MENTAL HEALTH IN ADOLESCENTS; STIGMA, LITERACY, AND INTERGROUP CONTACT

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ABSTRACT

Background

Estimates suggest that as many as one in two individuals will experience a mental illness at some point in their lives, with over half of all lifetime mental disorders having their origin in childhood and adolescence. The vulnerability of the adolescent period is exacerbated by a lack of help-seeking, resulting in adolescents failing to receive adequate mental health support. Two factors which have been proposed as presenting barriers to help-seeking for mental illness are high levels of stigma and a lack of knowledge of mental illness or 'mental health literacy'. Within adult literature, contact with individuals who experience living with a mental illness (intergroup contact) has been successful in reducing stigma, however research is currently inconclusive regarding the use of intergroup contact to reduce the stigma of mental illness in adolescent populations.

Aims

To develop an in depth understanding of adolescent stigma, knowledge, and well-being, and to investigate the use of intergroup contact to reduce the stigma of mental illness, to improve mental health knowledge and literacy, and to promote mental health in adolescent populations.

Methodology

Adolescents from Birmingham UK took part in a survey which investigated stigma and knowledge, and their relationship to contact with individuals who experience mental illness, as well as levels of well-being and mental health. Group interviews were conducted to develop

an understanding of how adolescents conceptualise mental health, and in what ways they would like to receive information regarding mental health.

Results from these two studies informed the development of a school-based intervention for 11-13 year olds evaluating the use of contact combined with education compared to education alone in a randomised controlled trial design.

Results

Adolescents were found to have relatively high levels of stigma, and low levels of knowledge. Participants were, however, able to engage in thoughtful and empathetic discussion of mental health issues once negative stereotypes of mental illness had been acknowledged.

Results were conflicting regarding the use of intergroup contact as a means to reduce stigma and improve knowledge, literacy, and well-being in adolescent populations. Contact occurring in naturalistic settings was related to a lower level of stigma and higher knowledge levels. In contrast, the structured contact which took place as part of the intervention was found to significantly reduce the impact of the intervention for a number of outcomes.

Conclusions

The research presented in this thesis suggests that intervention in adolescent populations aiming to reduce stigma, increase knowledge and literacy, and promote well-being and mental health is needed, and that mental health education would be welcomed by adolescent populations. Caution is needed regarding the use of intergroup contact as a means to reduce stigma and improve knowledge in adolescent groups, and further research in this area is warranted.

ACKNOWLEDGEMENTS

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CHAPTER ONE: INTRODUCTION TO THE THESIS

BACKGROUND CONTEXT TO THE RESEARCH

It is commonly stated that mental illness affects 1 in four individuals in any one year (National Centre for Social Research, 2007; Kessler, Chiu, Demler, & Walters, 2005), though this may be an under estimate with Wittchen and colleagues suggesting estimates of between 27-38% per year (Wittchen & Jacobi, 2005; Wittchen et al., 2011). This estimate also rises dramatically when mental illness is considered from a lifetime prevalence perspective, with some suggesting a figure as high as one in two (Moffitt et al., 2010; Kessler, Berglund, Demler, Jin, & Walters, 2005). With this in mind it can be quite persuasively argued that mental illness will affect virtually everyone, be it through co-workers, friends, family members, if not the experience of living with a mental illness directly. The Royal College of Psychiatrists (2010) argue that:

> 'Mental illness is the largest single source of burden of disease in the UK. No other
> health condition matches mental illness in the combined extent of prevalence,
> persistence and breadth of impact' (p7)

The development of mental illness almost invariably instigates human suffering and loss, in the individual experiencing the illness, and in close family and friends. Loss of potential, loss of dreams, loss of future, and in some cases loss of life; are all possible outcomes in the development of mental disorder.

In addition to human suffering, mental illness is a huge burden on the economy with McCrone et al. (2008) estimating that mental illness currently costs the English economy

around £22.5 billion a year in service costs alone. When lost earnings are also taken into account this figure rises to £48.6 billion a year. These figures exclude substance disorders and those aged less than 5 years of age, as well as less common diagnoses where data is not readily available. These figures are estimated to rise to approximately £88.45 billion per year (including both service costs and lost earnings) by 2026. Data which does take these wider non-health service cost implications, such as informal care and the criminal justice system, into account estimates that total expenditure may be three times McCrone et al.'s 2008 estimate, currently £77 billion a year (SCMH, 2003).

Mental health and adolescence

Adolescence represents something of a paradox in health terms; the physical peak of health occurs during these years, yet it is also a risk period for the development of mental illness. Over half of all lifetime mental disorders emerge during childhood and adolescence, and by the mid-twenties two-thirds of all mental disorders will have appeared (Kessler et al., 2007). Many of the mental disorders which develop after this period will be secondary comorbid conditions (Kessler et al., 2005). The development of mental illness during adolescence is particularly poignant due to its impact on the young person's future potential. Adolescence is associated with a number of fundamental biological, cognitive, and social changes, and is when young people forge an identity for themselves, develop relationships with their peers, and determine their long term goals as an adult (Harrop & Trower, 2001). Disruption at this stage in the lifespan can have a severe and long term impact on development with the consequences of a mental disorder during adolescence still salient at age 30, in terms of earning potential and social outcomes (Gibb, Fergusson, & Horwood, 2010).

Current estimates suggest that one in ten children and adolescents will experience a diagnosable mental disorder in any 12 month period (Office for National Statistics, 2005), with up to one in two young people experiencing at least one diagnosable mental disorder by the time they transition to adulthood (Gibb et al., 2010). Despite these high rates of mental distress and disorder, many adolescents do not obtain appropriate treatment or support at the time (McGorry, Parker, & Purcell, 2006). In part this is due to the fact that adolescent groups are less likely to help-seek than other age groups (Collins, Westra, Dozois, & Burns, 2004; Zachrisson, Rodje, & Mykletun, 2006; Slade, Johnston, Browne, Andrews, & Whiteford, 2009; Potts, Gillies, & Wood, 2001). One reason for poor help-seeking may be related to stigma and knowledge of mental illness, which have been found to represent significant barriers to help-seeking (Schomerus, Matschinger, & Angermeyer, 2009; Kelly, Jorm, & Wright, 2007). The stigma of mental illness is reportedly relatively high in adolescent populations (Scotland SM, 2004; Barney, Griffiths, Jorm, & Christensen, 2006; Stuart & Arboleda-Florez, 2001), and despite psychiatric disorders being 'the chronic diseases of the young', (McGorry, 2009) adolescent knowledge of mental illness also appears to be relatively low (Myers et al., 2009).

For these reasons reducing stigma and increasing knowledge of mental illness are highlighted as national objectives on the UK policy agenda (Office of the Deputy Prime Minister, 2004; Royal College of Psychiatrists, 2010; DoH, 2012) and elsewhere (President's New Freedom Commission on Mental Health, 2003). Stigma has a highly negative impact on the lives of those who live with mental disorders (Mental Health Foundation, 2004b), and appears to develop throughout childhood and adolescence (Corrigan & Watson, 2007; Office of the Deputy Prime Minister, 2004; Flavell, Miller, & Miller, 2001; Hinshaw & Stier, 2008; Wahl, Hanrahan, Karl, Lasher, & Swaye, 2007), however, relatively little work has investigated

levels of mental health stigma in UK adolescent groups, and even less in young adolescent groups. In adult populations 'intergroup contact' (Allport, 1954), where members of a stigmatised out-group interact with members from the in-group, has been cited as a successful method for reducing the stigma of mental illness (Corrigan et al., 2001), but remains comparatively under-investigated in adolescent populations.

STATEMENT OF THE PROBLEM

It appears evident that a better understanding of strategies aiming to reduce the impact of mental ill-health in adolescence is required, with a particular focus on reducing potential barriers to help-seeking such as stigma and improving general knowledge regarding mental illness, perhaps through public mental health strategies. It would appear important that such approaches are instigated early, as this is when young people are most likely to present with mental illness, but there remains a lack of understanding on how best to do so (see systematic reviews by: Wells, Barlow, & Stewart-Brown, 2003; Weare & Markham, 2005; Lister-Sharp, Chapman, Stewart-Brown, & Sowden, 1999; Spence & Shortt, 2007; Schachter et al., 2008).

OUTLINE OF THESIS

This thesis is concerned with furthering knowledge and understanding of the impact of mental illness in regards to adolescent stigma, adolescent knowledge, and well-being outcomes including the promotion of mental health.

Chapter 2 reviews the literature relevant to the thesis; adolescent development and mental illness, the stigma of mental illness, mental health knowledge and mental health literacy,

intergroup contact, and intervention and school-based strategies, before discussing aims and research questions.

Chapter 3 presents the rationale, methodology, and results from a survey that sought to address gaps in the literature; how levels of stigma and knowledge may differ between adolescent and adult populations, whether stigma and knowledge are related in young adolescents, how intergroup contact may impact upon stigma and knowledge in young adolescents, how mental health and ill-health appear in a young adolescent urban population, and how resilience to mental illness may impact on mental health.

Chapter 4 describes a series of group interviews which sought to develop an in-depth understanding of how adolescents conceptualise mental health and ill-health; how adolescents perceive mental illness, what they think about their knowledge level regarding mental health and ill-health, whether they think mental health is relevant to them, and how they would like to receive information about mental health.

The findings from Chapters 2, 3, and 4, were employed in the development of the SchoolSpace Intervention (see appendix 2 for further details of the SchoolSpace Intervention). Chapter 5 describes the methodologies for the evaluation and hypothesis testing of the SchoolSpace intervention and the use of intergroup contact in a young adolescent population. Chapters 6 and 7 present the rationale, background, and results for different outcomes of the intervention, with Chapter 6 reporting on stigma, knowledge, and literacy outcomes, and Chapter 7 reporting on well-being outcomes for the project, including mental health, resilience, and attitudes to help-seeking.

The final chapter in this thesis, Chapter 8, presents a general discussion and summary of results presented in this thesis, alongside implications and recommendations for research and practice. Strengths and limitations of the thesis are discussed, as well as overall conclusions.

Search Strategies Used within the Thesis

At various points throughout this thesis the term 'to the author's knowledge' is used in reference to the amount of existing research on a given topic. Where this occurs, the following search strategies have been used to establish what existing literature exists on the topic.

1. Inclusion and exclusion criteria were established and search terms relevant to the topic of interest were decided upon. Where relevant, date of publication restrictions was included in inclusion/exclusion criteria (for example, research in the last 10 years). Where date of publication restrictions were used this is stated in the thesis.
2. Databases were searched, most commonly 'Web of Knowledge', but on occasion 'Psyc info' and 'Pub Med'. On one occasion the database 'ERIC' was searched (see Appendix 9 for an account of this search).
3. Titles were screened and excluded if it could be clearly established that inclusion criteria was not met or if exclusion criteria was met. Abstracts of remaining papers were read and papers were again excluded if inclusion/exclusion criteria could be clearly established.
4. Full text articles were then assessed for eligibility.
5. These topic searches occurred at various time points from January 2011 to August 2013.

This search strategy does not claim to adhere to the stringent recommendations for systematic review or meta-analyses as per the PRISMA statement, but does use the PRISMA statement as a guide (inclusion/exclusion criteria established including participants, interventions, comparisons, outcomes, and study design; screening all studies followed full

text assessment of those deemed relevant to study inclusion/exclusion criteria etc.). A recorded version of this search strategy can be seen in Appendix 9.

CHAPTER TWO: REVIEW; MENTAL HEALTH AND ADOLESCENCE

ADOLESCENT DEVELOPMENT AND MENTAL ILLNESS

The adolescent period has been defined in a number of ways by differing cultures and time periods (Sisson, Herson, & Van Hasselt; 1987). Even within the current time and culture, the definition of adolescence remains elusive. The World Health Organisation (WHO; 2014) defines adolescence as occurring from ages 10 -19. Others, for example the Canadian Paediatric Society (2003) argue against a definition of adolescence which relies solely on chronological age, instead suggesting that a functional definition which starts with the onset of puberty and ends with a young person's biopsychosocial readiness to enter adulthood best encapsulates the adolescent period. This definition also has it's critiques, with some pointing out, for example, the difficulty of defining the onset of adolescence with the initiation of puberty, due to the progressively younger ages at which pubertal onset occurs (Kaplan, 2004).

It must be acknowledged that, as the Canadian Paediatric Society suggest, adolescence is an individualistic process which will likely differ for each person, however, for the sake of clarity this thesis adopts the definition of adolescence of the WHO, from ages 10-19, with early adolescence being ages 10-13, middle adolescence as ages 14-16, and late, ages 17-19. The WHO definition of adolescence encapsulates the views and experiences of many of the world's cultures, and defines adolescence within the historical time period in which this thesis has been written. Importantly, the WHO give a definition which can be used to categorise groups which, although flawed (as discussed by The Canadian Paediatric Society; 2003), is important for the generalisation and comparison of certain kinds of research.

Much of the research discussed in this thesis appears to use a similar definition of adolescence. The American Psychological Association's Developing Adolescents: A Reference for Professionals (2002) for example, defines adolescents as those aged 10 – 18. Other authors offer varying definitions of adolescence, with Harrop and Trower (2001) defining early adolescence as approximately 13 years, middle adolescence as 15 years of age, and late adolescence as occurring around age 17 (p248). Steinberg and colleagues (2001, 2005) utilise a definition more reminiscent of the Canadian Paediatric Society, discussing the adolescent period as one which encapsulates the development and maturation of number of systems, including biological, emotional, cognitive, social, educational, legal and cultural. In addition, some authors discuss 'young people' rather than 'adolescents', with research from Gulliver et al. (2010) and Wright et al. (2006) defining 'young adults' as those aged 12-25 years. Whenever possible, throughout this thesis care is taken to explicitly state the ages of the adolescent participants who have taken part in other researchers work in order to add clarity to the discussions of any previous research.

Development in adolescence

Adolescence is a time of remarkable turbulence, instability, and flux. With the security and idealisation of parental figures swiftly evaporating, adolescents are required to forge identities for themselves which are unique yet acceptable to their peer group, embark on relationships and sexual encounters, make educational decisions which may affect future earning potential and career satisfaction, and take on adult responsibilities which, at least at first, may seem entirely beyond their abilities. Harrop and Trower (2001) argue that there are two basic psychological needs during the adolescent period of development which are necessary for healthy progression but which are also a source of stress; autonomy and

individuation from the family, and forging peer relationships. Adolescents must first assert their own individuality away from their parental figures, taking on responsibility for their own welfare, and then replace this attachment 'void' left by their parents with their peers, creating an overwhelming reliance on friendship groups and romantic relationships during adolescence. With either of these developmental needs there lies the potential for things to veer off course; for the adolescent to fail to develop their own sense of self away from their parents or to fail to develop successful peer relations.

During this period of flux the adolescent brain is also undergoing a period of intense maturation. Steinberg (2005) likens adolescence to 'starting an engine without yet having a skilled driver behind the wheel' (p 70). Throughout adolescence regions which underlie reasoning, information processing, abstract thinking, long-term planning, and the regulation of behaviour and emotion, as well as arousal and motivation, are still maturing, often following different developmental timelines, making adolescence a time of opportunity, but also of risk and vulnerability (Keating, 2004; Steinberg, 2005). It is perhaps unsurprising therefore, that adolescence confers one of the highest risk periods for the development of mental illness.

Adolescence and mental illness

Of particular relevance to the emergence of mental disorders is the gradual development of regulatory competence and executive functions throughout adolescence, in combination with the emotional and stressful life experiences which adolescents encounter from a relatively young age (Harrop & Trower, 2001); one which may be becoming progressively younger with the decreasing age of pubertal onset (Steinberg, 2005). This disjunction between early

exposure to life stressors and later development of many of the regulatory systems (e.g. metacognition and self-regulation; Keating, 2004; judgement of risk; Crone & van der Molen, 2004; Cauffman & Steinberg, 2000; the influence of emotions on judgement; Steinberg, 2004; desire to sensation seek; Martin et al., 2002) which could be utilised by fully developed adults in similar situations may increase the potential for negative developmental trajectories to occur, leading to increased likelihood of the development of a range of mental disorders (Steinberg, 2005).

What is remarkable are the *rates* of onset and prevalence of mental illness in adolescent populations. Over half of all of the lifetime prevalence of mental disorder has an onset prior to mid adolescence, with two-thirds of all mental disorders developing prior to the mid-twenties (Kessler et al., 2005). In the UK one in ten children and adolescents are reported to have a psychiatric disorder at any one time (Office for National Statistics, 2005) and approximately 20% within the course of one year (Mental Health Foundation, 2004a). Recent estimates suggest that up to 50% of young people will have experienced a *diagnosable* mental illness by age 25 (Gibb et al., 2010).

Adolescents and help-seeking

Exacerbating the vulnerability of the adolescent period is the tendency for adolescents to be reluctant to seek help for symptoms of mental illness (Collins et al., 2004; Zachrisson et al., 2006; Slade et al., 2009). In a sample of young people aged 15-24 from the general population, 39% of males and 22% of females stated that they would not seek help from professional services for emotional problems, with 30% of males and 6% of females reporting that they would not seek help from any source (Donald, Dower, Lucke, & Raphael, 2000).

This finding translates to actual rates of help-seeking, with just 34% of young people aged 15-16 who experienced a high level of anxiety and depression symptoms reporting that they had sought help from professional sources (Zachrisson et al., 2006). When adolescents do engage in help-seeking behaviours, they display a preference for involving peers in the help-seeking process over and above others such as their parents or GP (Rickwood, Deane, & Wilson, 2007). Whilst not necessarily problematic in and of itself, this may result in a delay in accessing adequate support.

Risk and Resilience

There are an enormous number of risk factors that have been associated with the development of mental disorders ranging from the relatively well understood (e.g. familial psychiatric illness, traumatic events; Egeland, Carlson, & Sroufe, 1993), to the thought provoking (e.g. urbanicity; Marcelis & van Os, 1998) to the seemingly bizarre (owning a cat; Torrey & Yolken, 2003). Developmental psychopathology (Cicchetti, 1989) seeks to understand the development of psychiatric illness from a perspective informed by diverse models (e.g. social, neurological, biological, psychological, cultural) and increasingly central to this perspective is the study of resilience and factors which may induce protection rather than vulnerability. Certain protective factors may act as moderators in the face of adversity, reducing the risk of developing a psychiatric illness (Masten & Reed, 2002). One such protective factor, resilience, is commonly conceptualised as a triad; *'Personal disposition'*, including temperament, cognitive skills, self-esteem, and locus of control, *'Family cohesion'* describes support from within the immediate and extended family and *'Social resources'*, which includes all social support networks external to the family (Werner, 1989; Werner, 1993).

Resilience has been found to reduce the adverse effects of childhood abuse, neglect and trauma (Wingo et al., 2010; Campbell-Sills, Cohan, & Stein, 2006). In non-clinical adolescent populations, resilience has been linked to lower levels of depressive, anxiety related, and obsessive-compulsive symptoms, as well as to lower levels of stress (Hjemdal, Vogel, Solem, Hagen, & Stiles, 2011). Personal disposition resilience has also been found to have a negative correlation with internalising symptoms such as depression and anxiety, though only a low correlation with behavioural or externalising problems (von Soest, Mossige, Stefansen, & Hjemdal, 2010). Such research is currently generating a lot of interest amongst UK public health and policy developers which may be related to the possibility that some aspects of resilience (for example personal disposition resilience) appear to have potential for being taught within educational settings and may moderate the development of mental illness in adolescent populations (Royal College of Psychiatrists, 2010).

Section summary

Adolescence represents a significant time of risk for the development of psychiatric disorders with estimates as high as one in two young people having experienced a mental illness by the time they reach adulthood (Gibb et al., 2010). This coupled with low rates of help-seeking and even lower rates of help-seeking from appropriate sources (Collins et al., 2004; Zachrisson et al., 2006; Slade et al., 2009) suggests research is warranted to explore the efficacy of interventions aiming to improve adolescent help-seeking, as well as of methods for promoting mental health and resilience during the adolescent period. Understanding which factors may negatively impact upon adolescent help-seeking is also vital. Two such factors which have been proposed are stigma (Barney et al., 2006) and knowledge (Olsson & Kennedy, 2010) of mental illness.

STIGMA

Stigma has been described as comprising of three components: knowledge (ignorance), attitudes (prejudice), and behaviour (discrimination; Thornicroft, Rose, Kassam, & Sartorius, 2007), or similarly, as stereotypes, prejudice, and discrimination (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). Rooted in the labelling of difference between groups (Link & Phelan, 2001), stigma is frequently associated with negative and far-reaching consequences. Goffman's (1963) classic text *Stigma: Notes on the Management of Spoiled Identity* opens with a letter from a young girl with a facial deformity, describing the isolation, loneliness, and psychological pain she feels due to the stigma she experiences. Her letter ends poignantly; 'Ought I to commit suicide?'

The process of stigma

According to Link and Phelan (2001) stigma occurs when four interlinked components converge to form the process of stigma development; labelling difference, stereotyping, separation of 'them' and 'us', and status loss and discrimination. Labelling differences, ordering, or categorising may be a natural human propensity, however the stigma process begins when these differences become associated with negative traits in the form of stereotypes. The separation of 'them' and 'us' defines an in-group and an out-group, implying that stereotypes can become all-encompassing, completely defining the stigmatised group. Hence the use of words like a 'schizophrenic' versus 'someone who has cancer', suggests that individuals diagnosed with schizophrenia may be more stigmatised than individuals diagnosed with cancer as they are *defined* by their disorder; they have become a 'schizophrenic'. The last component of the stigma process involves a loss of status and

discrimination, which can have serious and lasting consequences for stigmatised individuals and groups, and implications for income (Bordieri & Drehmer, 1986), accommodation (Page, 1977), and well-being (Markowitz, 1998). Important to the conception of the stigma process are notions of 'power' inequity, which Link and Phelan claim is a necessary requisite for stigma to occur (there are stereotypes of doctors and lawyers, but neither of these groups can be said to belong to a stigmatised group in the same sense as those who, for example, are unemployed or disabled). Groups both with and without power may label, form stereotypes, and create 'in-groups' but, according to Link and Phelan, status loss and discrimination can only occur when one group has more 'power' than the other.

With regards to stigma related to mental illness, Corrigan et al. (2003) discuss how attributions regarding controllability of the illness, dangerousness, and personal responsibility may determine emotional responses to individuals who experience mental disorders, which in turn influences behaviour, be it discriminatory or helpful. For example, the belief that an individual is the cause of their illness and could control it if they wanted to may contribute to expressions of anger and be more likely to lead to rejection and discrimination. By contrast, an understanding that an individual's behaviour is caused by an illness which is not in their control should, according to Corrigan et al.'s attribution theory, lead to emotional responses such as pity, and result in behaviour which is more likely to be helpful.

Reducing the stigma of mental illness has historically proven challenging. A letter to the editor from a 1942 edition of The Lancet (1942) writes of the challenges of disassociating negative connotations from mental illness, with the evolving description of the 'madhouse' to 'lunatic asylum', to finally 'mental hospital', yet the stigma of mental illness remains to this

day, with individuals who experience mental illness reporting experiencing stigma in almost every area of their lives (Mental Health Foundation, 2004b).

Types of stigma and discrimination

Stigma and discrimination can occur in a variety of ways, which is one of the reasons that stigma is so resistant to change; if one type of stigma is blocked or becomes socially unacceptable, other types may take its place (Link & Phelan, 2001). Commonly discussed types of stigma include:

- *Individual stigma:* Individual stigma represents the most common notion of stigma, whereby an individual's prejudices lead them to negatively view others who possess the stigmatised attributes (e.g. race, disability, or violation of social norms),
- *Structural stigma:* Link and Phelan (2001) give examples of mental health facilities being placed in undesirable locations or receiving less funding than other illnesses, as examples of structural discrimination.
- *Self-stigma:* Self-stigma occurs if an individual with a mental disorder assimilates a negative stereotype; 'I have depression because I am weak'.
- *Stereotype threat:* Stereotype threat occurs because individuals from a stigmatised group are aware of the stereotypes and prejudices which may be aimed at them. For example, an individual with a mental illness may believe that others will reject them due to their illness, leading them to withdraw from or act awkwardly in social situations, which in turn may lead others to reject them.
- *Perceived stigma:* Perceived stigma describes individual's belief about the extent to which *others* endorse stigmatising ideas

- *Public stigma:* public stigma describes stigma which is endorsed by the general

  population

Stigma of mental illness in adult and adolescent populations

The majority of research into the stigma of mental illness has focused on adult attitudes (e.g. Schomerus et al., 2012; Broussard, Goulding, Talley, & Compton, 2012; Norman, Windell, & Manchanda, 2012; Barney et al., 2006; Stuart & Arboleda-Florez, 2001). Adult attitudes in England appear to be moderate to high, with the Department of Health reporting low levels of agreement with statements relating to the inclusion of individuals with mental illnesses into the community, although high agreement with statements relating to understanding and tolerance (e.g. 'We have a responsibility to provide the best possible care for people with mental illness'; Department of Health, 2011).

Public attitudes towards mental illness may be worsening, with reports that attitudes to mental illness are similar or have worsened in the past decade (Angermeyer, Holzinger, & Matschinger, 2009; Mehta, Kassam, Leese, Butler, & Thornicroft, 2009). A systematic review from Schomerus et al. (Schomerus et al., 2012) examining National trends in the United States, UK, Austria, Australia, the Netherlands, Poland, New Zealand, and Germany suggested that this may be the case. One hypothesis which has been put forwards for these attitude changes is that increased lay understanding of the biological causal model of mental illness, though potentially reducing notions of blame and responsibility (see Angermeyer, Holzinger, Carta, & Schomerus, 2011 for a discussion regarding this), may increase notions of 'them and us', reduce optimism on treatment effectiveness, or increase fear of violence (Read, Haslam, Sayce, & Davies, 2006; Phelan, 2002).

Less research has been conducted in adolescent populations, despite research suggesting that childhood and adolescence is when attitudes to mental illness are being formed (Corrigan & Watson, 2007; Office of the Deputy Prime Minister, 2004; Flavell et al., 2001; Hinshaw & Stier, 2008; Wahl et al., 2007). Much of the existing research has concentrated on young people rather than adolescents per se. Reavley and Jorm (2011b) found that young people aged 15-25 often endorsed views of unpredictability, but that stigma varied depending on the disorder presented, with social phobia more likely to be seen as a personal weakness than a true mental illness, and desire for social distance (e.g. desire to avoid living with an individual with a mental illness, desire to avoid a family member to marrying someone with a mental illness) high for psychosis but relatively low for PTSD. The Department of Health's annual attitudes to mental illness survey (2011) found that the youngest age category of 15 – 35 years reported more positive attitudes relating to the fear and exclusion of individuals with mental illness than older adults, but were less likely than older adults to show understanding or tolerant attitudes, less positive about the integration of individuals with mental illnesses into the community, and more negative regarding the causes of mental illness and the need for specialist services.

Adolescents have also been found to hold moderate to high levels of stigma. The 'See Me' campaign which was launched in Scotland in October 2002 found that at baseline 48% of participants aged 12-17 agreed with the statement 'If I was suffering from mental health problems, I wouldn't want people knowing about it' and 47% thought that 'Young people with mental health problems are more likely to be ignored by young people'. On the other hand, just 3% agreed that 'Young people with mental health problems are largely to blame for their own condition' and 9% that 'Young people who hear voices should be locked up in a psychiatric hospital' (Myers et al., 2009). It is difficult to quantify what is a high, or

unacceptable, level of stigma. One way to assess whether stigma is high is to compare time periods or groups (e.g. age groups, ethnicities) as the Department of Health *Attitudes to Mental Illness Survey* does. Another way to attempt to quantify levels of stigma in society is to look at the experiences of those within the stigmatised group. With individuals who experience mental illnesses reporting that they experience stigma in virtually every aspect of their day to day life (Mental Health Foundation, 2004b), and young people with psychiatric disorders reporting that up to 66% of the discrimination they experience comes from friends (Time to Change, 2013), clearly levels of stigma in England remain unacceptable.

Stigma and help-seeking

Young people have reported that they perceive stigma to be a major barrier to seeking-help (Gulliver, Griffiths, & Christensen, 2010; Gulliver, Griffiths, & Christensen, 2012) and Yap et al. (2011) report that young people who view individuals as 'weak not sick' are less likely to seek help. On the other hand, Sheffield et al. (2004) found that adolescents' attitudes to mental illness were not predictive of their willingness to seek help, and Yap et al. (2011) report that belief in the dangerousness/unpredictability of individuals with mental illness is associated with *greater* intention to seek help in the event of developing a mental illness.

Barney et al. (2006) suggest that one potential reason for the inconsistency in findings may be that only certain types of stigma may be detrimental to help-seeking. Self-stigma may impact upon an individual's willingness to help-seek by, for example, leading them to think that they are ill because they are weak and they should be able to deal with their emotional difficulties without external support. Perceived-stigma may impact upon help-seeking when an individual is concerned about the reactions of others, including mental health

professionals, family and friends, or their local community. Self-stigma may be particularly

important in predicting help-seeking from a wide range of professional sources, including

psychiatrists, GPs, psychologists, counsellors, and complimentary practitioners, though

perceived stigma can also negatively affect intention to help-seek (Barney et al., 2006; Bayer

et al., 2009). In their systematic review Schomerus et al. (Schomerus et al., 2009) suggest

that certain types of individual stigma, may be important for help-seeking intentions if these

attitudes are internalised in the event that the individual develops a psychiatric disorder

themselves.

Young people may be less likely to help-seek than other age groups (Barney et al., 2006) and

may be particularly concerned regarding the judgement of others if they are known to have a

mental illness (Wisdom, Clarke, & Green, 2006) suggesting that self-stigma within this age

group may be heightened. As adolescence represents one of the most vulnerable times for the

development of mental illness (Kessler et al., 2005), any further barrier to help-seeking

within their age group is detrimental, and suggests that stigma interventions targeting this

age group may be particularly important.

Interventions to reduce stigma

Link and Phelan (2001) argue that interventions should be multifaceted and multilevel, seek

to change attitudes at a fundamental level, target groups which hold more power, and seek to

change the dynamics of power between groups thus undermining the ability of dominant

groups to stigmatise.

Thornicroft et al. (2007) conceptualise the stigma of mental illness as an overarching term

which includes three elements which may be amenable to change; knowledge, attitudes, and

behaviour. Of these, Thornicroft et al. argue that behaviour may be the most important to change, as it reflects the element of stigma which directly affects the actual experiences of people with mental disorders. Behaviour may also be the most difficult element of stigma to measure change in when conducting an intervention. Social desirability causes difficulties when asking individuals directly if they have engaged in discriminatory behaviour (Henderson, Evans-Lacko, Flach, & Thornicroft, 2012), it may be difficult to track individual participants behaviour directly, or if specific behaviours *are* directly assessed (for example, do participants visit a mental health care home after the intervention; Mcconkey, Mccormack, & Naughton, 1983) they may assess a small fraction of stigma related behaviour or not be sensitive enough to capture the true level of behaviour change. Additionally, measures which may be appropriate for adult populations (for example, measuring any increase in hiring of individuals who have experienced a mental illness) may not be applicable for adolescent populations. One method which has been used previously is to assess participants' behavioural intentions for the future (Corrigan, Morris, Michaels, Rafacz, & Ruesch, 2012), or desire for social distance, though these of course will not be immune to social desirability biases.

Section summary

Stigma is a complex concept involving many elements, yet can be amenable to change, although in the case of the stigma of mental illness this has proved challenging. Adolescent stigma of mental illness appears to be relatively high and may represent a significant barrier to help-seeking. Since, in addition, the development of stigmatising attitudes most likely evolves during late childhood and early adolescence, it may be particularly important to attempt to intervene with educational strategies during this period.

The importance of knowledge in regards to health behaviours is widely acknowledged. The benefits of not smoking, healthy eating, exercise, and safe sex for example, are taught in schools, advertised on TV (e.g. change 4 life campaign; http://www.nhs.uk/change4life/Pages/change-for-life.aspx), and incorporated into public health programmes (e.g. Department of Health anti-smoking campaigns; https://www.gov.uk/government/policies/reducing-smoking). Completion of a certified first aid course is a requirement of a wide range of jobs (support worker, nanny, teacher, civil engineer). Individuals generally know where to receive help with physical ailments, when to consult a pharmacist rather than a GP, or when to go straight to emergency services. Mental disorder is one of the most prevalent causes of ill-health, with some estimates suggesting that as many as one in two of will experience a mental disorder (Moffitt et al., 2010), yet by comparison with physical health, knowledge of mental health is poor and lags behind (Jorm, 2012).

Mental health knowledge has been investigated in predominantly two different areas. Firstly by research examining 'mental health literacy' and secondly, by research which assesses stigma-based knowledge.

Mental health literacy

Much of the existing research into mental health knowledge concentrates on 'mental health literacy' a term coined by Jorm et al. (1997) to refer to 'knowledge and beliefs about mental disorders which aid their recognition, management or prevention'. It is important to note that mental health literacy is not simply identical to mental health knowledge. An

undergraduate psychology student might have some areas of relatively good mental health knowledge (e.g. which areas of the brain are implicated in schizophrenia) but still have relatively poor mental health literacy. Mental health literacy might be considered to be knowledge which is of *practical use* in maintaining levels of mental health: knowledge of good self-help strategies; recognition of disorder vulnerability or development; knowledge of help-seeking options including self-help; knowledge of how to support others in crisis (Jorm, 2012). Specific mental health literacy may also be desirable for individuals who experience certain disorders, which therapies may be particularly useful for their own disorder for example, however in general, mental health literacy research has tended to focus more on public knowledge of mental health (Cotton, Wright, Harris, Jorm, & McGorry, 2006; Farrer, Leach, Griffiths, Christensen, & Jorm, 2008; Jorm & Griffiths, 2008; Jorm, Christensen, & Griffiths, 2005), or the mental health literacy of specific groups who may come into contact with vulnerable individuals such as the police or secondary school teachers (Jorm, Kitchener, Sawyer, Scales, & Cvetkovski, 2010).

Stigma-related knowledge

Another area of knowledge which has been investigated is stigma-related knowledge, one of Thornicroft et al.'s three components of stigma (alongside attitudes and behaviour; 2007). As with mental health literacy, stigma-related knowledge does not encapsulate all mental health knowledge, with certain types of mental health knowledge shown to be particularly related to stigma outcomes. Stigma-related knowledge includes help-seeking, recognition, support, employment, treatment, and recovery (Evans-Lacko et al., 2010). For example, recognition of mental disorders as they exist in reality may help to reduce common stereotypes of 'madness'.

There is clearly some cross over between stigma-related knowledge and mental health literacy (see figure 1, p25). For example, knowing that individuals can develop and recover from a mental illness may reduce stereotypes of difference and conceptions of 'them and us', and so be considered stigma-related knowledge, but may also aid 'recognition, management or prevention' as knowing that individuals can recover when offered adequate support may encourage help-seeking, and therefore be considered relevant to mental health literacy.

Knowledge and stigma

There is also some overlap between the constructs of stigma and knowledge. In particular, stigma-related knowledge can be conceptualised as bridging the gap between stigma and knowledge (figure 1). Relatively high correlations have been found between knowledge and other elements of stigma (e.g. Wolff, Pathare, Craig, & Leff, 1996), and education has been one of the main strategies used to reduce stigma (Corrigan & Penn, 1999). Within adolescent populations knowledge of mental illness appears to be significantly associated with more positive attitudes to mental illness (Sheffield, Fiorenza, & Sofronoff, 2004). On the other hand, though lay mental health knowledge may be improving over time, particularly in reference to biological explanations of mental disorder, elements of stigma such as desire for social distance appear to have remained the same or even increased (Angermeyer et al., 2009; Schomerus et al., 2012; Mehta et al., 2009). It has been tentatively suggested that increases in biological conceptions of mental illness may lead to increased rejection of individuals with mental illnesses (Angermeyer & Matschinger, 2005), potentially due to increased endorsement of the idea that individuals are biologically different or distinct from 'normal' people, however, other research has found the increase in biological conceptions of mental illness to be unrelated to attitudes to mental illness (Angermeyer et al., 2009).

Mental health stigma			Overlap	Mental health knowledge	
Stigma-related attitudes	Stigma-related behaviour	Stigma-related Knowledge	Mental health literacy	Other knowledge areas
e.g. fear	e.g. avoidance	e.g. Stereotypes	e.g. Recovery rates	e.g. self-help strategies / e.g. how to help-seek	e.g. brain areas implicated
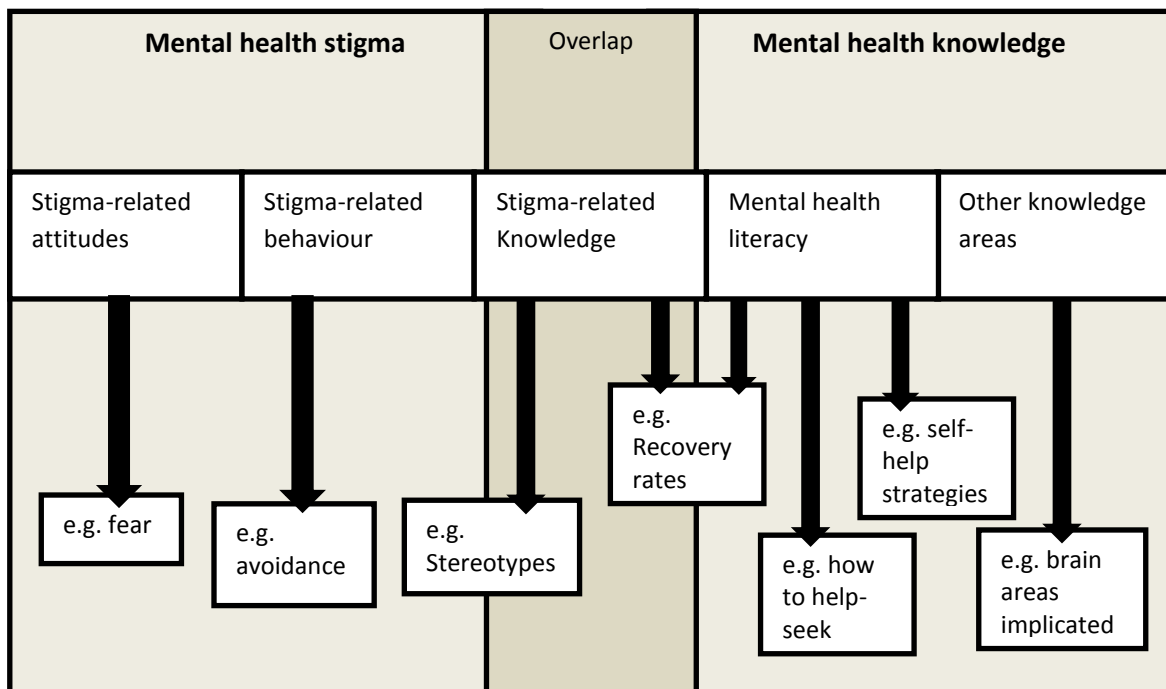
Figure 1: Areas of overlap and distinction between mental health stigma and mental health knowledge

Knowledge and mental health

Certain kinds of mental health knowledge may be correlated with mental health, for example mental health literacy places a strong emphasis on knowledge which is of practical use in maintaining levels of mental health. Research from Morgan and Jorm (2008; 2009b) identified self-help strategies which are both endorsed by mental health professionals and highly acceptable to the general population, such as exercise, regular sleep, and engaging in purposeful activity. A high level of mental health literacy with regards to strategies such as these may be of use in the prevention of mental illness or in the case of mild to moderate distress, as long as they are not used in place of accessing appropriate professional help and support should mental health worsen. Stigma-related knowledge and mental health literacy additionally both place an emphasis on knowledge relating to recognition and help-seeking.

Again, recognition and help-seeking may lead be a better enjoyment of mental health if they lead to adequate access of support for mental distress and illness (Jorm, 2012).

There is some empirical support for the suggestion that an increase in mental health knowledge may be related to increases in mental health and emotional well-being. Naylor et al. (2009) conducted a school-based mental health teaching programme which included six lessons over six weeks covering: stress; depression; suicide and self-harm; eating disorders; bullying; and learning disabilities. The programme aimed to improve knowledge of mental health and student attitudes, but was also successful in reducing students' conduct behaviour problems and improving pro-social behaviour. Similarly, Mackinnon et al. (2008) found that a website which contained information about depression, including treatment, reduced symptoms of depression at a higher rate than an attention-placebo control and at a similar rate to a website which offered cognitive-behaviour therapy (moodGYM; Christensen, Griffiths, & Jorm, 2004).

Knowledge in adolescent populations

Mental health knowledge and literacy has generally been found to be low in adolescent populations (Olsson & Kennedy, 2010; Wright, Jorm, Harris, & McGorry, 2007; Wright & Jorm, 2009), however, there is also evidence that younger adults are better at recognising disorders such as depression and schizophrenia than older adults (Farrer et al., 2008). Reavley and Jorm (2011a) found that almost 75% of their sample of Australian youth aged 15-25 were able to correctly identify vignettes of depression, though recognition of other mental illnesses including psychosis, PTSD and social phobia was much lower. Adults also appear to display greater recognition of depression than adolescents, with recognition increasing

rapidly from adolescence to the mid-twenties (Wright et al., 2007; Wright & Jorm, 2009). Understanding of how to prevent the development of disorders differs somewhat between young people and mental health professionals, with young people more likely to endorse strategies such as avoiding stressful situations (Jorm, Morgan, & Wright, 2010). Similarly, young people and their parents are less likely to endorse asking directly about suicidal thoughts than mental health professionals (Jorm, Morgan, & Wright, 2008).

In the UK, the Scottish 'See Me' (2009) campaign young people's strand, which worked with 12-17 year olds, found that at baseline a third of young people reported that they would know how to help a friend who was 'feeling really down all the time', a quarter how to help a friend who was 'deliberately cutting themselves' and 16% a friend who was hearing voices. Recognition of mental disorders ranged between 38% and 71%. Recognition was highest for manic depression (71%), depression (68%), and ADHD (61%), and lowest for Autism (38%). Worryingly, similar numbers of young people thought that stress (56%) was a mental disorder as thought that schizophrenia (59%) and anorexia (51%) were types of mental disorder, showing a lack of understanding of what constitutes a psychiatric disorder (Myers et al., 2009).

Knowledge and help-seeking

One reason that low knowledge may be considered of particular concern is that knowledge of mental health has been associated with help-seeking. The ability to recognise and describe emotions (Rickwood et al., 2007), recognition and labelling of symptoms or diagnoses (Gulliver et al., 2012; Olsson & Kennedy, 2010; Rickwood et al., 2007; Wright et al., 2007; Kelly et al., 2007; Gulliver et al., 2010), and awareness of help-seeking options and likely

efficacy (Gulliver et al., 2012; Rickwood et al., 2007), have all been suggested as aspects of knowledge which may impact upon help-seeking. For example, young people who identify a mental disorder from a vignette are up to four times as likely to state that they would engage in help-seeking behaviours if a peer had similar experiences (Olsson & Kennedy, 2010).

Young people themselves also perceive a lack of mental health literacy as a significant barrier to help-seeking. In a series of focus groups with elite athletes aged 16-23 years a lack of mental health literacy was highlighted as one of the main barriers to help-seeking (Gulliver et al., 2012).

It has been hypothesised that stigma-related attitudes may mediate the relationship between mental health knowledge and help-seeking (Sheffield et al., 2004). For example young people who are able to accurately label a vignette as describing either depression or psychosis are more likely to suggest appropriate help-seeking responses, and are *also* more likely to identify the person as sick, rather than weak (Wright et al., 2007; Wright, Jorm, & Mackinnon, 2011). Research from Sheffield et al. (2004) however, found that willingness to help-seek in the event of developing a mental illness improved after intervention, even though stigma was not reduced, suggesting that knowledge of mental illness may in fact have a direct impact on willingness to help-seek independent of a reduction in stigma. This possibility is supported by research investigating literacy and stigma trends across time, for example Angermeyer et al. (2009) found that from 1993 to 2001 in Eastern Germany knowledge of mental illness and attitudes to help-seeking both improved, whereas attitudes to mental illness remained the same or worsened.

Section summary

Mental health knowledge includes both stigma-related knowledge and mental health literacy; knowledge that is of practical use in promoting mental health and dealing with mental illness. Despite the prevalence of mental illness, mental health knowledge lags behind physical health knowledge, and may be particularly low in adolescent populations. Good levels of mental health knowledge appear to have a direct impact not only on appropriate help-seeking for mental illness, but also on levels of mental health itself. Improving knowledge of mental health and ill-health, including stigma-based knowledge and mental health literacy, in adolescent populations is therefore important if help-seeking is to be improved. Strategies to improve stigma and knowledge therefore warrant investigation; one such potential strategy may be centred on the theory of intergroup contact (Allport, 1954).

INTERGROUP CONTACT

In his book *The nature of Prejudice,* Allport (1954) proposed the 'contact hypothesis', also known as the theory of intergroup contact; that interaction between different groups reduces conflict, prejudice, and discrimination between these groups. Intergroup contact therefore may be an effective strategy for effectively reducing stigma between majority 'in-groups' and minority 'out-groups', with the caveat that there are certain optimal conditions within which the contact may need to occur (Allport, 1954).

These optimal conditions suggest firstly that the two groups must be 'equal', in that both groups perceive equality in their situational status. Secondly, the two groups must have common goals to work towards, for example, belonging to the same policing or sports team. Related to this is the third condition that the groups must work in co-operation rather than in

competition with each other. Finally, the contact should have the support or approval of authority, including law and social custom (Pettigrew, 1998).

Applications of interpersonal contact

The applicability of intergroup (between groups) or interpersonal (between individuals) contact to reduce stigma has a long and well-established history. During the process of desegregation in the USA, white housewives living in desegregated public housing schemes reported lower levels of stigma towards their black neighbours (Deutsch & Collins, 1951). Similarly, black wives reported more positive emotions towards their white neighbours when living in desegregated housing (Works, 1961) .

There is also evidence for the success of intergroup and interpersonal contact in diverse populations who have traditionally experienced stigma including individuals who are homosexual (Herek & Capitanio, 1996), who live with AIDS (Werth & Lord, 1992), and with aging populations (Caspi, 1984). More recently, research has investigated the application of contact to anti-Muslim attitudes and prejudice (Savelkoul, Scheepers, Tolsma, & Hagendoorn, 2011).

Interpersonal contact and mental illness stigma

Corrigan and Penn (1999) highlight that contact is one of three methods identified by social psychologists for challenging stigma, alongside education and protest. Education, as the name implies, involves imparting information about the stigmatised group, particularly information which disconfirms negative stereotypes. Protest involves the suppression of stigmatising attitudes and has two central aims; to prevent the media and public figures

representing mental illness inaccurately, and to send a message to the general public that they should stop believing negative or inaccurate representations. Corrigan and Penn suggest that education augmented by contact may be the most potent strategy for the reduction of stigma of mental illness, as protest can unintentionally lead to rebound effects. In their review Schomerus et al. (2012) agree, suggesting that anti-stigma campaigns for mental illness need to utilise contact strategies in order to be effective.

Contact has been investigated widely as a method to reduce stigma in mental health research, and has generally been found to be a successful strategy. Filmed contact has been found to be more successful in reducing stigma than a comparison intervention or no intervention (Brown, Evans, Espenschade, & O'Connor, 2010), contact in person (in vivo contact; Corrigan et al., 2002) and filmed contact (Faigin & Stein, 2008) more successful than education, protest, or no intervention (Corrigan et al., 2001). A recent meta-analysis has confirmed that within adult populations contact represents the most successful method to reduce mental illness stigma (Corrigan et al., 2012).

Allport's four optimal conditions for contact have also been noted in mental health research. Rusch et al. (2005) highlight the importance of equal status, co-operation, and institutional support, as well as discussing the optimal level of resemblance to stereotypes. Rusch et al. suggest that, though it is important that individuals from the out-group do not resemble negative stereotypes, it is also important that this disconfirmation from stereotypes is not too severe, suggesting that if an individual differs too much from the stereotype then they may be classified as 'one of us' instead of 'one of them' (Gaertner, Dovidio, Mann, Murrell, & Pomare, 1990). Rusch et al. additionally suggest that if an individual differs too much from the stereotype this may have an adverse effect where the individual is classified as the exception

that proves the rule, or the pressure of cognitive dissonance (Festinger, 1962) may cause the individual to be reclassified as not truly ill. It may also be possible that if an individual who is considered to be highly competent and successful discloses that they have a mental disorder, this could increase feelings that individuals who experience mental disorders and are *not* highly competent and successful are in some way blameworthy for this, instead of reducing stereotypes .

Interpersonal contact has received growing interest from policy makers and is currently one of the central themes of the English national anti-stigma campaign 'Time to Change'. Time to Change is a large scale national programme, launched in January 2009 by mental health charities MIND and Rethink, which aims to reduce the stigma of mental illness by facilitating intergroup contact between the general public and individuals who experience mental disorders (London & Evans-Lacko, 2010). Their 'contact' strategies include bringing together individuals from diverse communities, both with and without experience of mental illness through 'Living Libraries', where members of the public can talk to volunteers who have experienced living with a mental illness; a 'Get Moving' mass participation physical activity week once a year, and through a targeted mental health education programme 'Education Not Discrimination' (END) for medical students and education trainees and professionals which includes a contact component (London & Evans-Lacko, 2010).

