indirect contact	Contact that is not direct (e.g. face-to-face). This includes extended contact and imagined contact.
Institutional support	Support for contact that is given by customs, laws or authorities.
Intergenerational tensions	Tensions between younger and older age groups.
Intergroup	Refers to social psychological processes that occur between social groups.
Intergroup anxiety	Anxiety about interacting with members of other social groups.
Intergroup contact	Contact with members of other social groups.
IOS	Inclusion of other in the self. Incorporating another's perspectives and identities in the self.
Peer-reviewed	Refers to published research that is first evaluated by one or more people of similar competence.
Personal contact	Close contact which is good quality.
Qualitative research	Exploratory research which uses interviews, observation and focus groups.
Quantitative research	Research based on data, which provides a measure of what people think from a statistical and numerical point of view.
Self disclosure	Sharing personal information with another.
Service learning programmes	Programmes that are part of a students' education. Students provide a service to the community and the experience provides learning for the student.
Shared identity	When two individuals have a common social identity.
Shared information	The exchange of personal information about oneself with another.
Social group	People who share similar characteristics and a sense of shared identity. For example, racial groups, age groups, gender groups.
Social identity	Part of an individual's self-concept derived from perceived membership of a social group.
Social norms	A shared sense of attitudes and behaviours that are accepted by other members of your social group.
Stereotype threat	A situation in which individuals feel at risk of confirming a negative stereotype about their social group.
Stereotypes	Generalisations about groups that are applied to individual group members.

10 APPENDIX

Table A1. Details of intergenerational contact programmes reviewed.

YEAR AND AUTHORS	OUTCOMES	DESIGN	SAMPLE	SETTING	TYPE OF PROGRAM	CONDITIONS MET	PROGRAMME	DURATION	FINDINGS	EFFECT
1976 Wilhite & Johnson	Stereotypes towards older adults	Pre and post	80 Nursing undergrads	Nursing home	Service learning	Institutional support. Regular contact. Knowledge.	Students visit residential home and an ageing course	8 week course and visits	Negative stereotypes decreased	POSITIVE
1978 Porter & O'Connor	Attitudes towards older adults	Pre and post	30 undergrads 22 older adults aged 60+	Classroom	Educational	Institutional support. Close contact. Knowledge.	Discussion groups and one-to-one intergenerational contact with same partner	1 semester	Attitudes improved pre to post.	POSITIVE
1979 Trent, Glass & Crockett	Attitudes towards older adults	Pre and post. Experimental vs control. Seminars vs. interviews vs. seminars and interview.	265 13-18 year olds	Classroom	Educational	Institutional support. Close contact. Regular contact. Self-disclosure.	Seminars on ageing, interviews with older adults or both	6 weeks	All groups improved attitudes pre to post	POSITIVE
1983 Greenhill	Attitudes towards older adults	Pre and post	Nursing undergrads	Clinical setting (healthy older adults)	Service learning	Institutional support. Knowledge.	Clinical experiences with older adults during nursing course	No information	Improved attitudes pre to post	POSITIVE
1985 Gómez, Otto, Blattstein & Gomez	Attitudes towards older adults	Pre and post	82 nursing undergrads	Nursing home (unwell older adults)	Service learning	Institutional support. Close contact. Regular contact.	Caring for the same older adult in nursing home	3 weeks, 8 hours per week	Improved attitudes pre to post	POSITIVE
1986 Allen, Allen, & Weekly	Stereotypes towards older adults	Pre and post	49 12-14 year olds	No information	Educational	Institutional support. Close contact. Knowledge. Self disclosure. Story telling.	Reminiscence sessions with older adults and course on ageing	No information	Positive stereotypes increased	POSITIVE
1986 Murphy-Russell, Die & Walker	Attitudes towards older adults. Attitudes towards ageing.	Pre and post. 3 workshops counterbalanced.	84 undergrads	No information	Educational	Institutional support. Close contact. Self-disclosure. Knowledge.	3 workshops. 1) Quiz & discussion about ageing, 2) interview with non-stereotypical older couple 3) Film about ageing	1 workshop	Contact workshop most effective	POSITIVE
1990 Dooley & Frankel	Attitudes towards older adults	Pre and post	No information	Older adults homes	Volunteer	Institutional support. Regular contact. Cooperation. Shared goals. Voluntarily	Visiting same older adult weekly to help with chores	2 hours, once per week for 24 weeks.	Improved attitudes pre to post	POSITIVE