Although the use of naturalistic intergroup contact in adults rests on a relatively solid evidence base which shows that adults who report mental illness contact also report lower levels of stigma, very little research has examined whether this association holds true for adolescent populations. Just one study, to the author's knowledge, has investigated this directly, conversely finding that adolescents aged 13-19 who report interpersonal contact

report *greater* levels of stigma in the domains of responsibility and dangerousness (Corrigan et al., 2005). Corrigan et al. tentatively suggest that this may be reflective of a lack of information or knowledge of mental illness in adolescent populations resulting in more cautious attitudes to individuals with mental disorders, and less feelings of accommodation than it does in adult populations. Corrigan et al. also describe a small effect and suggest that further research into interpersonal contact experiences in adolescence is required.

The evidence base that exists in adult populations has therefore not yet been validated within adolescent groups. It should be noted however that contact has been shown to be a useful method for reducing stigma in childhood and adolescent populations in other fields, such as race (Aronson & Patnoe, 1997). Furthermore, there is a growing body of literature utilising contact in educational interventions for adolescent groups (discussed below, see below; *Contact and school-based strategies,* p36).

Limitations of current understanding regarding contact theory

Despite representing 'one of psychology's most effective strategies for improving intergroup relations' (Dovidio, Gaertner, & Kawakami, 2003; p5), there remain a number of areas of contention in intergroup contact theory research. Much of the evidence base upon which the theory of intergroup contact is built is correlational, creating difficulty in establishing causal sequencing; individuals with lower prejudices being more open to interpersonal and intergroup contact, with those who hold a higher level of prejudice more likely to avoid contact. A meta-analysis from Pettigrew and Tropp (2006) however, found that the most effective interventions were those with the most rigorous research designs, with 94% of the studies they analysed finding that contact was associated with reduced levels of prejudice and

stigma. Contact was also found to generalise from the individual members of the out-group with which participants had contact with to the entire out-group, meaning that contact with an individual with a mental disorder potentially leads not just to a reduced level of stigma towards that one individual, but to all individuals who experience mental disorders. Contact was found to be a successful method for reducing stigma across a wide range of prejudiced groups, and across a broad range of methodologies including archival research, surveys, field research, and laboratory research.

The process through which contact facilitates a reduction in conflict and prejudice has also been an area of debate (Pettigrew, 1998), with five different mediating mechanisms presented by Dovidio et al. (2003); functional relations, behaviour, affect, knowledge cognitions, and social representation cognitions. *Functional relations* and co-operative goal directed interdependence is viewed as an important mediator for stigma reduction, and contrasts directly to competition between groups which is more likely to lead to stereotypes and discrimination in favour of the in-group (Gaertner et al., 1999). Intergroup contact may lead to *behaviour* modification, where the new situation of intergroup interaction leads to a new set of social norms and expectations. Where the new social expectations include acceptance of out-group members this can in time lead to attitudinal change (Pettigrews 1998). Multiple *affective* processes may mediate the success of intergroup contact, with anxiety-provoking situations leading to negative outcomes (Hyers & Swim, 1998), and contact which enhances empathy creating more positive outcomes (Batson et al., 1997). *Knowledge cognitions* have been suggested by Pettigrew (1998) to be an essential mediator, with more information about out-group members leading to individuals being seen as unique and personalised rather than as stereotypes, by reducing anxiety regarding how to interact with out-group members making future interaction more likely, and by increasing

recognition of injustice through deeper understanding of cultural sensitivity. Finally, models of *social representation cognitions* suggests that as individuals from different groups mix the original group boundaries are repositioned (for a discussion see; Dovidio et al., 2003).

The field of intergroup contact research has also been criticized for focusing on unrealistic or 'utopian' conditions under which contact is recommended to take place. Dixon, Durrheim, & Tredoux (2005; p699) highlight the growing number of optimal conditions, added to Allport's original four, listed by researchers, including;

- Contact should be regular and frequent

- Contact should involve a balanced ratio of in-group to out-group members

- Contact should have genuine "acquaintance potential"

- Contact should occur across a variety of social settings and situations

- Contact should be free from competition

- Contact should be evaluated as "important" to the participants involved

- Contact should occur between individuals who share equality of status

- Contact should involve interaction with a counter-stereotypical member of another group

- Contact should be organised around co-operation toward the achievement of a superordinate goal

- Contact should be normatively and institutionally sanctioned

- Contact should be free from anxiety or other negative emotions

- Contact should be personalised and involve genuine friendship formation

- Contact should be with a person who is deemed a typical or representative member of another group

Pettigrew (1998) similarly argues against a 'laundry list' (p69) of conditions, and differentiates between conditions that are necessary for contact to have positive benefits and facilitating conditions, which may be beneficial but are in no way necessary. A meta-analysis from Pettigrew and Tropp (2006) confirmed this, finding that though Allport's optimal conditions added impact, they were not a necessary requisite for reducing stigma, with just 19% of the studies they analysed conforming to Allport's conditions, but 94% reporting an inverse relationship between contact and stigma. The authors did find however, that studies which adhered to Allport's optimal conditions reported a markedly larger mean effect.

Section summary

Contact between in-group and out-group members has been utilised by social psychology to reduce prejudice and discrimination across a wide range of traditionally stigmatised groups. Contact, alongside protest and education has been used to reduce stigma relating to mental illness, with contact appearing to represent the most successful method of reducing stigma in adult populations. On the other hand, less is known regarding the use of contact as a means to reduce mental illness stigma in adolescent groups. A growing number of interventions are however, investigating the use of contact within school-based interventions.

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CONTACT AND SCHOOL-BASED STRATEGIES

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Mental health interventions and school-based education with children and adolescents are frequently suggested in UK policy. The Mental Health and Social Exclusion report from the Office of the Deputy Prime Minister (2004) emphasises the importance of challenging the stigma and discrimination of mental illness from an early age through educational programmes in schools. 'No health without public mental health' the position statement from

the Royal College of Psychiatrists (2010) argues that educating the public about mental illness is essential if we are to reduce the burden of mental and physical illness, including alcohol and substance misuse, and states that 'school-based mental health promotion programmes are likely the best investment for prevention' (p27). Similarly, 'Healthy lives brighter futures' from the Department of Health (2009) also emphasises the importance of schools focusing on pupils' health and wellbeing.

Thornicroft et al. (2007) comment that stigma research has often concentrated on survey-based methods, rather than on developing and evaluating interventions which attempt to change attitudes or behaviours. In the present author's view, the reasons for addressing the stigma of mental illness are threefold. Stigma severely affects the lives of individuals who experience mental illness, with research from the mental health foundation finding that individuals with mental disorders report experiencing stigma in almost every aspect of their day to day lives (Mental Health Foundation, 2004b). In some cases stigma may present more barriers than the experience of the illness itself. As an example of this Rusch et al. (Rusch, Angermeyer, & Corrigan, 2005) discuss the character of Anne, who despite good recovery from the symptoms of schizophrenia loses her job as her employer thinks she could have a relapse at work, loses her flat as her parents are concerned about her living alone and persuade her to instead live with them, and loses her friends as her parents live in a different city to her. Rusch et al. compare schizophrenia to the physical illness of diabetes, which can also be chronic and involve severe relapses, yet does not entail the public stigma associated with schizophrenia. There are also direct benefits to adolescents in learning about mental illness and reducing levels of stigma. As discussed on pages 19 (stigma-based attitudes) and 27 (stigma-based knowledge), stigma may provide a barrier to appropriate help-seeking (Gulliver et al., 2010; Gulliver et al., 2012; Yap, Wright, & Jorm, 2011; Barney et al., 2006).

Educating young people about mental illness may be particularly important therefore, firstly because this is when the development of stigmatising attitudes is occurring, secondly, because delay in help-seeking is chronic (Jorm, 2012), and, as discussed on p11, particularly poor in adolescent populations, and thirdly because, given the prevalence of mental disorders, a good understanding of mental health topics may be considered an important life skill.

Intervention design

Interventions can be targeted, at specific groups (e.g. teachers or young people identified as being 'at risk' for psychosis) or universal, for the general population. Universal mental health programmes are particularly relevant for interventions which seek to reduce public stigma of mental illness, or to promote mental health literacy and mental health (see systematic reviews by; Wells, Barlow, & Stewart-Brown, 2003; Weare & Markham, 2005; Lister-Sharp, Chapman, Stewart-Brown, & Sowden, 1999; Spence & Shortt, 2007; Schachter et al., 2008). Universal educational interventions for adolescents are often school-based, or at least involving some kind of school-based component (although not always, for example see The Compass Strategy; Wright, McGorry, Harris, Jorm, & Pennell, 2006). Schools offer unparalleled access to adolescent age groups and reflect the diverse communities of which they are a part of, meaning that traditionally 'hard to access' groups can sometimes be reached.

Relatively little work has investigated how adolescents currently conceptualise or construct their understanding of mental illness from a qualitative perspective, nor what adolescents report they would value receiving as part of their mental health education. Given the

importance of lay perspectives in the success of health promoting initiatives (WHO, 1986; WHO, 2005), this represents a significant gap in the literature. The small body of work in this area suggests that adolescents would value receiving more education relating to mental and emotional health in school-based settings (Woolfson, Woolfson, Mooney, & Bryce, 2009; Kidger, Donovan, Biddle, Campbell, & Gunnell, 2009).

Educational stigma interventions based in schools and interpersonal contact

Much of the theory of attitude change through intergroup contact is based on social research which has analysed contact occurring in naturalistic settings (such as the desegregation of different races). A growing body of literature is now investigating contact in an intervention setting, where the contact is premeditated and occurs under a controlled set of circumstances. To date there have been 15 research papers published, to the author's knowledge, which report school-based interventions utilising contact to reduce stigma in adolescent populations (table 1), with Pinfold et al. (2005; 2003) suggesting that contact represents a promising method. A systematic review by Schachter et al. (2008), investigating school-based anti-stigma interventions, however failed to find any 'even remotely ideal investigation[s] whose results regarding possible benefits we can confidently accept as being reliable and valid' (p.22). Schachter et al. criticised poor reporting style with details of the intervention population, content, materials, and intervention development not included; poor research methods, e.g. a lack of either active or passive controls; the intervention itself acknowledged as too brief to provide impact; and failing to measure or control for baseline characteristics of participants including previous interpersonal contact.

Despite Schachter et al.'s reservations, three previous studies have utilised a randomised controlled trial (RCT) design. McConkey et al. (1983), conducted 30 years ago, compared 6 educational sessions which included a visit to a local centre for individuals with a mental 'handicap' to a control group. The study included post-intervention outcome measures as well as a three month follow-up, and involved 420 15-16 year olds. Contact was found to improve participants' confidence in meeting individuals with a mental 'handicap', as well as participants' knowledge. More recently, two RCTs have been conducted (Chan, Mak, & Law, 2009; Pinto-Foltz, Logsdon, & Myers, 2011). Chan et al.'s study compared three school-based stigma reduction programmes; education, education followed by video-based contact, and video-based contact followed by education. The research utilised pre and post-test, as well as a one month follow-up, with 255 13 – 18 year olds. Education followed by video-based contact was found to be significantly better than video-based contact followed by education or education alone at both post-test and follow-up. Pinto-Foltz et al. (Pinto-Foltz et al., 2011) evaluated a community knowledge-contact intervention, 'In Our Own Voice' which aimed to improve mental health literacy and reduce stigma. The study included baseline measures, post-test at one week, and follow-up at four and eight weeks, and involved 156 female adolescents aged 13-17. The study found that the intervention did not have an immediate effect on mental illness stigma or mental health literacy, however, at 4 and 8 week follow-up the intervention was found to have had a significant impact on mental health literacy, though not upon stigma. The partially conflicting findings of these three studies regarding the use of contact as a method to reduce mental illness stigma suggest that further research, utilising robust methodological designs such as randomised controlled trials (RCTs) with long term follow-up, is warranted.

Of the 15 studies summarised in Table 1 comparison groups were utilised in four. Two of these investigated the order in which contact and education are presented, finding that education followed by contact is significantly better than contact followed by education in reducing stigma (Husek, 1965; Chan et al., 2009). Tolomiczenko et al. (2001) investigated whether film-based contact is made more effective with the introduction of discussion as well as the film, finding that the inclusion of discussion significantly reduced stigma, whereas the film alone had a negative impact upon participants' levels of stigma.

Large scale interpersonal contact may be more difficult to deliver compared to educational programmes alone (London & Evans-Lacko, 2010). A meta-analysis from Corrigan et al. (2012), which compared interventions utilising contact to those utilising education found that, in adolescent populations, educational interventions demonstrated greater impact than contact interventions. By contrast, the only three studies (to the author's knowledge) to *directly* compare contact and education found that contact showed more impact that education (Chan et al., 2009; Meise et al., 2000; Husek, 1965). The question therefore, of whether contact and education combined is more effective than contact or education alone, remains unanswered.

Much of the existing adolescent research concentrates on age groups ranging from mid to late adolescence (e.g. Naylor, Cowie, Walters, Talamelli, & Dawkins, 2009; Mcconkey et al., 1983; Pinfold et al., 2003; Pinfold, Stuart, Thornicroft, & Arboleda-Florez, 2005; Schulze, Richter-Werling, Matschinger, & Angermeyer, 2003; Rickwood, Cavanagh, Curtis, & Sakrouge, 2004). Development of stigmatising attitudes and behaviours appears to occur in childhood and early adolescence (Corrigan & Watson, 2007; Office of the Deputy Prime Minister, 2004;

Flavell et al., 2001; Hinshaw & Stier, 2008; Wahl et al., 2007), so it is important that interventions for these age groups are investigated.

Section summary

Strategies to reduce stigma and to promote mental health literacy are needed in adolescent populations. Adolescents report a lack of mental health education at school and a desire to receive more. Interpersonal contact may be a promising strategy to reduce stigma in adolescence, however research findings have been inconsistent, and further robustly designed research is needed, particularly with the youngest adolescent groups.

Table 1: Previous research investigating school-based interventions utilising contact to reduce stigma in adolescent populations

Author	Intervention	Participants	Design	Type of contact	Outcome measure	Impact on attitudes	Country
Naylor et al. (2009)	Six 50 minute sessions	14 – 15 year old, Two schools (1 intervention). N=356 (149 intervention)	Pre-post + control. Post-test was 8 months after pre-test.	Film	Mental health questionnaire	Significant improvements in attitudes (valid ideas about bullying, awareness of why people become mentally ill, number of pejorative terms used) and knowledge	UK
McConkey et al. (1983)	6 classes lasting 4 hours in total, including a 40 minute contact session	15-17 year old, 420 (197 interventions)	RCT; contact, control. Pre-post +three month follow-up	In-vivo	Attitudes relating to 'reaction to meeting', 'description of a typical mentally handicapped adult', and community integration. Reported contact. Attendance to a local day centre for individuals with mental handicaps. Knowledge.	Significant improvement in attitudes	Ireland
Husek (1965)	20 minute presentation by individuals with experience of mental illness	'high school students' (p126), n=498	Comparison and Control	In-vivo	Semantic differential; worthless-valuable, dirty-clean, foolish-wise, dangerous-safe, etc.	Significant improvement in attitudes. Information followed by disclosure of mental illness significantly better than no disclosure, which was significantly better than disclosure followed by information.	USA
Schulze et al. (2003)	Interactive project week	14-18 years old, n=150 (90 intervention)	Pre-post + control 1 month follow-up	In-vivo	Specially developed questionnaire assessing stereotypes and social distance	Significant improvements in attitudes and desire for social distance. Significant improvements in knowledge about stereotypes	Germany
Pinfold et al. (2003)	2 one hour sessions	14-15 year old, n=472	Pre-post +1 month follow-up	Film	4 factual statements, 4 attitudinal statements, 4 social distance statements.	Significant improvements in mental health literacy at 1 week, significant improvements no longer found at 6 month follow-up. *No significant improvement in attitudes or social distance*	UK

Watson et al. (2004)	8 week curriculum including five 45 minute educational sessions	6th – 8th grade (usually 11-14 years old), n=1566	Pre-post	Film	The knowledge test, Attribution Questionnaire: 9 constructs including blame, anger, pity, dangerousness, avoidance, etc.	Significant improvements in attitudes. Significant improvements in knowledge.	USA
Stuart (2006b)	Two lessons including a 20 minute video, role playing, and discussion	13-18 years old, n=571	Pre-post	Film	Knowledge of schizophrenia and social distance	Significant improvement in social distance. Significant improvement in knowledge	Canada
Pinfold et al. (2005)	Educational workshops; 2 in UK, 1 in Canada	14-16 years old, n=512 (UK), 634 (Canada)	Pre-post	In-vivo	Factual recall, attitudinal change, social distance change.	Significant improvements in factual recall, attitudes, and social distance	UK/ Canada
Spagnolo et al. (2008)	1 hour presentation	'High school students' (p188), n=277	Pre-post	In-vivo	The Attribution Questionnaire; 9 constructs including blame, anger, pity, dangerousness, avoidance, etc.	Significant improvements in attitudes	USA
Chan et al. (2009)	30 minute educational session either alone, or preceded or followed by 15 minute film.	13-18 year old, mean 14.6, n=255 (education n=88; education–video n=94; video–education n=73)	RCT; education, education followed by video-based contact, and video-based contact followed by education. Pre-post + 1 month follow-up	Film	The public stigma scale, The social distance scale, The knowledge test	Significant improvements in attitudes, desire for social distance, and knowledge. Education followed by video-based contact significantly better than video-based contact followed by education or education alone	Hong Kong
NG and Chen (2002)	10 one hour educational sessions, a mental health promotion day.	13 – 21 years old (mean 15), n=219 (117 intervention)	Control + 7 month follow-up	In-vivo	Attitudes to mental illness including; benevolence, separatism, stereotyping, restrictiveness, pessimistic prediction, and stigmatisation or shame.	Significant improvements in attitudes and desire for social distance	Hong Kong

Rickwood et al. (2004)	50 to 90 minute sessions run by consumer (contact) or carer	14-18 years old (mean 16). n= 457	Pre-post	In-vivo or carer	Vignettes followed by 4 attitude questions and 4 social distance questions. Knowledge: factual questions, e.g. prevalence of mental illness, etc. Help-seeking: General Intentions to Seek Help Questionnaire	Significant improvement in attitudes. Significant improvements in mental health literacy, no significant improvement in intention to seek help	Australia
Pinto-Foltz et al. (2011)	In Our Own Voice; 60 minute session	13 – 17 years old (mean 15). n=156 (95 intervention). Female only	RCT; contact, control. Pre-post + 4&8 week follow-up	In-vivo	In Our Own Voice Knowledge Measure. Attribution Questionnaire: 9 constructs including blame, anger, pity, dangerousness, avoidance, etc.	*No significant effect on attitudes. No immediate effect found on literacy.* Significant improvement in mental health literacy found at 4&8 week follow-up	USA
Meise et al. (2000) **(German language)**	2 lessons including a 15 minute presentation, and interactive discussion	16-19 years old (mean 17), n=114 (57 interventions)	Comparison group; psychiatrist and contact or psychiatrist and social worker	In-vivo	Knowledge, attitudes and emotional reactions, social distance	Significant improvement in attitudes and desire for social distance in intervention group only.	Austria
Tolomicz-enko et al. (2001)	2 hour workshop; video or video plus discussion	High-school students, n=575 (214 video only group, 186 video plus discussion group, 175 control)	Comparison group and control; control, video only, video plus discussion	Film	Attitudes to mental illness	Film plus discussion had a positive impact on attitudes; *film alone had a 'negative impact'.*	Canada

AIMS AND RESEARCH QUESTIONS

The overarching aim of this thesis is to investigate levels of stigma of mental illness and mental health literacy in young adolescent populations, as well as to investigate methods which may be applicable for improving stigma and literacy in this population. There are a number of research questions relevant to this central aim.

Much of the available evidence comes from older adolescent age groups and, in the case of mental health literacy in particular, from outside of the UK. Understanding levels of stigma, knowledge and mental health literacy within young UK adolescents is therefore important. Given that knowledge and attitudes are conceptualised as related (e.g. Wolff et al., 1996), and that education has been suggested as one way in which to improve the stigma of mental illness (Corrigan & Penn, 1999), a better understanding of the relationship between these variables in young adolescent populations would also be valuable.

It is also important that lay perceptions of health and ill-health are considered as well as professional conceptions of disorder, as this may lead to better design of public health strategies (WHO, 1986; WHO, 2005). Investigation into how adolescents conceptualise and understand mental health and ill-health is therefore also warranted, as how adolescents perceive and understand mental illness may help inform interventions aiming to decrease stigma or promote knowledge and literacy. An understanding of how to frame discussions of mental illness with adolescents may also prove useful in other important areas such as for clinicians attempting to engage with young people help-seeking with mental distress or psychiatric disorders, or for teachers who wish to discuss mental illness with young people who have family members who experience psychiatric disorder. It has also been emphasised

(WHO, 1986; WHO, 2005) that any service redesign should integrate the consultation and opinions of individuals who will be or have been users of the service.

With regards to intergroup contact and stigma, although there are a number of interventions which investigate the use of contact in adolescent populations, research into the effect of contact in naturalistic settings is minimal. As much of the theory behind the use of intergroup contact is based on research in naturalistic settings further research here is also needed prior to the use of intergroup contact in intervention settings.

Intergroup contact has long been presented as 'one of psychology's most effective strategies for improving intergroup relations' (Dovidio et al., 2003; p5), yet evidence for the success of contact in adolescent populations is conflicting (Corrigan et al., 2012; Chan et al., 2009; Meise et al., 2000; Husek, 1965). An area of particular concern relates to the fact that large scale contact may be more difficult to engineer (London & Evans-Lacko, 2010) than other stigma reducing strategies such as large scale education, something which is particularly true in adolescent groups where the school education system makes delivering large scale educational school-based programmes a particularly promising method. Whether results can be maintained long term is also an important question, worthy of investigation.

Logic of inquiry

A distinction can be made between inductive logic models of inquiry, which seek to discover patterns and generate theory and hypothesis, deductive logic models of inquiry, which test theory and hypothesis, and abductive logic models of inquiry, which set out to explain a given phenomenon and involve developing an explanation of 'best-fit' (Johnson & Onwuegbuzie,

2004). Traditionally, quantitative research has been more 'theory-driven' and thus deductive, and qualitative 'data-driven' and inductive.

The present thesis does not fit neatly into one logic of inquiry paradigm. The suggestion, for example, that the stigma of mental illness may be higher in adolescent samples than adult samples is clearly theory driven, and thus deductive, whereas research questions regarding how adolescents conceptualise mental health may be best served by a inductive logic of inquiry; the answer to this question will be dependent on the period of history, culture, and previous experiences of each individual or group. This thesis will therefore require a mixed design, utilising both of these models. The progression of the research presented in this thesis, and its relation to different logics of inquiry is presented in Figure 2.
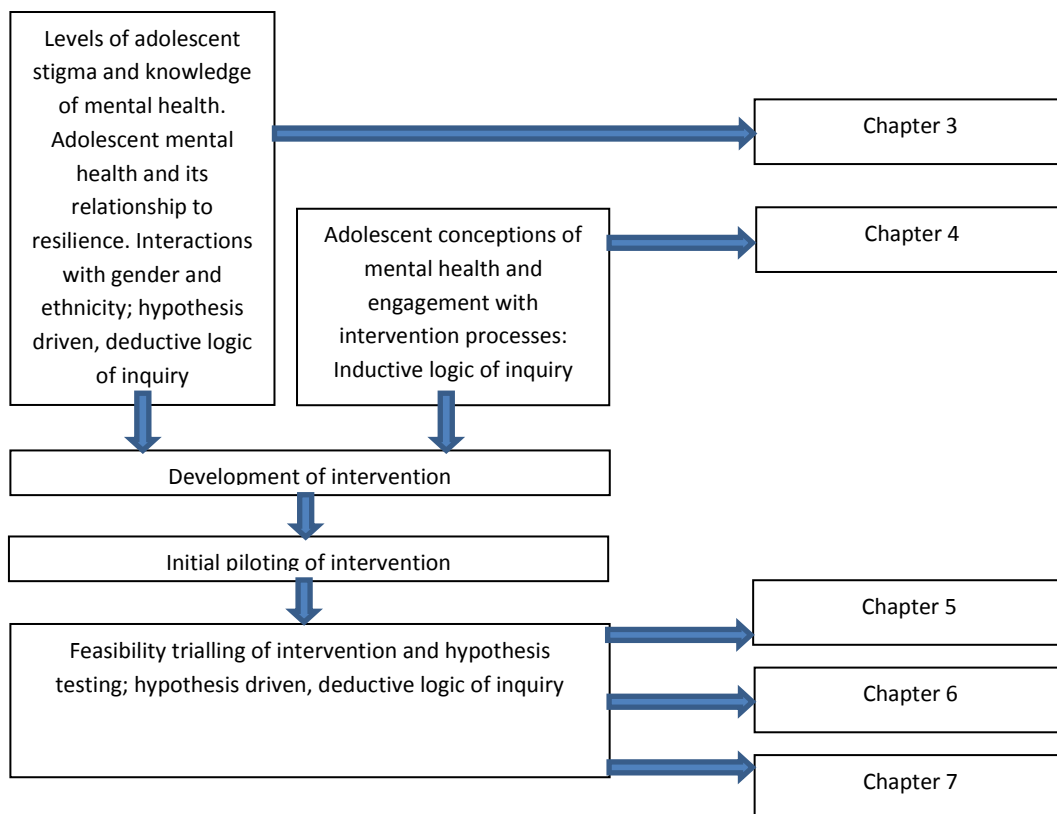
Figure 2: Progression of thesis research

Section summary

Intervention during adolescence aimed at tackling the stigma of mental illness and improving mental health literacy appears to be warranted by the research reviewed in this chapter. This may be particularly true for young adolescent groups, when it appears that the development of stigma is likely taking place. Intergroup contact may represent a promising strategy to facilitate attitude change and to reduce stigma, however research into contact in young adolescent populations is lacking.

CHAPTER THREE: STIGMA, KNOWLEDGE, AND MENTAL HEALTH IN AN URBAN ADOLESCENT SAMPLE

INTRODUCTION

Despite the wealth of information discussed in Chapter 2, a number of questions remain which warrant investigation. These relate to general levels of stigma, knowledge, and literacy in relation to mental illness in UK adolescent populations, as well as levels of mental health and wellbeing. Understanding the impact of demographic and mediating factors is also important; whether contact with individuals with lived experience of mental illness mediates attitudes to or knowledge of mental illness, and how resilience may be associated with mental health in the general adolescent population are also questions which may prove useful for the development and implementation of strategies to improve mental health awareness and reduce the stigma of mental illness.

Stigma and knowledge

As discussed in Chapter 2, stigma is envisaged as a combination of attitudes (prejudice), behaviour (discrimination), and knowledge (ignorance; Thornicroft, 2006), with the majority of research focusing on adult attitudes (e.g. Schomerus et al., 2012; Broussard et al., 2012; Norman et al., 2012; Barney et al., 2006; Stuart & Arboleda-Florez, 2001; Hogg, 2011). Increasingly, it has been realised that attitudes to mental illness need to be addressed in childhood and adolescence when they are being formed (Corrigan & Watson, 2007; Office of the Deputy Prime Minister, 2004; Flavell et al., 2001; Hinshaw & Stier, 2008; Wahl et al., 2007). Stigma has been reported to be high in adolescent groups age 14 - 18 (Time to Change,

2013), but there is relatively little research investigating stigma levels in young adolescent UK populations; this is important as attitudes may be influenced by culture.

Mental health knowledge and understanding is a relatively recent topic of research compared to the stigma of mental illness, and consequentially a smaller body of literature exists, with the majority of research conducted into mental health literacy (Chapter 2, p22; Jorm et al., 1997) or adults (Olafsdottir & Pescosolido, 2011). The existing research suggests that mental health literacy in adolescents tends to be poor (Olsson & Kennedy, 2010), and adults aged 18-25 have been found to be better than adolescents at recognising depression (Wright et al., 2006). By contrast, research from Australia has found that almost 75% of participants aged 15-25 were able to correctly identify vignettes of depression (Reavley & Jorm, 2011a). An accurate understanding of adolescent mental health knowledge, particularly within a UK setting where there is a dearth of literature concerning this, is therefore a priority.

Demographic characteristics are also of interest with regards to the stigma of mental illness as both ethnicity (Hickie et al., 2007) and gender (Reavley, McCann, & Jorm, 2012) may interact with stigma related knowledge and attitudes, and potentially therefore with strategies to improve them. No research (to this authors knowledge) has been conducted which investigates how demographic variables may interact with knowledge and attitudes to mental illness in UK adolescents.

Research questions:

- What are the current levels of adolescent stigma-based attitudes and stigma-based knowledge of mental illness?

- How do stigma-based attitudes and stigma-based knowledge of mental illness compare between adolescent and adult groups?

- How do the demographic characteristics of gender and ethnicity influence adolescent stigma and knowldge?

The relationship between mental health knowledge and attitudes to mental illness

It has been consistently argued that attitudes to mental illness and mental health knowledge are correlated, with Corrigan and Penn (1999) identifying education as one of the three main tactics for reducing stigma and improving attitudes to mental illness in the general population. Many interventions and anti-stigma campaigns are based on the assumption that improving mental health knowledge will reduce levels of discrimination and improve attitudes towards individuals with mental illness (e.g. Crisp & Cowan, 2004; Sartorius, 2005).

As discussed in Chapter 2, the relationship between mental health knowledge and attitudes has become more contentious recently, as although research suggests that mental health knowledge is improving in the general population, levels of stigmatising attitudes and discrimination remain unchanged (Angermeyer et al., 2009). If a correlation does exist between mental health knowledge and attitudes, then it may be that by including both in an intervention the impact can be increased, as Corrigan and Penn (1999) suggest.

Research question

- Are mental health knowledge and attitudes to mental illness associated in a young
  adolescent sample?

The relationship between intergroup contact and stigma of mental illness

Corrigan and Penn (1999) suggest that education combined with intergroup contact (Allport,

1954; Chapter 2, p29) with individuals who have experience of living with mental illness is

one of the most effective ways to reduce stigma. Relatively few intervention studies (Pinfold

et al., 2003) have utilised contact with individuals with lived experience of mental illness as a

means to improving attitudes to mental illness in adolescents, but these have met with some

success, as discussed in Chapter 2 (p36). The rationale behind these interventions relies on

correlational data suggesting a relationship between the amount of contact someone has had

with an individual with mental illness, and their attitudes to mental illness (Link & Cullen,

1986; Penn et al., 1994; Pinfold et al., 2003). Though this association has been found fairly

robustly within adult populations, research by Corrigan et al. (2005) suggests that the

association may be more complex within adolescent populations, with young people who

report high levels of familiarity with mental illness also more likely to report higher levels of

endorsement of items relating to attributions of responsibility and dangerousness. Corrigan

et al. suggest that intergroup contact may be less likely to impact positively upon stigma in

adolescent populations as the adolescent has a smaller knowledge base on which to build

feelings of accommodation. It is also possible that adolescents have a different experience of

intergroup contact to adults, with less insight into mental ill-health than an adult might have,

due to the this lack of a pre-existing knowledge base. Corrigan et al. however urge caution in

the interpretation of their findings, pointing out their small effect size and the fact that some but not all of their participants were exposed to an anti-stigma campaign, which may have biased results. As recent UK strategies to reduce stigma in adolescents are focusing more and more on intergroup contact (Henderson & Thornicroft, 2009; Time to Change, 2012), further research assessing whether these associations exist in adolescent populations is warranted.

Research questions

- To what extent do adolescents have contact with individuals with experience of living with mental illness?
- Is contact associated with more positive attitudes to mental illness in young adolescents?

The relationship between intergroup contact and mental health knowledge

Though stigma is conceived as comprising of attitudes (prejudice), behaviour (discrimination), and knowledge (ignorance; Thornicroft, 2006), previous research utilising intergroup contact has tended to focus on the attitudinal component of stigma. There are two potential ways in which contact with an individual with lived experience of mental illness might influence the knowledge component of stigma. Firstly, if an individual has a relationship with someone with lived experience of mental illness, they may acquire information relevant to mental health knowledge through the relationship, for example, what depression 'looks' like; if medication or therapy aid recovery, whether individuals with mental illness can fully recover, and so on. Secondly, mental health knowledge may also be affected by contact indirectly, mediated by levels of attitudinal stigma. It is suggested by previous research that mental health attitudes and knowledge are correlated (e.g. Wright et

al., 2011; Brockington, Hall, Levings, & Murphy, 1993; Link, Cullen, Frank, & Wozniak, 1987). The relationship between attitudes and knowledge is likely to be complex and multidirectional, as Angermeyer et al. (2009) describe. If contact with an individual with mental illness results in an improved attitude (Corrigan et al., 2001) this may in turn lead to increased engagement with mental health information, leading to better mental health knowledge. Very little research has investigated whether there is any association between contact with an individual with lived experience of mental illness and mental health knowledge. Though there is evidence to suggest that, amongst adult populations at least, contact is associated with better knowledge (Furnham & Blythe, 2012; Wolff et al., 1996).

Research questions

- Is contact associated with a higher level of mental health knowledge in young adolescents?

Mental health and well-being

Current estimates indicate that one in ten UK children aged five to sixteen have a diagnosable mental disorder (Office for National Statistics, 2005). The presence of even sub-clinical symptoms during childhood and adolescence are worrying as they are often predictive of adult psychiatric illness (Klein, Shankman, Lewinsohn, & Seeley, 2009; Fergusson, John Horwood, & Ridder, 2005; Fergusson, Horwood, Ridder, & Beautrais, 2005; Kessler et al., 2007). Universal strategies which aim to reduce or prevent mental illnesses or promote mental health in adolescents have found mixed results, leading reviewers to argue that currently there is not enough evidence supporting these programmes to justify their mainstream dissemination (e.g. Spence & Shortt, 2007; Weare & Markham, 2005; Lister-

Sharp et al., 1999). There are however, certain populations at increased risk for higher levels of mental distress and illness, and for which 'targeted' intervention strategies might be appropriate. For example, urban upbringing is associated with increased vulnerability to the development of psychosis (van Os, Spauwen, Lieb, Wittchen, & Krabbendam, 2005; van Os, Hanssen, Bijl, & Vollebergh, 2001), and has also been linked to higher levels of self-harm in 15 – 64 year olds (Harriss & Hawton, 2011), and suicide among males aged 15-44 years (Middleton, Sterne, & Gunnell, 2006). Universal interventions focusing on mental health literacy, resilience and self-help, and the importance of help-seeking alongside strategies to reduce stigma may be appropriate and worthwhile, particularly in deprived urban settings.

Also important to understand is how mental illness expression may be mediated by other demographic characteristics such as ethnicity (Goodman, Patel, & Leon, 2008) and gender (Meltzer, Gatward, Goodman, & Ford, 2000). In adult populations minority ethnic status has often been associated with higher rates of mental health service use (Doyle, Joe, & Caldwell, 2012; Morgan et al., 2005b; Morgan et al., 2005a). This trend has not always been observed in children and adolescents, with one systematic review finding that children from some minority ethnic groups actually have better mental health status than children from the majority ethnic group (Goodman et al., 2008). It is of course likely that variables other than higher levels of mental health could lead to less use of mental health services. Stigma and fear of discrimination, for example, may lead to an individual or group not using a service, and therefore being less likely to receive a diagnosis until the illness attracts the attention of emergency services. Research which investigates mental health status directly, rather than through service use is important and warranted.

- What are current levels of mental health and ill-health in young urban adolescents?

- How do young urban adolescents compare to the UK national average for mental illness in adolescents?

- How do the demographic characteristics of gender and ethnicity interact with mental health in adolescents?

The relationship between mental ill-health and resilience

Universal programmes designed to impact upon mental health often carry the assumption that by improving skills which are associated with resilience to mental illness, one can either improve mental health or reduce mental illness (e.g. Sawyer et al., 2010b). Research into resilience and its relation to mental health in non-clinical adolescent populations is however still very much in its infancy and a solid evidence base is a requirement if effective strategies are to be created for increasing mental health and resilience to mental illness in young people.

The evidence base which does exist suggests that mental health and resilience are correlated (Hjemdal et al., 2011). In terms of the protective nature of resilience in relation to psychiatric illness, recent research has also begun to confirm this within non-clinical adolescent populations (von Soest et al., 2010; Hjemdal et al., 2011). von Soest et al. (2010) found a significant correlation between resilience and internalising symptoms such as the symptoms of anxiety and depression, and suicidal ideation. Interestingly in von Stoest et al.'s research, relatively low correlations were found between resilience and behavioural or externalising problems, such as theft and violent behaviour. Understanding in what ways resilience is

associated with mental health will enable understanding of the possible effects or outcomes of future interventions in terms of both the promotion of mental health and the reduction of emotional dysfunction.

Research questions

- Is resilience inversely correlated with overall mental ill-health?

- Is resilience inversely correlated with specific types of mental ill-health?

All research questions

Stigma and knowledge	1. What are the current levels of adolescent stigma-based attitudes and knowledge of mental illness?
	2. How do stigma-based attitudes and knowledge of mental illness compare between adolescent and adult groups?
	3. How do the demographic characteristics of gender and ethnicity influence adolescent stigma and knowledge of mental illness?
The relationship between mental health knowledge and attitudes to mental illness	4. Are mental health knowledge and attitudes to mental illness associated in a young adolescent sample?
The relationship between contact and attitudes to mental illness	5. To what extent do adolescents have contact with individuals with experience living with mental illness?
	6. Is contact associated with more positive attitudes to mental illness?
The relationship between contact and mental health knowledge	7. Is contact associated with a higher level of stigma-related knowledge?
	8. Is contact associated with a higher level of mental health literacy?
Adolescent emotional well-being and mental health	9. What are current levels of mental health and ill-health in young urban adolescents?
	10. How do young urban adolescents compare to the UK national average for mental illness in adolescents?
	11. How do the demographic characteristics of gender and ethnicity interact with mental health in adolescents?
The relationship between mental ill-health and resilience	12. Is resilience inversely correlated with overall mental ill-health?
	13. Is resilience inversely correlated with specific types of mental ill-health?

METHOD

Sampling

Participants were accessed through secondary schools in Birmingham, UK. Schools were approached, based on the full socio-economic and socio-cultural strata of individuals in the urban population of Birmingham.

Published data from the (Department of Health, 2011), Evans-Lacko et al. (2010), and Evans-Lakco et al. (2011) representing national samples, and Patterson et al. (in preparation), representing a regional sample from Birmingham UK, were used for comparisons between the present urban adolescent sample and adult populations for mental health attitudes and knowledge.

Design and materials

The survey consisted of five validated questionnaires as well as participants' demographic information, including age, gender, ethnicity, and whether the participant currently has a diagnosed mental illness.

- *Stigma of mental illness.*

The Reported & Intended Behaviour Scale (RIBS; Evans-Lacko et al., 2011) assesses intended behaviour related to the stigma of mental illness. Higher scores on the RIBS indicate better attitudes relating to future intended behaviours towards individuals with mental illness (see Chapter 5, p146 for a full description of measure).

- *Knowledge of mental illness.*

Knowledge of mental illness was assessed using the Mental Health Knowledge Scale (MAKS; Evans-Lacko et al., 2010). Higher scores indicate a better level of mental health knowledge (see Chapter 5, p148 for a full description of measure).

- *Emotional well-being and mental health.*

Emotional well-being and mental health were assessed using two questionnaires, The Strengths and Difficulties Scale (SDQ; Goodman, Meltzer, & Bailey, 1998) and The Schizotypal Personality-Brief Form (SPQ_b; Raine & Benishay, 1995). These two questionnaires were used in combination in order to capture a broad spectrum of mental health difficulties which can be experienced in adolescents. Higher scores on both the SDQ and the SPQ_b indicate poorer mental health (see Chapter 5, p149-150).

The SDQ can also aid classification of individuals as emotionally well ('healthy'), vulnerable to mental illness ('borderline'), or emotionally and mentally unwell ('abnormal'). This 'abnormal' cut off will allow for comparisons to be made between the sampled population in the present study and the UK 10% average of mental health problems in adolescents (Meltzer et al., 2000).

- *Resilience.*

Resilience was measured using a 15 item (Neill & Dias, 2001) version of Wagnild and Young's (1993) Resilience Scale. Higher scores on the resilience scale indicate a higher level of personal resilience (see Chapter 5, p150).

Procedure

Ethical approval was sought and granted by The University of Birmingham ethics committee in June 2010 (reference number ERN_10-0397) after which schools in the Birmingham area were approached and invited to take part in a survey. 'Opt out' information and consent letters were sent to parents of students in participating age groups allowing parents at least two weeks to withdraw their child from the research if they wished to, by contacting either the research team or the school.

Students for whom parental consent had been gained were asked to indicate whether they assented to take part in the research by checking a box on the information sheet from the front of the survey after the information was read out by the class teacher, stating that the survey was voluntary and that students would not be in any trouble if they wished not to complete it. Students were also informed that they could choose not to complete any questions or subsections of the survey if they did not want to.

Schools were given a variety of options for completing the survey including having all students complete the survey at the same time and location with the researcher present, asking students to complete the survey during registration period, or asking students to complete an online version of the survey. All schools opted to complete the survey during registration, and as the researcher was unable to oversee survey completions conducted in the schools a set of instructions and protocols for teachers was written (see appendix 4). These were delivered to the schools alongside the surveys.

Schools were given up to two weeks to collect survey data, in order to minimise lost data through student absences. If a survey was not complete by the end of the time allocated by

the school for registration, participants wrote their name on the front of the survey and completed the survey during the next registration. After completion, participants then crossed their names off the survey to preserve anonymity.

Analysis

Data was analysed using ANOVAs and t-tests in SPSS, Version 20. Where assumptions of these tests were not met and data could not be transformed, non-parametric tests were employed.

RESULTS

The sample

1109 participants took part in the survey, with 361 students (24.6%) not taking part in the research, either through absence or choice. Participants were from 10 schools, chosen to represent the diversity of Birmingham, UK (table 1). Schools included four all-boy schools, four mixed schools, and two all-girl schools, with one all boy school (School 6) taking part in the survey with two consecutive year groups (year 8, age 12-13, in 2010-11 and 2011-12), leading to more males (62.8 %) taking part in the research than females. In line with the ethnic diversity of Birmingham almost two thirds of the participants came from Asian, Black, Mixed, or 'Other' ethnicities, with South East Asian participants making up the largest ethnic population at 45.7% (data available from Birmingham City Council, requested and accessed 2009). Participant characteristics can be seen in table 2 below. Completion rates for each measure are reported below.

Table 1: Characteristics of participating schools

	School type	Number of students	% male[1]	Number of participating students (%)	% male of participating students	% English second language[1]	% free school meals[1]	Ethnicity[1]							
								South Asian		White		Black		Other	
								Total % of school[1]	% participating	Total % of school[1]	% participating	Total % of school[1]	% participating	Total % of school[1]	% participating
1	Independent Fee paying	120	100	119 (99)	100	-	-	-	42	-	43	-	3	-	11
2	State Exam entrance	110	100	78 (71)	100	31	7	34	49	47	40	6	7	14	5
3	State Open access	140	56	97 (69)	57	52	61	46	54	7	9	36	28	12	10
4	State Open access	200	51	158 (79)	47	9	22	9	18	79	71	4	5	8	7
5	State Open access	180	53	81 (45)	65	89	63	74	83	4	0	18	9	4	8
6[2]	State Open access	120/120	100/100	77 (64)/104 (87)	100	26	30	35	40 /35	47	49/49	6	1 / 6	12	9
7	State Exam entrance	130	0	112 (86)	0	23	6	45	55	35	28	10	7	10	10 / 11
8	State Open access	120	52	73 (61)	44	18	54	8	16	65	37	14	19	13	27
9	State Open access	110	0	105 (95)	0	78	48	71	81	3	4	19	6	7	10
10	State Exam entrance	120	100	105 (88)	100	23	4	28	46	59	44	4	7	9	4

[1] Data available from Birmingham City Council, accessed 2009   [2] Two consecutive year groups

Table 2: Participant characteristics of the adolescent survey sample

Participant Characteristics	N=1109 (%)
Age	
11	82 (7.4)
12	757 (68.3)
13	268 (24.2)
No response	2 (0.2)
Gender	
Male	697 (62.8)
Female	412 (37.2)
Ethnicity	
Asian or Asian British	497 (44.8)
White or White British	394 (35.5)
Black or Black British	91 (8.2)
Other Ethnic Group	106 (9.6)
No response	21 (1.9)
Currently diagnosed with a mental illness	
Yes	33 (3)
No	1054 (95)
No response	22 (2)
Currently living with someone with a mental illness	
Yes	80 (7.2)
No	881 (79.4)
Don't know	121 (10.9)
No response	27 (2.4)
Currently working with someone with a mental illness	
Yes	94 (8.5)
No	838 (75.6)
Don't know	152 (13.7)
No response	25 (2.3)
Currently has a neighbour with a mental illness	
Yes	100 (9)
No	688 (62)
Don't know	295 (26.6)
No response	26 (2.3)
Currently has a friend with a mental illness	
Yes	110 (9.9)
No	829 (74.8)
Don't know	142 (12.8)
No response	28 (2.5)

Stigma and knowledge

Three research questions were relevant to adolescent stigma-based attitudes and knowledge. These are addressed in turn.

1. What are the current levels of adolescent stigma-based attitudes and knowledge of mental illness?

As the RIBS and MAKS had not yet been validated with an adolescent sample a reliability analysis was run. In the present sample the RIBS was found to have a Cronbach's alpha of 0.85 and the MAKS a Cronbach's alpha of 0.49 (for items 1-6). The RIBS alpha is therefore comparable to the original adult sample alpha of 0.85 (Evans-Lacko et al., 2011). The MAKS alpha in the present study is lower than that of the adult data (items 1-6 a=0.65; Evans-Lacko et al., 2010). Evans-Lacko et al. comment that the moderate Cronbach's alpha of the adult data is reflective of the fact that knowledge of mental illness is multidimensional and that therefore knowledge on one item is not necessarily related to knowledge on other items. The lower Cronbach's alpha potentially suggests that there is greater variability between different items on the schedule in adolescent populations compared to adults.

938 participants (85%) completed the RIBs. Participants' responses can be seen in table 3, alongside data from a national adult sample (Evans-Lacko et al., 2011). The predominant answer from each age group is highlighted in bold, with adults tending to indicate less stigmatising future intended behaviours towards individuals with mental illnesses than adolescents.

The majority of adolescents gave neutral responses of either 'don't know' or 'neither agree nor disagree'. Almost a third of adolescents stated that that they didn't think they would be willing to live with someone with a mental health problem in the future, compared to 22.3% who thought they would be. More adolescents reported that they would (35.5%) be willing to work with someone with a mental health problem, than reported that they would not (23.6%). Similarly, more participants reported they would be willing to (38.3%) to live nearby someone with a mental health problem, than would not be willing (20.3%). With regards to continuing a relationship with a friend who developed a mental illness, 45.8% of participants stated that they would be willing to continue a relationship, compared to 16.8% of participants who indicated that they wouldn't be.

Table 3: Adolescent and adult responses to the RIBS

		Disagree strongly %	Disagree slightly %	Neutral %	Agree slightly %	Agree strongly %
In the future I would be willing to live with someone with a mental health problem	Adolescent sample Adult Sample*	20.5	11.7	**48.2**	11	8.7
		11.2	16.1	**40**	20.6	12.2
In the future I would be willing to work with someone with a mental health problem	Adolescent sample Adult Sample*	14.7	8.9	**40.8**	21.5	14
		3.7	7	28	**37**	24.3
In the future I would be willing to live nearby someone with a mental health problem	Adolescent sample Adult Sample*	14.3	6	**41.4**	19	19.3
		3.5	6.5	27.8	**39.5**	22.8
In the future I would be willing to continue a relationship with a friend who developed a mental health problem	Adolescent sample Adult Sample *	11.8	5	**37.4**	14.3	31.5
		2.7	2.5	19.8	29.8	**45.2**

*Data from Evans-Lacko et al. (2011)

804 participants (73%) completed the MAKs. Participants responses to the first 6 items can be seen in table 4, alongside data from a national adult sample (Evans-Lacko et al., 2010), and in table 5 for items 7-12 alongside both a national and regional sample (Patterson et al., in preparation). The most predominant answer from each age group is highlighted in bold. The percentage of each age group identifying the most accurate response (according to the questionnaire authors; Evans-Lacko et al., 2010) is underlined. Adults from both the regional and national samples tended to be less likely than adolescents to give neutral responses of 'neither agree nor disagree' or 'don't know', and tended to be more likely to record accurate responses.

Several gaps were identified in the participants' knowledge (see tables 4 and 5). Participants were most likely to endorse neutral responses of 'neither agree nor disagree' and 'don't know'. Just over a quarter identified that it is possible for those with severe mental illness to recover. With regards to treatment, psychotherapies were regarded as a marginally more successful treatment (48.1% agree) than medication (43.5% agree). 40.2% of participants stated that they would know what advice to offer a friend who developed a mental illness, and only 8.2% of participants identified that many people with mental health problems do not seek help.

Table 4: Adolescent and adult responses to items 1-6 of the MAKS

		Disagree strongly %	Disagree slightly %	Neutral %	Agree slightly %	Agree strongly %
Most people with mental health problems want to have paid employment	Adolescent sample	4.7	3	**52**	19.1	<u>21.2</u>
	Adult Sample*	1.2	2.2	32.8	**42.9**	<u>20.8</u>
If a friend had a mental health problems, I know what advice to give them to get professional help	Adolescent sample	9	10.2	**40.6**	24.4	<u>15.8</u>
	Adult Sample*	7.9	19.9	**29.3**	28.8	<u>14.1</u>
Medication can be an effective treatment for people with mental health problems	Adolescent sample	6.5	4	**46**	21.9	<u>21.6</u>
	Adult Sample*	1.2	2.5	23.8	**50.6**	<u>21.8</u>
Psychotheraphy (e.g. talking therapy or counselling) can be an effective treatment for people with mental health problems	Adolescent sample	6.5	3.9	**41.5**	28	<u>20.1</u>
	Adult Sample*	1	1.7	18.8	**51.9**	<u>26.6</u>
People with severe mental health problems can fully recover	Adolescent sample	7.3	12.2	**54.3**	16	<u>10.3</u>
	Adult Sample*	3	11.4	**41.6**	32	<u>11.9</u>
Most people with mental health problems go to a healthcare professional to get help	Adolescent sample	<u>2.7</u>	5.5	**43.6**	28.1	20.1
	Adult Sample*	<u>17.9</u>	27.1	**30.5**	18.1	6.5

*Data from Evans-Lacko (2010)

Just under half of all participants agreed that depression (48.5%) and schizophrenia (46.9%) are mental illnesses. Schizophrenia also received the highest number of 'do not know' or 'neither agree nor disagree' responses to the statement 'schizophrenia is a mental illness'. Bipolar disorder was the most recognised disorder, with 60.4% of participants agreeing slightly or strongly that bipolar disorder is a mental illness. Slightly more participants endorsed the statement that that stress is a type of mental illness (36.7%) than disagreed with it (32.5%). Similarly, more participants thought that drug addiction was a mental illness

(36.6%) than thought it wasn't (31.6%). Just over a quarter (26.9%) of participants thought that grief was not a mental illness, compared with a quarter who did.

Table 5: Adolescent and adult responses to items 7-12 of the MAKS

		Disagree strongly %	Disagree slightly %	Neutral %	Agree slightly %	Agree strongly %
Depression	Adolescent sample	14.9	9.1	**27.5**	26.5	<u>22.1</u>
	Adult sample 1*	8.2	6.1	11.4	28.1	**<u>46.3</u>**
	Adult sample 2**	2.2	4.2	11.7	35.2	**<u>46.7</u>**
Stress	Adolescent sample	16.1	16.4	**30.7**	22.8	<u>13.9</u>
	Adult sample 1*	<u>17.7</u>	14.5	19.4	**24.2**	**24.2**
	Adult sample 2**	<u>8.2</u>	16.1	21.6	**31.8**	22.3
Schizophrenia	Adolescent sample	3.2	1.6	**48.3**	13.5	<u>33.4</u>
	Adult sample 1*	1.2	0.8	27.2	11.3	**<u>59.5</u>**
	Adult sample 2**	0.3	0.3	8.5	12.9	**<u>78.2</u>**
Bipolar disorder (manic-depression)	Adolescent sample	5.5	2.1	31.9	20.8	**<u>39.6</u>**
	Adult sample 1*	1.4	1.5	27.4	14.2	**<u>55.4</u>**
	Adult sample 2**	0.7	1	9.2	22.6	**<u>66.5</u>**
Drug addiction	Adolescent sample	17.8	13.8	**31.8**	16.4	<u>20.2</u>
	Adult sample 1*	18.1	8.9	25.4	20.3	**<u>27.3</u>**
	Adult sample 2**	17.9	16.6	24.5	**25.8**	<u>15.1</u>
Grief	Adolescent sample	<u>13.8</u>	13.1	**48.1**	14.1	10.9
	Adult sample 1*	<u>21.0</u>	11.9	**26.9**	20.9	19.2
	Adult sample 2**	<u>11.7</u>	14.9	23.6	**34**	15.9

* Adults from a regional sample. Data from Patterson et al. (in preparation)

** Adults from a national sample. Data from Evans-Lacko et al. (2010)

3. How do stigma-based attitudes and stigma-based knowledge of mental illness compare between adolescent and adult groups?

Participants had a mean RIBs score of 12.57 (Mdn:12, SD:4.07). A one sample t-test found this to be significantly less than the Birmingham adult mean (14.53, SD:3.82) found by Patterson et al. (in preparation), t(937)=-14.78, p<0.001, r=0.43

Participants mean MAKs score (39.25, mdn:39, SD:5.12) was significantly lower than the Birmingham adult mean (43.42, SD:4.70) reported by Patterson et al., t(803)=-23.08, p<0.001, r=0.63.

4. How do the demographic characteristics of gender and ethnicity influence adolescent stigma?

Participants with a White or White British ethnicity reported the highest scores on the RIBS, indicating the lowest levels of attitudinal stigma, with students from Asian and Asian British ethnicities reporting the highest level of attitudinal stigma towards individuals with mental disorders (table 6). A one way ANOVA identified that there was a significant effect of ethnicity on attitudes to mental illness, F(3,921)=10.23, p<0.001, r=0.18. Post hoc tests employing Bonferroni corrections demonstrated significant differences between White or White British and Asian or Asian British students (p<0.001), Black or Black British students (p<0.03), and students from the 'other' ethnic group (p<0.03). No significant differences were observed between Asian or Asian British students, Black or Black British students, or students from the 'other' ethnic group.

Table 6; Differences between ethnicities mental health attitudes

Ethnicity	n.	Mean (SD)	Median
Asian or Asian British	446	11.99 (4.05)	12
White or White British	310	13.59 (3.83)	14
Black or Black British	82	12.16 (3.99)	12
Other ethnic group	87	12.24 (4.56)	12

Males (12.59, mdn:12, SD:4.05) and females (12.52, mdn:13, SD:4.10) reported similar levels of attitudinal stigma, and an independent samples t-test found no significant effect of gender on reported attitudes t(936)=0.27, p>0.05, r=0.00.

With regards to mental health knowledge, students from a Black or Black British ethnicity reported the highest levels, with students from an Asian or Asian British level reporting the lowest levels of knowledge (table 7). A one-way ANOVA found no significant effect of ethnicity on mental health knowledge F(3,793)=1.78, p>0.05, r=0.08. Males (39.04, mdn:39, SD:5.67) and females (39.63, mdn:39.50, SD3.95) reported similar levels of mental health knowledge, t(802)=1.60, p>0.05, r=0.06.

Table 7: Differences between ethnicities mental health knowledge

Ethnicity	n.	Mean (SD)	Median
Asian or Asian British	381	38.89 (5.08)	39
White or White British	278	39.52 (5.17)	40
Black or Black British	29	40.30 (4.52)	40
Other Ethnic Group	12	39.22 (5.70)	39

The relationship between mental health knowledge and attitudes to mental illness

5. Are mental health knowledge and attitudes to mental illness associated in a young adolescent sample?

786 participants completed both the RIBS and the MAKS. A moderate positive correlation between attitudes and knowledge of mental health was found r= 0.35, p(two-tailed) <0.001, suggesting that participants who knew more about mental illness were less likely to report attitudinal stigma relating to intended future behaviour.

The relationship between contact and attitudes to mental illness

6. To what extent do adolescents have contact with individuals with experience living with mental illness?

Of the 1076 participants who presented data on levels of contact 283 (26.3%) reported some previous contact with an individual with experience of living with mental illness. As can be seen in table 8, 80 (7.4%) of the sample stated that they currently lived with someone with a diagnosed mental illness. 94 (8.7%) said they currently worked with someone with a mental illness, 100 (9.2%) disclosed that they had a neighbour with a mental illness, and 110 (10.2%) had a friend with a mental illness. Comparison with adult data from the Department of Health annual survey (2011) can be seen in table 8, with adults reporting much higher rates of contact with individuals with mental illness.

Table 8: Adolescents level and type of contact with individuals with lived experience of mental illness

	Adolescent data	Adult data*
Currently live with someone with a mental illness	7.4%	19%
Currently work with someone with a mental illness	8.7	26%
Currently have a neighbour with a mental illness	9.2%	18%
Currently have a friend with a mental illness	10.2%	33%

* Data from the Department of Health (2011)

7. Is contact associated with more positive attitudes to mental illness in young people?

928 participants (83%) completed both the RIBs and information on previous contact. As can be seen in table 9, those who had previous contact with an individual diagnosed with a mental illness had significantly less stigmatising attitudes than those who did not report any previous contact $t(927)=4.82$, $p<0.001$, $r=0.16$.

Table 9: Mean RIBS score for adolescents with and without previous contact with individuals with mental illness

| | RIBS score (SD) | |
	Contact	No contact
Currently have *any* contact with someone with a mental illness	13.64 (3.91)	12.20 (4.03)
Currently live with someone with a mental illness	14.06 (4.70)	12.46 (3.99)
Currently work with someone with a mental illness	13.76 (3.57)	12.44 (4.10)
Currently have a neighbour with a mental illness	12.94 (4.21)	12.51 (4.09)
Currently have a friend with a mental illness	13.96 (3.76)	12.42 (4.06)

For all four types of contact, reported contact was associated with better attitudes. These differences between those with and without previous contact were found to be significant for having lived, $t(932)=3.04$, $p<0.01$, $r=0.10$, worked, $t(934)=2.88$, $p<0.01$, , $r=0.09$, and had a friend, $t(930)=3.44$, $p=0.001$, $r=0.11$, with a mental illness. Having a neighbour with a mental illness was not found to have a significant impact on attitudes to future behaviour towards individuals with mental illnesses, $t(932)=0.91$, $p>0.05$, $r=0.03$.

The relationship between contact and mental health knowledge

8. Is contact associated with a higher level of stigma-related knowledge?

795 participants (72%) completed both the MAKs and information on previous contact. Previous contact with an individual with lived experience of mental illness was associated with higher levels of mental health knowledge, $t(794)=3.89$, $p<0.001$.

Adolescent emotional well-being and mental health

10. What are current levels of mental health and ill-health in young urban adolescents?

11. How do young urban adolescents compare to the UK national average for mental illness in adolescents?

842 participants (76%) completed the SDQ. Three per cent of the sample stated that they had been diagnosed with a mental illness, a figure which is lower than the UK national of 10% (Meltzer et al., 2000). 6% of participants with complete data were found to have levels of distress which placed them in the mentally unwell category of the SDQ. A further 10.5% of participants who completed the SDQ were experiencing high enough levels of distress to be classed as vulnerable to the development of mental illness (table 10).

Table 10: Rates of mental well-being and ill-health as measured by the SDQ compared to Goodman et al.'s (1998) sample

	All participants (n)	Participants with complete data (%)
Healthy / Emotionally well	642	83.5
Borderline / Vulnerable	81	10.5
Abnormal / Probable mental illness	46	6
Not enough data to compute score	340	n/a

12. How do the demographic characteristics of gender and ethnicity interact with mental health in adolescents?

With regards to ethnicity, participants who reported their ethnicity as 'other' ethnicity reported the highest levels of mental distress, measured by the total difficulties subscale of

the SDQ, with participants from an Asian or Asian British ethnicity reporting the lowest

levels (table 11). An independent samples Kruskal-Wallis test, found a non-significant trend

towards differences in mental distress between participants of different ethnicities

H(3)=6.90, p=0.08.

Table 11: Rates of mental well-being and ill-health as measured by the SDQ by ethnicity

Ethnicity	n.	Mean (sd)	Median
Asian or Asian British	377	9.34 (5.22)	9
White or White British	253	10.43 (5.91)	9
Black or Black British	61	10.13 (5.95)	9
Other Ethnic Group	73	11.59 (7.22)	10

Female participants (mdn;10, mean;10.98, SD;5.91) reported experiencing slightly higher

levels of mental ill-health on the SDQ than males (mdn;9, mean;9.50, SD;5.61). A Mann-

Whitney U test found a significant impact of gender on mental health, U(1)=76232.00,

z=3.51, p>0.001, r=0.13.

The relationship between mental ill-health and resilience

13. Is resilience inversely correlated with overall mental ill-health?

14. Is resilience inversely correlated with specific types of mental ill-health?

633 participants (60%) completed the SDQ, SPQ, and resilience scale. Resilience was found

to have a significant weak correlation in the predicted direction with most of the measures of

mental health, with higher resilience associated with higher mental health (table 12).

Table 12: Spearmans rho (two tailed) correlations between resilience and mental health

		SDQ						SPQ
		Total	Emotional	Conduct	Hyperactivity	Peer	Prosocial	
Resilience	r_s	-0.29	-0.20	-0.17	-0.23	-0.22	0.31	-0.09
	P<	0.001	0.001	0.001	0.001	0.001	0.001	0.05

DISCUSSION

The survey was conducted to investigate a number of unanswered questions relevant to strategies for improving attitudes and knowledge of mental illness, as well as promoting positive mental health in young adolescent populations. Research questions addressed; current levels of adolescent knowledge and attitudes to mental illness, the relationship between mental health knowledge and attitudes, the relationships between contact and attitudes to mental illness, and between contact and mental health knowledge, the current levels of urban adolescent mental health and well-being, and the relationship between mental ill-health and resilience. Each of these shall be discussed in turn.

Attitudes to mental illness

Adolescents were found to hold more stigmatising attitudes to mental illness than regional (Patterson et al., in preparation) and national samples of adults (Evans-Lacko et al., 2011). This is similar to previous research which has found that stigma and negative attitudes to mental illness may be relatively high in adolescent populations (Barney et al., 2006; Stuart & Arboleda-Florez, 2001; Scotland SM, 2004). Specific to the UK, a recent survey from the Department of Health (2011) found that younger adults held less tolerant attitudes towards individuals with mental illness than older adults.

Previous research has identified that demographic characteristics such as ethnicity and gender may impact upon levels of reported and perceived stigma (Hickie et al., 2007; Korszun, Dinos, Ahmed, & Bhui, 2012; Cinnirella & Loewenthal, 1999; Reavley et al., 2012; Sheffield et al., 2004). With regards to ethnicity, the present study found that adolescents who reported their ethnicity as White or White British reported less stigmatising attitudes in terms of their future intended behaviour towards individuals with mental disorders than participants from Asian or Asian British, Black or Black British, or 'Other' ethnicities. Though much of the available research into attitudes to mental illness has been conducted in adult rather than adolescent samples, the present research suggests that differences exist between ethnicities' attitudes to mental illness within adolescent as well as adult populations (Hickie et al., 2007). On the other hand, in contrast to previous research, no significant differences were found between male and female attitudes to mental illness. Data from adult populations suggests that males report more stigmatising attitudes (Reavley et al., 2012). As attitudes to mental illness appear to develop throughout childhood and adolescence (Corrigan & Watson, 2007; Office of the Deputy Prime Minister, 2004; Flavell et al., 2001; Hinshaw & Stier, 2008; Wahl et al., 2007) it may be that these gender differences have not yet emerged within young adolescents.

Just over a quarter of participants reported some previous form of contact with an individual with lived experience of mental illness, a smaller figure than reported by adults (Department of Health, 2011). Contact was found to mediate attitudes to mental illness, with those who reported previous contact also reporting less stigmatising future intended behaviours. This finding mirrors data from adult populations which suggest that contact can be a successful method for reducing stigma (Corrigan & Penn, 1999; Corrigan et al., 2001). Very little research has been conducted into contact occurring in naturalistic settings in adolescent

populations, with just one study (to the authors knowledge) existing. This study, from Corrigan et al. (2005), in contrast to the current findings, found that adolescents who had higher levels of contact with individuals with mental illness were also more likely to report higher levels of endorsement of items relating to attributions of responsibility and dangerousness in people with mental illness. This discrepancy between the present results and Corrigan et al.'s findings may be because different aspects of stigma were investigated; attitudes towards future behaviours towards individuals with mental disorders in the present study, and attributions of responsibility and dangerousness in Corrigan et al. It is also important to note that both Corrigan et al.'s findings and the present research report small effect sizes, suggesting that caution may be needed in the interpretation of these findings, and more research is needed to investigate the use of contact in adolescent populations.

Is intervention warranted for mental health attitudes and stigma?

Though adolescents presented with more stigmatising attitudes by comparison with reports from adult populations, it is important to understand whether this means that adolescent attitudes to mental illness were highly stigmatising per se. The "see me" schools survey in Scotland (Citigate SMARTS 2005a, 2005b, as cited by Myers et al., 2009) which was developed to evaluate the "see me" Scottish national anti-stigma campaign, found that prior to the campaign 24% of young people reported they would find it difficult to talk to someone with a mental health difficulty, 33% thought that young people with mental health problems would be less likely to have friends, and 47% thought that young people with mental health difficulties would be more likely to be ignored by other young people. Despite this, 45.8% of adolescents in the current sample reported that they would be willing to continue a relationship with a friend who developed a mental illness, a much larger figure than the

16.8% who would not be willing to continue a relationship. Nonetheless, the results do indicate that there is room for improvement in adolescents' attitudes to mental illness, and suggest that interventions to improve attitudes to mental illness are warranted.

The relatively poor attitude to mental illness reported here by adolescents is of note. Young people have less general life experience than adults and may be more reliant on information from media sources for their attitudes (Morgan & Jorm, 2009a), which often display negative depiction of mental illness (Philo et al., 1994; Stuart, 2006a). The lack of certainty of adolescents in the present sample may also be a reflection of the lack of mental health education given in schools. The survey results also however, suggest that attitudes may improve with age prompting the question 'is it a good use of resources to develop programmes which address stigmatising attitudes in adolescents'?

Answering this question focuses on two main benefits: for the benefit of individuals with mental illnesses, and for the benefit of the adolescent. With regards to individuals who experience mental illness, stigma is reported to permeate almost every aspect of their everyday lives (Mental Health Foundation, 2004b). Even if adolescent attitudes improve over time, individuals who experience mental illness should not have to experience high levels of stigma at any age or from any age group. With regards to the adolescents themselves, reducing stigma becomes an important target due the vulnerability of this developmental period for the emergence of mental illness coupled with the barrier that stigma presents to help-seeking. This barrier, as discussed in Chapter 2 (p19), is reinforced by the perceived stigma of others as well as any self-stigma the adolescent may experience. Intervening in adolescence may also have additional benefits compared to intervening in adulthood. Stigma towards mental illness develops throughout childhood and adolescence (Corrigan & Watson,

2007; Office of the Deputy Prime Minister, 2004; Flavell et al., 2001; Hinshaw & Stier, 2008; Wahl et al., 2007) and by intervening in early adolescence it may be possible that the development of stigmatising attitudes can be reduced or prevented. Intervening in adolescence also gives the opportunity to reduce the impact of stigmatising attitudes before they become entrenched in adulthood.

It is also an assumption that current UK adolescents have attitudes which will improve over time as it is also possible that the current generation of adolescents hold greater levels of stigma than their parents did at the same age. Research into trends over time suggest that this is possible, for example in Germany Angermeyer et al. (2009) have found that desire for social distance from people with depression and schizophrenia may have worsened slightly. Intervention in adolescence is therefore important.

Knowledge of mental illness

As with attitudes to mental illness, adolescents in the present study were found to display lower levels of mental health knowledge than regional (Patterson et al., in preparation) and national samples of adults (Evans-Lacko et al., 2010). This supports previous research from Olsson and Kennedy (2010) which found that mental health knowledge in adolescents tended to be relatively low, though the research did not compare adolescent responses to adult responses. Previous research by Farrer et al. (2008) has found that young adults (18-24 years) tend to be better than older adults (70+ years) at identifying depression and schizophrenia, however very little research has directly compared adolescent mental health knowledge to that of adults, particularly within the UK.

Unlike attitudes to mental illness, no effect of ethnicity was found on knowledge of mental illness in the present research. Previous research has suggested that, in adult populations, ethnicity may impact upon mental health knowledge (Hickie et al., 2007). Though some of the schools who took part in the research had a high number of students for whom English was their second language, many of these participants will have been second generation migrants, and will have experienced growing up in Britain and attending British schools. This may mean that among adolescents there is more homogeneity in terms of mental health knowledge between ethnicities than among some adult populations who may have developed their knowledge of mental illness in a variety of different countries and settings.

Similarly, gender was found to have no impact on mental health knowledge. This contrasts with research in adult populations where gender differences are reported (Swami, 2012; Reavley et al., 2012), and suggests that gender differences in mental health knowledge may emerge throughout later adolescence and early adulthood.

Contact with an individual with lived experience of mental illness was associated with higher levels of mental health knowledge. Very little research has examined whether contact occurring in naturalistic settings is associated with increased levels of mental health knowledge, though there is some evidence that this may be the case in adult populations. Furnham and Blythe (2012) found within an adult population, that although direct experience with individuals who had schizophrenia did not entail a significant improvement in overall understanding of schizophrenia, it was associated with better recognition of the individual symptom *avolition* (a lack of motivation) and countered the 'split personality' association with schizophrenia. There are two potential reasons why contact many be associated with a higher level of knowledge. Firstly, close contact with an individual who has

a mental illness might lead to knowledge through experience, for example, that medication can be used to treat mental illnesses. Secondly, if contact with individuals with lived experience of mental illness reduces attitudinal stigma, as previous research suggests it does (Corrigan et al., 2001), then it may be that by reducing stigma greater engagement with information relating to mental illness can be achieved.

Is intervention warranted for mental health knowledge?

It is again necessary to define whether adolescents in the present study can be said to have poor mental health knowledge. Clearly adolescents displayed lower levels of knowledge when compared to adults, but this is to be expected since adults have more life experience on which to base their understanding of mental illness. That adolescents have lower levels of mental health knowledge when compared to adults does not necessarily imply that adolescents have low knowledge of mental health.

Important in adolescence are facets of mental health knowledge relevant to mental health literacy, that is, knowledge and beliefs about mental illnesses which can aid the recognition, management, or prevention of mental illness (Jorm et al., 1997). This type of knowledge may be of particular use in adolescence due to the vulnerability of the adolescent period for the development of mental illness. In reference to this type of 'useful' knowledge, just under a third of the sample thought it was possible for individuals with severe mental illness to recover, with another third stating that they would know what advice to offer a friend in crisis. These results are somewhat similar to Scotland's "see me" campaign survey results, where one in three young people reported that they would know how to help a friend who reported feeling down all the time, 26% reporting they would know how to help a friend who

was deliberately cutting themselves, and 16% a friend who was hearing voices (Citigate SMARTS 2005a, 2005b, as cited by Myers et al., 2009). Though a third is by no means an insignificant percentage of the sample, it suggests that there remains a definite need for improvement in adolescent mental health literacy. For example, if young people do not know that it is possible to recover from severe mental illnesses then this may lead them to believe that seeking help is pointless, resulting in significant delays in receiving appropriate support. Similarly, adolescents are more likely to turn to friends if experiencing mental distress than younger children (Rickwood et al., 2007) and less likely to turn to primary care services than adults (Potts et al., 2001). This increases the importance for adolescents of feeling able and prepared to give advice to friends experiencing mental illnesses, and in particular, to encourage them to help-seek.

Adolescents in the present study were most likely to endorse neutral statements of 'don't know' or 'neither agree nor disagree' on the majority of questionnaire items suggesting a high level of uncertainty. Less than half of the sample recognised depression or schizophrenia as types of mental illness. Previous research has found that lay definitions of mental illness often differ from medical terminology, particularly with regards to depression, for example qualitative work with adults has found that depression is often viewed more as part of the emotional continuum of everyday existence, and less as an illness (Hogg, 2011).

With this in mind, and coupled with the fact that, as with adolescent attitudes to mental illness, it appears mental health knowledge may improve with age; is there really a need to intervene in adolescence and teach mental health knowledge? Again, there are a number of reasons why this would still be advantageous. Firstly, with regards to the differing definitions of mental illnesses such as depression from medical professionals and lay individuals, correct

labelling of mental illnesses may be associated with more appropriate help-seeking responses (Olsson & Kennedy, 2010; Wright, Jorm, & Mackinnon, 2012; Link & Phelan, 2010). This suggests that, within a population that is both more vulnerable to the development of mental illness and less prone to help-seek, identifying depression as a mental illness, rather than as a common facet of human experience, may be advantageous. Secondly, longitudinal studies estimate a one in two chance that an individual will experience a mental illness in their lifetime (Moffitt et al., 2010), thus educating young people about mental illness should be an important public health priority in the same vein as sex education or physical health education. Furthermore, although not every individual will develop a mental illness, due to its prevalence it is very likely that today's adolescents will come into contact with mental illness through friends, family, neighbours or future colleagues, even if they do not develop an illness themselves. Thirdly, research suggests that mental health literacy increase may result in improvements to individual mental health (Kelly et al., 2007), with a study by Naylor et al. (2009) finding that a mental health teaching programme designed to enhance adolescent students' understanding of mental illness also resulted in an improvement of conduct problems and pro-social behaviour. Due to the vulnerability of adolescence for the emergence of mental illness, anything which may lead to an increase in mental health during this developmental period must be viewed positively.

The relationship between mental health knowledge and attitudes to mental illness

Attitudes to mental illness and mental health knowledge were found to be correlated in the current adolescent sample, with those individuals with more positive attitudes also displaying higher levels of mental health knowledge. Previous research in adult samples has tended to

find a similar relationship (e.g. Reavley et al., 2012; Patterson et al., in preparation), however, the limited research into adolescent samples has been less conclusive. For example Wright et al. (2011) found that whilst correctly identifying a mental illness in a vignette generally was not associated with higher levels of stigma, neither was it associated with lower levels. As strategies to reduce stigma in young people may rest on the assumption that by increasing mental health knowledge it is possible to reduce stigma, it is important to understand more about the association between attitudes and knowledge in adolescent samples.

Current levels of adolescent emotional well-being and mental health

Just 3% of participants reported having a diagnosed mental health problem, however, the SDQ identified that 6% of the participants reported levels of difficulties high enough to be categorised as having a probable mental illness. It is possible that this discrepancy may be the result of the survey's self-report style, alongside the fact that the survey was completed within school grounds. It is possible that, despite the surveys' anonymity, participants failed to disclose that they had a diagnosed mental health difficulty due to fear of repercussions from either school staff or their peer group. On the other hand, many mental health difficulties do go undiagnosed, particularly among younger adolescents (Raman et al., 2007; Gonzalez-Tejera et al., 2005; Jick, Kaye, & Black, 2004). If this discrepancy is taken at face value, it suggests that up to 50% of young adolescents with probable mental health difficulties may not be receiving adequate support. This reflects the worrying trend found in research that whilst most mental health disorders begin in adolescence, many adolescent fail to receive appropriate treatment (McGorry et al., 2006).

In addition to the 6% of participants identified by the SDQ as having a 'probable' mental illness, a further 10.5% were identified as borderline or 'possible' mental illness, meaning that approximately one in six participants were experiencing significant levels of distress and difficulties. The results in the present sample are lower overall than Meltzer et al.'s (2000) original dataset using the SDQ, which found that 5.1% of young people aged 11-15 fell into the 'probable' mental illness, and 15.7% into the borderline or 'possible' mental illness category. This may be due to the relative youth of the present sample compared to Meltzer et al.'s slightly older participants, as research suggests that mental health decreases throughout adolescence (McGorry et al., 2006).

Previous research has found that during childhood and adolescence males experience slightly higher levels of mental illness than females, with females experiencing more emotional disorders, and males more conduct and hyperactivity disorders (Meltzer et al., 2000). The present research found the opposite pattern, with female participants reporting higher levels of mental distress on the SDQ than males. This may be related to the specific age of participants in the present study, as mental disorders such as depression have been reported to increase in females during early adolescence (Angold & Worthman, 1993).

Social defeat in adolescent populations

No effect of ethnicity was found on levels of mental distress in the present sample. Within adult populations, minority ethnic groups have been found to be at higher risk of mental illness (Doyle et al., 2012). The theory of social defeat (Selten & Cantor-Graae, 2007) argues that coming from a minority group increases vulnerability for the development of certain types of mental illness, as it is associated with increases in the amount of stressors which an

individual will have to face in their day to day life. Much of the research conducted into this area has focused on samples where White ethnicity was the majority group, with those from the minority group being of another ethnicity.

Recent research suggests that the theory of social defeat may not be applicable to adolescent groups, with a systematic review finding that Black African and Indian children appear to have lower levels of mental disorder and use of mental health services than White British children (Goodman et al., 2008). Whilst lower use of mental health services does not necessarily entail better mental health, this discrepancy is interesting, and is somewhat supported by the present findings, with participants from Asian and Asian British and Black and Black British ethnicities reporting non-significantly lower levels of mental distress compared to participants from White or White British and 'Other' ethnicities.

The relationship between mental ill-health and resilience

Weak to moderate correlations were found between 'resilience' and both pro-social behaviour and overall mental health. This adds support to assumptions underlying many mental health programmes, which aim to teach resilience skills as a means to improve mental health. For example positive psychology (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009) and Well-being therapy (Ruini, Belaise, Brombin, Caffo, & Fava, 2006; Ruini et al., 2009) both advocate teaching resilience skills in mainstream schooling as a way to promote mental health, and have had positive results using this method.

Weak correlations were found between emotional symptoms, hyperactivity, and peer problems. Von Soest et al. (2010) found that the personal factor of resilience correlated with internalising but not externalising symptoms. Similar results were found in the present study

as a negligible correlation was found between resilience and conduct problems, as well as with schizotypy. This suggests that although resilience-based mental health programmes may have an effect on overall mental health, and on some symptoms of mental illness, they may be less appropriate to programmes which aim to impact upon conduct or psychotic symptoms. By contrast, Naylor et al. (2009) found that their programme which aimed to increase knowledge of mental illness also reduced conduct problems and increased pro-social behaviour. This provides an interesting line of inquiry for future research.

Limitations

There are a number of limitations with the study which need to be addressed. Thornicroft (2006) suggests that there are three components of stigma; knowledge (ignorance) and attitudes (prejudice) and behaviour (discrimination). Of these, behaviour is hypothesised by Thornicroft to be the most important, as it is the most likely element of stigma to negatively affect individuals who experience mental disorders. The RIBs is a measure of attitudes towards future intended behaviours and so encapsulates some elements of both attitude and behaviour, however it must be recognised that *reported and intended* behaviours may differ from actual behaviour. The research also investigated the knowledge component of stigma through the use of the MAKs questionnaire. That the research investigated more than one element of stigma represents a strength of the project, however it must be noted that other aspects of stigma exist (for example concepts of dangerousness, unpredictability, or blame in attitudinal stigma) and the research is not necessarily generalisable to all aspects of stigma.

Only the personal construct of resilience was investigated. This was in part to ensure that the length of the questionnaire was kept to a minimum. The personal construct of resilience was

investigated as it has previously been shown to be correlated with symptoms of mental illness in adolescent groups (Hjemdal et al., 2011; von Soest et al., 2010). Personal disposition may be more easily manipulated than other factors of resilience (see Chapter 2, p12). It is therefore important that an in-depth understanding of associations between the personal construct of resilience and mental health is developed.

As evidenced by the relatively low alpha score, the MAKS is not intended to function as a scale. Knowledge of mental illness is likely to be multidimensional, and a high level of knowledge in one domain, for example recognition, will not necessarily entail a high level of knowledge in another domain, for example help-seeking (Evans-Lacko et al., 2010). The current study employed the MAKS to investigate responses to individual items, but compared overall scores between adult and adolescent samples. As the MAKS is not intended to function specifically as a scale it is important that in the interpretation of results it is recognised that although adults have higher levels of mental health knowledge, this does not necessarily imply that they have a higher level of mental health knowledge in all subscales of the MAKS (see Chapter 5, p148).

Finally, it is important to note that though participants were asked whether they had had previous contact with an individual who had lived experience of mental illness, the quality of this contact was not assessed. There are two potential issues with this, firstly, type of contact has been highlighted as important (Rusch et al., 2005). For example, if the contact is with an individual who *does* conform to the stereotypical view of mental illness, then this is unlikely to challenge any stigmatising attitudes a young person may hold, and may even help to reinforce them. Secondly, there is a risk of false positives where participants falsely believe that they know someone with a mental illness due to a lack of knowledge. For example,

previous research has shown that children and adolescents may confuse mental illness with learning disability or physical illness (Smith, 2004; Wahl, 2002). It is important that future research investigates the type and quality of contact that adolescents have with individuals who live with mental illness.

An a priori power estimation for sample size was not calculated prior to the survey data collection, suggesting the possibility that some of the analyses may be underpowered. This may be particularly true of analyses of ethnicity where the smallest ethnic group used in comparisons was individuals from a Black or Black British ethnicity (91 participants). On the other hand the sample size in the present research of 1109 participants appears fairly robust. A sample size calculation from Raosoft (http://www.raosoft.com/samplesize.html) estimates that for an Alpha of 5% / 95% Confidence level, with Beta set at 50%, just 377 participants would be needed. Similarly, for the same variables sample size is set at 384 by Macorr's sample size calculation tool (http://www.macorr.com/sample-size-calculator.htm).

Conclusions and implications

The current study found that adolescents report higher levels of stigma and lower levels of knowledge than adults, and suggests that educational interventions are warranted in adolescent populations. Additionally, ethnicity may impact upon levels of stigma in adolescent populations, implying that interventions may need to be tailored to different ethnic groups.

The research also suggests that strategies which aim to increase resilience such as self-help techniques may have some impact on mental distress with regards to emotional symptoms, hyperactivity, and peer problems, but less success with regards to conduct disorder

behaviours and schizotypy. As high levels of stigma and a lack of knowledge may also present barriers to help-seeking (Barney et al., 2006; Gulliver et al., 2012; Schomerus & Angermeyer, 2008; Yap et al., 2011) it is also important that these are tackled during early adolescence.

The present research found that knowledge and attitudes to mental illness were associated in a young adolescent sample. As both knowledge and attitudes are hypothesised to represent aspects of stigma (Thornicroft, 2006), and this was reflected in the questionnaire measures chosen, this finding is perhaps unsurprising. However it does suggest that educational interventions may have a positive impact on stigmatising attitudes relating to future intended behaviours and education may represent an effective strategy for intervention.

Intergroup or interpersonal contact with individuals who have experienced living with mental disorders may also represent a successful strategy for intervention. As widespread intergroup contact may be more difficult to facilitate than widespread education for adolescent populations (London & Evans-Lacko, 2010) it is vital that further, well designed research programmes investigate this possibility.

CHAPTER FOUR: ADOLESCENTS' CONCEPTION OF MENTAL HEALTH

INTRODUCTION

The research presented in Chapter 3 alongside previous quantitative work reported in Chapter 2 suggest that levels of adolescent stigma of mental illness are high and levels of mental health knowledge low. Policy documents cite child and adolescent mental health as a major target for development in research, as well as educational and clinical practice (Royal College of Psychiatrists, 2010; DoH, 2012). It is recognised that lay and professional views of mental health may differ and that health promotion initiatives must take this into account if they are to succeed (WHO, 1986; WHO, 2005). Despite this very little research has been conducted which investigates how adolescents conceptualise mental health, or what adolescents say they would like from services designed to inform them regarding mental health.

Previous qualitative research has investigated how adolescents view their overall health (Ott, Rosenberger, McBride, & Woodcox, 2011), the experiences of young people *with* mental disorders (Marcus, Westra, Eastwood, & Barnes, 2012), and the views of adolescents on their mental health education (Woolfson et al., 2009; Kidger et al., 2009) and services (Roose & John, 2003). Whilst a comparatively large body of research into adult attitudes and understanding of mental health and ill-health exists (e.g. Hogg, 2011; Economou et al., 2012; Olafsdottir & Pescosolido, 2011), little is known about how adolescents regard mental health, and whether they feel it is relevant to themselves, either as potential help-seekers or as help-facilitators who may be confided in and asked to help instigate the help-seeking process on the occurrence of mental health difficulties in their peers (Rickwood et al., 2007). This dearth

of research is particularly concerning due to the vulnerability of the adolescent period for the development of mental illness (Kessler et al., 2005), as well as the fact that adolescents are less likely to help-seek for mental health issues than other groups (Collins et al., 2004; Zachrisson et al., 2006; Slade et al., 2009; Potts et al., 2001)

Stigma and a lack of knowledge of mental health issues also represent significant barriers to help-seeking (Schomerus et al., 2009; Kelly et al., 2007), and are reported to be particularly high in adolescent groups (Scotland SM, 2004; Barney et al., 2006; Stuart & Arboleda-Florez, 2001). Chapter 3 suggests that educational programmes for adolescence which aim to reduce levels of stigma and increase mental health knowledge may be worthwhile, and certainly merit further investigation. Understanding how these attitudes are formed, maintained and influenced is vital for the success of educational programmes and health-behaviour directed policies intended to improve outcomes for youth mental health.

Knowledge of adolescent conceptions of mental health may also be an important consideration for both clinical and educational settings, in that they improve professionals' awareness into which questions to ask, and enable professionals to frame and discuss mental illness in appropriate and accessible terminology. Given adolescents' poor help-seeking behaviour (Collins et al., 2004; Zachrisson et al., 2006; Slade et al., 2009), such insights could enable improvements in engagement and the sharing of information and advice. Adolescents' willingness to seek and listen to advice, answer questions and provide personal information, particularly under the shadow of the stigma associated with mental illness, can be problematic (Yap et al., 2011) and young people may be more likely to positively engage with and consider advice offered by a professional who is capable of reflecting on the adolescent's own conceptions of mental health.

The current study aimed to gain greater understanding of how young people conceptualise mental health, and to investigate how they would like to receive further information on mental health topics. This chapter reports on adolescents' perceptions of mental illness and their views on information and knowledge regarding mental health.

METHOD

The research adopted a critical realism position (Willig, 1999), seeking to both make sense of the participants' experience of their reality, whilst also acknowledging the impact of society upon this reality. Due to the potential for being viewed as a mental health 'expert' by participants, the researcher maintained a passive role during the data collection, guiding and directing the focus of the interviews, but retaining a neutral presence. A semi-structured interview was used (Box 1) which allowed topics of interest to be addressed and for participants to introduce and discuss subjects they felt were important. Due to the age difference between the researcher and the participants (between 7-14 years), it was felt that participants might feel more comfortable in a group. Group interviews are discussed by Benner (1994) as grouping 2-4 individuals together in a safe space that encourages dialogue of 'stories' or experiences which might be lost in a larger focus group (e.g. 6-12 participants; see Liamputtong, 2011). The interviewer asks direct questions of the group, and there is less emphasis on interaction between participants. Other authors discuss the somewhat similar 'mini focus group' with Feltwell and Rees (2004) conducting mini focus groups of 2 individuals, and other authors suggesting that mini focus groups include 4-6 (Krueger and Casey, 2009) participants. These smaller groups, with the direction of the interviewer, ensure that each participant is given opportunity to voice their thoughts, to explore the issues raised in greater depth, and allow all participants to take an active role in the discussion.

The decision to conduct smaller group interviews, rather than larger focus groups, meant that

participants were given space to consider and clarify their own viewpoints and were able to

bounce ideas off each other as they would in a larger focus group (Kitzinger, 1995). However,

although this discussion was allowed to naturally occur, no emphasis was placed on group

discussion over the voicing of individual view points, and the interviewer directed questions

so as to allow each participant adequate opportunity to express their opinions. As the topic

under discussion had the potential to be sensitive for participants, smaller group interviews

allowed for the creation of a 'safe space' for dialogue as suggested by Benner (1994), with the

hope that participants felt more able to engage in the interview and explore their ideas

further, than if they had been part of a larger group.

Box 1; Interview Schedule

Focal points for group interviews:
Current perception of mental health, e.g.   - What do the words 'mental health' make you think about?   - What do you think mental health means?   - Prompts include; what was the first thing you thought of? Where do you think your ideas come from? What helped you develop your understanding?   Past perception of mental health and development of mental health framework, e.g.   - When did you first hear about or think about mental health?   - Do you have enough information about mental health?   - Where can you get information about mental health?   - Prompts include; what would you like to know about mental health? Have you been taught anything in school? What about information on stress/bullying/exams?   Mental health in young people, e.g.   - What sorts of difficulties or problems do people your age face?   - What do people your age do if they have difficult feelings or problems?   - If you were worried about a friend, and thought they might have a mental health problem, what would you do?

A topic guide was piloted with one school, and this resulted in the inclusion of engagement strategies (Box 2; Gibson, 2007) for children and young people. Participants and their parents gave informed consent prior to taking part in the study. The study was granted ethical approval by The University of Birmingham ethics committee. All group interviews were conducted by K.C.

Box two; Ice Breaker Games

Ice Breaker Games: Games lasted for approximately 10 minutes prior to the start of the interview schedule. Participants were encouraged by the researcher to elaborate on their answers and to discuss questions amongst themselves, to encourage a group interview dynamic.
1. *'Would you rather…' game.* Questions include: - Would you rather be invisible or able to read minds?   - Would you rather wrestle a lion or fight a shark?   - Would you rather be stranded on a deserted island alone or with someone you don't like?   2. *Throw a dice, answer a question game.* Participant roles a dice and then answers the corresponding question number from a sheet. Questions include: - If you had a time machine that would work only once, what point in the future or in history would you visit?   - What's the weirdest thing you've ever eaten?   - Who's your favourite cartoon character, and why?

Recruitment and sampling

Seven schools that had expressed an interest in taking part in a related schools project (Chisholm, Patterson, Torgerson, Turner, & Birchwood, 2012) were approached. All seven agreed to take part, but one later declined due to timetabling pressures. The six participating schools included an independent (fee paying) school, two grammar schools (exam entry), two comprehensive schools (open access), and a sixth form college (for students aged 16-18 only). Schools were chosen to represent a range of intake profiles and socio-economic statuses

(Table 1). In particular the schools chosen reflected the West Midlands school system (based on data available from Birmingham City Council, accessed 2009), as well as being broadly representative of schools across Britain in terms of including two different types of state school (comprehensive and grammar) as well as one independent school. The participants who took part in the group interviews represented the collective ethnic diversity of the schools (18 or 39% Asian or Asian British, 25 or 54% White or White British, 3 or 7% Black of Black British). The generalizability of the present research and of qualitative research in general, is discussed further in the discussion.

A total of 46 participants (22 female) took part in one of 12 group-interviews (Table 2), each lasting an average of 40 minutes. This was largely determined by the lesson time which schools were able to allocate to the research. Teachers were asked to select a broad range of students, and not just those who they thought might be more appropriate for the research. To reduce teacher bias (e.g. selecting students who would represent the school in a positive light) teachers were assured that school identities would remain confidential.

Table 1: Demographic characteristics of schools

| | School Type | Pupils with English second language* | Pupils with free school meals* | Ethnicity* | | | |
				South Asian	White	Black	Other
1	Girls only grammar school	23%	6%	45%	35%	10%	10%
2	Boys only comprehensive school	26%	30%	35%	47%	6%	12%
3	Boys only independent school	Data not available					
4	Mixed grammar school	15%	2%	16%	70%	1%	13%
5	Mixed comprehensive school	54%	42%	45%	26%	12%	17%
6	Mixed sixth form college	Data not available					

*Data available from Birmingham City Council, accessed 2009

No screening or assessment took place prior to the group interviews regarding students' knowledge, attitudes, or previous exposure to mental illness. At the start of the interview participants were informed that the research was to find out what they thought about emotional well-being and mental health. Due to the exploratory nature of the research no further explanations regarding mental health were given. Participants were left to themselves to discuss and define what they felt these terms might mean, and time was given at the end of the interview to discuss participants' questions. Gender differences in students' emotional needs and coping strategies (Magaya, Asner-Self, & Schreiber, 2005; Hjemdal et al., 2011) and reported difficulties for young adolescents discussing potentially sensitive topics difficult with members of the opposite sex present (Strange, Oakley, Forrest, & The Ripple Study Team, 2003), led to a decision to facilitate single sex group-interviews (Table 2).

Table 2: Characteristics of group interviews

Group Interview number	Number in-group interview	Age / gender	Location
G1	5	11-12 / female	On school premises in an empty classroom
G2	5		
G3	4	11-12 / male	On school premises in an empty classroom
G4	5		
G5	5		
G6	4	13-14 / female	After school hours in a participant's home
G7	4	15-16 / male	After school hours in a participant's home
G8	3	16 – 18 / male	In a meeting room, as part of a school visit to the University of Birmingham
G9	3		
G10	3	16 – 18 / female	In a meeting room, as part of a school visit to the University of Birmingham
G11	2		
G12	3		

Analysis

Group interviews were recorded and transcribed *verbatim*. A thematic analysis process (Braun & Clarke, 2006) was used involving line-by-line coding of transcripts followed by the identification and grouping of themes (figure 1). See appendix 1 for an example of coded text demonstrating the process.

Analysis and data collection coincided so that themes identified in earlier group-interviews could be explored more fully in later ones (Britten, Jones, Murphy, & Stacy, 1995). After the first three transcripts had been analysed a coding frame consisting of themes and sub-themes

was developed against which all subsequent transcripts were compared and analysed. Where a theme from a transcript did not fit with the existing coding frame, either a new theme was created or an existing theme adapted. Once all transcripts had been analysed the initial three transcripts were then re-analysed with reference to this new coding frame, and overall categories and sub-categories were finalised.

Data analysis took place as an inductive process where no attempt was made to fit the data into a pre-existing model. Reflexive memo writing and constant comparative methods were employed (Glaser, 1965), and negative case analyses was used at each stage to check that developing themes accurately represented the data (Onwuegbuzie & Leech, 2007). A subset of data was coded by P.P. and S.G. to check for inconsistencies and to lessen the impact of researcher bias.

Sandelowski (2001) discusses that qualitative researchers working within health science will often use numbers in order to be accessible to both scientific and humanistic criteria and to aid clarity in the presentation of their results. Sandelowski, along with other authors such as Hammersley (1992) suggest the use of numbers alongside or instead of statements such as 'most/some/a few participants' can make these statements more precise. On the other hand, other authors claim that the use of numbers in qualitative research is incompatible with the constructivist nature of qualitative methods (see Maxwell, 2010 for a discussion). The present author takes the view that each participant's viewpoint is important and worth discussion, regardless as to whether a view point was expressed by few or many participants. In certain places within the results section of this chapter numbers are given on how many participants expressed a certain view or had had a certain experience. This is to aid clarity for readers who may wish to compare the cohort interviewed in this study to other groups of young people, and to aid transparency. This is not intended to suggest that the views or experiences of the majority were more important than those of the minority, nor is it intended to claim representativeness of breadth of opinion in the same way that a qualitative survey would.
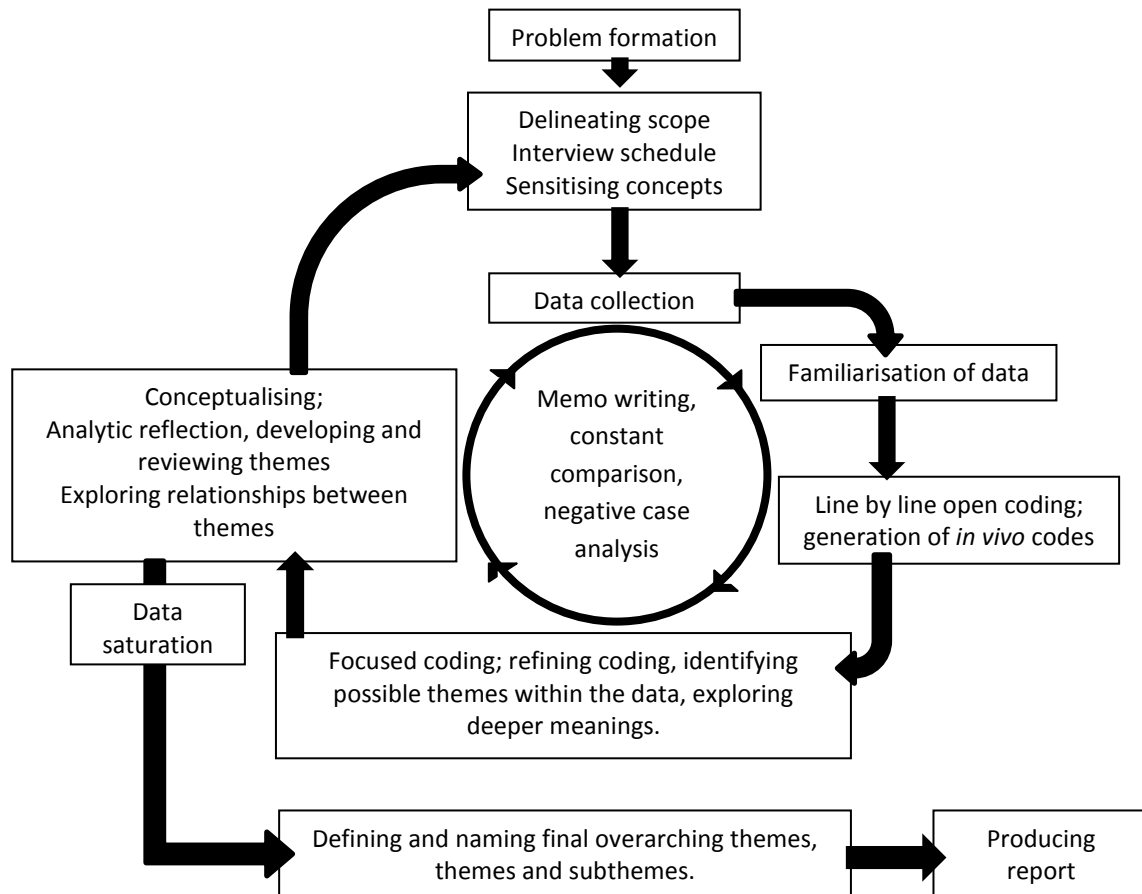
Figure 1: Thematic analytic processes used in the analysis

RESULTS

Four overarching themes were developed from the data; *Perceptions of mental illness*,

Information and knowledge, *Seeking help*, and *Adolescent development* (figure 2).