YEAR AND AUTHORS	OUTCOMES	DESIGN	SAMPLE	SETTING	TYPE OF PROGRAM	CONDITIONS MET	PROGRAMME	DURATION	FINDINGS	EFFECT
1992 Duerson, Thomas, Chang & Stevens	Attitudes towards older adults	Pre and post	88 medical students	Multisite clinical locations (e.g. clinics/nursing homes/own homes)	Service learning	Institutional support. Regular contact. Knowledge.	Community Health and Family Medicine clerkship. Learning activities, interacting with older adults.	6 week	Improved attitudes pre to post	POSITIVE
1993 Aday, McDuffie, & Sims	Attitudes towards older adults	Pre and post Experimental vs control	19 young people 16-18 years old. 19 older adults, average age 71 years old	Older adults' services centre	Educational	Institutional support. Regular contact. Common goals Cooperation. Close contact. Equal status.	Intergenerational project. Basket making/arts/crafts /puppet show.	8 week	Improved attitudes pre to post only in experimental group	POSITIVE
1994 Dellmann- Jenkins, Fowler, Lambert, Fruit & Richardson	Behavioural intentions. Interest in working with older adults.	Pre and post	45 younger adults 19-23 years old.	No information.	Educational	Institutional support. Regular contact. Close contact. Self-disclosure. Equal status	Intergenerational sharing programmes. Consisting of presentation on lifespan issues and discussion in small mixed age groups.	6 x 1 hour sessions over 3 months.	Improved behavioural intentions pre to post. Improved intentions to work with older adults.	POSITIVE
1998 Bowers	Attitudes towards other age group	Pre and post	15 Students and 15 senior singers	No information	Recreational	Institutional support. Regular contact. Self-disclosure. Equal status. Common goals Cooperation	Intergenerational choir. Paired with a buddy. Musical, rehearsal and bonding activities.	1.5 hours weekly over 2 semesters. One concert	Improved older adults' attitudes towards younger adults and younger adults' attitudes towards older adults	POSITIVE
1999 Taylor, LoSciuto, Fox, Hilbert & Sonkowsky	Attitudes towards: Older adults, school, drug abuse and the future.	Pre and post. Contact group vs mentor group vs control group	562 school children aged 10-14 years old	Classroom and community.	Educational	Institutional support. Regular contact. Knowledge.	Contact group: Curriculum and care home visits. Mentor group: as contact group plus mentoring.	Regular contact over 1 year	Contact and mentor groups improved on all outcomes pre to post. Mentor group improved more than contact group.	POSITIVE

YEAR AND AUTHORS	OUTCOMES	DESIGN	SAMPLE	SETTING	TYPE OF PROGRAM	CONDITIONS MET	PROGRAMME	DURATION	FINDINGS	EFFECT
2002 Dorfman, Murty, Ingram, & Evans	Attitudes towards older adults. Attitudes towards working with older adults. Attitudes towards community service.	Pre and post. Contact vs control group	13 social work undergrads	Nursing homes, independent living and congregate meal provision site.	Service learning	Institutional support. Regular contact. Self-disclosure. Close contact. Story telling.	Paired with older adult: friendly visits, reminiscing and oral history.	1 semester	Improved attitudes towards older adults in both groups pre to post. Improved attitudes towards working with older adults in contact group only pre to post.	POSITIVE
2011 Chase	Attitudes towards older adults	Pre and post. Experimental and control group	43 undergrads 19 -28 years old. Older adults 65-85 years old	Remotely	Email intervention	Institutional support. Regular contact. Voluntarily. Self disclosure.	Email exchange contact intervention.	At least one email per week for 6 weeks.	Young people reported more positive attitudes towards older adults compared to control group at post test.	POSITIVE
2013 Powers, Gray, & Garver	Attitudes towards older adults	Pre and post.	32 undergrads and retired independent living older adults	Local retirement community	Service learning	Institutional support. Cooperation. Knowledge.	Intergenerational learning service combined with physical activity-based programme	One 50 minute senior fitness testing session	Improved attitudes pre to post.	POSITIVE
1994 Darrow, Johnson, & Ollenberger	Attitudes towards older adults. Attitudes towards younger adults.	Pre and post	27 High school students. 24 older adults. Total population ages 16-85.		Recreational	Institutional support. Regular contact. Close contact. Equal status. Common goals. Cooperation.	Intergenerational choir. Buddy system and social interaction in addition to singing.	1.5 hours per week for 16 weeks and 12 performances.	Young people's attitudes towards older adults improved pre to post. Older adults' attitudes towards self and young improved pre to post.	POSITIVE