Perceptions of mental illness reflects the adolescents' conflicting experiences and perceptions

of mental illness, with participants attempting to negotiate the path between their own

experience of emotional and mental health and portrayals of 'craziness'. *Information and*

knowledge discusses the participants developing understanding of mental health and ill-

health, the lack of information readily available to the adolescents to develop this

understanding, the use of information to better understand their experiences, and the

adolescents' preferences for receiving information and knowledge regarding mental health.

Related to these, *Adolescent Development* reflects participants' discussion of the transition from childhood to adulthood, emerging identity and feelings of being judged or assessed; by peers, family, and the school system. The need to emerge from the adolescent period with adequate skills to navigate life, including a skill set relevant to mental health, was considered essential. Perceptions of 'craziness', a lack of adequate knowledge, and fear of negative judgement all fed into participants' thoughts regarding *Seeking Help* for mental disorders, the fourth overarching theme, and participants discussed issues such as confidentiality and stigma, the emotional and at times hormonal reactions of the adolescent period, and potential qualities of help-seeking options which might encourage or discourage help-seeking. Together, these four overarching themes formed an account of how adolescents in the study conceptualised mental health.

Two of these overarching themes, *Perceptions of mental illness* and *Information and knowledge*, were thought to be particularly relevant to the development of strategies aiming to reduce stigma and increase knowledge of mental illness, and therefore to this thesis. These themes are reported below. The remaining two overarching themes will be written for publication elsewhere. *Perceptions of mental illness* and *Information and knowledge* are examined in turn using quotes to reflect the issues discussed. Details of which group-interview each quote came from are given by group number as indicated in table 2 above and age. 'KC' denotes interviewer text and participants have been given pseudonyms.
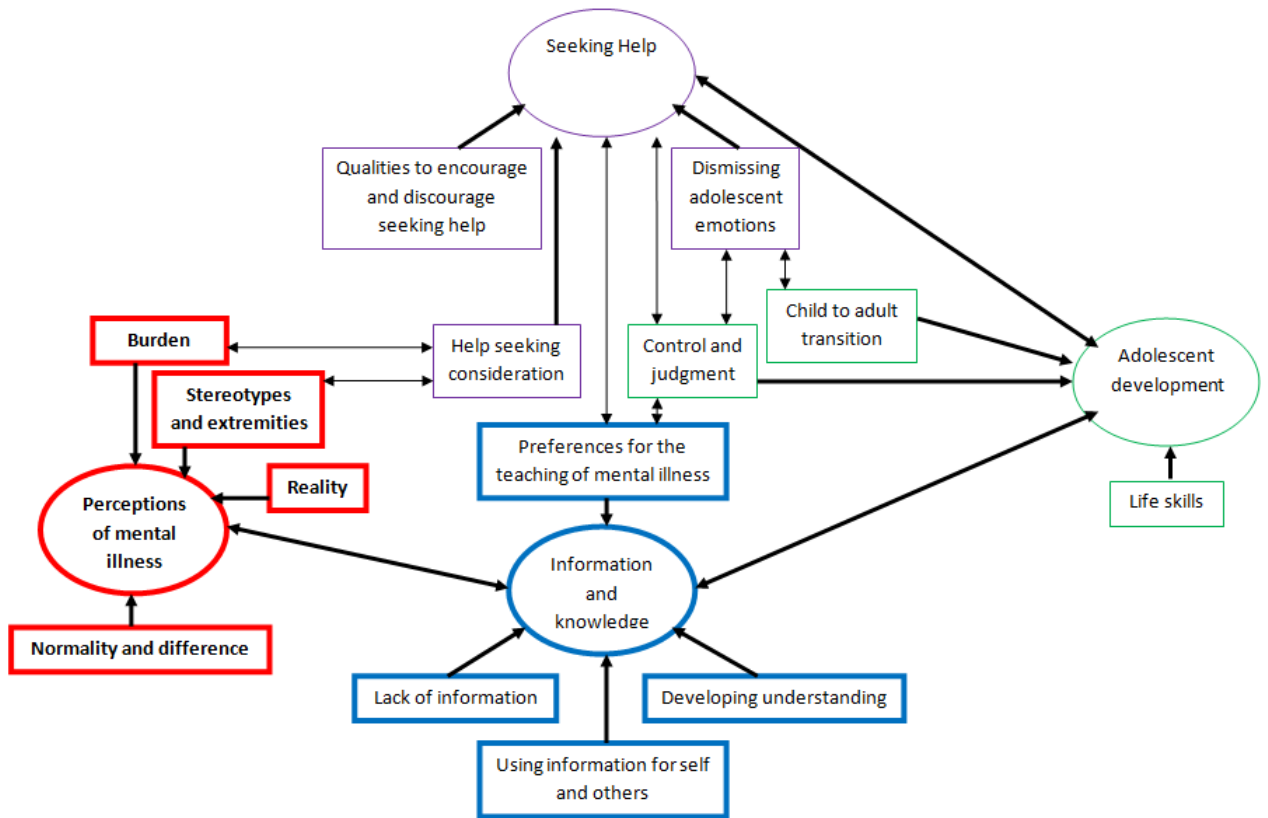
Figure 2: Adolescent conceptualisation of mental health

Perceptions of mental illness

Whilst the purpose of the group-interviews was to elicit young people's conceptualisation of

mental health, for almost all participants, mental health understanding was defined within a

framework of mental illness. Much of the content thus focused on participants' *Perceptions of*

mental illness as a recurrent overarching theme. The predominant themes within this

overarching theme were *Stereotypes and extremes*; *Normality and difference*; *Reality*; and

Fear.

A dual perception of mental illness was found (figure 3); participants discussed *Stereotypes*

and Extreme symptoms of mental illness, but also displayed an insightful and often

empathetic understanding of the ways in which stress and difficult life events can impact

upon individuals, based on their own *Reality* and life experiences. Attempting to make sense

of this dual understanding, participants created a distinction between individuals who are

'different' and those who are 'normal'; examined in the theme *Normality and Difference*.

Emotions of *Fear* and anxiety were associated with both perceptions.
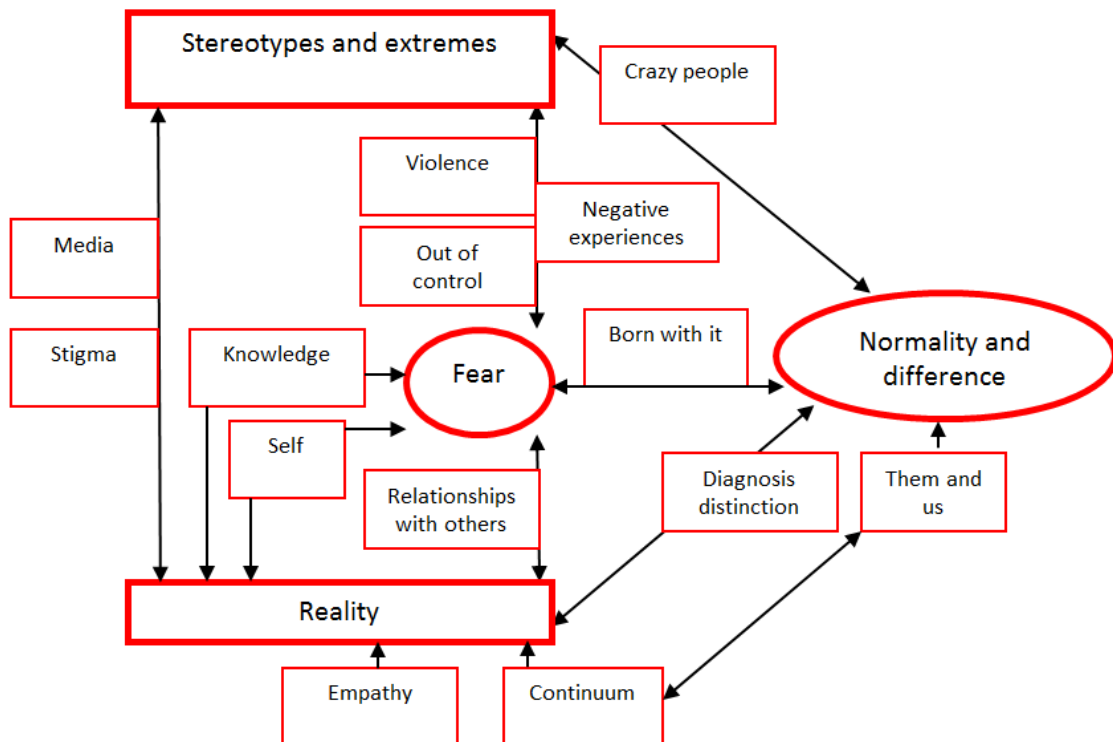
Figure 3: Overarching theme; Perceptions of mental illness

Stereotypes and extremes

Themes of *Stereotypes and Extremes* pervaded the group interviews. Highlighting how

images of stereotyped individuals and extreme examples of mental disorder permeated

perceptions of mental illness, the predominant response and initial reaction to the question

'what does mental health mean to you?' was associated with common negative stereotypes

(n=31/46) and notions of extreme illness (n=17/46). Extremes of symptoms, behaviours, and treatments were mentioned, with individuals who experience mental disorders presented as *aggressive*, *unpredictable*, and *out of control*. The extent to which some participants endorsed this viewpoint was displayed by comments stating that they would discontinue a friendship (G5; 11-12 year old males) or call the police (G4; 11-12 year old males) if they found out a friend had a mental illness. Other participants endorsed perceptions of craziness with less conviction, dependent on the participant's own experiences. Stereotypes were present however, even for participants with the most experience of mental illness. For example, despite disclosing experience of mental illness, Andy's initial thoughts when discussing mental health related to themes of *craziness;*

K.C: When I say mental health, what's the first thing that you think about?

Andy: Like I just thought the joker like straight away *(laughs)*

K.C: like batman?

Andy: yeah it's literally the first thing that popped to my head, the joker, weird.

K.C: in what ways is he like

Andy: he's just crazy, I guess mental health would be associated with crazy people

G9 16-18 year old males

Many participants had come into contact with individuals exhibiting behaviours which had been classified as *crazy*, and these personal *negative experiences* added to the negative stereotype of mental illness.

Danielle: last summer we were like walking down this road and then this like guy

Jenny: that was scary

Danielle: I think he was like drunk but also he seemed a bit strange

KC: yeah

Danielle: like, talking to himself and then he started

Jenny: screaming

Aminah: screaming

Danielle: like screaming at us

KC: yeah

Danielle: and then that kind of doesn't help like our view on mental people cos like when you see someone in the street you like kind of like walk away from them quick

G6 13 -14 year old females

Many of these experiences had not been discussed outside the peer group, leading to a view of mental illness that was at times somewhat one-sided; for many participants, individuals exhibiting odd or *bizarre behaviours* had come to represent what mental illness meant to them, even though under some circumstances the behaviour they described could potentially be differently attributed, for example to a fancy dress party, transvestism, or inebriation. In a vacuum of school or public health education regarding the symptoms of mental disorder, and with the influence of pop-culture stereotypes of madness, the *crazy* man screaming at the girls in the street had come to represent what they believed mental illness might be. Though these encounters with *crazy people* were presented as representations of mental illness, the participants were also reflective regarding their level of uncertainty regarding the construct of mental illness, and displayed an awareness of the relationship between stereotypes and *media* representations.

Hannah: I think about schizophrenia.

Debbie: Yeah I think about mental hospitals.

K.C: So [like

Hannah: more] extreme stuff

Debbie: Yeah

K.C: Why do you think it is that that's the kind of thing you go to straight away?

Debbie: In films and stuff you watch about a woman who has schizophrenia and they make it like really dramatic and then she goes to like a mental hospital and she like kills someone

G10 16-18 year old females

The participants also displayed a sophisticated understanding of the *stigma* to which negative stereotypes can lead. Participants were keenly aware of playground jokes and bullying, and of how *media* concepts of 'madness' fed into this; 'in horror films people are normally portrayed to have a mental illness' (G7 15-16 year old males). Participants' discussed that the words 'mental health' might mean something different in reality to the stereotypical way in which western society often uses them.

Amy: I think like if someone had mental health problems I think it's a bit like sad because in films people portray it as someone who's gone crazy or something whereas if you actually had them yourself you may not actually be like that at all you could be fine and not much different and think it's a bit... because from watching films that's what people think, it's like so when people actually are different like that I think it's a bit sad that people portray it like that because they may not actually be like that in films or...

K.C: what do you think it might be like in real life then?

Lilly: it's easy for people to be prejudiced to people who are like that

G1 11-12 year old females

Participants were aware that mental illness as *craziness* is a prevalent societal meme and described the idea of mental health (as opposed the mental illness) as an oxymoron (G6; 13-14 year old females). The word crazy was also seen as a potentially useful description of

certain types of behaviour, and one which has its place within the English language; 'I know it sounds horrible, but a good way to say it because then you know what they're talking about' (G6 13-14 year old females).

Reality

In direct contrast to perceptions of *Stereotypes and Extremes* was a perception of mental illness which related to the participants' understanding of mental stress and distress, including their own *emotional experiences* as well as the experiences of those closest to them. Many of the participants discussed close *friends* (n=8/46) and *family members* (n=11/46) with mental disorders. In a minority of cases participants' chose to disclose *personal experience* (n=2/46). These personal experiences had increased understanding and enabled them to 'empathise with them' (G9 16-18 year old boys).

> **K.C**: How do you think you kind of developed your own opinions about mental health though? Was there anything that made you think differently to the way you had before or?
>
> **Jess**: Erm I think personal experiences, because my mum's friend's got bi-polar and I thought all schizophrenics and people with bi-polar are gonna be absolutely mental, but I think my opinion changed because she's really hyper and not like that ill anyway
>
> G12 16-18 year old females

Personal contact with individuals with mental illness led away from perceptions that mental illness was something that only happened to people who were completely different or innately 'crazy'. Similarly, by discussing causes of mental illness participants moved away from a categorical 'them and us' or 'born with it' perspective to perceiving mental illness as something which an individual could both develop and recover from. Generally the life events which participants associated with mental illness tended to be acutely negative; 'if someone's

killed all your family' (G3 11-12 year old males). Some participants however, recognised that mental illness can result from less extreme situations; 'bullying and stuff, it can be lonely and that gives you mental imbalance' (G8 16-18 year old males).

Related to perceptions of development and recovery, and the idea that individuals can slip in and out of mental ill-health, the participants interpreted mental health and ill-health as a *continuum*, rather than just focusing on the extreme examples. This related to; type and severity of mental illnesses; 'some people could just have like a mild version' (G11 16-18 year old females); the range of mental health conceived in terms of everyday stress and the effect this has on emotional health; 'you're so stressed you don't think straight' (G6 13-14 year old females); and individual personality quirks or traits.

> **Debbie**: I think it's good to have really good mental health but everyone has traits of something. Like everyone's got a little bit of OCD or something. Like everyone's got little traits of things. I don't think everyone is completely perfect. I think everyone's got a little bit of something mentally maybe, a little bit of, but I think when it spirals out of control, when it takes over their life so much that it becomes like a big problem.
>
> <div align="right">G10 16-18 year old females</div>

With this more inclusive perspective mental illness was seen as relevant and as something which could potentially happen to the participants themselves. Participants discussed prevalence levels and this perspective helped to reduce stigma.

> **Ryan:** They can say "why have you got mental problems". They can't help it bla bla bla. If you take the mick out of them, then how do you know, how do you know you might not get mental problems when you're older.
>
> **K.C**: Yeah

Si: Yeah but kids aren't like that in this school are they?

Ryan: Yeah but that's this school. What about other schools?

K.C: Do you think kids in other schools might have mental health problems?

Ryan: Yeah loads of kids, all around the world.

G4 11-12 year old boys

Normality and difference

The two perceptions of mental illness, *Stereotypes and Extremes* of 'craziness' and the *Reality* of experiences of mental illness and ill-health, provided an incongruous and often conflicting picture of mental illness which participants attempted to reconcile. Distinctions were drawn; between '*them' and 'us*', between '*born with it' and 'developed*', and between '*crazy' and 'diagnosed'*. The distinction '*them and us*' emerged early in the interviews, and the idea that those with mental disorders were somehow 'not normal' or 'different' was revisited often by participants. This difference was seen as long term and contrasted with the idea of the mental health continuum discussed in the theme of *Reality* 'if you're mental then you're just mad all the time, but if you're emotional then you can wear off' (G4; 11-12 year old males).

A distinction between the idea that some are *born with* a mental illness, whereas others may develop emotional or mental health problems was also made. The perception of mental illness discussed in the *Stereotypes and Extremes* theme was often not conceived as something that could develop, but as something one was '*born with'*. This reduced levels of blame associated with mental illness 'if they're born with it, they can't help it' (G4; 11-12 year old males), however it also increased the distinction participants made between '*them and us'* with mentally ill individuals conceived as completely distinct from the participants. One interesting outcome of this was a rift between the idea of '*craziness'* and the diagnoses which

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the young people were aware of; where the participants had gained prior knowledge about mental illnesses and knew that individuals could both develop and recover from a disorder, instead of reconceptualising their understanding of mental illness they instead had often reclassified these disorders as something other than mental illness. This led to an interesting distinction drawn between the stereotyped view of mental health, and many common disorders.

Will: it just doesn't sound like a mental illness

KC: yeah

Will: because you weren't born depressed

Katie: yeah

Will: like it's not something that, like you don't come out depressed it's something you experience

G9 16 – 18 year old males

Aminah: you don't really think about the conditions which go with mental health I think you just think mental health is crazy

Jenny: yeah mental health is crazy and depression bipolar anorexia bulimia is they're all like they're all a different category

Danielle: I wouldn't like I never used to class them with mental health like if you're crazy you're mental and the others you're like ill

G6 13-14 year old females

Fear

Emotions of *anxiety* and *fear* were associated with both themes of *Stereotypes and Extremes* as well as themes of *Reality*. Associations between *Fear* and themes of *Stereotypes and*

Extremes were particularly prevalent for the younger participants and related to fear of individuals with mental illnesses; 'if there was someone mental in this school you'd be scared' (G4 11-12 year old males). Related to *Reality* themes of mental illness were concerns regarding mental illness in the participants *friends and family*, as well as a fear of *developing a mental illness*; 'I was scared by it, if it would happen to me or not' (G2; 11-12 year old females). Often, this was related to a feeling that developing a mental illness was predestined and entirely out of their control, a perception which relates to the *Normality and Difference* subtheme that some individuals with mental disorders are 'born with it'; this 'innate' quality of illness was associated with a perception of 'helplessness' in the face of its expression.

Mental illness affecting *friends and family* also caused worry, sometimes developing into a major focus of *anxiety* in participants lives. Many of the participants (n=26/46) discussed peers with mental disorders, and often reported feeling ill-equipped to deal with the emotional pressure which this sometimes entailed.

> **Rupa**: the way she was talking as well like she was going to do something like she was going to overdose again or something like that and it was really scary because it was like what, like I can't sit in class and just think she will be okay because she is gonna be alone at home she could do anything
>
> G11 16-18 year old females

Participants reported often being the first people to whom friends experiencing mental illnesses turned, with a consequent increase in perceived pressure and anxiety. Such apprehensions, of individuals with mental disorders, of developing a mental illness, and of supporting friends in mental distress, were ameliorated for those young people who felt that they were equipped to deal with such situations by having the *knowledge* to cope.

Information and Knowledge

A second overarching theme which ran throughout the interviews reflected topics of *Information and Knowledge*; participants discussed information available to them and the ways in which this was lacking, as well as how a *lack of information* impacted upon their *developing understanding* of what mental health and ill-health might be. Participants discussed why this lack of information was problematic in relation to their ability to use information to better *understand themselves and others*. These three themes then fed directly into participants' *preferences for learning* more about mental health and ill-health (figure 4).
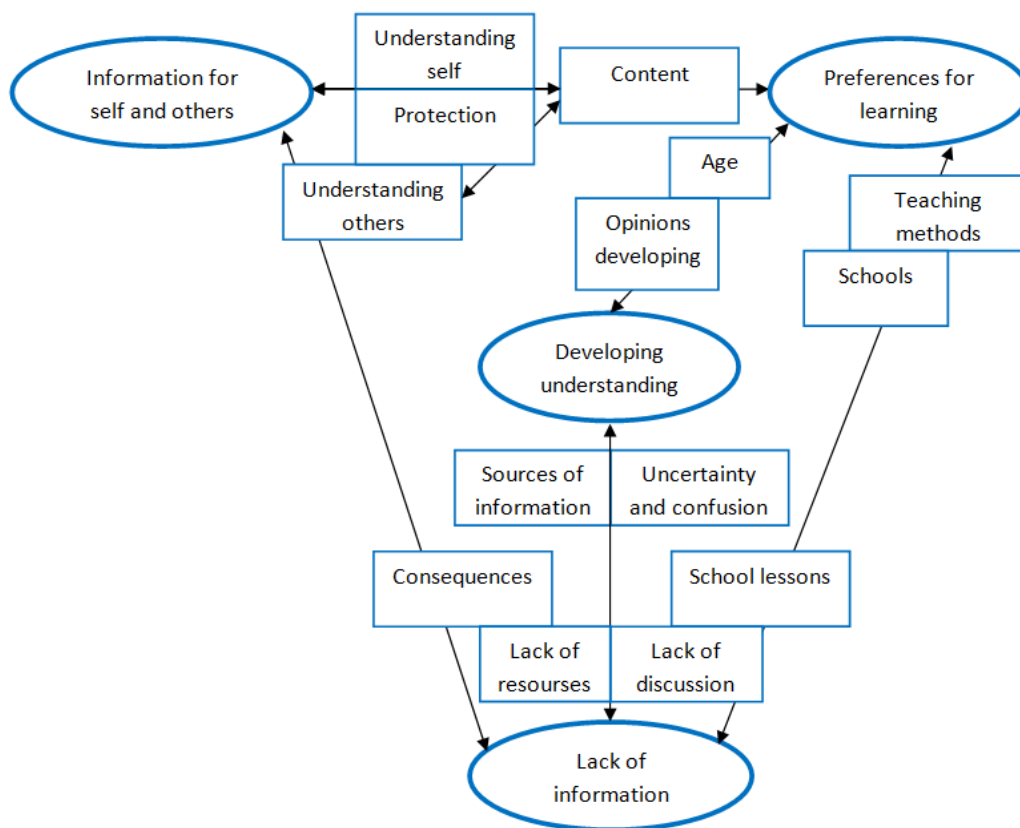

Figure 4: Overarching theme; Information and knowledge

Lack of information

A lack of information regarding mental health issues was a recurring theme throughout several of the group-interviews. Many of the participants reported that they had rarely been spoken to about mental health issues. In some of the youngest age groups participants reported that the group-interview was the first time anyone had discussed mental health with them. This *lack of discussion* was prevalent even for those participants who had experienced mental illness themselves. Andy, who spoke about having sub-clinical psychotic experiences when younger, discussed the lack of information given to him about his own experiences.

KC: what about information from places like parents, media, um TV adverts, NHS, that kind of stuff do you think that would be useful?
Andy: I really don't know about doctors because when I was little you just go in there, they talk to your parents mainly, they'd look at you and see what was wrong and the next thing you know you're out there taking pills

<div style="text-align:right">G9 16-18 year old males</div>

This *lack of resources and discussion* was at times so extreme that when participants were asked where they had developed their ideas regarding mental health the group-interview was cited by 4 out of the 5 groups aged 11-12, despite the fact that the researcher did not answer questions on mental health until the group-interview session had finished and so the only information the participants were getting was from each other. The vast majority of the participants felt that the mental health education they received in *school lessons* was either inadequate or non-existent; 'It's almost like it's a subject that's avoided in school' (G7 15-16 year old males). Where mental health was addressed in schools participants often did not feel

<div style="text-align:center">116</div>

it was useful or relevant to their lives, that it was 'dumbed down' or not presented in as serious a light as it should be, that it was too brief, or that it was overly authoritative;

KC: So do you know much about the actual illnesses [or

Danielle: Um I] think I know what some of them are but we don't really learn

Jenny: [Yeah

Danielle: About] them

Jenny: We learn about anorexia and bulimia like you [shouldn't get

Aminah: And pregnancy]

Danielle: And that's it

Jenny: Yeah it's like "don't get too skinny, don't get too fat, don't get pregnant, don't have sex"

Lucy: Yeah it is like every single year

Aminah: Pressure

Lucy: It is like this thing telling you not what to actually do, it's just telling you what not to do

<div align="right">G6 13-14 year old females</div>

This theme of inadequacy regarding school lessons endured even when participants discussed mental health education which was potentially grounded in good mental health practice, with participants describing potentially helpful techniques for dealing with stress as 'useless'. This suggests that the worth of these techniques was somehow 'lost in translation', perhaps having been explained inadequately to the participants or poorly demonstrated, leading to them being dismissed as pointless or ineffective.

Sarah: Like breathing techniques, but no one's going to listen to that.

KC: Have you ever used a breathing technique?

Sarah: No.

Laughter

Sarah: We all know how to breathe

The participants also discussed many of the *consequences* which a lack of information can lead to. These consequences included personal distress, the bullying of those labelled 'mentally ill' by their peers, the development of stigmatising or discriminatory attitudes in themselves and their peers, and not knowing how to help those around them who experience mental illness. For example, Lucy, who had previously discussed experiencing extreme mental distress after breaking up with her boyfriend, encompassing many of the symptoms of depression, described how not receiving information on mental illness can make 'you feel more alone' (G6 13-14 year old females). The participants felt that many of these consequences, such as bullying, were not acknowledged by the adults in their lives, as they were not witnessed by them;

> **Andy:** I think we had an autistic kid and she just acted crazy so we just saw it as a joke in a way because you were too young to know what it was really, you thought she was just crazy**,** you thought it was her
>
> **KC:** did you like, did the teachers talk to you about it at all [or
>
> **Andy:** no] they didn't the teachers just ignored it because I don't think we did it in front of the teachers or anything
>
> **KC:** yeah
>
> **Andy:** so I think because of that and because we didn't get caught I don't think they explained it to us or anything like that

Developing understanding

The *lack of information* which participants felt was available to them was also apparent when participants discussed their *developing understanding* of mental health and ill-health; through their own discussion of their opinions emerging and developing through new experiences, and through their *uncertainty and confusion* on the topics discussed. The younger age groups in particular asked questions of each other and the researcher throughout; 'do all of them look the same?' (G5 11-12 year old males), 'can it be spread?' (G5 11-12 year old males), 'does it just affect how you can behave?' (G2 11-12 year old females). There was also a *confusion* in younger participants between mental and physical/intellectual illnesses and disabilities, with 'dyslexia' (G1; 11-12 year old females), 'epilepsy' (G2; 11-12 year old females), 'high blood pressure', 'homelessness', 'cancer' (G3; 11-12 year old males), 'people with sign language' (G4; 11-12 year old males), 'downs syndrome', 'heart attacks', 'stroke', 'diabetes', 'dyspraxia', and 'in a wheelchair' (G5; 11-12 year old males) all being cited as possible types of mental illness.

Participants discussed how awareness of mental health often began in primary school 'calling each other mental' (G7 15-16 year old males) and then continued to grow throughout adolescence. *Sources of information* which added to the young peoples' awareness and understanding of mental health included media resources such as films, TV, and the news, as well as 'what your friends tell you' (G12 16-18 year old females), and occasionally, discussions with parents. Media influence on participants understanding of mental illness was often present from a very young age, and, as discussed in the overarching theme of *Perceptions of Mental Illness*, was often negative.

Mia: it was like a rabbit getting like really angry, I think it was Bugs-Bunny I don't know why

KC: Yeah

Mia: But um I thought that he like had mental illness, … I thought that was kind of scary because they really freaked me out when I watched it

KC: What kind of things was he doing which made you think he had a mental illness?

Mia: Um his eyes just went really weird and a bit of like you could see his veins and stuff

G2 11-12 year old females

In contrast, other resources, such as parental discussion or school education, tended to come later when participants were slightly older, resulting in the lack of resources discussed in the theme *lack of information*. Often parental discussion was very limited, or only in reference to an acquaintance who had been diagnosed with a mental illness. This meant that first impressions of mental illness were often felt by participants to be ill informed.

Information for self and others

One way in which information and knowledge about mental health was considered particularly important was in terms of participants' ability to *understand themselves* and *understand others*. Many of the participants felt that knowing if other people had a mental illness could help their relationship with that person, particularly in terms of issues relating to blame and responsibility for behaviours which were out of character for the individual, relating to themes of consequences in the *lack of information* theme; 'you can often think badly of someone if, if, you don't know that they do have something wrong with them' (G7 15-16 year old males). On the other hand, participants also discussed how knowing too much about any one person's mental health without feeling able to access available support could also create difficulties, and could lead to the feelings of *fear* and *burden* discussed in the

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Perceptions of mental illness overarching theme. This again reflected the notion that supporting peers through experiences of mental ill-health could be rewarding but could also lead to personal distress in cases where the participants did not feel they had appropriate knowledge, skills, or support.

Knowledge of mental illness was also considered relevant by participants in terms of their own mental health. Many of the participants pointed out that mental illness was something which might affect them personally and felt that more information was therefore important. This related both to the development of severe mental illness, but also to the continuum of mental health and ill-health discussed in the theme *reality*; participants expressed an awareness that emotional health was not only important to those who experience severe mental illness and knowledge of mental and emotional health was viewed as an important life skill.

Information was also considered as offering the potential to *protect* oneself and loved ones through knowledge regarding help-seeking; 'you would know like how to get them help' (G1 11-12 year old females); as well as something which might provide protection from individuals with a mental disorder, again linking to feelings of *fear* discussed in the *Perceptions of mental illness* theme. Knowing how to react to someone in crisis without escalating the situation was considered important. This was on a personal level in terms of their relationships with peers and acquaintances, but also in terms of more extreme examples.

> **KC:** do you think that mental health is a good thing to know about?
>
> **Lilly:** I think it is because we recently went on a field trip and while we were there we saw a monument and this person came into a school the Shetlands and he um these, uh there were like I think maybe 16 five year olds were killed in the disturbance but because one teacher down the hall

they heard it and so she got everyone all of her kids to go under the tables and um I think that's good that she knew about it and knew about what could of happened so she acted quickly.

Preferences for the teaching of mental illness

All of the themes within *Information and Knowledge* fed into participants *preferences for the teaching of mental illness*, and many of the participants had strong views on why mental health topics should be taught in schools, the ways in which lessons should be taught, and what lessons should cover. *Schools* were thought to be an appropriate arena for mental health education for a number of reasons. Participants felt that, left to their own devices, many adolescents would not choose to educate themselves about mental ill-health in their spare time, and that therefore classes in schools were needed to ensure that all adolescents had a basic understanding of mental health.

> **Jon**: if it's taught to them when they have to be taught about it, then, then they're listening to it, it's, because if you tell them to, like, look it up in their own time then that's less likely to happen.
>
> G7 15-16 year old males

Participants also felt that under some circumstances school was more appropriate than parental guidance due to the differing levels of knowledge of their parents; 'if it hasn't been taught to us then it probably, my mum, it won't have been taught to them. So it just goes on, a whole generation of people not knowing what they're talking about' (G7 15-16 year old males); and differing cultural beliefs about mental illness;

> **Rupa**: There's] like a lot of parents who won't know about it from the start like for example like Asian families, like my relatives, their parents they won't have a clue about these things

Ruth: I'm sure they would know more

Rupa: Like my parents would, they're like born and bred British but whereas like my aunt and uncle like they're from Bangladesh

G11 16-18 year old females

Most participants felt that mental health topics should be taught from the beginning of secondary school. Only a minority of participants felt that education on mental health should begin earlier than this and most of these considered early education to be important only because children may have contact with individuals with mental illnesses from a young age, 'if their parent is really depressed or something' (G10 16-18 year old females), rather than considering that children themselves may be vulnerable to developing mental disorders. Interestingly, the participant who advocated the youngest *age* at which mental health education should begin in schools; 'year three' (age 7-8 years; G9 16-18 year old males); was Andy, one of only two participants who stated that they had been diagnosed with a mental illness. Just 1 participant thought that mental health education shouldn't be taught in schools.

Participants thought that it was important *teaching methods* be interactive and suggested role play and websites as two possible ways in which to do this. Another way in which participants felt engagement could be increased was via the individuals who taught the session. External speakers who had expertise in mental health were seen as holding potential for increasing interest in the lesson, and participants were also aware that their teachers might not have sufficient knowledge of mental health themselves to teach lessons on the subject. Another group with expertise mentioned by participants were individuals with personal experience of mental illness. These individuals were seen as a particularly useful

resource in terms of finding out how to help or behave around individuals with mental illnesses.

> **Jo**: I think you should like get somebody that's experienced in what it feels like to have mental issues like come and speak to you about it because they might tell you like how you should act and what you can do to help

> G1 11-12 year old females

In terms of lesson *content* some participants felt strongly that using language such as 'emotional well-being' rather than 'mental health' was patronising. Additionally, participants felt that if 'child-friendly' language was used, rather than terms such as mental illness or schizophrenia, then the serious nature of the message might fail to be relayed.

> **Aminah**: When you get to an age like this people often under estimate your maturity but I think people should just give it to you bluntly because if you beat around the bush and don't get straight to the point I think it kind of masks the true message
>
> **Lucy**: … if you treat us more like adults you know it's like serious where as if they treat us like little kids then it's not such a serious problem I think

> G6 13-14 year old females

Participants felt it was important that lessons be relevant, for example, covering diagnoses 'that people tend to suffer from regularly or usually' (G8 16-18 year old males); or which were most likely to affect their age group. In addition they felt it was important to explain fully the differences between categories such as stress and other negative emotions and what might be considered a diagnosable mental disorder; 'what's normal and what isn't' (G2 11-12 year old females).

Themes of protection were also relatively common when discussing what the adolescents would like to be taught, linking in with the previous themes of *fear* and *using information for self and others*. These themes addressed protection from those with mental illnesses,; 'what to do if someone come up to you and if they were a bit, not scary, but a bit out of control' (G1 11-12 year old females); but more generally were centred around the topic of protection from developing mental illness in one's self. Despite often discussing mental illness as something which only happened to others, as discussed in the *Normality and difference* theme, the participants also discussed the ways in which mental illness was something which might affect them, and participants were interested in being taught more about prevention; 'how could you kind of avoid mental conditions' (G8 16-18 year old males); development; 'what makes them start' (G4 11-12 year old males), help-seeking; 'what help you can get' (G1 11-12 year old females); and the recognition of early symptoms of mental illnesses. In addition, participants felt that *content* should cover issues such as stigma and discrimination. Many of the participants felt that misconceptions of mental illness and the prejudice which this can lead to should be addressed from a young age; 'so we get rid of those prejudices against people, sufferers from mental health' (G8 16-18 year old males).

DISCUSSION

The vast majority of adolescents in this study had relatively sophisticated perceptions of mental health and ill-health, and felt that mental health was an important topic currently lacking from their education system. Participants described a dual perception of mental illness. The first of these perceptions revolved around stereotyped images of 'craziness' and focused on extreme examples of illness. In contrast, the second perception displayed a sophisticated understanding of mental health and ill-health based upon the participants' own

life experiences and the experiences of those closest to them. Attempting to negotiate and reconcile these conflicting perceptions of mental illness a series of distinctions were made; between them and us, between born with and developed, and between crazy and diagnosed. The adolescent sample also discussed negative emotions which related to both perceptions; a fear of individuals with mental health problems, of developing a mental illness, and of lacking the ability, skills, and knowledge to help those they knew who experienced severe mental distress. The adolescents displayed an understanding regarding the importance of unbiased knowledge and information relating to mental health and expressed frustration at the lack of discussion surrounding mental health issues. Participants felt that this lack of information impacted upon their understanding of themselves and others, as well as upon their emerging understanding of mental illness, and considered that mental health education was important.

Context and implications

Previous quantitative research has suggested that adolescents hold relatively stigmatising attitudes toward mental illness (Scotland SM, 2004; Barney et al., 2006; Stuart & Arboleda-Florez, 2001). The present research amplifies this body of work by suggesting that although *initial* reactions from participants related to negative stereotypes, further discussion revealed this to be unrepresentative of the true level of understanding for all but a small minority; participants were willing and able to engage in in-depth and insightful discussion regarding mental distress and from this *Reality* perspective mental illness was conceived as relevant and prevalent. One possible reason for this contrast in findings is that previous quantitative research is likely to have captured similar initial 'reflex' attitudes to mental illness, but missed the opinions participants subsequently expressed. Consistent with previous research (Morgan & Jorm, 2009a), a common subtheme associated with the development of more

discriminatory themes was the media. The adolescents in this study reported that they were uncertain of media-promoted stereotypes, but that media representations were often all they had available to gain information from. Consequences of this *Lack of information* were also discussed, with almost all participants stating that mental health education should be present in schools to a greater extent, echoing participants from Kidger et al. (2009) who reported a current lack of adequate mental health education in schools.

One interesting outcome from the distinctions which participants drew in the *Normality and Difference* theme was a conception of mental illness which differed from traditional medical models. Participants did not always categorise disorders such as depression within the boundaries of mental illness. Instead, these disorders were seen as part of an emotional continuum ranging from 'happiness' to 'distress', and an individual might travel this continuum, without ever presenting with a mental disorder. This is consistent with previous qualitative work within adult populations, which found that adults associated depression with social and environmental causes and as a normative element of human existence, rather than as a pathological illness (Hogg, 2011). The vast majority of research into fearful emotions in relation to mental illness has focused on fear of individuals who live with mental disorders (Fresan et al., 2012), calling for an increase in mental health education to reduce perceptions of dangerousness (Reavley & Jorm, 2012). Whilst the present research found that adolescents reported fearful reactions to individuals who experience mental illness and expressed a wish to receive education relating to this to enable their *Understanding of others*, fear and anxiety were also reported relating to the development of a mental illness, and having adequate skills and knowledge to support a friend or family member in crisis, and many of the participants' *Preferences for learning* centred around these themes rather than relating solely to a fear of those with mental disorders. This suggests that mental health

education may have some potential to reduce fears associated with mental illness which are unrelated to perceptions of *Stereotypes and Extremes*.

Participants who had access to contact with individuals with experience of mental disorders reported that this had enabled them to develop more understanding and knowledge that reduced their reliance on media representations. There is a growing body of research which advocates the use of contact as a means to reduce adolescents' stigma of mental illness (Yamaguchi, Mino, & Uddin, 2011; Allport, 1954). Previous qualitative research however, has had somewhat conflicting results with regards to the teaching of contact in educational settings. Kidger et al. (2009) found that participants were in favour of external speakers and rejected the idea that school teachers should lead sessions on mental health. On the other hand, Woolfson et al.'s (2009) participants reported a preference to be taught by someone who was familiar to them. Participants of the present study felt that contact, both with those who experience living with mental illness as well as with mental health professionals, would be a useful method for increasing engagement in school lessons as well as gaining further insight into mental illness. It may be that both methods are applicable, and that by combining external speakers with familiar teachers, engagement can be maximised.

Recent estimates suggest that as many as one in two will experience a mental illness during their lifetime (Moffitt et al., 2010) and discussing with adolescents whether they know anyone with mental illness may help direct the conversation away from stereotypes and instead frame the conversation within the theme of '*reality*', and help to normalise discussions. Similarly, information about recovery may help young people to examine their dichotomous understandings of mental health and ill-health. The current research also highlights the importance of including environmental or 'biopsychosocial' explanations of

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mental illness rather than only biological explanations (Yamaguchi et al., 2011) as these appear to encourage adolescents to consider mental illness as on a continuum rather than a dichotomy, and were more in line with adolescents' actual views of mental health. Adolescents in the present study were also more able to conceive of mental illness as relevant to them from this holistic viewpoint.

A challenge, for policy makers and those wishing to hold meaningful discourse about mental illness with adolescents is whether or how to divorce societal use of words such as 'crazy', from understanding of mental illness. Participants in the present study drew strong links between the term 'mental illness' and derogatory terms such as 'crazy', whereas many of them were far less stigmatising with regards to individual diagnoses, and expressed an interest in the inclusion of lessons which aim to reduce stigma as well as to increase knowledge of mental health. Anti-stigma programmes may have more impact if discrete disorders such as depression, bi-polar, or schizophrenia, or the symptoms of these disorders are targeted, rather than more generic terms such as 'mental illness', something which has also been suggested by Reavley and Jorm (2011b). Similarly, for educational programmes aiming to increase knowledge, discussion of 'stress' or 'pressure', and again, of specific disorders and symptoms, may prove more acceptable to adolescents than general statements about mental illness and emotional well-being, which are more likely to invoke themes of '*stereotypes and extremes'*.

Parents, and other adults, may feel that they wish to protect young people from negative aspects of life, such as mental illness, but young people's understanding of mental illness and 'craziness' is already being shaped from a young age by media resources and even cartoons, as discussed in the theme *Developing understanding*. This implies that it may be important that

young people receive education regarding mental illness from a relatively early age in order that stereotypical presentations generated by the media do not become entrenched. The research also suggested that without adequate knowledge and information resources regarding mental illness, young people may feel a considerable burden when dealing with their own and their peers' mental health difficulties, as well as having anxieties about individuals with mental health disorders in their wider neighbourhoods. Mental health education in schools could thus play an essential role in the lessening of these anxieties.

Strengths and limitations of the study

The present research captures an in-depth understanding of adolescents' perceptions of mental illness, which adds to the (mainly quantitative) research already existing into adolescent attitudes. It is possible that the stigma which surrounds mental health may have caused some suppression of participants' views due to the group interview format. The methodology however, allowed participants to 'bounce' ideas off each other and develop their opinions (Kitzinger, 1995). This was felt to be important, particularly as some participants reported never having discussed mental health topics before.

It needs to be acknowledged that, though chosen to come from a range of backgrounds and school systems, the adolescents who took part in the research are not representative of all adolescents. It is important that the research is placed within its context as capturing a snapshot of reality. This does not necessarily mean that the experiences of the adolescents who took part in this research are not generalisable or reflective of the experiences of adolescents from elsewhere in the UK or other similar nationalities. The experiences which had shaped the adolescents' perceptions of mental illness were not specific to Birmingham,

and media influences (Owen, 2012), challenges to school-based mental health education (Weist & Murray, 2008), and rates of mental illness (The Office for National Statistics, 2001; National Institute of Mental Health, 2013; Alonso & Lepine, 2007) are similar in many westernised nations. Qualitative research also places a high level of interpretive trust in the researcher. Care was taken to minimise bias, through the research techniques outlined in the analysis section above and additionally including reflexive memo-writing, negative case analysis, and constant comparative method, which are common techniques to ensure validity and reliability in qualitative research. Quotes given enable the reader to develop an account of the trustworthiness of the data, and details are given regarding the participants who took part in the research allowing the reader to assess the generalisability of the research findings.

Conclusions

Very little prior research has investigated how adolescents from the general population conceptualise mental health. The last qualitative research on this topic was over a decade ago (Secker, Armstrong, & Hill, 1999), during this time society and attitudes have likely changed, and an accurate understanding of how adolescents perceive mental illness and interpret these perceptions to form conceptions of mental health is vital to inform stigma and discrimination research, policy decisions, and for the creation of appropriate educational and clinical resources. With adolescents' poor levels of help-seeking (Collins et al., 2004; Slade et al., 2009), a better understanding of how they perceive mental illness may enable the improvement of care pathways, for example through public health campaigns designed specifically for adolescent populations. The current research informs these areas in a number of ways. Regarding the application of the present findings to public mental health campaigns, the study adds support to the growing body of research which advocates the use of contact

with individuals who have lived experience of mental illness to reduce adolescents' stigma (Yamaguchi et al., 2011). It also has important implications for health and education professionals involved in communicating with young people regarding mental illness; discussing with adolescents whether they know anyone with mental illness may help direct the conversation away from stereotypes and instead frame the conversation within the theme of '*reality*', helping to normalise discussions. For clinicians working with young people experiencing mental illnesses, discussing any prior contact they may have had with individuals who experience mental illness may help to reduce the negative impact of self-stigma.

As well as utilising contact, public mental health and anti-stigma campaigns may be more effective if discrete disorders or symptoms are targeted, rather than more generic terms such as 'mental illness'. Participants in the present study drew strong links between the term mental illness and derogatory terms such as '*crazy*', but were less stigmatising regarding individual disorders. The current research also highlights the importance of including environmental or 'biopsychosocial' explanations of mental illness rather than only biological explanations (Yamaguchi et al., 2011) which may confer themes of '*born with it*' which in turn were linked to conceptions of '*craziness*'. Adolescents in the present study were also more able to conceive of mental illness as relevant to them from this more holistic viewpoint. Similarly, when discussing mental health with adolescents it may be preferable for clinicians to discuss specific disorders rather than using the more generic term of mental illness, as this may increase adolescents' fear of 'becoming crazy'. By contrast, disorders were seen as something that an individual could develop, and importantly, recover from, and therefore may be more acceptable to young people seeking help or advice from health professionals.

CHAPTER FIVE: DEVELOPMENT, METHODOLOGY AND ACCEPTABILITY OF THE SCHOOLSPACE RESEARCH PROJECT

OVERVIEW

The rationale, background, and main findings from the active intervention 'SchoolSpace' are reported in Chapters 6 and 7, respectively focusing on stigma, knowledge, and well-being outcomes. Though treated separately for clarity, these findings all emerged from the same study. The development, methodology, and acceptability of the SchoolSpace project are therefore discussed in this chapter to avoid repetition.

INTRODUCTION

There are a number of different reasons why schools are thought to be one of the most promising areas for interventions related to mental health. Schools give unparalleled access to a group who are not only known to be highly vulnerable to the development of mental disorders (Kessler et al., 2007), but who have higher levels of stigma, lower levels of knowledge, and are less likely to help-seek (Collins et al., 2004; Zachrisson et al., 2006; Slade et al., 2009; Potts et al., 2001). Schools reflect the respective communities of an area, in terms of culture, ethnicity, wealth and deprivation, so young people within communities and ethnic groups who are traditionally considered 'hard to reach' can be accessed with comparative ease. It also means that interventions can be targeted to reflect the needs of individual communities.

A randomised controlled trial design was employed with two conditions: an experimental condition which included contact with a young person with lived experience of mental illness as well as education (contact and education), and an active control condition, with education but no contact (education alone). In the main trial measures were taken 2 weeks prior to the intervention, and 2 weeks post-intervention. In the six month follow-up measures were again taken 6 months post-intervention. The intervention was designed in accordance with CONSORT guidelines (Altman D.G., 1996; Altman D.G. et al., 2001).

Randomisation protocol

Random allocation took place at the level of school, with blocking used to randomly stratify classes to different conditions. Random allocation was independent and concealed, and undertaken by an individual independent of the research team after pre-test. A computer programme was used to randomise classes, working on the basis that if there were an even number of classes then an equal number of classes went into each condition, if the number of classes was not divisible by two then the larger number went into the contact and education condition. For example, if there were three classes then one would be allocated to the education alone condition and two allocated to the contact and education condition.

SAMPLING AND SCHOOL CHARACTERISTICS

Inclusion criteria

Schools: Schools in Birmingham UK were selected to represent the diversity of the region and were approached based on the following criteria:

- Type of school; independent (fee-paying), grammar (exam-entry), comprehensive (open-access)

- Socio-economic profile including percentage of pupils with free school meals

- Intake profiles including ethnicity, gender, and percentage of pupils with English as a second language

- Geographic location; representing north, east, south, and west Birmingham.

Participants: All students in year 8 (age 12-13) from the selected schools were approached to take part in the research.

Rate of attrition estimate

It was anticipated that none of the schools would be lost to follow-up. A self-generated code was used (see _confidentiality_, p152) to match participants over time and to condition which has a reported 92% success rate (Galanti et al., 2007). Pinfold et al. (2005) experienced an 81% response rate post-intervention for a similar intervention conducted with adolescents. A similar 20% loss, combined with an 8% loss of participants due to errors in the production of the self-generated code, therefore produces an expected loss post-intervention of around 30%. It was also anticipated that participant absences on days when data was collected would cause some loss of participants at follow-up. To minimise this schools were given at least a week to collect data.

Power size estimation

An intra-cluster correlation coefficient (ICC) estimate provided by Aberdeen University's Health Services Research Unit (Aberdeen University: Health Services Research Unit, 2010)

of 0.037 was assumed, with a cluster size of approximately 30 students per class. Depending on the size of the included schools, with an average year group size in Birmingham of 165 students (data from Birmingham City Council, accessed 2009) it was calculated that inclusion of six schools would allow an estimated 990 participants to take part in the research. With the estimated rate of attrition at 30% this gives an estimation of approximately 693 participants required, allowing for detection of an effect size between 0.3 - 0.4 (see appendix 8 for power calculation).

School Characteristics

Six schools took part in the main trial intervention. Two of these six schools took part in the six-month follow-up (schools 1 and 2). In one school students from year 7 (age 11-12) instead of year 8 took part due to administration error in the school which led to a double booking (school 5). Demographic characteristics of participating schools can be seen in Table 1.

Table 1: Demographic characteristics* of schools

	School Type	Students aged 5 - 15	Students with English second language	Students with free school meals	Ethnicity South Asian	White	Black	Other
1	Mixed comprehensive school	1288	9%	22%	9%	79%	4%	8%
2	Girls only grammar school	668	23%	6%	45%	35%	10%	10%
3	Mixed comprehensive school	798	18%	54%	8%	65%	14%	13%
4	Boys only comprehensive school	611	26%	30%	35%	47%	6%	12%
5	Girls only comprehensive school	635	78%	48%	71%	3%	19%	7%
6	Boys only grammar school	622	23%	4%	28%	59%	4%	9%

*Data available from Birmingham City Council, accessed 2009

School mental health provision:

Existing mental health provision (table 2) was discussed with a teacher from the welfare team, personal social health economic education - PSHE, or head of pastoral care within each school (for further details see appendix 6).

Table 2: existing mental health provision of schools

School:	1	2	3	4	5	6
Qualified counsellor			☑	☑		
School Mentors who offer counselling	☑	☑			☑	☑
PSHE / lessons on mental health	☑	☑		☑	☑	☑
Support for vulnerable students	☑	☑	☑	☑	☑	☑
Classes or groups for vulnerable students				☑		
Behavioural support services					☑	☑
General staff training (i.e. not just well-being staff)				☑		☑
Other	☑		☑	☑	☑	☑

PROCEDURE

Stage 1: development of the intervention

The intervention was developed utilising the results reported in Chapters 3 (first 344 responses to the survey) and 4, by a planning group of the author, Dr Paul Patterson and consultant psychiatrist Dr Erin Turner in collaboration with teachers and service-users, with additional educational resources evolved from the work of Dr Gary O'Reilly (www.Peskygnats.com<http://www.Peskygnats.com provide a CBT workbook and a CBT computer game played in-session by young people with their therapist free of charge; O'Reilly, 2004) and the Staffordshire Changes Young Peoples mental health programme (Changes, 2010). Intergroup contact modules in the intervention were designed in collaboration with current and past users of mental health services (see appendix 3 for an account of contact modules).

As can be seen in figure 1, stage 1, intervention components for content and delivery were developed from previous research, as well as research findings from surveys and focus groups (Chapters 3 and 4). The intervention was piloted in one school, discussed below. For a full description of each of the intervention components and lesson plans see appendix 2.

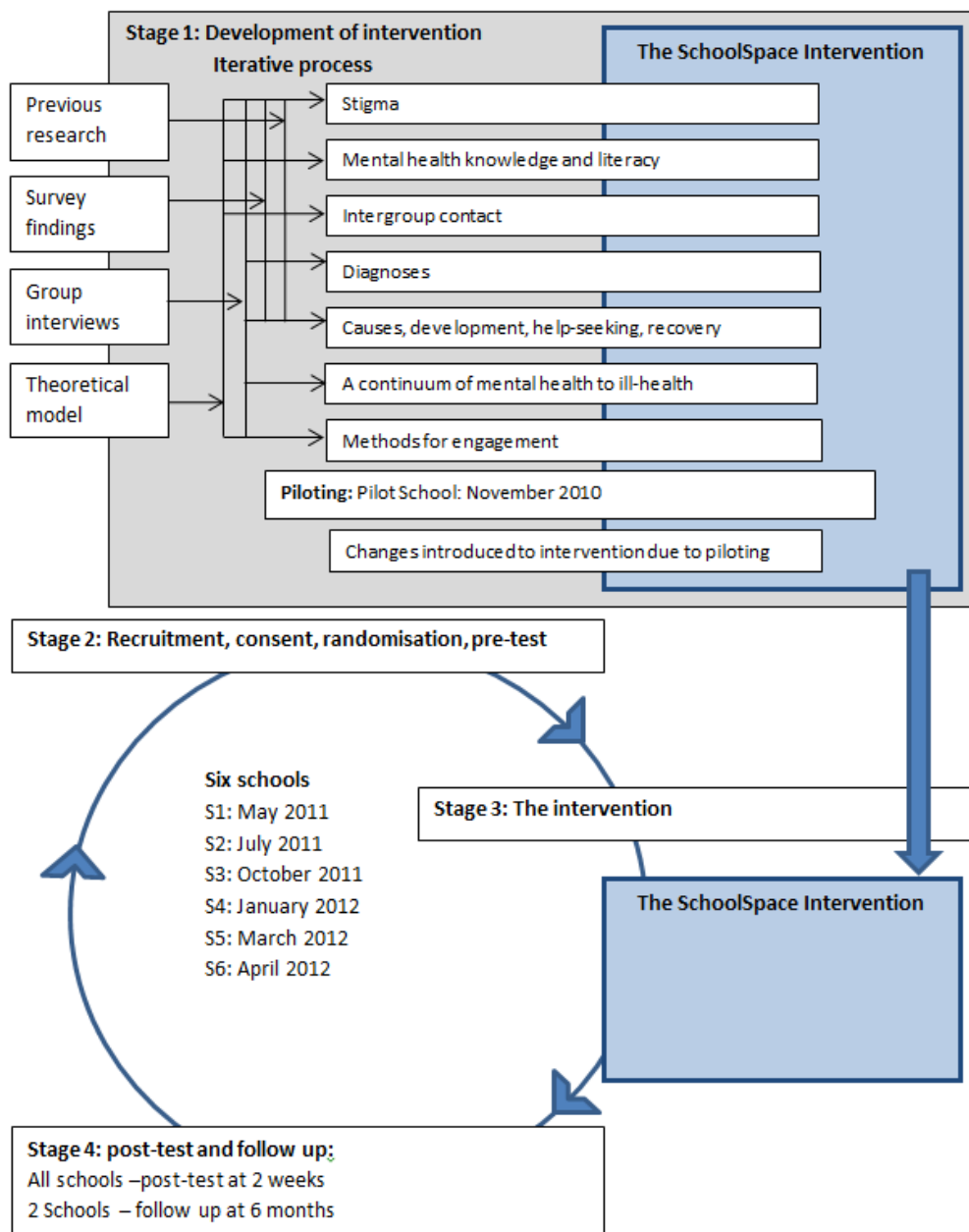Figure 1: Development and Procedure of the SchoolSpace Research Project

Theoretical underpinnings of the intervention

Interventions designed around conceptual models may show increased efficacy (Beadnell, 2007). Despite calls for educational interventions on stigma of mental illness in adolescent groups to be a priority (DoH, 2012; Royal College of Psychiatrists, 2010), until recently no

relevant conceptual model existed. As the approach taken by Pinto-Foltz and Logsdon (2009; Figure 2) represents the only existing model (to the authors knowledge) to demonstrate a reduction in mental illness stigma in adolescent populations, this model was utilised to guide the development and implementation of the SchoolSpace intervention.
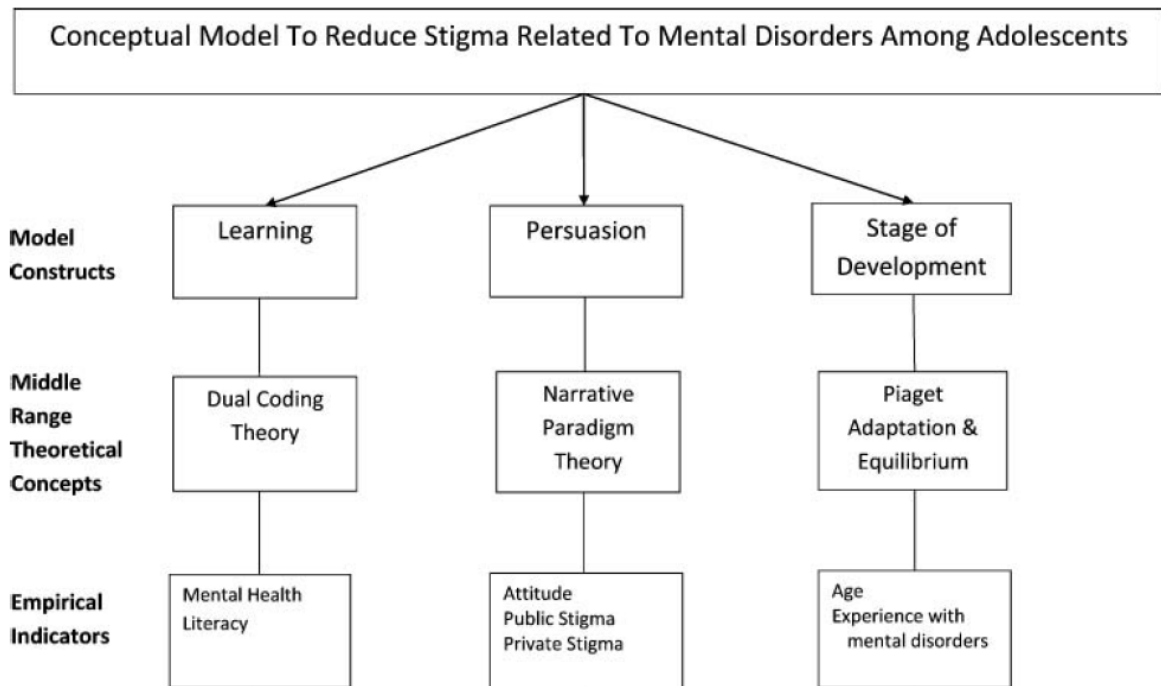
Figure 2: Conceptual Model to reduce stigma-related to mental disorders among adolescents. From Pinto-Foltz and Logsdon (2009)

Developed in reference to the 'In Our Own Voice' intervention programme (Pinto-Foltz & Logsdon, 2009; Pinto-Foltz et al., 2011) the model is constructed with reference to theories from the fields of education, communication, and child development, respectively utilising Paivio's (1986) Dual Coding theory, Fisher's (1987) Narrative Paradigm theory, and Piaget's (1972) Adaption and Equilibrium theory. Paivio's (1986) dual coding theory posits that individuals learn best when they receive both visual and auditory information, and guides the learning aspect of the model. This suggests that interventions which utilise visual and

auditory information combined, such as film clips, and visual worksheets or presentations, enhance intervention capabilities. Narrative paradigm theory (Fisher, 1987) asserts that persuasive communication occurs through the telling of stories or narratives, whereby new narratives are judged to be likely true or false in reference to their consistency with prior narratives. The narrative paradigm theory suggests that 'storytelling' relating to an individual's experiences of mental illness, from onset, through pathways to recovery, to future expectations, can enhance the experience and engagement of participants. Given the intergroup contact element of the SchoolSpace intervention, the narrative paradigm theory seems particularly salient and adds support to the inclusion of a 'contact story' in the intervention. Piaget's (1972) Adaption and Equilibrium theory conceptualises that it is during adolescence that individuals develop the ability to introspect, to think logically and to think about abstract concepts. Important to the interventions timing, is the hypothesises that 'first stories', or narratives which are heard earlier in the life span, may be particularly persuasive or important in relation to later beliefs or opinions (Schrag, 1991). As mental health conceptions develop throughout childhood and adolescence (Corrigan & Watson, 2007; Office of the Deputy Prime Minister, 2004; Flavell et al., 2001; Hinshaw & Stier, 2008; Wahl et al., 2007) providing at least some 'first stories' on mental health which are accurate and compelling during early adolescence may be particularly important. In agreement with the views of participants reported in Chapter 3, this suggests that the SchoolSpace intervention might best be conducted with younger adolescents, in their first or second year of secondary school (age 11-13).

Piloting

The intervention was piloted in one school to assess practicality, timing, level of pitch, and suitability of materials for the target age group. Classes were randomised to the contact and education condition and education alone conditions. Procedure of the pilot intervention is identical to that of the main feasibility trial. Demographic characteristics of the pilot school are presented in table 3.

Table 3: Demographic characteristics* of pilot school

School Type	Students aged 5 - 15	Students with English second language	Students with free school meals	Ethnicity South Asian	White	Black	Other
Mixed comprehensive school	922	89%	63%	74%	4%	18%	4%

*Data available from Birmingham City Council, accessed 2009

Pilot feedback led to the decisions to include 2-4 facilitators rather than one, to refine the afternoon to include more movement and interactive activities, and to reduce the length of the questionnaire.

Stage 2: Recruitment, consent, randomisation, pre-test

Secondary schools in Birmingham UK were approached regarding participation in the research. Care was taken to ensure that schools represented a diverse range of socio-economic, geographic, and demographic factors (see Sampling, p134). Once a school agreed to participate, 'opt out' consent letters were sent to parents of students in participating age groups. These allowed parents at least two weeks to withdraw their child from the research.

Pre-intervention questionnaires were completed 2-3 weeks prior to the intervention during registration. Teachers from the school oversaw completion of the questionnaire, following a set of instructions for teachers (appendix 4). Students for whom parental consent had been gained indicated whether they also assented by checking a box on the survey after information on the front of the survey was read out by the teacher. This information stated that the survey was voluntary and that students could choose not to complete questions or subsections. Participants were also informed that there was a prize draw for £25 worth of vouchers for those students taking part in the research. Participants generated a code (Galanti et al., 2007) on the front of each survey, which was used to match individual's responses over time and to the condition that the participant was randomised. Teachers were given at least a week to collect survey data. Class randomisation to condition took place after pre-test (see *randomisation protocol*, p134).

Stage 3: The intervention

Interventions may be more successful if they are delivered over time. Spence and Shortt (2007) observe that one would not expect to teach everything a child needs to know about mathematics over a one day period, and suggest that a developmental curriculum which spans multiple time points throughout a young person's education may be more realistic. Wells et al.'s (2003) systematic review supports this theory, finding that interventions which took a long term approach to the teaching and promotion of mental health were more successful. There is need, however, to balance teaching mental health topics under ideal circumstances, with the practical consideration that schools have many other curriculum requirements. The current feasibility trial incorporates a simple one-day intervention (a

common way in which schools address PSHE requirements), with the expectation that the intervention will be expanded for evaluation in the future, should it prove to be successful.

Participants were taught within their usual classes. A days training and workshop notes were provided for all individuals facilitating the intervention prior to the day to ensure fidelity of implementation. Additionally, one class per condition, per school was assessed for fidelity between conditions and schools with a pre-developed checklist on the intervention day (appendix 7). For details of the intervention see appendix 2.

Stage 4: Post-tests

Approximately 2 weeks post-intervention surveys were completed again by participants. A six month follow-up also occurred in two schools.

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ACCEPTABILITY OF THE INTERVENTION

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Acceptability of the intervention, including method of delivery and content, was assessed in one school (school 2, see p136-137). Students who had attended the intervention day (either condition) took part in two short group interviews (Benner; 1994) which were recorded and transcribed verbatim. Participants reported finding the intervention highly acceptable. In particular, the use of intergroup contact, interactive methods of delivery, and expert and friendly presenters were praised. Areas suggested for improvement were ensuring language and explanations were clear and appropriate, making sure time was allowed for class discussion, more information on help-seeking avenues, and more information on violence in mental illness. Quotes are presented in Table 4 and highlight participant views.

Table 4: Quotes highlighting participants' feedback on the intervention

Positive elements	
Intergroup contact	"The talk with Camilla was the most helpful thing because it was like, you probably like, you probably weren't ever going to talk to a mental um person like someone who's actually been there, done that kind of thing. So you probably won't get the chance and like if like it was good cos then you knew what people go through" "A stereotype of a crazy person, um someone with a mental illness is someone who's crazy, speaks nonsense, but she looked really normal. So that just goes to show that people with mental illnesses are normal, but in their own way"
Presenters	"They were very like straight to the point and they didn't over exaggerate it either" "They were chatty, they didn't just read off the board, they spoke to you like not in a boring way just didn't waffle" "They didn't scare you but they made you understand"
Interactive elements	"I liked the videos because they were effective and they actually showed you what people can do" "I liked the true and false one where you had to see where, cos you were still learning then, but like without having to just sit there. it gets you more interactive so you feel like you're actually taking part in that" "I liked the drama as well because it was like um it was almost like, cos we were doing stress and I think Mika, cos I was Mika in one of them, Mika was stressed, so you kind of like, you learnt what stress is actually like"
Areas for improvement	
Language and explanations	"In the end, they kind of kept saying what is normal and I couldn't really put my finger on it – is everyone normal? Is no-one normal? And it really like made my brain fuzzy, it's really hard to think straight. I did find it useful, it was just really difficult" "I didn't find it, the drama bit boring because it was really funny watching it, like everyone in the class watching, but the bit afterwards because it, it used words that I didn't understand like 'bodily language'"
Time for discussion and questions	"I found that we just got loaded on with information more than discussed it"
Help-seeking	"More on what you could do if you like did have mental illness because you could see a doctor or you could er go on this website to get help but they didn't really tell us anything else that we could do"
Violence	"What triggers them to be dangerous?"

Primary outcome measure

Stigma of mental illness: Future intended behaviours towards individuals with mental illnesses

The Reported & Intended Behaviour Scale (RIBS; Evans-Lacko et al., 2011) assesses intended behaviour related to the stigma of mental illness. The RIBS takes approximately 1-2 minutes to complete and rates participants' current and past experiences (e.g. 'Are you currently living with, or have you ever lived with, someone with a mental health problem?'), as well as their future willingness to have contact with individuals who are experiencing mental illness (e.g. 'In the future I would be willing to live with someone with a mental health problem'). Only the later questions generate the participant's final score, with higher scores indicating more positive attitudes relating to intended future behaviour towards individuals with mental disorders. Within adult groups the RIBS has a test-retest reliability of 0.75, and Cronbach's alpha for items 5-8 (those which generate the participants final score) is 0.85.

Developed in 2011 the RIBS has been used in nationwide (Evans-Lacko et al., 2011; Department of Health, 2011) and regional adult populations (Patterson et al., in preparation), as well as being used to evaluate the National Anti-Stigma campaign 'Time to Change' (Evans-Lacko, Rose, Henderson, & Thornicroft, 2010). At the time of writing, the RIBS had not yet been utilised with adolescent populations. Due to this, the measure was discussed for inclusion suitability with teachers and it was decided that the language utilised in the questionnaire was age appropriate. The use of the RIBS within the study has had the added benefit of allowing comparisons to be drawn with national and regional adult samples

(reported in Chapter 3). In the research reported in Chapter 3 it was found that within adolescent populations, the RIBS has a Cronbach's alpha of 0.85 for items 5-8.

Of Thornicroft's (2006) three components of stigma; attitudes (prejudice), behaviour (discrimination), and knowledge (ignorance); the majority of school-based interventions focus on the attitudinal component of stigma, though some have also focused on knowledge (see Chapter 2, p 36). Very few interventions have investigated behavioural outcomes of interventions, in a large part because behavioural outcomes are far more difficult to measure than attitudes or knowledge. This represents a drawback, as changing an individual's understanding of stereotypes, their knowledge, or their attitudes, does not necessarily entail change in behaviour (Tolomiczenko, Goering, & Durbin, 2001; Rickwood et al., 2004; Schulze et al., 2003). Ultimately, behavioural outcomes may prove to be more important that attitudinal or knowledge components of stigma, particularly from the perspective of the group who are discriminated against (Schachter et al., 2008).

Schachter et al. argue that at important outcome measure of school-based interventions should be 'behaviour which can be observed under naturalistic conditions' (p10; 2008). One way of indirectly measuring the behavioural component of participants' stigma combines both attitudinal and behavioural components of stigma, by asking participants how they believe they will behave in the future, as per the RIBS. This doesn't live up to Schachter et al.'s proposition that the measure should be 'behaviour which can be observed under naturalistic conditions'. Nonetheless, the question of whether interventions impact upon the behavioural component of stigma is an important one, and attempts should be made to capture it, even in the presence of drawbacks with the measurement techniques.

Secondary outcome measures

Knowledge of mental illness

Knowledge of mental illness was assessed in two ways; the Mental Health Knowledge Schedule (MAKS; Evans-Lacko et al., 2010) and two vignettes developed by Jorm et al. (1997).

The MAKS assesses six areas of stigma-related knowledge: help-seeking, recognition, support, employment, treatment, and recovery, and takes 1-2 minutes to complete, with higher scores indicating a higher level of knowledge. The MAKS has a test-retest reliability of 0.71 and has been extensively reviewed by experts. The MAKS Cronbach's alpha is moderate at 0.65 (items 1-6). This is largely due to the fact that the MAKS is not intended to function as a scale; individuals may have different levels of knowledge based on different domains. A similar Cronbach's alpha of 0.49 was found in the adolescent population in the survey study (Chapter 3, p66).

Since its development in 2010 the MAKS has been used with nationwide and regional adult populations (Department of Health, 2011; Evans-Lacko et al., 2010; Patterson et al., in preparation) as well as to evaluate Time to Change (Evans-Lacko et al., 2010). The MAKS has not yet been utilised in adolescent populations. Due to this discussions were held with teachers to discuss age appropriateness of language used in the measure for adolescent populations.

The two vignettes designed by Jorm et al. (1997) describe individuals who meet ICD-10 (World Health Organization, 1993) and DSM-IV (American Psychiatric Association, 1994)

criteria for major depression (John) and schizophrenia (Peter). Participants read these vignettes and were asked 'In the above story do you think John/Peter has…'. Participants then chose from answers; 'depression', 'anxiety', 'psychosis or schizophrenia', 'drug addiction', or 'no mental health problems'. Participants were given a score of 1 if they identified the correct mental disorder and a score of 0 if they selected another answer.

These vignettes as well as others developed by Jorm's research group in Melbourne have been widely used in mental health literacy research with adult and older adolescent populations (Yap, Reavley, & Jorm, 2012b; Yap, Reavley, & Jorm, 2012a; Reavley & Jorm, 2012; Kermode, Bowen, Arole, Pathare, & Jorm, 2009) as well as in younger adolescent populations (Reavley, Yap, Wright, & Jorm, 2011). The vignettes were included in the present research to add a further dimension of knowledge to the stigma-related knowledge questionnaire of the MAKS, with the inclusion of mental health literacy related knowledge, i.e. recognition of symptoms of mental illness.

Emotional well-being and mental health

Emotional well-being and mental health were assessed using two questionnaires; The Strengths and Difficulties Scale (SDQ; Goodman et al., 1998) and The Schizotypal Personality-Brief Form (SPQ_b; Raine, 1991; Raine & Benishay, 1995).

The SDQ consists of 25 items which generate scores along five subscales: conduct problems (e.g. 'I get very angry and often lose my temper'), hyperactivity-inattention ('I am restless, I cannot stay still for long'), emotional symptoms ('I get a lot of headaches. stomach-aches or sickness'), peer problems ('I am usually on my own. I generally play alone or keep to myself'), and pro-social behaviour ('I try to be nice to other people. I care about their feelings'), as well

as producing a total difficulties score. The SDQ has been validated for use with adolescents age 11 – 16 with a Cronbach's alpha of 0.82 for the total difficulties scale (Goodman et al., 1998). Higher scores on the SDQ indicate lower levels of mental health. The SDQ has been used extensively in existing adolescent literature.

The SDQ also provides an algorithm which classifies individuals as emotionally well ('healthy'), vulnerable to mental illness ('borderline'), or emotionally and mentally unwell ('abnormal'). This allowed for comparisons to be made between the sampled population in the survey study (Chapter 3) and the UKs 10% average of mental health problems in adolescents (Meltzer et al., 2000).

The SPQ_b assesses three subscales relating to schizotypal thinking; cognitive-perceptual deficits, interpersonal deficits, and disorganisation. It takes approximately 2 minutes to complete, has an internal reliability of 0.76, a test-retest reliability of 0.90, and has been validated for use with adolescents (Fonseca-Pedrero, Paino-Pineiro, Lemos-Giraldez, Villazon-Garcia, & Muniz, 2009). Higher scores on the SPQ_b indicate higher experience of schizotypal thinking. Together the SDQ and SPQ_b allow a broad spectrum of potential mental health difficulties to be captured.

Resilience

Resilience was measured using a 15 item (Neill & Dias, 2001) version of Wagnild and Young's (1993) Resilience Scale. Questions assess the personal competence aspect of resilience (e.g. 'My belief in myself gets me through hard times'; see Chapter 2, p12 for discussion of resilience). Concurrent validity is supported by correlations between the Resilience Scale and measures of depression, morale, and life satisfaction and the scale has reported Cronbach's

alphas of between 0.72 – 0.94. The Resilience Scale has been used previously with adolescent populations (Black & Ford-Gilboe, 2004; Rew, Taylor-Seehafer, Thomas, & Yockey, 2001; Hunter & Chandler, 1999; Neill & Dias, 2001). Higher scores on the resilience scale indicate a higher level of personal disposition resilience. The resilience scale was selected for use in this thesis due to its previous use in adolescent samples and its short length.

Attitudes to help-seeking

Attitudes to help-seeking were assessed by the question 'In the next 12 months if you were to experience a mental illness, how likely are you to seek help?' with the possible answers of 'definitely', 'very likely', 'likely', 'not sure', 'unlikely', 'very unlikely', and 'definitely not'. Higher scores indicate a greater willingness to help-seek.

ETHICAL CONSIDERATIONS

The study was granted ethical approval by The University of Birmingham ethics committee in June 2010 (reference number ERN_10-0397).

Facilitators and timing

Mental illness remains a sensitive topic and it was decided that mental health professionals from Birmingham and Solihull Mental Health Foundation NHS Trust would lead all intervention sessions. A teacher from the school was present during every intervention so that students had someone familiar to them present, and the intervention was designed in collaboration with teachers and members of the local educational authority to be age appropriate. Pinto-Foltz and Logsdon's (2009) conceptual model as well as findings from the focus group work reported in Chapter four suggested that the intervention should be

delivered to students within the first few years of secondary school. It was decided that the intervention would be delivered to students in their second year of school (year 8), rather than their first, so that students had a higher level of familiarity with each other, the school environment, and the school staff.

Further support

Participants, as well as their parents, were provided with contact details of the research team, access to a mental health and emotional well-being website designed specifically for young people in the West Midlands (www.youthspace.me), and details of other available support (see appendix 5).

Consent

Parental consent was obtained employing an opt-out method where parents contact the school or researcher if they do *not* wish their child to take part in the research. This was used to maximise participation in the research as well as to lessen potential disruption to the school. Parents received consent letters through the postal service to ensure that letters were received. If parental consent was gained students indicated their own assent by checking a box on the front of the questionnaire.

Confidentiality

Participants generated a personal code at the start of each questionnaire to ensure measures could be matched over time and to condition (Galanti et al., 2007). The personal code was based on; first letter of own name, third letter of own name, second letter of own surname,

second and forth number in date of birth, first letter of mothers name. Participants' names did not appear on any of the measures.

The research utilised questionnaires designed to identify potential difficulties with mental health. As these questionnaires are not diagnostic tools, and since anonymity was preserved as participants did not write their names on questionnaires, individual student's results were not provided to parents or teachers. Schools were however provided with an overall results breakdown, allowing them to target potential areas for improvement.

STATISTICAL APPROACH

Within the clustered design employed data is nested within individual schools, with two clusters per school; a contact and education cluster, and an education only cluster, creating 12 clusters in total. Within these clusters however, data cannot be assumed to be independent due to the fact that the intervention was delivered to classes of students, and each class will have its own unique culture. Data was not collected relating to which class the participants' were in when they received the intervention. A statistician, Dr David Jenkinson, was consulted and it was decided that to take account of the clustered nature of the design alongside the lack of independence of data within each cluster, generalised estimating equation models would be used to analyse the data for both primary and secondary analyses.

In keeping with CONSORT guidelines data was first analysed without adjustment. For the unadjusted analyses factors included 'school' and 'condition' (contact and education or education alone), and 'baseline score' of outcome was included as a covariate. Data was then reanalysed adding 'gender', 'ethnicity', 'previous contact', and 'reported mental health diagnosis' as additional factors. Outcomes were transformed if skewed using appropriate

statistical methods. Both complete case analysis and multiple imputation of missing data were used. This acted as a sensitivity analysis to assess whether missing data was problematic. Of these four analyses (unadjusted with and without multiple imputation; adjusted with and without multiple imputation) the unadjusted GEE with multiple imputation was considered to be the primary statistical analysis.

T-tests or marginal homogeneity tests (where data was ordinal) were used to assess any change in participants scores pre to post intervention. Data was analysed using SPSS, Version 20.

STRUCTURE OF THE RESEARCH FINDINGS

The results of the SchoolSpace project are presented in the following two chapters. The primary outcome of the project, stigma, is investigated in Chapter 6, alongside knowledge and literacy outcomes. Chapter 7 reports on well-being outcomes from the intervention, including mental health and schizotypal thinking, resilience, and attitudes to help-seeking.

CHAPTER SIX: THE USE OF INTERPERSONAL CONTACT IN A SCHOOL-BASED INTERVENTION; STIGMA OF MENTAL ILLNESS AND MENTAL HEALTH LITERACY

INTRODUCTION

Mental health stigma and literacy have recently been highlighted as national targets for research, prevention and reduction (DoH, 2012; Royal College of Psychiatrists, 2010). The existing research, discussed in Chapters 2 and 3, suggests that adolescents hold relatively stigmatising attitudes towards individuals with mental disorders, and tend to have low levels of literacy (See Chapter 3; Scotland SM, 2004; Olsson & Kennedy, 2010). On the other hand, the qualitative research reported in Chapter 4 suggests that adolescents are willing to engage in discussions relating to mental health and are able to acknowledge gaps in their understanding and knowledge, as well as the influence of negative media reports on many of their more discriminatory ideas. Adolescents also report that they would welcome additional school-based education to address the issues, including stigma, which surround mental health and ill-health (Woolfson et al., 2009; Kidger et al., 2009).

Interpersonal contact theory, stigma, and adolescence

Intergroup (between groups) or interpersonal (between individuals) contact theory suggests that interaction between different groups reduces conflict, prejudice, and discrimination (Allport, 1954). Corrigan and Penn's (1999) review suggests that, at least in adult populations, a combination of interpersonal contact and education may offer the best opportunity for success in reducing stigmatising attitudes to mental illness. Very little research however, has examined whether this is true for adolescent populations, with only

two studies, to the author's knowledge, investigating this relationship between naturalistic contact and stigma, each reporting conflicting results and small effect sizes (Corrigan et al., 2005; and see Chapter 3).

The evidence base that exists in adult populations has therefore not been validated within adolescent groups. Despite this, a small body of research investigating interpersonal contact in school-based interventions exists, and systematic and narrative reviews by Schachter et al. (2008) and Yamaguchi et al. (2011), highlight the importance of interpersonal contact as a potentially effective way to reduce stigma in adolescents. Contact has not always yielded significant improvement in adolescent stigma (Pinfold et al., 2003; Pinto-Foltz et al., 2011; Tolomiczenko et al., 2001), and Schacter et al. (2008) criticise studies for inadequate reporting of study details, lack of adequate controls, overly brief interventions or failure to control for baseline characteristics of participants including previous interpersonal contact. A recent meta-analysis compared interventions which utilise contact to those which have utilised education, and found that in adolescent populations, education alone may be a better strategy than contact (Corrigan et al., 2012). The only three research projects however, to *directly* compare contact and education with education alone (to the authors knowledge) found contact following education significantly reduced stigma compared to education alone (Meise et al., 2000; Husek, 1965; Chan et al., 2009).

Mental illness stigma appears to develop during early adolescence (Corrigan & Watson, 2007; Flavell et al., 2001) and it is therefore important that appropriate methods for tackling stigma development target these age groups. Within research utilising contact with adolescents, there has been an emphasis on mid to late (e.g. age 15 -18) adolescent age ranges (e.g. Naylor et al., 2009; Mcconkey et al., 1983; Pinfold et al., 2003; Pinfold et al., 2005;

Schulze et al., 2003; Rickwood et al., 2004) with very little work investigating younger adolescent populations (Watson et al., 2004). School-based interventions with younger adolescents may have potential as a primary prevention model for the development of stigmatising attitudes and behaviours (Schachter et al., 2008), emphasising the importance of evaluating the impact of interventions targeting younger age groups.

A further challenge with the existing research is that relatively few interventions have been evaluated with UK populations. This is problematic as stigma has social, cultural and environmental underpinnings (Pescosolido & Martin, 2007) suggesting an intervention evaluated as effective in one country may not prove to be equally effective in another. This may be particularly important given the growing multicultural nature of the UK (Office for National Statistics, 2011).

Knowledge and interpersonal contact

As discussed in Chapter 2, though it is theorised that knowledge comprises one of the three components of stigma (alongside attitudes and behaviour; Thornicroft, 2006), far less research has been conducted into the knowledge component of stigma than the attitudinal component. As a concept, knowledge of mental illness also exists independently of stigma as some aspects of knowledge regarding mental health and ill-health do not specifically relate to stigma. Mental health literacy is defined by Jorm and colleagues (1997) as knowledge and beliefs which can aid recognition, management, or prevention of mental illness. Whether investigating knowledge as a component of stigma, or knowledge/literacy in the wider sense, school-based interventions which aim to specifically improve mental health knowledge or literacy are comparatively rare, and Kelly et al. (2007) highlight the need for future work to

investigate and develop more efficient ways of improving knowledge of mental illness. Employing contact to engage young people may offer this potential, but has not to date been fully investigated.

Participating in lessons on mental health taught by someone with experience of living with a mental illness may increase the impact of such lessons for a number of reasons relevant to general knowledge of mental illness/literacy as well as attitudes and stigma-related knowledge. Firstly, as previous research has shown, contact may lead to a reduction of stigma (e.g. Pinfold et al., 2003). This reduction in stigma in combination with interpersonal contact may enable adolescents to realise that mental health is applicable to all, and that 'normal' individuals can be affected by mental illness, which may increase their engagement with the lesson. Secondly, talking with an individual who has experienced mental illness increases the impact of the message 'this is important and relevant to you'. For those adolescents who might feel that mental health is not as important as physical health, the experience of talking to someone who has experienced severe mental illness may press home the message 'Look after your emotional health - I didn't know how to, and I was very ill'. Thirdly, talking to someone with a mental illness makes the lesson far less abstract, important for an age group who may still be developing the capacity to consider abstract concepts (Piaget, 1972), and can demonstrate to adolescents that the lesson has practical implications in the 'real world'; it is not just an academic exercise, but has 'real world' applications.

As might be expected, interventions aiming to improve knowledge almost always contain some kind of educational component, with some also containing elements of interpersonal contact (e.g. Watson et al., 2004; Pinfold et al., 2005). The results reported in Chapter 3 as well as research from Furnham and Blythe (2012) suggest that previous contact with an

individual with mental illness may be related to better knowledge of mental illness. No research however, to the author's knowledge, has yet investigated whether in an intervention contact adds anything to education alone in improving knowledge of mental illness. As previous research has had success in improving knowledge both with (e.g. Naylor et al., 2009; Rickwood et al., 2004) and without (e.g. Rahman, Mubbashar, Gater, & Goldberg, 1998) interpersonal contact elements, this question remains pertinent.

Aims

The study aimed to investigate whether interpersonal contact in addition to education is more effective than education alone for interventions in secondary schools tasked with reducing attitudinal and knowledge based stigma and improving mental health literacy in students. This chapter reports the results for the projects primary outcome of stigma (specifically attitudes relating to intended future behaviour), as well as the secondary outcomes of knowledge-based stigma and mental health literacy.

Hypotheses

Based on the literature review the following hypotheses were formed;

At two weeks post intervention:

H1: Participants who receive education combined with contact will report more positive attitudes regarding future intended behaviour relating to mental illness two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

H2: Participants who receive education combined with contact will report increased mental health knowledge two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

H3: Participants who receive education combined with contact will report increased mental health literacy two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

At six months post intervention:

H4: Participants who receive education combined with contact will report more positive attitudes regarding future behaviour relating to mental illness six months following the intervention compared to participants who receive the educational component of the intervention alone.

H5: Participants who receive education combined with contact will report increased mental health knowledge six months following the intervention compared to participants who receive the educational component of the intervention alone.

H6: Participants who receive education combined with contact will report increased mental health literacy six months following the intervention compared to participants who receive the educational component of the intervention alone.

METHOD

The methodology of the research is described in Chapter 5. A summary of this is provided below.

Sampling

Schools in Birmingham, UK, were approached based on criteria representing the socio-economic and socio-cultural strata of Birmingham. Once a school had agreed to take part in the research all students and their parents/guardians in the participating year group were approached to take part in the research.

Design

Classes in schools were randomised into one of two conditions in a blocked randomised controlled trial design. Classes randomised to the contact and education condition received an educational topic day covering mental health topics including an interactive session led by a young person with experience of living with a mental disorder. Classes randomised to the education alone condition received the same topic day but with a brief history of mental illness instead of the session led by the young person with experience living with a mental disorder.

Measures were taken 2 weeks prior to the intervention, and 2 weeks post-intervention. For the six month follow-up measures were taken again 6 months post-intervention in two schools.

Procedure

Ethical approval was sought and granted by The University of Birmingham ethics committee (reference number ERN_10-0397) after which schools were approached and invited to take part in the research. Once a school had consented to take part in the research opt-out consent letters were sent out to all parents of students in the participating year group with a minimum of two weeks allowed for parents to withdraw their child from the research.

Two to three weeks prior to the intervention day students who had parental consent were invited to complete the study measures, indicating assent by checking a box on the front of the questionnaire after information attached to the front of the questionnaire was read out by the teacher of the class about the research project, stating that the survey was voluntary, and that students could choose not to complete any questions or subsections of the survey. Participants were also informed that there was a prize draw for a £25 voucher. Participants generated a code (Galanti et al., 2007) on the front of their questionnaire, which was used to match individual's responses over time and to the condition to which the participant was randomised.

The intervention days were facilitated and led by staff from Birmingham and Solihull Mental Health Foundation Trust (BSMHFT) along with other volunteers, some of whom had lived experience of mental illness. Participants completed the post-questionnaire approximately 2 weeks following the intervention. For the six month follow-up two schools additionally completed measures six months after the intervention day.

Measures

Stigma of mental illness: Attitudes regarding future behaviour

The Reported & Intended Behaviour Scale (RIBS; Evans-Lacko et al., 2011) assesses intended behaviour related to the stigma of mental illness. Higher scores on the RIBS indicate more positive attitudes relating to intended future behaviour towards individuals with mental disorders (see Chapter 5, p146 for a full description of measure).

Stigma of mental illness: Knowledge

Knowledge of mental illness was assessed using the Mental Health Knowledge Scale (MAKS; Evans-Lacko et al., 2010). Higher scores indicated a higher level of stigma-related mental health knowledge (see Chapter 5, p148 for a full description of the measure).

Mental health literacy

Two vignettes were used to assess mental health literacy, specifically identification of mental illnesses, developed by Jorm et al. (1997). Participants were asked 'In the above story do you think John/Peter has...' and chose from answers 'depression', 'anxiety', 'psychosis or schizophrenia', 'drug addiction', or 'no mental health problems'. A score of 1 is given if participants identify the correct mental illness for each vignette (see Chapter 5, p48 for a full description of measure).

Analysis

Data was analysed using generalised equation estimates (GEE) in SPSS, Version 20. In accordance with CONSORT guidelines unadjusted analysis was employed, with school and

condition (contact and education or education alone), and baseline measure scores included as covariates. An adjusted analysis was run with gender, ethnicity, previous contact, and whether the participant reported having been diagnosed with a mental health disorder, added as additional factors. Outcomes were transformed if skewed using transformations where possible. Where data was ordinal an ordinal logistic GEE was used. Both complete case analysis and multiple imputation were used to offset for missing data where possible. This acted as a sensitivity analysis to assess whether missing data was problematic. Of these four analyses, and based on CONSORT guidelines, the unadjusted GEE with multiple imputation was considered to be the primary statistical analysis.

Additionally, t-tests or marginal homogeneity tests (where data was ordinal) were used to assess any change in participants' scores pre to post intervention. A sample size calculation can be seen in appendix 8.

RESULTS

The sample

657 participants aged 11-13 (mean:12.21, SD:0.58) from six schools took part in the main trial which looked at follow-up outcomes at 2 weeks post intervention. A sub-set of 270 (mean age:12.21, SD:0.40) participants from two of these schools additionally took part in a 6 month follow-up. Baseline characteristics of participants can be seen in table 2 and 3 (p171) for participants from the main trial and six month follow-up. Baseline and two week/six month means, standard deviations, medians, and significance of improvement between baseline and two weeks, and between baseline and six months can be seen in tables 4 and 5 (p172). A summary of the effect between conditions at two weeks, and six months, can be

seen in tables 6 and 7 (p173). A consort diagram for the main trial can be seen in figure 1 below.
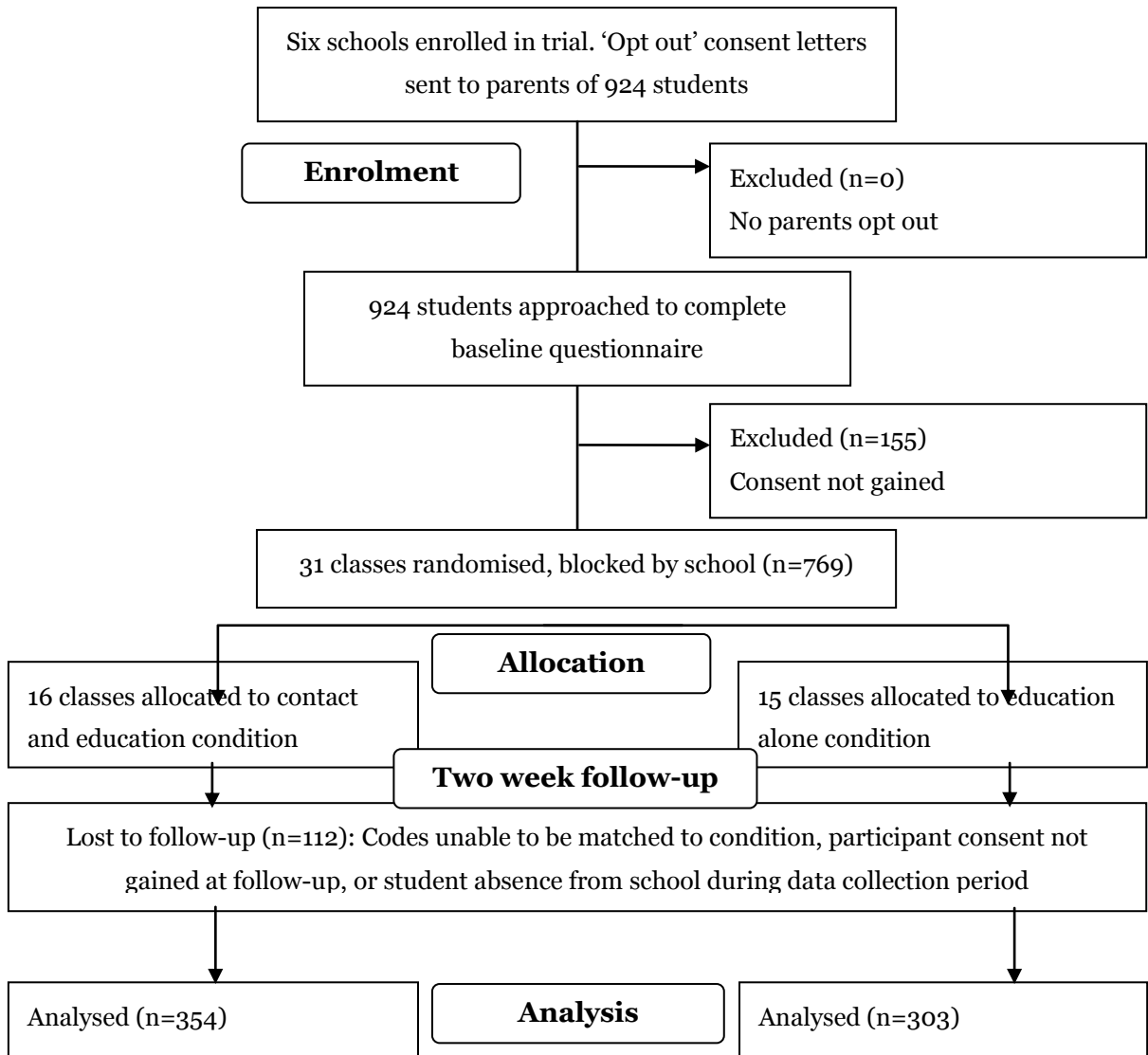
Enrolment

Six schools enrolled in trial. 'Opt out' consent letters sent to parents of 924 students

Excluded (n=0)
No parents opt out

924 students approached to complete baseline questionnaire

Excluded (n=155)
Consent not gained

31 classes randomised, blocked by school (n=769)

Allocation

16 classes allocated to contact and education condition

15 classes allocated to education alone condition

Two week follow-up

Lost to follow-up (n=112): Codes unable to be matched to condition, participant consent not gained at follow-up, or student absence from school during data collection period

Analysis

Analysed (n=354)

Analysed (n=303)

Figure 1: Participant enrolment, allocation, follow-up, and analysis for main trial

Main trial results; two-week follow-up

H1: Participants who receive education combined with contact will report more positive attitudes to mental health two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

Participants' scores on the RIBS improved from baseline to two weeks follow-up (see table 4 for means, p172). These improvements were found to be significant for both the contact and education condition, $t(255)=-3.84$, 95%CI(-0.99, -0.32), $p<0.001$, $r=0.23$, and the education alone condition, $t(193)=-3.62$, 95%CI(-1.21, -0.36), $p<0.001$, $r=0.25$.

The unadjusted GEE, -0.09, 95%CI(-0.40, 0.22), $p=0.5$, $d=0.01$, found no significant effect of condition on participants RIBS scores at two week follow-up. When gender, ethnicity, mental disorder diagnosis, and previous contact were added in as factors in the adjusted analysis the effect of condition remained small, -0.07, 95%CI(-0.41, 0.28), $p=0.7$, and was again non-significant. After multiple imputation of missing data both unadjusted, 0.09, 95%CI(-0.40, 0.22), $p=0.5$, $d=0.01$, and adjusted analyses, -0.10, 95%CI(-0.43, 0.23), $p=0.5$, remained non-significant.

H2: Participants who receive education combined with contact will report increased mental health knowledge two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

Scores on the MAKS (see table 4) improved significantly for participants in the contact and education condition, $t(195)=-8.91$, 95%CI(-3.90, -2.49), $p<0.001$, $r=0.54$, and the education alone condition, $t(169)=-9.50$, 95%CI(-4.52, -2.96), $p<0.001$, $r=0.59$.

The unadjusted analysis found that at two week follow-up participants in the education alone condition had improved significantly more than participants in the contact and education condition, -0.65, 95%CI(-1.13, -0.17), $p=0.008$, $d=0.05$. After adjustment for gender, ethnicity, mental disorder diagnosis, and previous contact this effect remained significant, -0.72, 95%CI(-1.28, -0.16), $p=0.01$. After multiple imputation both unadjusted, -0.71, 95%CI(-1.36, -0.05), $p=0.04$, and adjusted analyses, -0.72, 95%CI(-1.24, -0.21), $p=0.008$, the effect remained.

H3: Participants who receive education combined with contact will report increased mental health literacy two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

A marginal homogeneity test was used for ordinal data. In the contact and education condition improvement in scores was not found to be significant, $z=-1.03$, $p=0.3$, $r=0.05$. Conversely, participants in the education alone condition demonstrated a significant improvement in mental health literacy at two week follow-up, $z=-2.49$, $p=0.01$, $r=0.13$.

As data was ordinal an ordinal logistic GEE was used to analyse data. The unadjusted GEE found participants in the education alone condition showed improved mental health literacy two weeks post intervention compared to participants in the contact and education condition, -0.30, 95%CI(-0.44, -0.16), p<0.001, d=0.12. This effect remained after an adjusted analysis for gender, ethnicity, mental disorder diagnosis, and previous contact was conducted, -0.35, 95%CI(-0.47, -0.23), p<0.001, as well as after multiple imputation for the unadjusted analysis, -0.33, 95%CI(-0.65, -0.01), p=0.04. The multiple imputation adjusted analysis, -0.31, 95%CI(-0.67, 0.04), p=0.08 found a similar but non-significant effect.