YEAR AND AUTHORS	OUTCOMES	DESIGN	SAMPLE	SETTING	TYPE OF PROGRAM	CONDITIONS MET	PROGRAMME	DURATION	FINDINGS	EFFECT
1996 Angiullo, Whitbourne & Powers	Knowledge and attitudes towards older adults	Pre and post. Contact and ageing course vs ageing course group vs control group	Students	Nursing homes and rest homes	Service learning	Institutional support. Regular contact. Voluntary.	Course on psychology of ageing. Either including or without contact.	4 month course. 10 hours per week contact time	All groups' knowledge and attitudes improved pre to post. No differences between groups.	POSITIVE
1986 Doka	Attitudes towards older adults	Pre and post. Experimental vs control	24 12-16 year olds	No information	Educational	Institutional support. Close contact. Knowledge.	Interviewing older adults and coursework on ageing	2 days	No attitude change.	NEUTRAL
1986 Eddy	Attitudes towards older adults.	Pre and post.	56 undergrad nurses	Older adults in the community	Service learning	Institutional support.	Visitation programme with well older adults	5 visits	No attitude change.	NEUTRAL
2004 Dorfman, Murty, Ingram Evans, & Power	Attitudes towards older adults. Attitudes towards working with older adults. Attitudes towards community service.	Pre and post. Experimental and control group	5 successive cohorts of students on a gerontology course N=59 (cohort 1 was sample from Dorfman et al., 2002.)	Nursing homes, independent living and congregate meal provision site.	Service learning	Institutional support. Regular contact. Self-disclosure. Close contact. Story telling.	Service learning. Paired with older adult: friendly visits, reminiscing and oral history.	1 semester	No change in attitudes from pre to post in experimental group.	NEUTRAL
1990 Chapman & Neal	Attitudes towards older adults. Behavioural intentions. Perceptions of other age groups' attitude towards own age group	Pre and post.	107 older adults aged 53-92 208 young people aged 9-18.	Community	Educational	Institutional support. Regular contact. Cooperation.	Young people worked for older adults. Older adults ran educational/recreational programme for young people.	3-4 hours per week over 6 months	All outcomes improved pre to post in young workers group. No change in young people in educational group. No change in older adults' attitudes.	POSITIVE/ NEUTRAL