Six-month follow-up

H4: Participants who receive education combined with contact will report more positive attitudes to mental health six months following the intervention compared to participants who receive the educational component of the intervention alone.

Scores on the RIBS improved significantly (see table 5 for means, p172) for both the contact and education condition, t(68)=-3.34, 95%CI(-1.78, -0.45), p=0.001, r=0.38, and the education alone condition, t(63)=-4.78, 95%CI(-2.90, -1.19), p<0.001, r=0.52.

The unadjusted GEE found that participants in the education alone condition reported significantly higher scores than participants in the contact and education condition at six month follow-up, -0.69, 95%CI(-1.31, -0.06), p=0.03, d=0.06. The adjusted analysis for gender, ethnicity, mental disorder diagnosis, and previous contact had a similar, but smaller, effect, -0.52, 95%CI (-1.18,0.14), p=0.1, and was not significant. When multiple imputation was used both the unadjusted, -0.14, 95%CI(-0.82, 0.55), p=0.7, and adjusted analyses, -0.13,

95%CI(-0.84, 0.58), p=0.7, the effect was again similar but smaller, and did not meet significance.

H5: Participants who receive education combined with contact will report increased mental health knowledge six months following the intervention compared to participants who receive the educational component of the intervention alone.

Scores on the MAKS for the contact and education condition, t(61)=-7.39, 95%CI(-4.53, -2.60), p<0.001, r=0.69, and the education alone condition, t(56)=-7.20, 95%CI(-5.61, -3.17), p<0.001, r=0.69, were found to improve at a statistically significant level.

The unadjusted GEE found that at six month follow-up participants in the education alone condition had significantly better scores than participants in the contact and education condition, -0.88, 95%CI(-.95, -0.81), p<0.001, d=0.08. After adjustment for gender, ethnicity, mental disorder diagnosis, and previous contact a similar effect was found, -0.63, 95%CI(-.84, -.42), p<0.001. When multiple imputation was used the unadjusted, -0.39, 95%CI(-2.36, 1.59), p=0.6, and adjusted analyses, -0.56, 95%CI(-2.38, 1.26), p=0.4 found a similar, but non-significant effect.

As multiple imputation changed the significance for the unadjusted analysis, baseline scores of those who had complete data at six months were compared those who did not for the contact and education and education alone conditions. At baseline mean MAKS scores for both conditions were found to marginally differ (see table 3), but this was not found to be significant for the contact and education condition, t(88)=0.42, p=0.7, r=0.04 or the education alone condition, t(63)=0.94, p=0.4, r=0.12.

Table 1: mean baseline MAKS score for participants with and without complete data at 6 months

Condition		N	Mean (SD)
C&E	Complete data	62	39.82 (4.04)
	Incomplete data	28	39.43 (4.19)
E	Complete data	57	39.77 (3.76)
	Incomplete data	8	38.38 (5.13)

H6: Participants who receive education combined with contact will report increased mental health literacy six months following the intervention compared to participants who receive the educational component of the intervention alone.

At six month follow-up the improvement in participants' scores in the contact and education condition was once again not found to be statistically significant, $z=-1.54$, $p=0.1$, $r=0.14$. Again, participants in the education alone condition were found to show significant improvements in their mental health literacy, $z=-2.29$, $p=0.02$, $r=0.21$.

An ordinal logistic GEE was used to analyse data. Both the unadjusted, -0.44, $95\%CI(-0.57, -0.32)$, $p<0.001$, $d=0.12$, and adjusted analyses, -0.37, $95\%CI(-0.42, -0.31)$, $p<0.001$, found that participants in the education alone condition were significantly better at identifying the vignettes compared to participants in the contact and education condition at six month follow-up. Due to the large amount of missing data multiple imputation was not possible. Results therefore need to be interpreted with caution.

Table 2: Baseline characteristics between conditions; main trial

Condition		Total N	Gender		Ethnicity						Current mental health diagnosis		Previous contact	
			Male	Missing	White	Asian	Black	Mixed ethnicity	Other ethnicity	Missing	Yes	Missing	Yes	Missing
Contact and education	N	354	171	0	149	141	29	23	9	3	10	7	92	8
	%	100	48.30	0	42.10	39.80	8.20	6.50	2.50	0.80	2.80	2	26	2.30
Education only	N	303	144	0	119	127	19	27	8	3	4	4	77	5
	%	100	47.50	0	39.30	41.90	6.30	8.90	2.60	1	1.30	1.30	25.40	1.70

Table 3: Baseline characteristics between conditions; 6 month follow-up schools

Condition		Total N	Gender		Ethnicity				Current mental health diagnosis		Previous contact	
			Male	Missing	White	Asian	Other ethnicity	Missing	Yes	Missing	Yes	Missing
Contact and education	N	138	33	0	73	46	16	3	4	4	28	5
	%	100	23.90	0	52.90	33.30	11.60	2.20	2.90	2.90	20.30	3.60
Education only	N	132	41	0	67	41	21	3	3	3	27	3
	%	100	31.10	0	50.80	31.10	15.90	2.30	2.30	2.30	20.50	2.30

Table 4: Significance of change; baseline-2 weeks

		Pre		2 weeks		t / z value	95%CI	P value
		Mean (SD)	Median	Mean (SD)	Median			
RIBS	C&E	13.28 (3.71)	13	13.81 (3.96)	14	-3.84	-0.99, -0.32	<0.001
	E	13.10 (4.29)	14	13.85 (3.83)	14	-3.62	-1.21, -0.36	<0.001
MAKS	C&E	39.92 (3.86)	40	42.98 (5.77)	43	-8.91	-3.90, -2.49	<0.001
	E	40.25 (4.04)	40	43.28 (5.83)	44	-9.50	-4.52, -2.96	<0.001
Vignettes	C&E	1.19 (0.74)	1	1.23 (0.77)	1	-1.03	-	0.3
	E	1.18 (0.72)	1	1.32 (0.73)	1	-2.49	-	0.01

Table 5: Significance of change; baseline-6 months

		Pre		6 months		t / z value	95%CI	P value
		Mean (SD)	Median	Mean (SD)	Median			
RIBS	C&E	13.84 (2.89)	14	14.61 (3.56)	15	-3.34	-1.78, -0.45	.001
	E	13.37 (3.58)	14	14.81 (3.23)	15	-4.78	-2.90, -1.19	<0.001
MAKS	C&E	39.70 (4.09)	40	42.63 (4.41)	42	-7.39	-4.53, -2.60	<0.001
	E	39.60 (3.93)	39	42.99 (5.05)	43	-7.20	-5.61, -3.17	<0.001
Vignettes	C&E	1.25 (0.69)	1	1.39 (0.72)	2	-1.54	-	0.1
	E	1.25 (0.70)	1	1.48 (0.66)	2	-2.29	-	0.02

Table 6: Effect of condition at 2 weeks, unadjusted GEE with multiple imputation (MI) shown

Measure	Contact and education		Education alone		Model	Treatment effect for C&E	95%CI	P value
	Mean (SD)	Median	Mean (SD)	Median				
RIBS	13.81 (3.96)	14	13.85 (3.83)	14	Unadjusted MI	-0.09	-0.40, 0.22	0.5
					Adjusted MI	-0.10	-0.43, 0.23	0.5
MAKS	42.98 (5.77)	43	43.28 (5.83)	44	Unadjusted MI	-0.71	-1.36, -0.05	0.04
					Adjusted MI	-0.72	-1.24, -0.21	0.008
Vignettes	1.23 (0.77)	1	1.32 (0.73)	1	Unadjusted MI	-0.33	-0.65, -0.01	0.04
					Adjusted MI	-0.31	-0.67, -0.04	0.08

Table 7: Effect of condition at 6 months, unadjusted GEE with multiple imputation (MI) shown where possible

Measure	Contact and education		Education alone		Model	Treatment effect for C&E	95%CI	P value
	Mean (SD)	Median	Mean (SD)	Median				
RIBS	14.61 (3.56)	15	14.81 (3.23)	15	Unadjusted MI	-0.14	-0.82, 0.55	0.03
					Adjusted MI	-0.13	-0.84, 0.58	0.7
MAKS	42.63 (4.41)	42	42.99 (5.05)	43	Unadjusted MI	-0.39	-2.36, 1.59	0.6
					Adjusted MI	-0.56	-2.38, 1.26	0.4
Vignettes	1.39 (0.72)	2	1.48 (0.66)	2	Unadjusted	-0.44	-0.57, -0.32	<0.001
					Adjusted	-0.37	-0.42, -0.31	<0.001

DISCUSSION

The current study found that within a young adolescent population, contrary to the study hypotheses, interpersonal contact did not add value to education alone, and often significantly reduced impact. Participants' attitudes regarding their intended future behaviour showed improvement at two weeks and six months post intervention for both conditions, but were found to be unaffected by the addition of contact to education. For stigma-based knowledge, a significant improvement in both conditions was found at two weeks and six months, with participants in the education alone condition improving significantly more than those in the contact and education condition two weeks post intervention. Mental health literacy displayed an even stronger effect between contact and education and the education alone condition with an improvement seen only in participants in the education alone condition both at two weeks and at six month follow-up.

There are a number of possible reasons for this unexpected outcome. The majority of research into the relationship between interpersonal contact and stigma has been conducted within adult populations, and it was from this research that Corrigan and Penn (1999) based their original proposition that contact combined with education is likely the best method for reducing stigma, compared to contact, education, or protest (Chapter 2, p29) alone or in a different combination. Just two studies, to the authors knowledge, have investigated the relationship between stigma and naturalistic interpersonal contact in adolescent populations, and these reported inconclusive results, Corrigan et al. (2005) finding that adolescents who reported interpersonal contact reported *higher* levels of stigma in the domains of responsibility and dangerousness. Conversely, the research reported in Chapter 3 found that

participants who reported previous contact also reported lower levels of stigma, however both of these studies also reported very low effect sizes.

The results are similar to the findings of a recent meta-analysis from Corrigan and colleagues (2012) which compared education interventions to contact interventions and suggested that within adolescent population's education only interventions held more promise for the reduction of stigma. On the other hand, the current findings conflict with the only three previous studies (to the authors knowledge) which investigated education and contact compared to education alone in school-based interventions with adolescent populations, finding that education followed by contact was more successful for reducing attitudes and desire for social distance than education alone in 13-18 year olds (Chan et al., 2009; Meise et al., 2000; Husek, 1965).

Explanation of findings

One potential reason for this discrepancy in research findings may be the difference in participant age between the present and previous studies which compared contact and education. During adolescence the brain undergoes intense and swift maturation processes in a number of domains including those which underlie reasoning, the processing of information, abstract thinking, and the regulation of behaviour and emotion including arousal and motivation (Keating, 2004; Steinberg, 2005). Due to the rapid nature of these changes there may be a large discrepancy in level of maturation between adolescents who differ in age even by a year or two. Though only a few years age gap separates the young adolescents who took part in the present study from the participants of Chan et al. (2009) and Meise et al. (2000) this difference could potentially have an impact on participants'

response to contact, and render the slightly older adolescents who took part in the research reported by Chan et al. and Meise et al. closer to the adult populations in their response to contact compared to the young adolescent population focused on in the present research.

A different internal framework to older populations

Pinto-Foltz et al. (2011) suggest that adolescents may conceptualise the term 'mental illness' in a different way to adult populations. If so, this may be even more pronounced in younger adolescents than the older adolescent age group (age 13-17, mean 15 years) Pinto-Foltz et al. worked with. The research presented in Chapter 4 suggested that knowledge of mental illness may be poor for many young people, particularly those in the youngest adolescent age groups (age 11-12), with 'dyslexia', 'epilepsy', 'high blood pressure', 'homelessness', 'cancer', 'people with sign language', 'downs syndrome', 'heart attacks', 'stroke', 'diabetes', 'dyspraxia', and 'in a wheelchair' all suggested as potential types of mental illness. Poor knowledge of mental illness in adolescent populations has been found by previous research also (Olsson & Kennedy, 2010; Scotland SM, 2004), but the findings reported in Chapter 4 additionally suggests that in the younger (though not older) adolescent groups, conceptions of what constitutes a mental illness may be relatively unformed, as opposed to present but incorrect. This undefined conception of mental illness may have had an impact on participants' responses to interpersonal contact. By nature of having more life experience, adults are likely to have a more fully developed and defined concept of what mental illness is (regardless of whether this conception is correct or not), and therefore *have* a framework which can be challenged by interpersonal contact. If young adolescents do lack an internal reference system, or have a framework of mental illness which is somewhat undifferentiated, then contact cannot challenge this.

If an individual does lack a differentiated or predefined framework of what having a mental illness constitutes, contact with an individual with lived experience of mental illness may not be an ideal introduction in terms of clarifying mental illness. Mental illness in 'reality' is not a neatly categorised version of the DSM; symptoms do not always fit elegantly into diagnostic categories, comorbidity is common (e.g. Weaver et al., 2003). As an introduction to mental illness then, instead of serving to challenge conceptions of mental illness as it might in an adult or older adolescent population, for young adolescents interpersonal contact may serve to confuse rather than clarify. If this is the case then it may be that within younger age groups contact can still be a successful method for increasing the impact of interventions but within a more controlled set of parameters, for example via video-based rather than in-vivo contact, as was utilised in Chan et al.'s (2009) RCT which found that video-based contact combined with education was more successful than education alone in a population of 13-18 year olds.

Some of the young adolescents involved in the intervention may have had a more developed framework of what they believed mental illness to be, if they had experienced interpersonal contact prior to the intervention for example. This may be a potential reason for the larger standard deviations found post-intervention, which increased more for the contact and education condition than the education alone condition for every outcome measure, and in particular showed a striking increase for the contact and education condition compared to the education alone condition in the measure of attitudes towards social distance. If having a prior, relatively well defined conception of mental illness is necessary for contact to add value to an intervention then young people who do have this predefined framework may respond well to contact, increasing the spread of outcome responses in the contact and education condition.

A fearful framework of mental illness

An alternative explanation is that adolescents may have an internal framework of mental health and ill-health, but it is a more negative or fearful framework. Adolescents' conception of mental health may be influenced to a large part by media representations of mental illness (e.g.Morgan & Jorm, 2009a; and see Chapter 4) leading to a framework of mental illness which encapsulates negative extremes of mental illness without the life experience which adults have to moderate some of these extremes. Additionally, the participants who took part in the qualitative research reported in Chapter 4 reported a fear of developing a mental illness themselves. Developmentally, adolescence is a time of discovering self and personality in terms of values, sexuality, aspirations, and importantly for the current research, emotional responses (Keating, 2004; Steinberg, 2005; Piaget, 1972; Steinberg & Silverberg, 1986; Erikson, 1968). There is an uncertainty regarding personal identity which exists to a lesser extent in adults, and it is possible that this uncertainly may lead to adolescents experiencing higher levels of fear of developing a mental illness. If the contact used in the intervention did indeed normalise mental illness in terms of the message 'anyone can develop a mental illness' then this fear of developing an illness may have increased leading to cognitive avoidance strategies (Sibrava & Borkovec, 2006) in participants as a defence mechanism against anxiety. Participants may have decreased any anxiety they felt by distancing themselves from the topic of mental illness, increasing their desire for social distance, and leading to a decreased engagement in the educational elements of the intervention and a diminished impact on knowledge and literacy outcomes as well as attitudinal ones. Alternatively, any anxiety experienced by the participants may have led to a reduced ability to focus or concentrate, again lessening the impact of the intervention.

Over-engagement in contact modules

One further explanation for the research findings may be that the contact module of the intervention in the contact and education condition had a heightened impact on students, which led to this section of the intervention being remembered over and above other modules, effectively pushing out much of the educational elements of the intervention. Increased engagement in the contact module may have left participants with less attentional capacity to process other information presented, leading to decreased levels of improvement on the research measures when compared to the education alone condition. This account is in line with themes discussed in the focus groups investigating the acceptability of the intervention, in which participants reported engaging with and valuing the interpersonal contact elements of the intervention (see Chapter 5, p144-145). It is also worth noting that the education modules of the intervention were more in line with traditional teaching methods, and it is possible that the interruption of these more traditional methods of teaching via the contact module in the Contact and Education condition may have disrupted the continuity of the teaching methods, leading to a lower level of retained information.

Knowledge and literacy

In terms of knowledge and literacy outcomes prior research has found that knowledge of mental illness and stigma are related, though generally in terms of improved knowledge (Sartorius, 2005; Crisp & Cowan, 2004) or increased mental health literacy (Morawska et al., 2013) leading to improved attitudes. Recently research from Angermeyer et al. (2009) has suggested that this relationship between knowledge/literacy and stigma may involve complex interactions, rather than being a simple one-way linear relationship where increased

knowledge/literacy leads to improved stigma. An additional reason for the reduced impact on

mental health literacy in the contact and education condition may relate to this association

between knowledge/literacy and stigma; if impact on stigma is reduced then participants may

engage with the intervention to a lesser extent, reducing impact on knowledge and literacy.

Implications

There are a number of implications from this research relevant for future research and policy.

The findings support the conclusion that a brief one day intervention can have a lasting

impact on levels of stigma, knowledge, and literacy of mental health. A positive impact was

retained at six months for participants in the education alone condition, despite research

suggesting that adolescence may be a time through which stigma may develop, worsen, or

crystallise (Corrigan & Watson, 2007; Flavell et al., 2001; O'Driscoll, Heary, Hennessy, &

McKeague, 2012). This suggests that programmes which aim to reduce stigma and improve

knowledge and literacy in schools hold great potential, particularly with young adolescent

populations.

There are also a number of implications regarding the use of intergroup contact with young

adolescent populations. The students participating in the current research had just one

morning session of mental health education directly prior to the contact element of the

intervention, with no time in between to process the information they had received prior to

the contact. If young adolescents do lack an internal reference system it may be that they

require a larger component of mental health education prior to experiencing interpersonal

contact compared to older adolescents or adults. Chan et al. (2009), for example found that

video-based contact was more effective than education alone only when the video was

presented after the educational component of the intervention, but not before. Although the contact in the present research did come after the educational component, it may be that due to the participants' relatively young age the quantity of education given prior to contact (approximately 3 hours) was not sufficient. Similarly, if the engaging experience of contact led to a decrease in attentional capacity for other intervention modules then contact may still prove to be a successful technique for reducing stigma if additional time is given for participants to process the information they have received before the introduction of interpersonal contact.

In a similar vein, adolescents may also need more time and discussion *after* the presentation of contact to consolidate and process the information they have received. Tolomiczenko et al. (2001) found that video-based contact was only successful in reducing the stigma of high school students when accompanied by discussion of the film afterwards. Video-based contact unaccompanied by discussion was found to lead to increased levels of stigma. Further research is warranted to investigate these possibilities.

Strengths and Limitations

Rusch et al. (2005) outline a number of factors which are advantageous if interpersonal contact is to be a successful method for reducing stigma including equal status and co-operative interaction between group members as well as institutional support. The current intervention had support from the senior management within the schools, and co-operative interaction was reached by the inclusion of group activities and discussions in which both students and 'contact volunteers' took part. Rusch et al.'s criteria of 'equal status' was however not entirely possible within the current intervention programme; though efforts

were made to make the day interactive and inclusive, the school environment, particularly with younger adolescents, naturally lends itself to a division between the statuses of teacher and student.

Rusch et al. also discuss the need for members of the stigmatised group to disconfirm stereotypes only *mildly*, and suggest that if an individual disconfirms a stereotype too strongly then contact may not have the desired effect of reducing stigma. Instead, participants may decide that the individual represents an 'exception to the rule' and reclassify the individual as 'us' and not 'them'. Many of the young people who shared their experiences with the students had recovered from their disorders and were no longer in contact with mental health services and some discussed this with the students. This may have led participants to classify the young people as 'recovered' and define them differently on a conceptual level to 'mentally ill'.

There were a number of other potential limitations with the research. Previous research has been criticised for only representing specific school types (e.g. fee paying single gender schools; Spence & Shortt, 2007). For the SchoolSpace intervention schools were chosen to represent the diversity of the UK school system, and therefore may not have represented a homogenous group, despite being assessed in this way. It is important that responses to such an approach from schools of varying demographics is investigated before widespread dissemination of interventions occurs, however this was outside the scope of the present study where many of the major school types (e.g. exam entrance/open access, single gender/mixed gender) were represented by a single school in the present research sample resulting in the sample size unable to support between-school comparisons.

Related to this, the six month follow-up involved just two schools, a large mixed comprehensive (open access) school, and a smaller all girls grammar (exam entrance) school. As schools were purposefully chosen to be diverse these schools cannot be assumed to be representative of the other four schools who were also part of the main trial, with implications for the six month follow-up results being less generalizable. By contrast, the six month follow-up results were very consistent with the findings from the main trial, showing a clear trend across outcome measures towards education without the addition of contact.

Regarding the analyses, cluster data was collected at the level of school, but not at the level of class in which participants received the intervention. Each school which took part in the intervention represented a unique population with differing demographic characteristics, a differing ethos, and a distinctive character, and this was important to represent in the clustered analysis which was conducted. The same is true, though to a lesser extent, regarding individual class groups within each school; each of which had varying characteristics. Unfortunately data relating to class group was not recorded and therefore not taken into account within the analysis. Additionally, to maintain power, classes within schools were randomised to each condition, rather than entire schools, which may have led some level of cross contamination between conditions, and to magnified intra-class correlations. Both of these mean that effect sizes between conditions may have been diluted, and the difference in impact between the contact and education condition and the education alone condition may be even more pronounced than suggested by the present research.

Each class was taught by at least two facilitators, a lead facilitator and an assistant. These individuals will have had an impact on the intervention as each individual will have had a unique style of delivery, as well as varying levels of confidence and experience. The impact

that each of these individuals had on the classes they taught was not recorded, which represents a potential limitation as though some of the facilitators switched between teaching contact and education and education alone conditions, many of the facilitators taught the same condition on each intervention day they attended due to them becoming more familiar with the condition, enabling increased confidence in delivery. It is possible that the results of the research could be related to the ability of the individuals who facilitated the intervention, with more able individuals teaching the education alone condition. To reduce this possibility, fidelity of implementation of the intervention was assessed (see appendix 7) for each condition within each school; facilitators demonstrated a high level of fidelity to the intervention implementation, and similar levels of engagement were observed across conditions, representing a strength of the project (Leff, Hoffman, & Gullan, 2009).

More generally, as the SchoolSpace intervention was facilitated by volunteers from Birmingham and Solihull Mental Health Foundation Trust and The University of Birmingham Psychology Department, students were taught by individuals with a high level of expertise in the field of mental health. In terms of longer-term widespread dissemination, this level of voluntary commitment from an NHS or University department is clearly not practical, and so further research is needed to assess whether similarly positive results regarding the reduction of stigma and increase of mental health literacy can be achieved under less ideal circumstances. Flay et al. (2005) comment that a trial which delivers significant improvements under ideal circumstances may not deliver such results under real world conditions, and distinguishes between efficacy standards, effectiveness standards, and dissemination standards. An efficacy trial will utilise a well-designed methodology, have a good quality of fidelity and implementation, and control over confounding variables. By contrast, an effectiveness trial must be delivered under real world circumstances, suggesting

that fidelity may be variable, with many potential confounding variables. A programme such as SchoolSpace, for example, must be capable of being taught by teachers *without* exceptional expertise in the area of mental health and *with* many additional demands on their time and attention. For an intervention to be considered 'dissemination ready' it must not only have demonstrated efficacy and effectiveness, but also have clear cost/benefits, and validated tools for evaluation of the intervention which can be utilised in any setting in which the intervention is to be applied. It is important however, that trials progress through these stages before widespread dissemination occurs; if a trial fails to show an effect whilst being tested under ideal circumstances it is highly unlikely that effectiveness will be observed. Flay et al. argue that the initial stage for any intervention must be to establish efficacy and the present research has taken the first step towards demonstrating this.

Conclusions

The present research demonstrated that educational interventions provided in schools can be successful in reducing the stigma of mental illness, both attitudinal and knowledge-based, as well as improving mental health literacy. Contrary to study hypotheses, interpersonal contact was not seen to add value, and reduced the impact of the intervention. This is important for mental health and educational policy that aims to reduce stigma and increase mental health literacy in young adolescent populations, though further research into this area is certainly warranted.

CHAPTER SEVEN: THE USE OF INTERPERSONAL CONTACT IN A SCHOOL-BASED INTERVENTION; WELLBEING OUTCOMES

INTRODUCTION

A large body of research has investigated school-based interventions which aim to improve mental health or to reduce mental ill-health, particularly when compared to school-based interventions which aim to improve attitudes or mental health knowledge (Lister-Sharp et al., 1999; Wells et al., 2003; Weare & Markham, 2005). These studies have had mixed findings, with '*beyondblue*', one of the most robustly designed RCTs conducted into the reduction of depressive symptoms, reporting flat results (Sawyer et al., 2010b; Sawyer et al., 2010a) and many of the studies which have reported significant improvements having small effect sizes. Whilst this is not necessarily problematic in itself, in the present economic climate school-based programmes need to be able to demonstrate reliable and consistent efficacy to illustrate value for money (Children and Adolescent's Mental Health Coalition, 2010; Spence & Shortt, 2007). In response to this a number of systematic reviews have suggested that the promotion of mental health (rather than the reduction of mental illness) may hold promise, as this has relevance for universal populations (Lister-Sharp et al., 1999; Wells et al., 2003; Weare & Markham, 2005). A benefit of school-based programmes which aim to reduce stigma and increase mental health literacy is that these programmes *are* relevant to all participants and increasing knowledge of mental illness may additionally be beneficial to mental health (Kelly et al., 2007; Naylor et al., 2009).

There are a number of reasons why interventions which aim to increase knowledge or literacy might have a positive impact on participants' mental health. Rather than candidly discussing

mental health or emotional well-being with adolescents, increasing their knowledge of mental health and ill-health in a more general manner may still increase their awareness of the importance of mental health in an indirect manner. This may be particularly important in view of the shadow of stigma which surrounds mental illness, allowing adolescents to discuss and engage with mental health topics without having to worry about their peers' judgments.

Encapsulated within Jorm et al.'s (1997) definition of mental health literacy as knowledge or beliefs which can aid recognition, management, or prevention of mental illness is the importance of understanding self-help and resilience skills (Jorm et al., 2010). Interventions which increase mental health knowledge and literacy therefore have the potential to increase mental health firstly through raising awareness of mental health itself and secondly through promoting understanding of self-help and resilience skills which may be linked to the prevention of mental illness (e.g. Seligman et al., 2009; Ruini et al., 2006).

A benefit of utilising these two methods, increasing general knowledge and increasing literacy related to self-help and resilience, may be that they address different components of mental or emotional health. For example, resilience may be correlated with some aspects of emotional well-being and mental health but not others, with medium correlations associated with emotional symptoms, hyperactivity, and peer problems, but not with conduct or behavioural problems (see Chapter 3; von Soest et al., 2010). Thus interventions which aim to increase resilience may have more impact on internalising problems, such as depressive or anxiety symptoms, rather than externalising behaviours, such as conduct problems. Conversely, Naylor et al.'s (2009) intervention which aimed to increase pupils' understanding of mental health issues but *did not* aim to teach resilience skills found a significant reduction in behavioural problems and externalising behaviours and an

improvement in pro-social behaviour, but had no effect on emotional problems, hyperactivity, or peer problems.

Interpersonal contact with a stigmatised out-group has traditionally been used as a method to reduce stigma of discriminated groups (Corrigan & Penn, 1999). There are also a number of reasons why interventions which utilise interpersonal contact might have a positive benefit on the promotion of mental health. Contact with individuals with experience of living with a mental disorder may increase engagement with lessons and help to reduce stereotypes that mental illness only affects a 'certain type' of individual, thus helping to improve an adolescents understanding that mental health is applicable to all. Talking to someone who does not conform to negative stereotypes of mental illness also increases the impact of the message that it is important to look after and be aware of our own mental health; here is someone 'just like you' who was unable or unaware of how to look after their mental health and was consequently very ill. For younger adolescents in particular, talking directly with an individual who has experienced a mental illness may make the lesson far less abstract or purely academic, bringing the lesson into the 'real world', and increasing engagement. Additionally, the research presented in Chapter 4, alongside previous qualitative research (Kidger et al., 2009; Woolfson et al., 2009) suggests that adolescents would value hearing personal experiences when being taught about mental health. Despite this the research which has utilised contact as a means to reduce stigma has not investigated mental health and well-being outcomes.

One way in which interventions which aim to reduce stigma and increase knowledge may impact upon mental health, and where the effect of intergroup contact *has* been investigated, is with regards to help-seeking attitudes. In general, these studies have found significant

improvements in participants' attitudes towards help-seeking after the intervention (Swartz et al., 2010; Chovil, 2004), however one study failed to find any significant improvements even though in vivo contact was utilised (Rickwood et al., 2004). It is also worth noting that many educational programmes which have not utilised contact have also had positive results (Berridge, Hall, Dillon, Hides, & Lubman, 2011; Battaglia, Coverdale, & Bushong, 1990). Questions still remain therefore regarding whether the use of contact adds anything to education alone. This is important as large scale interpersonal contact may be more difficult to engineer (London & Evans-Lacko, 2010).

It is also worth noting that unintentional harm could arise from interventions which aim to increase adolescents' understanding and awareness of mental health issues. It is important to consider and be aware of this possibility, however unlikely it is assumed to be. For example, an increase in awareness of mental health issues without giving information on available support might lead to negative self-scrutiny as an adolescent attempts to increase their awareness of themselves. Schachter et al. (2008) report in their systematic review that very few researchers attempt to identify any potential harm which could come from their interventions. A further reason why it may be beneficial for interventions which aim to increase mental health awareness in young people to also investigate the participants own mental health is therefore to assess for any unintentional harm the intervention may have caused.

Aims

The present study aimed to investigate whether interpersonal contact in addition to education is more effective than education alone for interventions in secondary schools

tasked with reducing attitudinal and knowledge based stigma and to increase mental health literacy. This chapter reports on the projects secondary outcomes of mental health, resilience, and attitudes to help-seeking.

Hypotheses

At two week follow-up:

H1: Participants who receive education combined with contact will report improved mental health outcomes two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

H2: Participants who receive education combined with contact will report increased resilience two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

H3: Participants who receive education combined with contact will report improved attitudes to help-seeking two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

At six month follow-up

H4: Participants who receive education combined with contact will report improved mental health outcomes six months following the intervention compared to participants who receive the educational component of the intervention alone.

H5: Participants who receive education combined with contact will report increased resilience six months following the intervention compared to participants who receive the educational component of the intervention alone.

H6: Participants who receive education combined with contact will report improved attitudes to help seeking six months following the intervention compared to participants who receive the educational component of the intervention alone.

METHOD

The methodology of the research is described in Chapter 5. A summary of this is provided below.

Sampling

Schools in Birmingham, UK, were approached based on criteria representing Birmingham's socio-economic and socio-cultural strata. All students and their parents/guardians in the participating year group were then approached.

Design

A blocked randomised controlled trial design was used, with classes in schools randomised into one of two conditions; a contact and education condition, where students received an educational topic day covering mental health topics including an interactive session led by a young person with experience of living with a mental disorder, or the education alone condition where students received the same topic day but with a brief history of mental illness instead of the contact session.

Measures were taken 2 weeks prior to the intervention, and 2 weeks post-intervention. For the six month follow-up measures were taken again 6 months post-intervention in two schools.

Procedure

The University of Birmingham ethics committee granted ethical approval (reference number ERN_10-0397). Once a school had consented to take part in the research opt-out consent letters were sent to parents or guardians of students in the participating year group. A minimum of two weeks was allowed for parents to withdraw their child from the research.

Students who had parental consent were invited to complete the study measures two to three weeks prior to the intervention day. Students were read information about the research by the teacher of the class, stating that the survey was voluntary, that students could choose not to complete any questions or subsections of the survey, and that that there was a prize draw for a £25 voucher. Students then indicated assent by checking a box on the front of the questionnaire and generated a code (Galanti et al., 2007) on the front of their questionnaire, which was used to match individual's responses over time and to the condition that the participant was randomised.

The intervention days were facilitated and led by staff from Birmingham and Solihull Mental Health Foundation Trust (BSMHFT) and other volunteers, some of whom had lived experience of mental illness. Participants completed the post-questionnaire approximately 2 weeks following the intervention. For the six month follow-up two schools additionally completed the measures six months after the intervention day.

Measures

Emotional well-being and mental health

Two questionnaires were used to assess emotional well-being and mental health; The Strengths and Difficulties Scale (SDQ; Goodman et al., 1998) and The Schizotypal Personality-Brief Form (SPQ_b; Raine, 1991; Raine & Benishay, 1995). Together the SDQ and SPQ_b allow a broad spectrum of potential mental health difficulties to be captured.

The SDQ assess mental health along five subscales (conduct problems, hyperactivity-inattention, emotional symptoms, peer problems, and pro-social behaviour) and produces a total difficulties score. Higher scores on the SDQ indicate lower levels of mental health (see Chapter 5, p149 for a full description of measure).

The SPQ_b assesses three subscales relating to schizotypal thinking; cognitive-perceptual deficits, interpersonal deficits, and disorganisation, and again, produces a total difficulties score. Higher scores on the SPQ_b indicate higher experience of schizotypal thinking (see Chapter 5, p150 for a full description of measure).

Resilience

Resilience was measured using a 15 item (Neill & Dias, 2001) version of Wagnild and Young's (1993) Resilience Scale, which assesses the personal competence component of resilience (e.g. 'My belief in myself gets me through hard times'; see Chapter 2, p12 for discussion of resilience). Higher scores on the resilience scale indicate a higher level of personal disposition resilience (see Chapter 5, p150 for a full description of the measure).

Attitudes to help-seeking

Attitudes to help-seeking were assessed by the question 'In the next 12 months if you were to experience a mental illness, how likely are you to seek help?' with the possible answers of 'definitely', 'very likely', 'likely', 'not sure', 'unlikely', 'very unlikely', and 'definitely not'. Higher scores indicate a greater willingness to help-seek.

Analysis

SPSS, Version 20 was used to analyse data using generalised equation estimates (GEE). Unadjusted analysis was used, with school and condition (contact and education or education alone), and baseline score of outcome included as covariates. Adjusted analyses were then run with the additional factors of gender, ethnicity, previous contact, and whether the participant reported having been diagnosed with a mental health disorder. Where possible, outcomes were transformed if skewed. Where data was ordinal an ordinal logistic GEE was used. Both complete case analysis and multiple imputation was used with missing data where possible. This acted as a sensitivity analysis to assess whether missing data was problematic. Of these four analyses, and based on CONSORT guidelines, the unadjusted GEE with multiple imputation was considered to be the primary statistical analysis. Due to the large amount of missing data multiple imputation was not possible for any of the 6 month well-being outcomes. For these analyses the unadjusted GEE was considered to be the primary statistical analysis.

To assess any change in participants' scores pre to post intervention t-tests and marginal homogeneity tests (where data was ordinal) were used.

RESULTS

The sample

The same six schools reported in Chapter 6 completed wellbeing measures pre and post intervention.

657 participants age 11-13 (mean:12.21, SD:0.58) took part in the main trial which looked at outcomes at 2 weeks post intervention. At six months post intervention two of these schools and 270 (mean age:12.21, SD:0.40) participants completed measures. One measure, help-seeking, was not administered to one of the schools at baseline resulting in this school being excluded from all analyses involving this measure. For the six month follow-up of the help-seeking questionnaire therefore only one school and 112 participants were involved (mean age 11.98, SD:0.09). Baseline characteristics of participants can be viewed in Chapter 6, p171, for participants from the main trial and participants from schools which took part in the six month follow-up. Baseline and two week/six month means, standard deviations, medians, and significance of difference between baseline and two weeks, and between baseline and six months can be seen in tables 3 and 4 (p199). A summary of the effect between conditions at two weeks, and six months, can be seen in tables 5 and 6 (p200). A consort diagram for the main trial is available in Chapter 6, p165.

Main trial results; two-week follow-up

H1: Participants who receive education combined with contact will report improved mental health outcomes two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

SDQ: A square root transformation was employed for baseline and 2 week data. Participants scores on the SDQ improved from baseline to two weeks follow-up (see table 3 for means, p203) and was found to be significant for the contact and education condition, t(194)=2.31, 95%CI(0.02, 0.19), p=0.02, r=0.16, as well the education-alone condition, t(165)=4.81, 95%CI(0.12, 0.29), p<0.001, r=0.35.

The unadjusted GEE revealed that at two weeks post intervention participants in the education-alone condition had greater improvements in levels of emotional wellbeing compared to participants in the contact and education condition, 0.10, 95%CI(0.01, 0.18), p=0.02, (transformed scale). When gender, ethnicity, mental disorder diagnosis, and previous contact were added in as factors in the adjusted analysis this effect remained, 0.11, 95%CI(0.02, 0.19), p=0.01.

After multiple imputation for missing data a similar but smaller, non-significant, effect was found for both the unadjusted, 0.08, 95%CI(-0.05, 0.21), p=0.2, d=0.05, and adjusted analyses, 0.09, 95%CI(-0.05, 0.23), p=0.2.

As multiple imputation changed the significance of results for the unadjusted analysis, baseline scores of those who had complete data at 2 weeks were compared those who did not

have complete data. At baseline mean SDQ scores for both conditions were found to differ slightly (see table 1). This difference was not found to be significant for the contact and education condition, t(237)=-1.59, p=0.1, r=0.10 or the education-alone condition, t(204)=-1.15, p=0.3, r=0.08.

Table 1: mean baseline SDQ score for participants with and without complete data at 2 weeks

Condition		N	Mean (SD)
C&E	Complete data	195	3.11 (0.88)
	Incomplete data	44	3.34 (0.81)
E	Complete data	166	3.12 (0.89)
	Incomplete data	40	3.30 (0.74)

SPQ: As data was not normally distributed a Wilcoxon signed rank test was used to analyse baseline and 2 week post intervention results. Participants' median scores (see table 3) improved in both the education-alone condition, z=-3.99, p<0.001, r=0.20, and the contact and education condition, z=-6.99, p<0.001, r=0.35.

Due to the distribution of the data a negative binomial GEE model was used. The unadjusted analysis found that participants in the contact and education condition had slightly lower scores than those in the education-alone condition, but this did not reach the level of significance, -0.13, 95%CI(-0.31, 0.06), p=0.2,. A similar effect was observed in the adjusted analysis, -0.12, 95%CI(-0.32, 0.07), p=0.2.

After multiple imputation a similar effect was observed, with participants in the contact and education condition reporting significantly lower levels of schizotypal thinking than participants in the education-alone condition. This was found to be significant for both the

unadjusted, -0.22, 95%CI(-0.40, -0.05), p=0.02, d=0.15, and adjusted analyses, -0.22, 95%CI(-0.38, -0.05), p=0.01.

As multiple imputation altered the level of significance a Mann Whitney U test was run comparing the baseline scores of those who had complete data at 2 weeks to those who did not for the contact and education and education-alone conditions. At baseline SPQ scores for both conditions were found to differ marginally (see table 2), but differences were not found to be significant for contact and education, z=1.14, p=0.3, r=0.08 or education-alone conditions, z=1.36, p=0.2, r=0.09.

Table 2: mean baseline SPQ score for participants with and without complete data at 2 weeks

Condition		N	Mean (SD)	Median
C&E	Complete data	199	6.31 (4.77)	6
	Incomplete data	26	7.19 (4.33)	6.5
E	Complete data	191	5.74 (4.59)	5
	Incomplete data	29	6.86 (4.41)	7

H2: Participants who receive education combined with contact will report increased resilience two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

Resilience data was negatively skewed so data was reverse coded and a square root transformation was used on baseline and two week data. Participant means (see table 3) improved significantly in the education-alone condition, t(157)=2.87, 95%CI(0.07, 0.39), p=0.005, r=0.22. In the contact and education condition scores decreased, but not significantly so; t(152)=0.86, 95%CI(-0.11, 0.28), p=0.4, r=0.07.

At two weeks post intervention participants in the education-alone condition were found to have improved scored compared to participants in the contact and education condition. The unadjusted 0.19, 95%CI(-0.15, 0.52), p=0.27, and the adjusted 0.16, 95%CI(-0.16, 0.48), p=0.3, GEE however, found no significant difference between conditions.

This remained non-significant after multiple imputation for both unadjusted, 0.20, 95%CI(-0.09, 0.49), p=0.2, d=0.05, and adjusted analyses, 0.19, 95%CI(-0.10, 0.47), p=0.19.

H3: Participants who receive education combined with contact will report improved attitudes to help-seeking two weeks following the intervention compared to participants who receive the educational component of the intervention alone.

A marginal homogeneity test was used as data was ordinal, and found no significant change pre to post intervention for the contact and education condition, z=-0.92, p=0.4, r=0.05, or the education alone condition, z=-1.24, p=0.2, r=0.07.

As the data were ordinal an ordinal logistic GEE was used to analyse data. The unadjusted analysis found that participants in the education-alone condition were more likely to report that they would seek help in the event that they developed a mental illness compared to participants in the contact and education condition -0.26, 95%CI(-0.52, -0.00), p=0.05, d=0.02. When adjusted the effect was found to be similar, -0.20, 95%CI(-0.41, 0.01), p=0.07, but non-significant.

An assumption of multiple imputation techniques is that data must be missing at random. As the help-seeking questionnaire was not given to one school at baseline this assumption was violated, and so multiple imputation techniques were not utilised.

Six month follow-up

H4: Participants who receive education combined with contact will report improved mental health outcomes six months following the intervention compared to participants who receive the educational component of the intervention alone.

SDQ: A square root transformation was used on baseline and six month data. Scores (see table 4, p203) were not found to have improved significantly at six month follow-up for either the contact and education condition, $t(53)=-0.98$, 95%CI(-0.09, -0.26), $p=0.3$, $r=0.13$, or the education-alone condition, $t(55)=-1.07$, 95%CI(-0.08, -0.25), $p=0.3$, $r=0.14$.

At six months, no significant difference was observed between the contact and education condition and the education-alone condition, -0.10, 95%CI(-0.25, -0.04), $p=0.2$, $d=0.002$. A non-significant effect was observed in the adjusted GEE, -0.05, 95%CI(-0.20, 0.09), $p=0.5$.

SPQ: Participants scores improved significantly for the education-alone condition, $z=-2.43$, $p=0.02$, $r=0.22$, but not the contact and education condition, $z=1.60$, $p=0.1$, $r=0.16$.

A negative binomial GEE model was used to analyse data. Participants in the education-alone condition reported lower levels of schizotypal thinking following the intervention compared to participants in the contact and education condition in both the unadjusted, 0.06,

95%CI(0.05, 0.07), p<0.001, d=0.08, and adjusted analyses, 0.56, 95%CI(0.03, 0.08), p<0.001.

H5: Participants who receive education combined with contact will report increased resilience six months following the intervention compared to participants who receive the educational component of the intervention alone.

As baseline data was normally distributed, and the 6 month data negatively skewed, so a Wilcoxon's signed rank test was employed to analyse the difference in scores pre to post intervention. Participants scores did not change significantly in the contact and education condition, z=1.73, p=0.08, r=0.19, or the education-alone condition, z=-1.49, p=0.14, r=0.14.

In order that a parametric GEE could be conducted, both baseline and 6 month data were reverse coded and a square root transformation was used on the 6 month data. At six months participants in the contact and education condition displayed improved scores compared to the education-alone condition, this was found to be significant by the unadjusted, -0.40, 95%CI(-0.42, -0.37), p<0.001, d=0.28, and the adjusted analysis, -0.36, 95%CI(-0.44, -0.27), p<0.001.

H6: Participants who receive education combined with contact will report improved attitudes to help seeking six months following the intervention compared to participants who receive the educational component of the intervention alone.

Participants' median scores in the contact and education condition remained at 6 pre to post intervention, with the mean decreasing from 5.83 (SD:1.26) to 5.74 (SD:1.31). Prior to the

intervention no students reported that they would definitely not seek help if they developed a mental illness and 21 (37.5%) that they definitely would. Post intervention 1 (1.8%) reported they definitely would not seek help, and 19 (33.9%) that they definitely would. A test of marginal homogeneity was attempted but was unable to compute.

In the education-alone condition participants' median scores decreased from 7 to 6, with the mean also decreasing from 5.82 (SD:1.60) to 5.69 (SD:1.50). Prior to the intervention 1 student (1.8%) reported that they would definitely not seek help if they developed a mental illness and 26 (46.4%) that they definitely would. Post intervention 1 (1.8%) reported they definitely would not seek help, and 22 (39.3%) that they definitely would. A test of marginal homogeneity was attempted but was unable to compute.

Attitudes to help-seeking scores from the one school who completed both baseline and six month questionnaires on help-seeking were too similar between baseline and 6 months for a GEE to be conducted.

Table 3: Significance of change; baseline-2 weeks

		Pre		2 weeks		t / z value	95%CI	P value
		Mean (SD)	Median	Mean (SD)	Median			
SDQ	C&E	9.69 (5.63)	9	9.15 (5.90)	8	2.31	0.02, 0.19	0.02
	E	9.72 (5.57)	9	8.87 (5.87)	8	4.81	0.12, 0.29	<0.001
SPQ	C&E	6.41 (4.72)	6	4.06 (4.67)	2	-6.99	-	<0.001
	E	5.89 (4.57)	5	4.73 (4.57)	4	-3.99	-	<0.001
Help-seeking	C&E	5.41 (1.71)	6	5.51 (1.67)	6	-0.92	-	0.4
	E	5.35 (1.71)	6	5.48 (1.62)	6	-1.24	-	0.2
Resilience	C&E	83.88 (13.38)	86	82.50 (15.75)	86	0.86	-0.11, 0.28	0.4
	E	82.80 (13.79)	85	83.34 (15.47)	85	2.87	0.07, 0.39	0.005

Table 4: Significance of change; baseline-6 months

		Pre		6 months		t / z value	95%CI	P value
		Mean (SD)	Median	Mean (SD)	Median			
SDQ	C&E	10.33 (5.25)	9	9.58 (5.43)	8.5	-0.98	-0.09, -0.26	0.3
	E	9.95 (5.34)	9	9.57 (5.98)	9	0.29	-0.08, -0.25	0.3
SPQ	C&E	6.91 (4.58)	6	3.90 (4.40)	3	-1.60	-	0.1
	E	6.68 (4.71)	6.5	4.25 (4.62)	2			0.02
						-2.43	-	
Help-seeking	C&E	5.83 (1.26)	6	5.74 (1.31)	6	-	-	-
	E	5.82 (1.60)	7	5.69 (1.50)	6	-	-	-
Resilience	C&E	82.08 (10.90)	83	84.09 (12.05)	83.5	1.74	-	0.08
	E	82.29 (9.40)	82	80.62 (12.73)	82			0.1
						-1.49	-	

Table 5: Effect of condition at 2 weeks, unadjusted GEE with multiple imputation (MI) shown where possible

Measure	C&E		E		Model	Treatment effect for C&E	95%CI	P value
	Mean (SD)	Median	Mean (SD)	Median				
SDQ	9.15 (5.90)	8	8.87 (5.87)	8	Unadjusted MI	0.08	-0.05, 0.21	0.2
					Adjusted MI	0.09	-0.05, 0.23	0.2
SPQ	4.06 (4.67)	2	4.73 (4.57)	4	Unadjusted MI	-0.22	-0.40, -0.05	0.02
					Adjusted MI	-0.22	-0.05, -0.05	0.01
Help-seeking	5.51 (1.67)	6	5.48 (1.62)	6	Unadjusted	-0.26	-0.52, -0.00	0.05
					Adjusted	-0.20	-0.41, 0.01	0.07
Resilience	82.50 (15.75)	86	83.34 (15.47)	85	Unadjusted MI	0.20	-0.09, 0.49	0.2
					Adjusted MI	0.19	-0.10, 0.47	0.19

Table 6: Effect of condition at 6 months, unadjusted GEE without multiple imputation

Measure	C&E		E		Model	Treatment effect for C&E	95%CI	P value
	Mean (SD)	Median	Mean (SD)	Median				
SDQ	9.58 (5.43)	8.5	9.57 (5.98)	9	Unadjusted	-0.10	-0.25, -0.04	0.2
					Adjusted	-0.05	-0.20, 0.09	0.5
SPQ	3.90 (4.40)	3	4.25 (4.62)	2	Unadjusted	0.06	0.05, 0.07	<0.001
					Adjusted	0.56	0.03, 0.08	<0.001
Help-seeking	5.74 (1.31)	6	5.69 (1.50)	6	Unadjusted	-	-	-
					Adjusted	-	-	-
Resilience	84.09 (12.05)	83.5	80.62 (12.73)	82	Unadjusted	-0.40	-0.42, -0.37	<0.001
					Adjusted	-0.36	-0.44, -0.27	<0.001

DISCUSSION

Contrary to the study hypothesis, contact with an individual with experience of mental illness combined with education did not improve well-being outcomes in a young adolescent population when compared to education alone. Contact and education combined and education alone were both found to significantly improve mental health outcomes measured by the SDQ two weeks post-intervention, but the addition of contact did not significantly improve outcomes when compared to the education alone condition. By six months scores on the SDQ had returned to baseline levels, again unaffected by contact. Similarly, only the education-alone condition was found to significantly improve resilience at two weeks post intervention, with participants in the contact and education condition remaining at baseline levels. The initial improvement for the education condition had also been lost at six month follow-up. Neither contact and education nor education alone significantly increased participants' willingness to help-seek in the future event of developing a mental illness at either 2 weeks post intervention or in the 6 month follow-up. Scores for schizotypal thinking displayed a slightly different pattern; both conditions had improved significantly at 2 weeks, with participants in the contact and education condition showing increased improvement compared to participants in the education-alone condition. In the six month follow-up a reverse pattern was found, with only participants in the education-alone condition displaying significantly lower levels of schizotypal thinking.

Previous research utilising contact

There is little previous research which explicitly examines the use of intergroup contact as a means to address well-being outcomes in adolescents. Where research has examined this

question it has usually been in relation to attitudes to help-seeking, with some authors reporting that the use of contact improved attitudes (Swartz et al., 2010; Chovil, 2004), and others (Rickwood et al., 2004) that no significant improvements were observed in their adolescent sample. Previous research has also found that educational interventions with *no contact component* can significantly improve attitudes to help-seeking (Berridge et al., 2011; Battaglia et al., 1990), and so this is an important question as large scale contact may be more difficult to organise (London & Evans-Lacko, 2010). The current research is the first (to the authors knowledge) to investigate contact combined with education compared to education alone with regards to help-seeking, but the flat results provide little in the way of conclusive evidence, and future research is warranted. Other than investigating help-seeking outcomes, interpersonal contact has been used rarely with regards to well-being outcomes.

Explanation of findings

There were a number of reasons for thinking that interpersonal contact combined with education might have more success than education alone in improving well-being outcomes in adolescence, including increasing engagement in the lessons, increasing understanding that mental illness can be experienced by people who are 'normal', increasing the impact and importance of the message 'look after your mental health', and bringing the lesson into the 'real world'. Adolescents also report that they value experiences of interpersonal contact in terms of developing an understanding of mental health and would welcome opportunities for this in their school education (Woolfson et al., 2009; Kidger et al., 2009). Reasons for the discrepancy between these hypothesised suggestions for the efficacy of contact compared to the results of the present research include increased fear of developing a mental illness, increased negative self-scrutiny, and cognitive avoidance strategies (Sibrava & Borkovec,

2006), as well as the possibility of over-engagement in the contact module 'overwriting' the other modules of the intervention. These shall be discussed in turn.

It is also noteworthy that the use of contact has primarily been used in adult populations, as a means to reduce the stigma of mental illness. The stigma, knowledge, and literacy outcomes of the intervention, discussed in Chapter 6, suggest that young adolescents may respond differently to adults to intergroup contact, as the addition of contact to education was found to negatively impact stigma, knowledge and literacy outcomes when compared to education alone. No research to the author's knowledge however, has investigated whether intergroup contact may affect adults' well-being or mental health outcomes.

Fear of developing a mental illness

One of the reasons for thinking that interpersonal contact might provide more impact was that it might encourage mental illness to be 'normalised' and increase the message that 'anyone can develop a mental illness'. The normalising effect of contact has been found previously, for example, within literature investigating homophobia (Castro-Convers, Gray, Ladany, & Metzler, 2005). It was hypothesised that this would lead to increased engagement in messages which promote mental health, and increased likelihood of help-seeking in the event of mental distress, however, it is also possible that normalisation of mental illness may have led to an increased fear of developing a mental illness. One of the themes which emerged from the research reported in Chapter 4 revolved around adolescents' reported fear of developing a mental illness. Developmentally, adolescence is a time of flux and change (Keating, 2004; Steinberg, 2005; Piaget, 1972; Steinberg & Silverberg, 1986; Erikson, 1968), and it is possible that the young age of the participants led to more uncertainty and fear

regarding the development of mental illness. If the contact included in the intervention did lead to increased fear of developing a mental illness then this may have increased participants levels of mental distress in comparison to the education only condition.

Defence mechanisms

Related to the possibility of increased fear of developing a mental illness is the idea that this may have led to participants utilising cognitive avoidance strategies (Sibrava & Borkovec, 2006) as a defence mechanism, as discussed in Chapter 6 (p178). Participants may have distanced themselves from the topic of mental illness and from the memory of the intervention in order to reduce any anxiety provoked by the normalisation of mental illness.

Related to both of these explanations (fear of mental illness and cognitive avoidance strategies) may be the schizotypal thinking outcomes, which presented a different pattern to most other outcome variables in that they were significantly improved in the contact and education condition compared to the education only condition at two weeks post intervention. It is possible that prior to the intervention the questions on the schizotypal measure used ('Have you ever noticed a common event or object that seemed to be a special sign for you?', 'Have you had experiences with astrology, seeing the future, UFOs, ESP, or a sixth sense?'; Raine & Benishay, 1995) meant little to the participants in terms of their connection to mental illness, whereas after receiving an explanation of psychosis during the intervention participants may have understood the relation of the questionnaire to psychotic outcomes. If the contact and education condition led to an increased desire from participants to distance themselves from the idea of developing a mental illness then this may have biased their responses to this questionnaire. By contrast, the questions on the Strengths and

Difficulties questionnaire are often slightly more opaque in their relation to mental illness ('I get a lot of headaches, stomach-aches or sickness', 'I am constantly fidgeting or squirming', 'I get on better with adults than with people my own age'; Goodman et al., 1998), and also focus on strengths and pro-social behaviour ('I try to be nice to other people. I care about their feelings'). Tellingly, in the 6 month follow-up, when the specific content of the intervention may be less well remembered, the pattern of results for schizotypal thinking was similar to the trend observed in other outcomes, with participants in the education alone condition reporting lower schizotypal thinking than those in the contact and education condition.

Negative self-scrutiny

In contrast to the first two explanations, a third potential reason for the increased mental distress in the contact and education condition in comparison to the education alone condition may be in relation to an increased negative self-scrutiny, again caused by the normalising aspect of the contact. Intense self-scrutiny has been linked to increased stress and anxiety (Grossman, Niemann, Schmidt, & Walach, 2004). If the normalising aspect of the interpersonal contact did lead to an increased scrutiny, this may have led to an increase in emotional stress and distress when compared to the education alone condition.

Over-engagement in contact module

In the acceptability testing of the intervention (see Chapter 5, p144-155) participants praised the use of intergroup contact as one of the most striking and enjoyable elements of the intervention. A further interpretation of the results then is that, as expected, the experience of contact led to increased engagement, but contrary to expectations, this heightened engagement in the *contact module* of the intervention led to a decreased capacity in

participants' memory and attention for *other modules*. This suggestion is supported by work from Mather, Gorlick, and Nesmith (2009) who suggest that under certain circumstances, arousal can reduce memory for peripheral information, or for information presented just before or after the arousing stimuli (Mather, 2007; Knight & Mather, 2009). By contrast, in the education alone condition, participants' engagement remained similar throughout the day meaning that all elements of the intervention were received equal attention, and were stored and rehearsed in a similar manner in the participants' memory.

According to these explanations therefore, many of the hypothesised reasons for believing contact combined with education would be more efficacious than education alone may therefore be reversed; the normalising, increased impact and engagement, and 'real world' nature of meeting an individual with experience living with a mental illness leading to an increased fear of developing a mental illness, increased negative self-scrutiny, the increased use of defence mechanisms such as reaction formation, or decreased engagement in non-contact modules of the intervention.

School-based mental health research

One interesting outcome of the present research is that adolescent mental health and well-being improved despite the fact that much of the intervention dealt with topics unrelated explicitly to the promotion of mental health. Instead, the intervention covered some mental health literacy topics related to self-help and resilience techniques (see appendix 2 for intervention lesson plans). Previous interventions aiming to improve mental health or reduce the symptoms of mental illness have had some success (Lister-Sharp et al., 1999; Wells et al., 2003; Weare & Markham, 2005), though one of the largest, most robust trials to be

conducted (to the authors knowledge), which aimed to reduce the symptoms of depression in secondary school students in Australia, reported flat results (Sawyer et al., 2010b; Sawyer et al., 2010a). Reviews suggest that universal interventions which aim to promote mental health may have more impact than universal interventions which aim to reduce mental illness, but refer to a host of methodological flaws within existing research (e.g. Spence & Shortt, 2007) including (but not limited to) inadequate sample size and power, lack of active control groups, lack of control for fidelity and the quality of delivery, and failing to report on the exact nature and content of the intervention, suggesting that this question still requires further investigation before large scale dissemination of school interventions to improve mental health can be systematically delivered.

Similar to the present research, Naylor et al. (2009) conducted a school-based intervention which aimed to improve mental health knowledge and to reduce stigma and which also had success in improving students mental health with an increase in pro-social behaviour and a reduction of behavioural/externalising problems. There are some potential reasons why interventions which do not specifically address mental health improvement may have an impact on mental health. As discussed in the introduction to this chapter, mental health literacy topics have a direct relevance to the promotion of mental health, through the raising of awareness of mental health subject matter and resilience or coping mechanisms. Furthermore, in discussing mental illness in a more general and indirect manner, adolescents may be able to engage in a discussion without anxiety about stigma from their peers. In addition, discussing mental illness in others or in general may be less anxiety provoking than discussing mental health and ill-health in themselves or their peer groups.

Limitations and implications for future research

The study findings hold promise regarding mental health outcomes; if a short, one day programme can lead to improvements in mental health, emotional well-being, and resilience up to six months post-intervention, albeit with small effect sizes, then further research is certainly warranted into the potential for greater impact from longer term intervention programmes which focus on stigma and mental health literacy as a means to promote mental health in adolescence. There are, however, certain limitations which must be acknowledged in the present research.

As discussed in chapter 6 (p182) included schools were purposefully chosen for their diversity, meaning that they do not represent a homogenous group. It is important that future research investigates the ways in which different school types respond to interventions before widespread dissemination of interventions occur. Similarly, just two of six schools took part in the six month follow-up, meaning that these findings may be less generalizable. As multiple imputation was not possible for the six month follow-up this also suggests that these results must be interpreted with caution. The use of intergroup contact and education in regard to well-being outcomes however has never been directly compared to education alone previously (to the authors knowledge), so although potentially less generalizable, these results are still important in terms of new knowledge.

Relating to the impact difference between the contact and education condition compared to the education alone condition, classes were randomised with respect to power considerations, rather than entire schools, which may have inflated intraclass correlations. This may have led to a diluted effect size between conditions, suggesting that the difference

between the impact of contact combined with education compared to education alone may be even more marked than this study suggests.

Also discussed in Chapter 6, each school which took part in the intervention represented a distinct heterogeneous population, and it was important to the integrity of the cluster-based analysis that this was captured. To a lesser extent however, the same may have been true of each class group involved in the intervention, and this information was unfortunately not recorded and therefore not represented in the analysis. Similarly, each facilitator who led the intervention classes will have had an individual impact on outcome variables, but this information was not recorded. Fidelity of the implementation of each condition within each school was however documented, representing a strength of the research.

When conducting interventions it is important to consider any potential, unintended, negative outcomes which may result from the research. One important implication suggested by the present research which should be considered for future studies and interventions involving intergroup contact is well-being outcomes. Although this is the first research investigating the use of intergroup contact in an intervention for young adolescents (to the authors knowledge), previous research has investigated contact in older adolescent groups and adult populations (Corrigan et al., 2012). However, with the exception of help-seeking intentions, well-being outcomes have rarely, if ever been considered.

Conclusions

The present study suggests that contact used in stigma research may have a negative impact on well-being outcomes, when compared to education alone. This is in contrast to the original study hypotheses, and may be related to fear of developing a mental illness, increased

negative self-scrutiny, cognitive avoidance strategies (Sibrava & Borkovec, 2006), or over-engagement in the intergroup contact. It is important that the possibility of negative mental health outcomes is considered in interventions which utilise interpersonal contact, including those with older adolescents and adults which are becoming increasingly common.

CHAPTER EIGHT: DISCUSSION, IMPLICATIONS, AND CONCLUSIONS

The final chapter of this thesis will summarise and discuss the main findings, and suggest implications and recommendations for research and practice. Strengths and limitations will be discussed, as well as the overall conclusions of the research.

SUMMARY OF THE FINDINGS

Chapter 2 reviewed literature relevant to the development of mental illness throughout adolescence, stigma and knowledge of mental illness including mental health literacy, and the impact that stigma, knowledge and literacy can have on well-being and help-seeking. The use of intergroup contact as a means to reduce stigma and increase knowledge was investigated, and school-based educational interventions utilising contact to reduce stigma were reviewed.

This review highlighted that adolescence represents a time of vulnerability for the development of mental illness, intensified by a lack of adequate or appropriate help-seeking in the event of illness development. The need to find ways to increase help-seeking for mental distress and illness in adolescent populations was highlighted, as well as ways to promote mental health and to increase resilience to mental illness. The review highlighted that stigma of mental illness and a lack of mental health knowledge may present barriers to help-seeking. Stigma was found to be prevalent, reported as significantly negatively impacting upon individuals who live with mental disorders, and was suggested to develop throughout childhood and adolescence. The benefits of mental health literacy were also investigated and discussed as a means to promoting help-seeking, and resilience to mental illness.

The 'contact hypothesis' (Allport, 1954), which theorises that interaction between groups may reduce conflict, prejudice, and discrimination, was discussed as a means of reducing stigma, with research suggesting that the use of intergroup contact has a long and successful history of reducing stigma (Savelkoul et al., 2011; Herek & Capitanio, 1996; Werth & Lord, 1992; Caspi, 1984; Corrigan & Penn, 1999). A dearth of mental health research with adolescents into intergroup contact occurring in naturalistic settings was found, with the one available study (to the author's knowledge) suggesting that contact with individuals who experience mental disorders may increase adolescents' stigma of mental illness within the domains of dangerousness and responsibility (Corrigan et al., 2005). On the other hand, several school-based interventions which utilised contact reported positive effects and reduced levels of stigma post-intervention. A meta-analysis from Corrigan et al. (2012) which compared interventions which utilised education to interventions which utilised contact in adolescent populations found smaller effect sizes in those which utilised contact, but the only three studies (to the author's knowledge) to *directly* compare the use of contact with education to education alone suggested that, when contact followed education, contact was a successful method for reducing stigma and increasing knowledge of mental health when compared to education alone (Husek, 1965; Chan et al., 2009; Meise et al., 2000).

The research presented in this thesis therefore had the overarching aim of investigating levels of stigma and knowledge in adolescent populations, as well as methods to improve stigma, knowledge, and literacy. In addition the research aimed to develop a better understanding of the use of intergroup contact in adolescent populations as a means to reduce stigma of mental illness, and to increase knowledge, literacy, and wellbeing outcomes for adolescent groups.

Relevant to these aims, Chapter 3 presented the results from a survey of 1109 adolescents aged 11-13 which found significantly higher levels of stigma and lower levels of knowledge in adolescents than adults, with ethnicity showing some level of impact on attitudes regarding future intended behaviours towards individuals with mental disorders but not on knowledge of mental illness. This suggested that intervention in young adolescent populations was warranted, and that interventions might need to be developed with consideration of the ethnicities for which they were intended. Knowledge and attitudes were found to be correlated, suggesting that an intervention which utilised education might have a significant impact upon attitudes to mental illness. Adolescents with previous experience of contact with individuals who live with mental disorders were found to display lower levels of stigma and higher levels of knowledge, suggesting that contact might also be a successful technique for intervention. Consistent with previous research (Sawyer et al., 2000), fewer adolescents reported being diagnosed with a mental illness than was suggested by data from the questionnaire measures used to investigate mental health and ill-health, suggesting the possibility that some of the participants may have been experiencing significant levels of mental distress without receiving adequate support for these problems. The results from the survey also suggested that increasing young adolescents' resilience, potentially through mental health literacy strategies, might have an impact on participants emotional symptoms, hyperactivity, and peer problems; something which has been suggested by previous research (Kelly et al., 2007; Naylor et al., 2009).

Chapter 4 developed a more in-depth understanding of the ways in which adolescents conceptualise and perceive mental health and ill-health, and how adolescents would like to receive information about mental health. A dual perception of mental illness was highlighted; perceptions of stereotypes, extremes and images of craziness contrasted with perceptions

from the participants' personal experiences of reality, and of personal mental distress and mental illness in family and friends. Focusing on individual diagnoses and symptoms, discussing prevalence, and emphasising any previous contact with individuals with mental disorders were all suggested as ways to help adolescents focus their perceptions within this second, less stigmatising and more sophisticated perception of mental illness. Consistent with the survey research presented in Chapter 3, the participants who took part in the qualitative study presented in Chapter 4 expressed a belief that their personal experiences of contact with individuals who they knew to experience mental illnesses had enabled them to develop knowledge and empathy, and expressed a desire for mental health education to include hearing personal stories regarding living with a mental illness. Adolescents also expressed preferences for mental health topics to be taught within school, generally in the first half of secondary school (ages 11-13), for lessons to be taught by experts in mental health, for lessons to be relevant in terms of the type of mental illness discussed, and for lessons to cover help-seeking options for young people.

The effect of naturalistic contact (Chapter 3) in reducing stigma in the adolescent sample was small, and contrasted with the one previous study (to the author's knowledge) which had investigated naturalistic contact in adolescent populations. Corrigan et al. (2005) found that adolescents who report contact with individuals who have a mental disorder were more likely to report increased stigma, although also reported small effect sizes. The small effect sizes of both the research reported in Chapter 3 and Corrigan et al.'s research suggested that the question remains unresolved and therefore that further research is needed, and it needs to be noted that the element of stigma investigated differed between Corrigan et al.'s study, which investigated stigma in the domains of responsibility and dangerousness, and the research presented in Chapter 3 which investigated attitudes regarding future intended behaviours

towards individuals with mental illness and stigma-based knowledge. On the other hand, the findings reported in Chapter 3 are strengthened by triangulation (Denzin, 2009) with the findings reported in Chapter 4, where again, adolescents reported that their experiences of contact with individuals who they were close to and who experienced mental disorders led to increased knowledge and empathy.

The research reviewed in Chapter 2, alongside the studies conducted and presented in Chapters 3 and 4 fed into the development of a school-based intervention 'SchoolSpace', the central aim of which was to evaluate the use of interpersonal contact with an individual who has experience of mental illness in reducing the stigma of mental illness, increasing mental health knowledge and literacy (Chapter 6), and improving well-being outcomes in a young adolescent population (Chapter 7).

Chapter 5 summarised the methodology used in the evaluation and hypothesis testing of the intervention and use of intergroup contact, as well as presenting the results from a series of focus groups conducted to assess the acceptability of the intervention with young adolescent audiences. This qualitative study suggested that the participants had valued the presenters and presentation style of the intervention, enjoyed the interactive elements, and, for participants in the contact and education condition, placed a high value on the intergroup contact element. Areas suggested for improvement by the participants included a better explanation of some of the more technical language used throughout the intervention, more time for discussion of the ideas presented, more information on how to seek help for a mental illness, and more information on mental illness and violence.

The results from the cluster randomised controlled trial, which compared contact and education to education alone found, contrary to the study hypothesis, that contact combined with education did not reduce stigma, increase literacy or improve wellbeing-outcomes when compared to education alone, and in the case of stigma-based knowledge and mental health literacy significantly reduced the impact of the intervention, with many other measures showing non-significant trends in the same direction.

The results from the randomised controlled trial of the contact hypothesis (Chapters 6 and 7) therefore suggest that contact occurring in naturalistic settings (i.e. the contact investigated in Chapters 3 and 4) is not analogous with contact that occurs under more structured circumstances as part of an intervention. Clearly, not all contact is the same. Similarly, research into adult populations robustly suggests that intergroup contact with individuals with experience living with a mental disorder reduces stigma of mental illness, yet the present research found that, at least in terms of contact which occurs as part of an intervention, intergroup contact has the opposite effect, significantly reducing the impact of an intervention on a number of outcome measures. There appears to be something in the young age of the participants which causes them to respond differently to the introduction of intergroup contact as part of a structured intervention than older groups, but perhaps similarly in terms of naturalistic contact. Chapters 6 and 7 discussed several possibilities for the differentiation between contact in adult and young adolescent populations and between naturalistic and structured contact. 1; The young adolescent participants in the intervention may have had an undifferentiated or ill-defined framework of what mental illness is, and the addition of contact to the intervention may have led to increased confusion regarding this framework due to the fact that mental illness 'in the real world' often does not conform neatly into diagnostic categories. 2; The contact may have normalised mental illness, creating

fearful reactions and cognitive dissonance leading to a decreased engagement in the intervention, or leading to negative self-scrutiny and reduced well-being. 3; Contact may have increased engagement in the intervention, as hypothesised, but only in relation to the contact element of the intervention. This 'shock factor' of the contact session may have led to a decreased attentional capacity for the other intervention modules. All of these possibilities suggest that, with additional education prior to and after the contact, and more time in between sessions to process the experience of contact, intergroup contact may have had an increased positive impact. By comparison to structured contact which takes place as part of an intervention, naturalistic contact, such as living with or having a close friendship with an individual who experiences mental illness, will involve far more time to assimilate the contact into the adolescent's perception or framework of mental illness; this processing time was missing in the present intervention. The design of the intervention lesson plans 'revealed' that one of the lesson facilitators had experienced a mental illness half way through the day, after a morning of learning what mental illness is, and allowing for a relationship to develop prior to the 'reveal' of mental illness which wasn't built on preconceived judgements of what an individual with a mental illness might be like. After the contact session, the intervention then immediately turned to mental health literacy, and dealing with stress and difficult emotions. No time in between these lessons, over and above the school lunch break, was given for participants to process the information and experiences. The experience of meeting someone with a mental illness may have been confusing, frightening, shocking, and engaging, particularly in light of the relationship participants may have briefly built with the volunteer who had experience of mental illness, and it seems likely that participants would have benefited from time to process the complex emotions and thoughts that this may have led to; 'how is mental illness different to what I believed?' 'If this person can have a mental illness

does that mean I might also develop one?' 'Should I be frightened of this person, or of becoming this person?' It is also noteworthy that the adolescences who were involved in the intervention reported feeling that the experience of contact had increased their understanding of mental illness and reduced their stigma (Chapter 5, p144-145). This suggests that it would premature to reject contact as a means to reduce stigma in young adolescent populations entirely.

Research into intergroup contact has been criticised for developing a 'laundry list' of conditions (Pettigrew, 1998), but research has also suggested that studies which adhere to Allport's (1954) original four optimal conditions of equality between groups, common goals, co-operation rather than competition, and support or approval of authority, tend to display larger effect sizes (Pettigrew & Tropp, 2006). A necessary condition for the use of contact as a means to reduce the stigma of mental illness in adolescent populations may include adequate time for adolescents to process information between education and contact sessions, as well as additional education prior to and after the introduction of contact. This suggestion is supported by the only three other studies which have directly compared contact and education with education alone (Husek, 1965; Chan et al., 2009; Meise et al., 2000), which found that though contact may be successful in reducing stigma and increasing knowledge, there may need to be a caveat that at least part of the education component of the intervention come before the contact component.

IMPLICATIONS

The research presented in this thesis suggests interventions to reduce the stigma of mental illness, to increase mental health literacy, and to promote mental health in young adolescent

populations are needed and wanted by adolescent populations. The research, particularly that presented in Chapters 3 and 4, suggests that intergroup contact, as conceptualised by Allport (1954) may hold promise as a means to reduce attitudinal stigma related to future intended behaviours towards individuals who experience mental illness and to improve stigma-based knowledge, however the research presented in Chapters 5, 6, and 7 suggest that it would currently be premature to disseminate this approach with young adolescent populations.

The research also holds implications for understanding the development of stigma processes, as the young adolescent participants in the current research responded to contact in a way which opposes much of the adult research literature (Corrigan & Penn, 1999; Corrigan et al., 2001). Link and Phelan (2001) argue that the stigma process develops through four interlinked components; labelling difference, stereotyping, separation of 'them' and 'us', and status loss and discrimination. The first part of this stigma process, labelling difference, also however plays a normative role in the process of learning from infancy through to adulthood (Schafer, Plunkett, & Harris, 1999) and the ability to make learning shortcuts by labelling may be necessary for positive learning outcomes (Lupyan, Rakison, & McClelland, 2007; Lupyan, 2006). As adolescents attempt to negotiate their own unique identity away from their family and parents (Harrop & Trower, 2001), labelling and categorising others may be particularly important at this stage in their development and enable them to develop positive self-concept (Sussman, Pokhrel, Ashmore, & Brown, 2007; Brown & Lohr, 1987). If this is the case, then a brief introduction to mental health topics via intergroup contact may lead to increased labelling as the adolescent attempts to process the learning experience. This may also hold implications for the differing reaction of the adolescents to naturalistic contact compared to the more structured contact of the intervention; it may be more necessary to

categorise and utilise learning short cuts when attempting to process a brief learning experience, than when attempting to understand a long-standing relationship with a close family member or friend.

Recommendations for educational programmes in secondary schools

The research suggests that schools are promising arenas for interventions. Education, as well as methods to increase resilience, may be successful techniques to improve stigma and promote literacy and mental health, though resilience techniques may only be appropriate for promoting certain types of wellbeing, including emotional difficulties, peer problems, and hyperactivity.

The research suggests that school programmes should acknowledge stereotypes and discuss media influences on adolescents' understandings of mental illness. The term crazy should be separated from the term mental illness by discussing discrete disorders and symptoms, discussing prevalence rates of mental disorders, cause and recovery from mental illness, and conceptualising mental health and ill-health as a scale rather than a dichotomy. Increasing literacy relating to types of common mental illnesses, ways to help-seek, and ways to deal with stress and pressure is also supported by the present research. Adolescents reported a desire for mental health modules to begin in early rather than late adolescence, at the beginning of secondary school, with some adolescents suggesting that they should begin earlier. The research also suggests that increasing literacy and knowledge may play a part in the reduction of negative emotions such as fear of individuals with mental illnesses and anxiety relating to developing a mental illness or supporting family and friends who experience mental disorders. Discussing contact which occurs in naturalistic settings with

individuals close to the student *may* be a potentially useful strategy, though has implications relating to confidentiality if occurring as part of a universal school programme.

A one day intervention was found to reduce stigma, increase knowledge and literacy, and promote mental health and resilience, and many outcomes continued to show improvement at six month follow-up. This is despite adolescence being a period when traditionally, stigma towards mental illness develops (Corrigan & Watson, 2007; Office of the Deputy Prime Minister, 2004; Flavell et al., 2001; Hinshaw & Stier, 2008; Wahl et al., 2007; O'Driscoll et al., 2012) and mental health decreases (McGorry et al., 2006). On the other hand, the one day intervention failed to have an impact upon attitudes to help-seeking, suggest that more intensive or long term intervention may be required to show an impact.

Wellbeing outcomes were less likely to be maintained at six months than stigma, knowledge and literacy outcomes, suggesting that, unsurprisingly, adolescent well-being may not be improved long term by a short one day intervention. Instead, to have lasting impact upon well-being a longer-term or more intensive programme of interventions may be needed.

Even stigma programmes which have a high level of success will have outcomes which erode over time, and though successful, the SchoolSpace intervention reported in Chapters 5, 6, and 7 had modest effect sizes which decreased over time. It seems likely that wider educational changes are needed if positive outcomes of stigma programmes are to be maintained; instead of a one day mental health and stigma intervention, mental health education must become part of the curriculum in schools, spanning multiple year levels as part of a whole school approach if we are to see long term change maintained.

Recommendations for wider public health strategies

Many of the implications and recommendations suggested for educational programmes in secondary schools are also relevant for public health strategies aimed at adolescents and young people; divorcing concepts of craziness from mental illness by discussing discrete diagnoses, prevalence rates, cause and recovery, and so on. In addition, the research reviewed in Chapter 2 suggested that within *adult populations*, the use of intergroup contact, both naturalistic and within a structured intervention, may be a highly successful strategy for the reduction of mental illness stigma (see Corrigan et al., 2012 for a meta-analysis).

It is important to note that attitude chance occurs in a wider societal context; the work in this thesis suggests that school programmes may have a role to play in the reduction of stigma, and the improvement of mental health literacy and mental health, but even so, they can only be part of a wider solution. Link and Phelan (2001) discuss the difficulties in attempting to implement real change in stigma due to stigma's multifaceted nature; if one method of discrimination is blocked or becomes socially unacceptable, new mechanisms to discriminate become more prominent. In order to combat stigma therefore, approaches must be multifaceted and multilevel, addressing issues of individual and structural discrimination, fundamentally changing attitudes and the lack of knowledge which underlie discrimination, and changing the power relations which enable dominant societal groups to stigmatise others. The research reported in this thesis, culminating in the intervention reported in Chapter 5, 6, and 7, attempted to create fundamental changes by targeting young adolescent populations during a time when the development of stigmatising attitudes is still taking place (Corrigan & Watson, 2007; Flavell et al., 2001). For school interventions to be multilevel

however, a whole school approach will likely be necessary, with programmes developed for teachers as well as involvement with the local community.

Recommendations for clinical practice

Though not relevant to central research aims, the findings of this thesis also hold implications for clinical practice, in particular, increasing engagement in clinical services and reducing self-stigma in young people who experience mental disorders.

Understanding how young people perceive mental illness has implications for how and why young people may choose to seek help for mental distress. Baseline attitudes to help-seeking reported in Chapter 7 were relatively high (a median of 6, with the highest possible score 7), yet in reality adolescents show low levels of help-seeking. The research reported in Chapter 4 may offer some insight to this discrepancy, as high levels of mental distress and even mental disorders such as depression and bipolar were not always conceptualised by the participants as types of mental illness. Thus though adolescents indicate that they might help-seek if they were to develop a 'mental illness', in reality an adolescent may experience a mental illness but not conceptualise it as something which requires help-seeking through a mental health professional or primary care. Readjusting this conceptualisation so that common diagnoses of mental illness are aligned with concepts of mental illness may be a priority for educational and public health strategies, however it may be important for clinicians to keep in mind that young people may not conceptualise these disorders as mental illnesses, may not use language such as 'mental illness' themselves when describing their experiences, and may experience fearful reactions if medical professionals use more generic terms such as mental illness or mental disorder rather than discussing specific diagnoses or symptoms.

Similarly, though reducing the stigma of mental illness is not the clinician's primary aim, discussing stigma and using strategies to reduce self-stigma in young people help-seeking for mental distress and illness may help to increase engagement with mental health services (Schomerus et al., 2009). This in turn may lead to a reduction of treatment refusal or disengagement with services, and may increase attendance to appointments. Strategies to reduce self-stigma may include emphasising prevalence and recovery rates and discussing any positive experiences of naturalistic contact which the young person has experienced previously with individuals who live with mental illnesses.

Suggestions for future research

Further research is needed regarding the use of intergroup and interpersonal contact in young adolescent populations. With regards to naturalistic contact, the research presented in this thesis suggests that, in terms of attitudes regarding future intended behaviours towards individuals who experience mental disorders and stigma-based knowledge, naturalistic contact may result in significant decreases in stigma, however effect sizes were small and the finding conflicted somewhat with previous research investigating other aspects of stigma in adolescent groups (Corrigan et al., 2005). Further research in young adolescent groups is therefore needed both to see if these findings are reproducible and to investigate whether contact may impact upon certain types of stigma in different ways.

Research is also needed to assess under what conditions, if any, interpersonal contact with an individual with experience living with a mental illness may be optimal for interventions with young adolescent populations, and whether, if under these optimal conditions, education

alone is still a more effective method for reducing stigma and increasing literacy and wellbeing than contact and education combined.

Harrop and Trower (2001) discuss an over emphasis on reductionist models of mental illness leading to social and environmental avenues of enquiry to be comparatively neglected. The research presented in Chapter 7 found that a one day, non-therapeutic intervention, with an emphasis on stigma and literacy rather than mental health promotion *per se,* can promote resilience to mental illness and reduce mental health difficulties. Further research into mental health promotion, particularly via increasing mental health literacy is therefore warranted, and it is important that environmental, social, and educational factors are not neglected in favour of biological ones.

The present research found after a one day intervention (Chapter 5, 6, and 7) significant outcomes were maintained at six month follow-up for intended future behaviours towards individuals with mental illnesses in both the contact and education condition as well as the education alone condition, stigma-based knowledge of mental illness was also maintained in both conditions, mental health literacy in the education alone condition, and schizotypal thinking in the education alone condition. Whilst this is a positive outcome, research which employs even longer term follow-up is needed, to investigate whether a one day intervention in young adolescence can have a lasting impact on these outcomes, perhaps resulting in fundamental changes, or the more likely possibility that these outcomes will erode over time, and that 'booster' programmes are therefore needed.

The intervention trial reported in Chapters 5, 6, and 7 was conducted under 'ideal circumstances' taught by mental health experts from Birmingham and Solihull Mental Health

Foundation Trust and The University of Birmingham Psychology Department, and with at least two facilitators per class in each school. Clearly, this model of intervention would not be feasible or practical to maintain in the long term. Flay et al. (2005) discuss the need to test interventions under ideal circumstances before progressing to more 'real world' situations. Future research is therefore needed to investigate models of intervention which might be more practical, including e-based modules, and methods of teacher training, as well as the efficacy of video based contact with young adolescent groups.

STRENGTHS AND LIMITATIONS

Stigma, including attitudes, knowledge, stereotypes, and behaviours (Thornicroft et al., 2007; Corrigan et al., 2003) towards individuals with mental disorders changes with time and culture, and it is therefore important that the research is placed within its context. Birmingham, UK, is a highly multicultural city, with approximately 42% of residents from ethnic groups other than White and 22% of residents born from outside of the UK, and the city has a greater proportion of younger age groups than much of the rest of the UK (Birmingham City Council, 2013). The city also has higher levels of unemployment (Birmingham City Council, 2001). These differences between Birmingham and other cities within the UK, or indeed the rest of the world, do not necessarily mean that the research is not generalizable, but it is important to understand and discuss the context of the research so the reader can make their own judgement as to how the research may generalise to their own situation.

Similarly, it needs to be noted that, through the schools involved in the research were chosen to be representative of the wide variety of schools within the UK system, and represented

varied demographic factors, the schools all opted into the research. This potentially suggests a higher degree of enthusiasm for mental health topics from these schools, creating the possibility that data relating to students mental health stigma, knowledge, and well-being may be altered compared to students from schools which do not place a high value on mental health topics. 20 schools were approached to take part in the research. Of the 20 schools approached to take part in the research, 11 opted into at least one aspect of the research, and two explicitly stated that they didn't wish to take part. The remaining 7 schools had expressed an interest in taking part in the intervention (Chapters 5, 6, and 7), but were informed that all places in the project had been filled. If the schools involved in the research placed a higher value on mental health and well-being than other schools however, this has a number of implications. The relatively high levels of stigma and low levels of knowledge compared to adult populations may be understated by the research reported in Chapter 3, and in reality may be even more marked. Similarly, levels of mental distress reported by participants in Chapter 3 may also be underestimated compared to other schools. The lack of knowledge reported by participants in Chapter 4 may be more marked in adolescents from other schools, though whether this would lead to a decrease or increase of engagement in mental health topics compared to the participants who took part in the research presented in Chapter 4 is unclear, as the participants reported that their lack of knowledge led to a desire to be taught further about mental health topics in schools. It is also unclear whether any potential values held by the school relating to mental health and well-being may have impacted upon the overall positive outcomes of the intervention, regardless of condition. Increased school values may have led to increased engagement from students leading to more pronounced change post intervention, but equally, increased school values may have meant that students had a higher level of mental health knowledge and a lower level of stigma prior to the intervention,

reducing the interventions overall impact and leading to ceiling effects. Whilst the present thesis cannot answer this question, it is important that this limitation is reflected upon,

It is also important to note that the quantitative research (Chapters 3, 5, 6, and 7) presented in this thesis concentrated on certain aspects of stigma; attitudes relating to future intended behaviours towards individuals experiencing mental disorders and stigma-based knowledge. The findings reported in the thesis are not necessarily generalizable to other aspects of stigma such as conceptions of dangerousness, unpredictability or responsibility (Corrigan et al., 2003). The same is true of mental health literacy, which investigated recognition of diagnoses, and resilience, where only the personal disposition aspect of resilience was investigated. This is not a limitation of the research per se, but it is important to be transparent regarding the scope of the research and research findings.

The dual role of the author in the development and evaluation of the intervention, and the conflict of interest this entails, must also be acknowledged. As the developer of the intervention a vested interest in the success of the intervention occurs, yet as an evaluator an objective scientific role must also be maintained to ensure the integrity of the research process. This dual role thus potentially violates the principle of objectivity and detachment upon which scientific method is founded (Checkland & Holwell, 1998). These issues were discussed during academic supervision, with the following procedures put in place to minimise researcher bias.

- *The trial protocol was published:* By publishing the protocol beforehand, the research methods, outcomes, and hypotheses were transparent (Chisholm et al., 2012)

- *The author was not involved in the facilitation of the intervention:* Volunteers were trained and schools were engaged in the research by the author, who also co-ordinated the intervention day, but to reduce bias the protocol developed stated that the author would not run any intervention sessions. This protocol was followed except on one occasion when illness resulted in the intervention being one facilitator short, leading to the author facilitating an education alone intervention class in school 3 (see Chapter 5, p136-137, for details of this school).

- *Computerised system of data entry used which minimised bias.* A computerised system of data entry was developed by the University of Birmingham Psychology technical team which allowed questionnaires to be scanned and data output, minimising the chance of human error and researcher bias in the inputting of data. Data stating which condition each participant was in was added after all other data entry was complete (though before data analysis).

- *Analysis of data developed a priori:* The analysis plan of the data reported in Chapters 6 and 7 was discussed and developed a priori, with a subset of data analysed by a statistician independent from the research team (Dr David Jenkinson).

The dual role also held benefits for the research, namely through the engagement of schools in the research process; the author was able to answer schools' questions regarding the intervention and the rationale behind different modules with a full understanding of the scientific knowledge supporting them. As the researcher was also the implementer of the intervention, schools were able to feel fully engaged with the research process and were acknowledged as being integral to the study. The dual role also held other benefits, through situating the research and researcher within a real world environment, resulting in an

understanding of outcome variables which perhaps could not be understood through research occurring within the laboratory; by working closely with the schools involved in the research, and the volunteers who facilitated the intervention, the researcher was able to better understand the participants reactions to the introduction of intergroup contact.

Triangulation has been defined as the combination of two or more methods or data sources when studying a single phenomenon, leading to a more accurate account of reality (Denzin, 2009). Triangulation can provide a multifaceted view of research areas which are both complex and multidimensional (Foss & Ellefsen, 2002) by combining methodologies as in the present thesis; surveys, group interviews, and experimental research. Ross and Ellefsen (2002) argue that though qualitative and quantitative methods may have traditionally differing paradigms and epistemologies the methods can be combined, and hold that 'within a complex and differentiated reality we need different and various types of knowledge. Knowledge gained from qualitative and quantitative approaches should not be seen as irreconcilable pools of knowledge, but as different positions on a continuum of knowledge' (p244). The use of triangulation within this thesis allowed for the identification of inconsistencies relating to the impact that intergroup contact can have on young adolescents, on the one hand, appearing to have a positive impact when naturalistic, and on the other, reducing the impact of an educational intervention when compared to education alone.

Link and Phelan (2001) discuss that researchers may unintentionally cast those who are stigmatised in the role of the helpless victim. The use of contact within the present thesis, in particular the research presented in Chapter 5, 6, and 7, may have helped to avoid this. As individuals taking a lead role in the intervention, and facilitating at least one module during the day, those with lived experience of mental illness were not passive, helpless, or

acquiescent 'victims' of stigma, but maintained a position of power. This represents a

strength of the present research and of the use of contact in general.

OVERALL CONCLUSIONS

The research presented in this thesis focused on the stigma, knowledge, and literacy of

mental health and ill-health, as well as well-being outcomes and mental health promotion in

young adolescent populations. In particular, the use of intergroup contact was investigated as

a means to improve outcomes. It is clear from the present research that there is a vital need

to improve adolescents' stigma of mental illness, as well as their mental health knowledge

and literacy, and well-being outcomes. Schools may represent a successful arena through

which to do so. The research presented extends previous work into the fields of adolescent

stigma, literacy, and well-being, as well as presenting an original contribution to the field of

intergroup contact to reduce the stigma of mental illness in adolescent populations. Whilst it

is clear that reducing stigma and improving literacy and well-being are worthy goals, the

present research suggests that the use of intergroup contact with young adolescent

populations requires further investigation if it is to be utilised successfully.

APPENDICES

Appendix 1: Example of coded text demonstrating the thematic analysis process used in Chapter 4

06/07/11	Ccollege 5	FG1	Interviewer: Katharine Chisholm

328 K: What kind of age do you think they should be taught about it?

    C5   327 Year 7

329 L – Probably at like year 7.

330 K – Yeah. Why did you pick that age?

331 L – Because like they're not too young like in primary school, but

    C5   328 Not too young, not too old.

332 they're at the beginning of secondary school so they're on their

    C5   329 On their way to becoming adults

333 way to becoming young adults.

334 K – So it's kind of that age just before they hit adolescence kind of

335 thing

336 LAUGHTER

    C5   334 Old enough to understand

337 H – They're not young enough to like not understand it.

338 K – Do you think that's the age at which mental health becomes

339 relevant? Or do you think it becomes relevant before that but

340 they're just too young?

    C5   338 Could teach earlier but no use complicate language

341 D – I think they should maybe teach it a little bit earlier but like

342 not use like schizophrenia or like depression. Like use different

    C5   340 Parents might have depression

343 words. Cos say if their parent is really depressed or something

    C5   342 Not too scientific

344 then maybe they should teach them about it but not make it so

345 scientific and like, maybe a little bit earlier but not make it so like

346 [???]

347 K – Do you think, I mean obviously you guys do psychology, but

348 aside from that do you think you've given enough information

349 about mental health and emotional well-being?

    C5   348 Not enough information
    C5   348 Only information from TV

350 All – No.

351 H - I think from Hollyoaks I did [laughter] and Eastenders

352 [laughter].

353 K – So why don't you think you're being given enough?

Appendix 2: SchoolSpace Intervention lesson plans

<u>MORNING SESSION</u>

If possible set up room with tables at the sides and chairs in big circle in the middle.

FILL OUT SELF CREATED CODES! – 5 minutes

Section 1: Being Normal – 25 minutes. 9:00 – 9:25

ACTIVITY	MATERIALS	Time
- Introduce volunteers- Facilitators introduce themselves but **do not** reveal that any of them have had experience of mental illness. - If not done already- fill out self generated codes - VERY BRIEFLY- quick show of hands- who sees the old lady first? Who sees a young lady? Get those who can see both to explain to the rest of the class e.g this is the old lady's mouth but the young lady's necklace etc. Use this to lead into the learning agreement- Everyone here will have different things to bring to the day and will get different things out of the day - Learning agreement- talking about mental health and emotional wellbeing. We all will have different opinions and different experiences of these things. We will all see what we do today in different ways. - Aims for the day-		5 minutes
FRANK AND FRANKIE EXERCISE. Facilitators go round groups as pupils work. - Pupils are divided into groups of 4 or 5 to fill out Frank/Frankie sheets. - Two groups do Frank/Frankie in the UK - Two are told (privately) that Frank/Frankie has a mental illness. Don't need to go into great detail with them about what a mental illness is at this point- just say ' what do you think would be normal for them?'	Frank/ Frankie sheets	10 minutes
CLASS DISCUSSION exercise - Ask different groups 'in your group what does Frank/Frankie... like to do, have as skills/job, dislike etc etc. - Then ask other groups, responding to what one group said Frank/Frankie would like to do/dislike/live etc 'does anyone in this group do this/like this/dislike this etc? Does that make you normal or not normal? - Reveal that some of the groups were looking at Normal in the UK whereas the others were looking at Normal and has a mental illness Ask the opposing groups to say whether they think that the other Frank/Frankie would be treated well or differently because of these differences.		5 minutes
- Is anyone normal? Is this a good thing or a bad thing **GROUP DISCUSSION:** What are the things about us which make us different or interesting **If the group are not taking part in the discussion well then can play MASTERMIND GAME** **MASTERMIND GAME: groups of 4/5 have 1 minute to write as many different answers to the question down. They can be as creative as they like. Play the mastermind music through once, let them know they have 30 seconds left, and then play it through again (music lasts for 30 seconds).** See which group has the most answers and get them to read out their answers to the rest of the class.	If doing Mastermind game - countdown music- lasts 30 seconds, play twice.	5 minutes

Section 2.1: Anxiety and Stress– 60 minutes: 9:25 – 10:25

• **Check with teacher** that none of their pupils is terrified of spiders- if there are any with genuine phobias get them to look away. Anyone feeling anxious: Talk about the classes reaction to image- do the sit back in their chairs or flinch? Why do they think they reacted this way even though they all know that a photo of a spider cannot hurt them?	5 minutes
• Can anyone think of a phobia? Ask for class to shout out common phobias. • Common phobias: Go through slide with them Unusual phobias: doesn't need to make sense for someone to be scared. Does anyone in the class have any strange fears or things they don't like?	10 minutes

• **PHOBIAS competition** – draw something that some people might find frightening and then we will vote on the best- winner gets some sweets at the end of the day Facilitators go round groups as pupils work. o Individually have 5-10 minutes to draw something scary- maybe a phobia, or just something that they think some people find frightening. Can draw one big thing or several little things. • Class facilitators go round- What is scary about it? Why do they think that some people might find it scarier than others? • Pupils in groups of 4/5 vote for the best in their group. The winners of these groups stand up and explain their picture to the rest of the class (or someone else from their group can explain it if they are shy) and the entire class votes ONE winning drawing.	A4 sheets	5 minutes 5 minutes

• Good stress vs bad stress
  o go through slide. Give examples of how stress can help motivate us. Explain the difference between this and anxiety which paralyses us. Too much anxiety leads to a fight, freeze or flight response. If we feel this level of anxiety it may cause us to react in an unproductive manner. For example when we have and exam and we're too stressed so we get into a fight with our parents, or burst into tears, or ignore all out school work because it's too stressful.
• Negative responses to stress.
  o There are lots of different negative ways in which people deal with stress. Because these are not good ways to deal with stress they can lead to long term problems with anxiety.
  o **Avoidance behaviour,** If we have a worry that we can't do anything about, distracting ourselves can be a good thing. Often however people feel so stressed out by something that they choose to avoid the problem rather than facing it head on. For example when you have a test at school, and you're so worried about it that instead of studying you go out with your friends, or watch tv. When you think about the test you feel really worried but you feel fine as long as you distract yourself. However this means you fail your test and so in this instance avoiding the thing that is worrying you is a negative way of dealing with the stress.
  o Ask if anyone knows what panic attacks are.
  o **Panic attacks:** A panic attack is when someone feels an intense overwhelming feeling of fear or panic. Sometimes this may happen when they are confronted with something they are afraid of (like a spider if someone has a phobia of spiders), or when they are in a situation where they are very stressed. Other times it may seem to happen with little warning and doesn't seem to be connected to anything in the situation around the person. This is often accompanied by feelings that it is difficult to breath, feeling sick, dizzy or faint, feeling too cold or hot, and feelings of 'not being real'.
  o Sometimes people get so stressed out that they rely on drugs or too much alcohol- but
	8 minutes

this can lead onto huge problems as well as making the anxiety worse.	
• **PANIC ATTACK EXERCISE-** It is quite difficult to understand what a panic attack is until we experience the ways in which breathing can affect our bodies reactions. o Volunteers stand up (not anyone with breathing difficulties e.g. asthma- ask teacher for advice with this). Big breath in- gasp in- little breath out for one minute. • **Class discussion of panic attack exercise**	2 minute
o Get them thinking about how their bodies respond when they are anxious- 'how do you feel?' breathless, faint, strange, lightheaded. If you were already feeling anxious might you think that you were going to faint or be sick or have a heart attack- see how easily something as simple as they way we breath when anxious can affect the way we feel. If you felt anxious already and then you started to feel this way, might feeling this way make you even more anxious, which would make your breathing even more strained and increase the effects of the panic attack. Imagine what you would feel like if you carried on breathing this way for five more minutes.	5 minutes
o Information to give class: When having a panic attack it can feel as though you don't have enough oxygen. In fact the opposite is true- you have too much oxygen and your body doesn't respond well to this, causing you to feel dizzy, short of breath, have clammy hands, difficulty swallowing, feeling weak or like you might collapse etc. o The spiral of negative emotions: The person feels anxious which makes their breathing speed up. This increases their heart rate which makes them feel more sick or dizzy. They interpret this as something frightening, which adds to their anxiety and makes their breathing become even more out of control. This in turn leads to their heart rate speeding even more, more feelings of panic, dizziness, and intense feeling of fear or of not being able to cope and so on. People having a panic attack feel they cannot get enough oxygen- in fact they are getting too much.	5 minutes

• One way to deal with too much stress
  o Information to give to class: deep breathing- Breathing deep into your tummy- the important thing is that your out breath is longer than your in breath. If your out breath is longer than your in breath this tells your body to relax- this is a basic fact of biology and if you breath in this way then your body will have no choice but to relax, which in turn will help your mind to relax a little. If you are very stressed then it may take a few minutes of breathing this way, but eventually you will start to feel calmer.
  o **RELAXING BREATHING EXERCISE**: 5/7 technique to calm and lengthen breathing. Breath in for 5 seconds and out for 7 seconds
  o **Discuss-** Do you feel any different? Calmer or more relaxed?
	3 minutes
	
	1 minutes
	
	5 minutes

• Final slide- emphasise that stress is different to anxiety disorders. • All the celebs on the slide have experienced anxiety disorders at some time in their lives	1 minute
FIVE MINUTE BREAK- can play a game, have a toilet break, let them chat amongst themselves etc	5 minutes

Section 3: Depression – 15 minutes: 10:25 – 10:40

• **Symptoms of depression exercise** Shout out symptoms of depression • **Could play TOPIC TENNIS GAME here - two/four pupils at front of class have to say symptoms of depression and throw ball between them (like a tennis match). Aim is not to be the one left holding the ball** • Go through slides	Ball / bean bag	5 minutes

• Film clips
    ○ Young depressed black man clip
    ○ **EXERCISE discuss in groups of 4 or 5 then swap ideas with rest of class:** What might be wrong with him? Could he have depression? What could the depressed young man do? What would YOU do if it were you?
		8 minutes

Depression is very common - all of these well known people have experience depression at one time in their lives.		2 minutes

Section 4: Psychosis and schizophrenia – 45 minutes 10:40 – 11:25

• What is psychosis?
    ○ Give some examples of jumbled thoughts e.g. word connections
    ○ Altered reality - as convincing as impossible things can be when you are in a dream
• What is a hallucination? – go through slide
	5 minutes

How psychosis feels. Get pupils to read out the slide	5 minutes

• **Hearing voices group exercise – can do this either in groups of 3 or 4 OR just with 3 at the front of class whilst the rest of the class observes.**
    ○ two people try to hold a conversation about what they did yesterday or this morning. One person whispers in the ear of one of them, trying to distract them. "who's over there, are they looking at you, agh a spider!..."
        (if in groups of 4 one person observes)
    ○ get pupils to talk about what it feels like, is it funny, is it upsetting, can you concentrate properly...
	10 minutes

• **Hearing voices - Class discussion** ○ What did it feel like - class tell one another. Did anyone want to talk back to their 'voice'. If you did talk back then what would other people think if the voice was just a hallucination?	5 minutes

• Common causes of psychosis
    ○ **Schizophrenia**: Schizophrenia is one of the most common types of psychosis. A person who has schizophrenia will have delusions or hallucinations or may have disorganised thoughts, where they jump from one topic to the next and their thinking is jumbled.
    ○ **Bipolar disorder**: Someone with bipolar disorder experiences extreme lows of depression but also extreme highs where they are not able to consider consequences and risks in the same way as they would be able to normally. In a minute we will watch a film clip showing this.
	2 minutes

• Film clips		
o The soloist a film from 2009 staring Jamie Foxx and Robert Downey Jr tells the true story of Nathaniel Ayers, a musician who develops schizophrenia and becomes homeless. This clip focuses on the moment Nathaniel starts hearing voices and illustrates how frightening hallucinations can be.	5 minutes	
o **Soloist clip-** 4 minutes.		
o **Class discussion-** did it seem frightening? How would you react? Would you try to keep quiet or would you let others know?		
o While many people understand how depression is a terrible illness, they find it difficult to see how the 'manic' side of bi-polar or manic-depression can also be dangerous or even frightening for the individual once they have come down from their 'high'. In Mr Jones we can see how the 'manic' highs can be alienating or even frightening and dangerous.	10 minutes	
o **Mr Jones clip 2-** 2 minutes		
o **Partner exercise-** Have you ever got so caught up in the moment that you did something you regret? Facilitators go round groups as pupils work. Asking partners questions for the class discussion below.		
o **Class discussion-** Have you ever got so caught up in the moment that you did something you regret? What about Mr jones- were you embarrassed for him? What would you do if a friend acted this way? What if your friend couldn't help it? What if it was because they were ill? Would that change the way you reacted?		
o **Mr Jones clip 3-** 3 minutes		
o As we can see manic behavior can also lead to frightening or dangerous situations.		
• Is there any warning **• Is it important to catch psychosis early**	3 minutes	

BREAK TIME
11:25 – 11:45

Section 5: Stigma and Myths – 10 minutes: 11:45 – 11:55

• Myths exercise	True / false signs & blue tac	10 minutes
o One side of the class room is 'true' the other side is 'false'		
o If you get it wrong you are out and have to go sit down again. Winner is the last person/group standing after the last statement is read out.		
o Have a brief discussion about why people think the false statements/ don't think the true statements- e.g. newspapers, films, TV… Talk (briefly) about each statement before going onto the next one		

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Section 7: Contact – 20 minutes: 1155 -12:15

• Get four of the facilitators to stand at the front- use a teacher to make sure you equal 4. One in four people has experiences a mental illness and out of the four of us it is... Contact volunteer re-introduces themselves, this time explaining about their experience of mental illness.	10 minutes
• Pupils talk to a young person with previous experience of mental illness. The young person will describe their experience of mental illness and their road to recovery	
• Questions from the class/ teachers/ other volunteers (if the contact volunteer is happy to do this.) If volunteer prefers; set up an interview with just the lead questioning the volunteer, so the volunteer knows what questions they are going to be asked in advance	10 minutes

AFTERNOON SESSION

This morning we have looked at understanding mental health and what is and isn't true about it. This afternoon we're going to look at your own mental health and emotional wellbeing.