YEAR AND AUTHORS	OUTCOMES	DESIGN	SAMPLE	SETTING	TYPE OF PROGRAM	CONDITIONS MET	PROGRAMME	DURATION	FINDINGS	EFFECT
1991 Couper, Sheehan & Thomas	Attitudes towards older adults. Stereotypes of older adults	Pre and post. Experimental vs control	44 9-13 year olds 41 15 – 18 year olds	School	Educational	Institutional support. Close contact. Shared goals. Cooperation. Story telling. Self disclosure.	Working in small mixed aged groups: problem solving, interpersonal communication, value clarification exercises. Including common life experiences, similarities, self disclosure and small-group goal setting exercises	1 day 5 hour workshop	Improved attitudes towards older adults. No change stereotypes	POSITIVE/ NEUTRAL
1998 Ward, Duquin, & Streetman	Attitudes towards older adults. Attitudes towards caring for older adult	Pre and post	13 undergrad healthcare students	Classroom and in community	Service learning	Institutional support. Regular contact. Close contact. Cooperation	Massage and knowledge ageing course	2 hour class work twice a week for 14 weeks plus 6 x 1 hour massage sessions with older adults	Improved attitudes towards older pre to post. No change attitudes towards caring for older adults.	POSITIVE/ NEUTRAL
1976 Gordon & Hallauer	Attitudes towards older adults	Pre and post. Control vs visits vs course vs visits & course	65 Undergrad students (no age given)	Residential home	Service learning	Intuitional support. Regular contact. Knowledge.	Students visit residential home and an ageing course	Weekly 1 hour sessions over a 10 to 12 week period.	Improved attitudes in course and course & contact groups. No change control and contact groups.	POSITIVE/ NEUTRAL
1980 Wilson & Hafferty	Attitudes towards older adults	Pre and post. Course vs control. Self-selecting.	43 medical undergrads	Classroom	Educational	Institutional support. Close contact. Knowledge.	Ageing lectures and interviews with older adults	1 contact session. Post measure 1 year later.	Attitudes improved in course group pre to post and course group vs control. No change: control group pre to post	POSITIVE/ NEUTRAL
1993 Shoemake & Rowland	Stereotypes of older adults: physical, interpersonal, cognitive, and affective	Pre and post	60 undergrads	Older adults' services centre	Service learning	Intuitional support. Regular contact. Close contact.	One-to-one experiences with older adults as part of coursework	5 – 20 hours per week	Improved physical stereotypes. All other stereotypes: no change	POSITIVE/ NEUTRAL

YEAR AND AUTHORS	OUTCOMES	DESIGN	SAMPLE	SETTING	TYPE OF PROGRAM	CONDITIONS MET	PROGRAMME	DURATION	FINDINGS	EFFECT
1981 Olejnik & LaRue	Stereotypes of older adults. Future contact intentions	Pre and post. Experimental vs control	446 11-14 year olds	School lunchtimes	Educational	Intuitional support. Regular contact.	40 older adults came for lunch in school cafeteria	2 months daily contact	Reduced stereotypes pre to post. Reduced contact intentions pre to post.	POSITIVE/NEGATIVE
1991 Reinsch & Tobis, 1991	Perceptions of ageing. Subjective reactions to older adults.	Pre and post. Experimental vs control	30 students, average age 21 years old. 70 Older adults, average age 78 years old	Older adults services centre (healthy older adults)	Service learning	Intuitional support. Regular contact. Knowledge. Cooperation.	Visitation programme with healthy older adults. Delivered health promotion classes and collected physical health data.	3 times per week for 11 months	More positive subjective reactions to older adults. Perceptions of ageing in the experimental group deteriorated pre to post.	POSITIVE/NEGATIVE
1977 Auerbach & Levenson	Attitudes towards older adults	Pre and post. Experimental vs control	60 undergrads	Classroom	Educational	Intuitional support. Regular contact. Knowledge.	Shared learning, older adults in class	1 semester	Experimental group attitudes deteriorated pre to post Control group: no change	NEGATIVE
2004 Meshel & McGlynn	Young participants: Attitudes towards older adult, life satisfaction and stereotypes of older adults. Older participants: attitudes towards younger participants and life satisfaction	Pre and post. Contact vs learning group vs control.	63 young people 11-13 year olds. 17 older adults aged 60 years old and above	Classroom	Educational	Intuitional support. Regular contact. Close contact. Shared goals. Cooperation. Equal status. Knowledge. Voluntary.	Intervention based on contact hypothesis; shared activities, getting to know each other, talent show, painting, music and cooking	One hour per week for 6 weeks	Younger adults contact group: attitudes moderately improved pre to post. Older adults contact group: attitudes and life satisfaction improved pre to post. Contact group: negative stereotyping of older adults increased pre to post test.	POSITIVE/NEGATIVE