<u>Section 7: The mental health scale. 25 minutes – 12:15 – 12:40</u>

WHAT IS MENTAL WELLBEING? • Class discussion on what is mental well-being and mental health Get them to define it to one another **QUESTION: WHO'S GOT MENTAL HEALTH** Hands up if you think you have mental health - if lots put their hands up can say- 'good, you are right mental health is something that is relevant to everyone just like physical health'. **QUESTION: WHO'S GOT PHYSICAL HEALTH** - If hardly anyone puts their hands up ask 'hands up if you think you have physical health'. Then can ask them- if you can be physically healthy or physically ill, then why can't you be mentally healthy or mentally ill- mental health is something that is relevant to everyone just like physical health. – it's a scale. Everyone has mental health- sometimes its high, as with physical health and sometimes its low. If it is low for too long this may lead to mental illness.		5 minutes
WHERE ARE YOU THE MENTAL HEALTH SCALE? Draw on flip chart or white board You start.... – I woke up and my mental health was here because... and then I had breakfast and it was here, and then I came in to teach you lovely lot and it was here... Ask for volunteers- where was your mental health when you woke up this morning and why? Pick on the loud ones first and then the others will follow- ask teacher which the more confident ones who will be happy to engage in this if you are not sure. They each initial their mark until most of class have been up- including teachers and other volunteers if the class are a bit shy. **Emphasis**- mental health is a continuum that we all have whether we have a mental illness or not.	A3 sheets and flip board markers	5 minutes

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CLASS ACTIVITY : What do you do about it when you get stressed out? How do you try to cope?: get them to write ONE thing on a post it and then stick it on the wall Go through the post its on the wall with the class- what are ways in which we can cope with these? Look at some of the healthy and unhealthy behaviours mentioned before. Could any of these be used as coping mechanisms? If not, what could be? At this stage don't worry if they put forwards unhealthy coping mechanisms (e.g. 'have a cigarette') just encourage them to talk (e.g. 'yes some people would have a cigarette if they felt stressed'). Write the coping mechanisms up on YELLOW post its and stick on the wall. Eg. Cry, drink, smoke, shout, punch a wall, take drugs, etc....	Post its	5 minutes
Ask them to decide whether their mechanisms for coping are healthy or unhealthy – Each member of the class takes a coping mechanism (YELLOW) post it note from the wall and puts it on one side for healthy and the other side for unhealthy.. Ask them to discuss this more.	Post its	5 minutes
GROUP ACTIVITY: What can you differently? Go through the post its that the class have decided are unhealthy Ask them to consider alternatives, longer term healthier changes to their life to improve wellbeing Play MASTERMIND GAME: groups of 4/5 have 1 minute to write as *many* different answers to the question down. They can be as creative as they like. Play the mastermind music through once, let them know they have 30 seconds left, and then play it through again (music lasts for 30 seconds). See which group has the most answers and get them to read out their answers to the rest of the class. Winning group in this game will get prize at end of day Eg. Talking, thinking differently, changing behaviour, being around people who are good for you, looking for support etc...	Countdown music- lasts 30 seconds, play through twice.	5 minutes

Session 8.1: DIFFERENT WAYS OF THINKING 1. 20 MINUTES 12:40 – 1:00

Optical illusions **BALLERINA** – who sees her going clockwise? Raise hands, who sees her going anticlockwise? Can anyone make her switch back and forwards? **Film clips and visual aids** **Film clip**- I want you to concentrate really hard- there are two teams, the team wearing white and the team wearing black. I want you to count the number of passes that the white team make. Play clip How many passes were there? Did you see the gorilla? **Message**- you find what you are looking for. Sometimes we concentrate so hard on one thing that we fail to see something that is right in front of us. It's good to try to look at things from different perspectives and in different ways before assuming that something, particularly something	5 minutes

negative, is the case.		
So we know that different people see things and thing about things differently. Did you also know that the way we think about things also affects our feelings and our behaviour? Thinking straight- There is an important way in which our thoughts can affect how we think and how our thoughts can affect how we behave... for example- scary film example? Class discussion: with whole class- what is a time when your thoughts affected how you felt? What is a time when your thoughts affected how you behaved? We don't always notice what we are thinking- it happens so quickly and is an automatic thing for us to do. When our automatic thinking goes wrong it has a bad impact on our feelings and on our behaviour.	<u>10- 15</u> <u>minutes</u>	

LUNCH 1:00 – 2:00

(the pupils will have registration in the room you are taking them in from 1:45 – 2:00, so they will be in the room already)

Session 8.2: drama workshop. 60 minutes. 2:00 – 3:00

We're now going to do a drama workshop where we look at someone feeling very strong emotions. We need 4 budding actors/actresses from the class. (get them to read through script and act out the drama) **Mika drama.** **Second run through of play** **Living photographs game:** At various points in the play 'freeze' the action and quiz the pupils about how they think their character is feeling (in their emotions and their body), what they are thinking, and why they are behaving the way they are.	**Mika Scripts**	<u>5 minutes</u> <u>15</u> <u>minutes</u>
POST IT GAME- PUPILS GET INTO 6 GROUPS. Give each pupil one of the A3 question sheets and some post it notes. Pupils have three minute to respond to the question on the sheet and to write as many answers as possible on the post it notes which they should stick on the sheet around the question. After the three minutes is up pupils have to more round to the next A3 question sheet and repeat the exercise with that question- they need to add to the responses already written there and are NOT allowed to repeat answers. Once groups have gone round all the question sheets they feed back the answers written on their original sheet to the class. **Message to the class**- think about these types of questions when you are feeling very angry or upset- what are the bad/unhelpful ways you could respond to your feelings? What are alternatives to the situation you are in? What are the good things you could have/ can do? How do others around you feel or think? What evidence is there to support the way you are feeling? **When you are feeling bad who can you talk to?** On this last point emphasise the importance of seeking help early and of talking to others if you are feeling bad or stressed.	A3 Question sheets x 6 Post its x 6	<u>23</u> <u>minutes</u> <u>10</u> <u>minutes</u>

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FACEBOOK COMPETITION		2 minutes
www.youthspace.me this is a website which has loads of information on it for young people about stress and mental health. We have a competition on facebook at the moment where you can win vouchers. Copy down www.facebook.com/youthspace.me and like the facebook page to win		
FIVE MINUTE BREAK- can play a game, have a toilet break, let them chat amongst themselves etc		5 minutes

Summary (GOING OVER THE DAY) 25 minutes. 3:00 – 3:25

Make sure all class has filled out self created codes and that you have collected them in (if not done already)

Bean bag game – pupils look back over the entire day and say something they enjoyed/ found useful/ made them think about things differently etc. Bean bag is thrown from person to person. Pupils raise their hands to signify they have something to say and the ball is thrown to them to say it. Or if they don't raise their hands just get them to throw it from person to person and whoever it is thrown to has to say something.	Ball / bean bag	15 minutes
Give out take home packs Give out sweet prizes- phobias competition (decided by class earlier) Group who won the mastermind game (ie got the most answers) Best contributor to the day- decided by you. Say why they were so good. Please give out the diabetic sweets ONLY if there is a child who the teacher confirms is diabetic- they are more expensive that the other sweets.	Take home packs Sweets x 7 Diabetic sweets x 1	10 minutes

EMOTIONAL WELL-BEING IN SCHOOLS RESEARCH PROJECT:
LESSON PLAN <mark>EDUCATION ONLY GROUP</mark>

If possible set up room with tables at the sides and chairs in big circle in the middle.

<u>MORNING SESSION</u>

FILL OUT SELF CREATED CODES! – 5 minutes

Section 1: Being Normal – 25 minutes. 9:00 – 9:25

ACTIVITY	MATERIALS	Time
• Introduce volunteers- Facilitators introduce themselves but **do not** reveal that any of them have had experience of mental illness. • If not done already- fill out self generated codes • VERY BRIEFLY- quick show of hands- who sees the old lady first? Who sees a young lady? Get those who can see both to explain to the rest of the class e.g this is the old lady's mouth but the young lady's necklace etc. Use this to lead into the learning agreement- Everyone here will have different things to bring to the day and will get different things out of the day • Learning agreement- talking about mental health and emotional wellbeing. We all will have different opinions and different experiences of these things. We will all see what we do today in different ways. • Aims for the day-		5 minutes

• **FRANK AND FRANKIE EXERCISE.** Facilitators go round groups as pupils work.
  o Pupils are divided into groups of 4 or 5 to fill out Frank/Frankie sheets.
  o Two groups do Frank/Frankie in the UK
  o Two are told (privately) that Frank/Frankie has a mental illness. Don't need to go into great detail with them about what a mental illness is at this point- just say ' what do you think would be normal for them?'
	Frank/ Frankie sheets	10 minutes

• **CLASS DISCUSSION exercise**
  o Ask different groups ' in your group what does Frank/Frankie... like to do, have as skills/job, dislike etc etc.
  o Then ask other groups, responding to what one group said Frank/Frankie would like to do/dislike/live etc 'does anyone in this group do this/like this/dislike this etc? Does that make you normal or not normal?
  o Reveal that some of the groups were looking at Normal in the UK whereas the others were looking at Normal and has a mental illness
Ask the opposing groups to say whether they think that the other Frank/Frankie would be treated well or differently because of these differences.
		5 minutes

• Is anyone normal? Is this a good thing or a bad thing **GROUP DISCUSSION:** What are the things about us which make us different or interesting If the group are not taking part in the discussion well then can play **MASTERMIND GAME** • **MASTERMIND GAME:** groups of 4/5 have 1 minute to write as many different answers to the question down. They can be as creative as they like. Play the mastermind music through once, let them know they have 30 seconds left, and then play it through again (music lasts for 30 seconds). See which group has the most answers and get them to read out their answers to the rest of the class.	If doing Mastermind game - countdown music- lasts 30 seconds, play twice.	5 minutes

Section 2.1: Anxiety and Stress– 60 minutes: 9:25 – 10:25

• **Check with teacher** that none of their pupils is terrified of spiders- if there are any with genuine phobias get them to look away. Anyone feeling anxious: Talk about the classes reaction to image- do the sit back in their chairs or flinch? Why do they think they reacted this way even though they all know that a photo of a spider cannot hurt them?		5 minutes
• Can anyone think of a phobia? Ask for class to shout out common phobias. • Common phobias: Go through slide with them Unusual phobias: doesn't need to make sense for someone to be scared. Does anyone in the class have any strange fears or things they don't like?		10 minutes
• **PHOBIAS competition** – draw something that some people might find frightening and then we will vote on the best- winner gets some sweets at the end of the day Facilitators go round groups as pupils work. o Individually have 5-10 minutes to draw something scary- maybe a phobia, or just something that they think some people find frightening. Can draw one big thing or several little things. • Class facilitators go round- What is scary about it? Why do they think that some people might find it scarier than others? • Pupils in groups of 4/5 vote for the best in their group. The winners of these groups stand up and explain their picture to the rest of the class (or someone else from their group can explain it if they are shy) and the entire class votes ONE winning drawing.	A4 sheets	10 minutes 10 minutes

• Good stress vs bad stress
   o go through slide. Give examples of how stress can help motivate us. Explain the difference between this and anxiety which paralyses us. Too much anxiety leads to a fight, freeze or flight response. If we feel this level of anxiety it may cause us to react in an unproductive manner. For example when we have and exam and we're too stressed so we get into a fight with our parents, or burst into tears, or ignore all out school work because it's too stressful.
• Negative responses to stress.
   o There are lots of different negative ways in which people deal with stress. Because these are not good ways to deal with stress they can lead to long term problems with anxiety.
   o **Avoidance behaviour,** If we have a worry that we can't do anything about, distracting ourselves can be a good thing. Often however people feel so stressed out by something that they choose to avoid the problem rather than facing it head on. For example when you have a test at school, and you're so worried about it that instead of studying you go out with your friends, or watch tv. When you think about the test you feel really worried but you feel fine as long as you distract yourself. However this means you fail your test and so in this instance avoiding the thing that is worrying you is a negative way of dealing with the stress.
   o Ask if anyone knows what panic attacks are.
   o **Panic attacks:** A panic attack is when someone feels an intense overwhelming feeling of fear or panic. Sometimes this may happen when they are confronted with something they are afraid of (like a spider if someone has a phobia of spiders), or when they are in a situation where they are very stressed. Other times it may seem to happen with little warning and doesn't seem to be connected to anything in the situation around the person. This is often accompanied by feelings that it is difficult to breath, feeling sick, dizzy or faint, feeling too cold or hot, and feelings of 'not being real'.
	10 minutes

○ Sometimes people get so stressed out that they rely on drugs or too much alcohol- but this can lead onto huge problems as well as making the anxiety worse.		

• One way to deal with too much stress
  ○ Information to give to class: deep breathing- Breathing deep into your tummy- the important thing is that your out breath is longer than your in breath. If your out breath is longer than your in breath this tells your body to relax- this is a basic fact of biology and if you breath in this way then your body will have no choice but to relax, which in turn will help your mind to relax a little. If you are very stressed then it may take a few minutes of breathing this way, but eventually you will start to feel calmer.
  ○ **RELAXING BREATHING EXERCISE**: 5/7 technique to calm and lengthen breathing. Breath in for 5 seconds and out for 7 seconds
  ○ **Discuss**- Do you feel any different? Calmer or more relaxed?
		3 minutes
		
		1 minute
		
		5 minutes

• Final slide- emphasise that stress is different to anxiety disorders. • All the celebs on the slide have experienced anxiety disorders at some time in their lives		1 minute
FIVE MINUTE BREAK- can play a game, have a toilet break, let them chat amongst themselves etc		5 minutes

Section 3: Depression – 15 minutes: 10:25 – 10:40

• **Symptoms of depression exercise** Shout out symptoms of depression • **Could play TOPIC TENNIS GAME here- two/four pupils at front of class have to say symptoms of depression and throw ball between them (like a tennis match). Aim is not to be the one left holding the ball** • Go through slides	Ball / bean bag	5 minutes

• Film clips
  ○ Young depressed black man clip
  ○ **EXERCISE discuss** in groups of 4 or 5 then swap ideas with rest of class: What might be wrong with him? Could he have depression? What could the depressed young man do? What would YOU do if it were you?
		8 minutes

Depression is very common- all of these well known people have experience depression at one time in their lives.		2 minutes

Section 4: Psychosis and schizophrenia – 35 minutes 10:40 -11:15

• What is psychosis?
     o Give some examples of jumbled thoughts e.g. word connections
     o Altered reality- as convincing as impossible things can be when you are in a dream
 • What is a hallucination? – go through slide
	5 minutes

• How psychosis feels. Get pupils to read out the slide	5 minutes

• Common causes of psychosis
     o **Schizophrenia**: Schizophrenia is one of the most common types of psychosis. A person who has schizophrenia will have delusions or hallucinations or may have disorganised thoughts, where they jump from one topic to the next and their thinking is jumbled.
     o **Bipolar disorder**: Someone with bipolar disorder experiences extreme lows of depression but also extreme highs where they are not able to consider consequences and risks in the same way as they would be able to normally. In a minute we will watch a film clip showing this.
	2 minutes

• **Film clips**
     o The soloist a film from 2009 staring Jamie Foxx and Robert Downey Jr tells the true story of Nathaniel Ayers, a musician who develops schizophrenia and becomes homeless. This clip focuses on the moment Nathaniel starts hearing voices and illustrates how frightening hallucinations can be.
     o **Soloist clip**- 4 minutes.
     o **Class discussion**- did it seem frightening? How would you react? Would you try to keep quiet or would you let others know?
	8 minutes

o While many people understand how depression is a terrible illness, they find it difficult to see how the 'manic' side of bi-polar or manic-depression can also be dangerous or even frightening for the individual once they have come down from their 'high'. In Mr Jones we can see how the 'manic' highs can be alienating or even frightening and dangerous.
     o **Mr Jones clip 2**- 2 minutes
     o **Partner exercise**- were you embarrassed for Mr Jones? What would you do if a friend acted this way? What if your friend couldn't help it? What if it was because they were ill? Would that change the way you reacted?
     o **Class discussion**- were you embarrassed for Mr Jones? What would you do if a friend acted this way? What if your friend couldn't help it? What if it was because they were ill? Would that change the way you reacted?
     o **Mr Jones clip 3**- 3 minutes
     o As we can see manic behavior can also lead to frightening or dangerous situations.
	12 minutes

• Is there any warning • Is it important to catch psychosis early	3 minutes

Section 5: Stigma and Myths – 10 minutes: 11:15-11:25

• Myths exercise
     o One side of the class room is 'true' the other side is 'false'
     o If you get it wrong you are out and have to go sit down again. Winner is the last person/group standing after the last statement is read out.
     o Have a brief discussion about why people think the false statements/ don't think the true statements- e.g. newspapers, films, TV... Talk (briefly) about each statement before going onto the next one
	True / false signs & blue tac	10 minutes

Section 6: History of Mental health- 30 minutes: 11:45-12:15
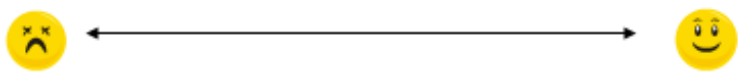
The history of treatments for people with mental illness is both fascinating and deeply disturbing! Go through slides		5 minutes
• Mental illness has been attributed to different causes o **GROUP EXERCISE**- groups of 4/5 given a different cause- what would you do if you thought mental illness was caused by this (in this day and age)? What would you do with the person? Come up with a 'treatment plan' for this cause. Where would you keep them- would you lock them up? Would you have any restrictions on them? Would they be allowed to see their loved ones?	Causes of mental illness sheets - witchcraft - possession - illness	10 minutes

• Exorcism
  o Attempts to treat mental illness date back as early as 5000 BC as evidenced by the discovery of Trephined skulls with bore holes – presumably trying to relieve the pressure in the brain, or release evil spirits. Holes (trephines) were bored into the skull using crude stone instrument. Death rates were high but some people did survive evidenced by the fact that some of the trephined skulls had shown signs of healing.
  o Priests, rather than doctors were called on to help, and rituals included exorcism, incantations etc.
• Witchcraft
  o Society is afraid of those they can not understand and the examples of burning 'witches', many of whom would have had mental illness, is horrific.
• Asylums
  o The middle ages saw the establishment of the asylums. They were notorious for the deplorable living conditions and cruel abuse endured by people admitted. Patients were shackled to the wall in dark and cramped cells. Some patients were forced to sleep upright due to restriction imposed by their shackles. The rooms were rarely cleaned, and they had no visitors.
		5 minutes

• **HEADS TOGETHER GAME-– what do you think this object was for?** • **This is to try to get all pupils involved in questions and answers. Pupils in groups of 4/5 number themselves 1,2,3,4,5. Ask first 'what was this for' question- pupils have to put their heads together and come up with an answer. You then pick a group and a number (e.g. number 3) and the pupil in that group who is number 3 has to answer the question. Then ask the other number 3s if they agree or have anything to add before going on to the next question and picking a different group and number.** • o Strange treatments were tried in asylums: eg ice baths to "shock" them out if madness, burning the skin to cause blisters, enemas (purging), the "gyrating chair", which spun people round "to shake up their body fluids and restore mental balance!" None of these, unsurprisingly, proved effective		5 minutes

	5 minutes

• Modern day
• Go through slide
   o One of the biggest advances in the treatment of mental illness was the discovery of psychoactive medications-antidepressants, antipsychotics etc. These medications, coupled with improved research and diagnostic classification, has shaped modern day psychiatry.
   o We have come a long way, but we still have much to do.	

<div align="center">AFTERNOON SESSION</div>

This morning we have looked at understanding mental health and what is and isn't true about it. This afternoon we're going to look at your own mental health and emotional wellbeing.

<u>Section 7: The mental health scale. 25 minutes – 12:15 – 12:40</u>

		5 minutes
WHAT IS MENTAL WELLBEING? • Class discussion on what is mental well-being and mental health Get them to define it to one another **QUESTION: WHO'S GOT MENTAL HEALTH** Hands up if you think you have mental health - if lots put their hands up can say- 'good, you are right mental health is something that is relevant to everyone just like physical health'. **QUESTION: WHO'S GOT PHYSICAL HEALTH** - If hardly anyone puts their hands up ask 'hands up if you think you have physical health'. Then can ask them- if you can be physically healthy or physically ill, then why can't you be mentally healthy or mentally ill- mental health is something that is relevant to everyone just like physical health. – it's a scale. Everyone has mental health- sometimes its high, as with physical health and sometimes its low. If it is low for too long this may lead to mental illness.		
WHERE ARE YOU THE MENTAL HEALTH SCALE? Draw on flip chart or white board You start.... – I woke up and my mental health was here because... and then I had breakfast and it was here, and then I came in to teach you lovely lot and it was here... Ask for volunteers- where was your mental health when you woke up this morning and why? Pick on the loud ones first and then the others will follow- ask teacher which the more confident ones who will be happy to engage in this if you are not sure. They each initial their mark until most of class have been up- including teachers and other volunteers if the class are a bit shy. **Emphasis**- mental health is a continuum that we all have whether we have a mental illness or not.	A3 sheets and flip board markers	5 minutes

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CLASS ACTIVITY : What do you do about it when you get stressed out? How do you try to cope?: get them to write ONE thing on a post it and then stick it on the wall Go through the post its on the wall with the class- what are ways in which we can cope with these? Look at some of the healthy and unhealthy behaviours mentioned before. Could any of these be used as coping mechanisms? If not, what could be? At this stage don't worry if they put forwards unhealthy coping mechanisms (e.g. 'have a cigarette') just encourage them to talk (e.g. 'yes some people would have a cigarette if they felt stressed'). Write the coping mechanisms up on YELLOW post its and stick on the wall. Eg. Cry, drink, smoke, shout, punch a wall, take drugs, etc….	Post its	5 minutes
Ask them to decide whether their mechanisms for coping are healthy or unhealthy – Each member of the class takes a coping mechanism (YELLOW) post it note from the wall and puts it on one side for healthy and the other side for unhealthy.. Ask them to discuss this more.	Post its	5 minutes
GROUP ACTIVITY: What can you differently? Go through the post its that the class have decided are unhealthy Ask them to consider alternatives, longer term healthier changes to their life to improve wellbeing Play MASTERMIND GAME: groups of 4/5 have 1 minute to write as *many* different answers to the question down. They can be as creative as they like. Play the mastermind music through once, let them know they have 30 seconds left, and then play it through again (music lasts for 30 seconds). See which group has the most answers and get them to read out their answers to the rest of the class. Winning group in this game will get prize at end of day Eg. Talking, thinking differently, changing behaviour, being around people who are good for you, looking for support etc…	Countdown music- lasts 30 seconds, play through twice.	5 minutes

Session 8.1: DIFFERENT WAYS OF THINKING 1. 20 MINUTES 12:40 – 1:00

Optical illusions **BALLERINA** – who sees her going clockwise? Raise hands, who sees her going anticlockwise? Can anyone make her switch back and forwards? **Film clips and visual aids** **Film clip-** I want you to concentrate really hard- there are two teams, the team wearing white and the team wearing black. I want you to count the number of passes that the white team make. Play clip How many passes were there? Did you see the gorilla? **Message-** you find what you are looking for. Sometimes we concentrate so hard on one thing that we fail to see something that is right in front of us. It's good to try to look at things from different perspectives and in different ways before assuming that something, particularly something	5 minutes

negative, is the case.		
So we know that different people see things and thing about things differently. Did you also know that the way we think about things also affects our feelings and our behaviour? Thinking straight- There is an important way in which our thoughts can affect how we think and how our thoughts can affect how we behave… for example- scary film example? Class discussion: with whole class- what is a time when your thoughts affected how you felt? What is a time when your thoughts affected how you behaved? We don't always notice what we are thinking- it happens so quickly and is an automatic thing for us to do. When our automatic thinking goes wrong it has a bad impact on our feelings and on our behaviour.	<u>10- 15 minutes</u>	

LUNCH 1:00 – 2:00

(the pupils will have registration in the room you are taking them in from 1:45 – 2:00, so they will be in the room already)

Session 8.2: drama workshop. 60 minutes. 2:00 – 3:00

We're now going to do a drama workshop where we look at someone feeling very strong emotions. We need 4 budding actors/actresses from the class. (get them to read through script and act out the drama) **Mika drama.** **Second run through of play** Living photographs game: At various points in the play 'freeze' the action and quiz the pupils about how they think their character is feeling (in their emotions and their body), what they are thinking, and why they are behaving the way they are.	**Mika Scripts**	<u>5 minutes</u> <u>15 minutes</u>
POST IT GAME- PUPILS GET INTO 6 GROUPS. Give each pupil one of the A3 question sheets and some post it notes. Pupils have three minute to respond to the question on the sheet and to write as many answers as possible on the post it notes which they should stick on the sheet around the question. After the three minutes is up pupils have to more round to the next A3 question sheet and repeat the exercise with that question- they need to add to the responses already written there and are NOT allowed to repeat answers. Once groups have gone round all the question sheets they feed back the answers written on their original sheet to the class. **Message to the class**- think about these types of questions when you are feeling very angry or upset- what are the bad/unhelpful ways you could respond to your feelings? What are alternatives to the situation you are in? What are the good things you could have/ can do? How do others around you feel or think? What evidence is there to support the way you are feeling? **When you are feeling bad who can you talk to?** On this last point emphasise the importance of seeking help early and of talking to others if you are feeling bad or stressed.	A3 Question sheets x 6 Post its x 6	<u>23 minutes</u> <u>10 minutes</u>

FACEBOOK COMPETITION www.youthspace.me this is a website which has loads of information on it for young people about stress and mental health. We have a competition on facebook at the moment where you can win vouchers. Copy down www.facebook.com/youthspace.me and like the facebook page to win		**2 minutes**
FIVE MINUTE BREAK- can play a game, have a toilet break, let them chat amongst themselves etc		**5 minutes**

Summary (GOING OVER THE DAY) 25 minutes. 3:00 – 3:25

Make sure all class has filled out self created codes and that you have collected them in (if not done already)

Bean bag game – pupils look back over the entire day and say something they enjoyed/ found useful/ made them think about things differently etc. Bean bag is thrown from person to person. Pupils raise their hands to signify they have something to say and the ball is thrown to them to say it. Or if they don't raise their hands just get them to throw it from person to person and whoever it is thrown to has to say something.	Ball / bean bag	**15 minutes**
Give out take home packs Give out sweet prizes- phobias competition (decided by class earlier) Group who won the mastermind game (ie got the most answers) Best contributor to the day- decided by you. Say why they were so good. Please give out the diabetic sweets ONLY if there is a child who the teacher confirms is diabetic- they are more expensive that the other sweets.	Take home packs Sweets x 7 Diabetic sweets x 1	**10 minutes**

Appendix 3: Account of contact module

SchoolSpace project – Ben Pearson, overview of discussion with pupils

When I spoke to pupils they had no prior knowledge of my experiences before the discussion. I began by explaining my opinion of what I felt had contributed to my psychosis. My experience of exam stress and overworking myself with college work and work outside of college was discussed. This then moved on to leaving college and struggling with the change having felt institutionalised, losing meaning, weekly structure and a feeling of fear due to the realisation that my life was now in my hands and that my day to day activities were now up to me. These feelings coupled with a drastic decrease in stress, activity and grieving the loss of friends sent me into a deep depression. I spoke about feeling worthless and wanting to kill myself. Early symptoms were discussed such as oversleeping, not taking care of myself and short term memory loss affecting my ability to work. Experiences with my GP were also taken into account, as well as a misdiagnosis of unipolar depression and treatment with antidepressants. I informed them that I had been in and out of work for a long period of time before the acute onset and prior to this I had felt my "normal" self for a number of weeks. I think pupils were shocked to hear how sudden my deterioration was and how I had no control over what happened to me. Details disclosed included initial mania from wanting to spend lots of money due to wild ideas to not being able to sleep. Delusions of grandeur (believing I was Jesus) were mentioned as well of those of paranoia (clone, victim of a terrorist plot). This I believe shocked the students the most as well as my hallucinations and experiencing a completely imaginary world. The fact that this happened to me in a part of the world that treats mental illness in a much different way to our culture also hit home. My admission into hospital was also covered and most could not believe the duration of my stay. I was keen to emphasise that discharge from hospital was not the end of my struggle and the main part of my recovery was facilitated by the early intervention service for many years after to bring some kind of normality back to my life.

The pupils asked me what hospital was like, if I had ever taken any drugs, what work I was doing, if I still felt that I had a mental illness as they thought I seemed normal, if I felt that people treated me differently and what plans I now had for the future.

Appendix 4: Instructions and protocols for teachers

STUDY TITLE: **Emotional Well-being in Schools**

We are trying to research how to improve emotional well-being in adolescents and young people and to better understand what young people currently think and know about mental health.

We are asking pupils to fill out this questionnaire, pupils will then take part in a topic day after which they will complete the questionnaire again so that we can see how much the topic day has improved their knowledge of emotional well-being.

QUESTIONNAIRE GUIDELINES FOR TEACHERS

Please encourage all pupils in your class to fill out the questionnaire, it's really important for the research that as many pupils fill out the questionnaire as possible. The questionnaire is voluntary however, so if a pupil really doesn't want to fill it out then they don't have to. There is a prize draw of Bullring vouchers as an incentive to encourage pupils to fill out the questionnaire.

Please also encourage all pupils to complete the questionnaire. If pupils do not finish the questionnaire in tutor/form time, please ask the pupil to write their name on the questionnaire and then give it back to them in the next tutor/form time to complete. Once they have finished the questionnaire ask them to cross their name out before they give the questionnaire back in.

Please don't give pupils the answers to the questions or help them- we are interested in what *they* think and what *they* know- it doesn't matter if they get a question wrong. If possible try to get pupils to fill out the entire questionnaire and to fill out the questionnaire under 'exam like' conditions, e.g. no talking.

Thank you very much for being involved in this research project.

If you would like more details about this project please contact

Katie Chisholm
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Edgbaston, Birmingham
B15 2TT

Appendix 5: Information given to participants regarding emotional support and mental health services

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Emotional well-being in schools; an educational intervention

Take home pack

Sources of information:

Emotional well-being websites for young people:

- www.youthspace.me
- www.getselfhelp.co.uk/index.html
- www.bbc.co.uk/headroom/emotional_health/
- www.rcpsych.ac.uk/mentalhealthinfoforall/youngpeople.aspx
- www.teenmentalhealth.org/
- www.kidshealth.org/teen/your_mind/

Different Perspectives

The probably familiar images of two straight lines (of equal length) and a candlestick (or two faces) show us that things are often not as they first seem, and there's almost always a different perspective.

When there's a traffic accident, police ask for witnesses to come forward to describe what happened. They like to have as many witness statements as possible, so they can build up a broader picture and a more realistic version of events. In a traffic accident, there will be many different perspectives on what happened. The driver will have one perspective, another driver, or a passenger will have yet another perspective. Each onlooker who witnessed the accident will have a slightly different perspective, depending on where they were, how far away they were, how much their view or vision was restricted, how much danger they felt they were in, what else was going on, how the accident affected them, what the accident means to them.

So it's the same principle with everything – each situation, event, conversation means something different to all those involved, and to those not involved. We give different meanings, according to our belief systems, and how we are affected by the event. We all have our own realities.

Anais Nin said: *"We don't see things as they are, we see things as we are"*

We look at situations, events, and interpret what other people say and do, according to our own set of past experiences, culture, faith, values, all of which help us form our beliefs about ourselves, about others, and about the world in general. The meaning we give events, the way we make sense of our world, is based upon our core belief system.

Our minds are constantly trying to make sense of our world, forming judgements and opinions about every situation, event, and interaction. Those judgements and opinions will be affected by our central or core belief system. It is as though we are looking at the world through distorted or coloured lenses – and everyone has their own personal prescription or colour for their glasses.

Core belief system comprises:
- How I think about myself
- How I think about others
- How I think about the world

Our core belief system is formed and influenced by:
- Past experiences
- Childhood upbringing
- Culture
- Faith
- Values
- Current circumstances
- Character traits, including genetic influences

Example:
Childhood Experience:
Bullied and hurt by others

Core Beliefs:
Others will hurt me.
The world is a dangerous place.
I'm useless   and unlovable.
I must try to please others so
they like and won't hurt me.

Lens: distorted perception

Situation or Event
See situations and events
as threatening &
dangerous

Interpret others' words and
reactions as critical or
threatening.

Behaviour: Passive, go along with what others
want, don't talk, avoid eye contact

Emotions: Anxious, depressed, low self-esteem

Thoughts: I'm vulnerable, this is dangerous,
I'm going to get hurt.
I'm useless and stupid. No-one likes me.

In the example above, even situations which others find enjoyable and relaxing, this
particular person will experience it very differently, and feel threatened by others. A look,
word or gesture intended to be friendly and kind, may be interpreted as "They don't mean
that. They're only trying to be kind to me because they pity me". Or even, "They mean to
hurt me". Their mind is interpreting the situation with the bias of "I'm vulnerable, others
might hurt me, this is dangerous, I'm useless and unlovable". The mind will work to make
any contrary information, fit with those beliefs. This is shown by "The Mental Crusher"

BELIEF SYSTEM

MENTAL CRUSHER
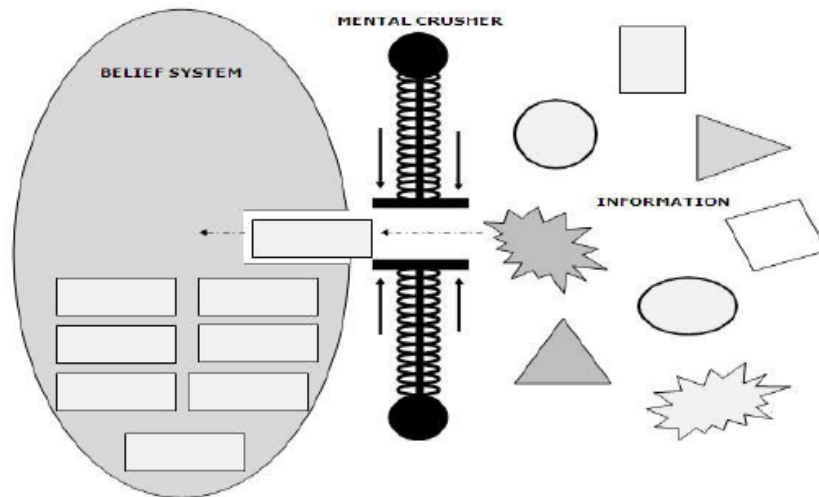
INFORMATION

'The Mental Crusher' sits outside the entrance to our belief system, and only allows information or 'evidence' which fits with our own belief system to enter. Any contradictory evidence or information (any shape other than a rectangle) is rejected, or made to fit (crushed into a rectangle). In the diagram, the explosion shape is about to enter the Crusher. As it passes through (shown by the arrow), it becomes a rectangle – it's been crushed and distorted to fit. Therefore, our beliefs remain unchanged in spite of apparently contradictory evidence being out there. *Paraphrased from p. 58 of Cognitive Behavioral Therapy for Anxiety Disorders by Butler, Fennel & Hackman (Guilford 2008)*

In the case of our earlier example, the information that *a person looked at me*, is "crushed" and distorted ("they looked at me funny") to confirm that others dislike or mean to hurt me.

Learning to see things differently - 'The helicopter view'

Sometimes it's useful to use a metaphor to help us consider the bigger picture. When something is distressing us, we're so close to it, involved with it, part of it – it's really hard to stand back from what's happening. It's like the well-known saying "We can't see the wood for the trees", or like Google Earth – we see the close up view but everything else is hidden from us. We can zoom out our view, and see the bigger picture. We could call this the helicopter view – as the helicopter takes off, getting higher and higher, it sees a bigger picture, and is less involved with the detail at ground level. *(diagram on next page)*
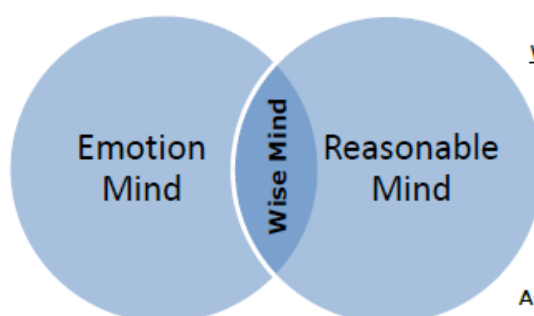
Wise Mind *(Linehan 1993)* is the balanced part of us that comprises our inner knowledge and intuition, where the parts of our mind where thoughts driven by distressing emotions, and more rational thoughts come together, the part of us that just "knows", that inner truth. Opinions are driven by emotion mind, whereas reasonable mind is better able to see the facts. Asking ourselves what 'wise mind' might make of this situation will help us to stand back and be more aware of the bigger picture, and help us respond in more helpful and effective ways.

Within any meeting of people all the individuals will of course have their own belief system, and will therefore have different perspectives – see and think about things differently - and this will affect the way these individuals interact with each other. We can learn to be more aware of how our own belief system affects us, and consider how others might see the same situation quite differently.

www.getselfhelp.co.uk/perspectives.htm   www.get.gg

The Helicopter View

SELF
What am I reacting to? What does this situation mean to <u>me</u>?

OTHERS
What would this look like to <u>others</u> involved?

STOPP!
Take a Breath
What's the bigger picture?

OUTSIDER
How would this seem to someone outside the situation – not emotionally involved?

WISE MIND
What would be the best thing to do – for me, for others, for this situation?
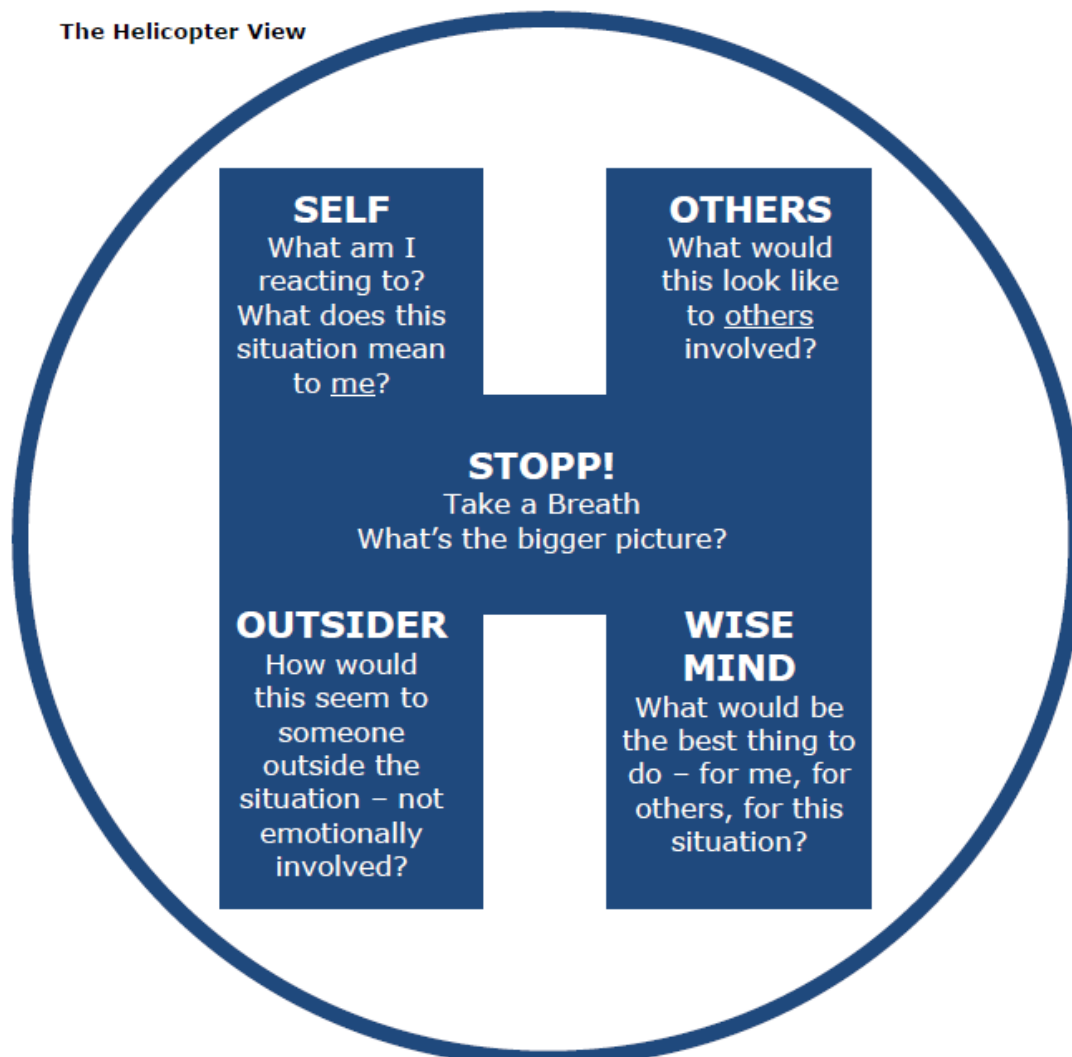
Seeing different perspectives will help to reduce distressing emotions, help us feel more confident, enable us to be more understanding and empathic, and improve communication and relationships. As we challenge our unhelpful thoughts and biased perspectives, and see things in a more balanced and realistic way, so we will discover that situations and people can be different to how we usually interpret things, which can lead us to modify our core belief system, and therefore bring about lasting positive change.

STOPP!
(*www.getselfhelp.co.uk/stopp.htm*)

www.getselfhelp.co.uk/perspectives.htm

www.get.gg

Unhelpful Thinking Habits

Over the years, we tend to get into unhelpful thinking habits such as those described below. We might favour some over others, and there might be some that seem far too familiar. Once you can identify your unhelpful thinking styles, you can start to notice them – they very often occur just before and during distressing situations. Once you can notice them, then that can help you to challenge or distance yourself from those thoughts, and see the situation in a different and more helpful way. *Blue text (italics) helps us find alternative, more realistic thoughts.*

Mental Filter - When we notice only what the filter allows or wants us to notice, and we dismiss anything that doesn't 'fit'. Like looking through dark blinkers or 'gloomy specs', or only catching the negative stuff in our 'kitchen strainers' whilst anything more positive or realistic is dismissed. *Am I only noticing the bad stuff? Am I filtering out the positives? Am I wearing those 'gloomy specs'? What would be more realistic?*	**Judgements** - Making evaluations or judgements about events, ourselves, others, or the world, rather than describing what we actually see and have evidence for. *I'm making an evaluation about the situation or person. It's how I make sense of the world, but that doesn't mean my judgements are always right or helpful. Is there another perspective?*
Prediction - Believing we know what's going to happen in the future. *Am I thinking that I can predict the future? How likely is it that that might really happen?*	**Emotional Reasoning** - I feel bad so it must be bad! I feel anxious, so I must be in danger. *Just because it feels bad, doesn't necessary mean it is bad. My feelings are just a reaction to my thoughts – and thoughts are just automatic brain reflexes*
Mind-Reading - Assuming we know what others are thinking (usually about us). *Am I assuming I know what others are thinking? What's the evidence? Those are my own thoughts, not theirs. Is there another, more balanced way of looking at it?*	**Mountains and Molehills** Exaggerating the risk of danger, or the negatives. Minimising the odds of how things are most likely to turn out, or minimising positives *Am I exaggerating the bad stuff? How would someone else see it? What's the bigger picture?*
Compare and despair Seeing only the good and positive aspects in others, and getting upset when comparing ourselves negatively against them. *Am I doing that 'compare and despair' thing? What would be a more balanced and helpful way of looking at it?*	**Catastrophising** - Imagining and believing that the worst possible thing will happen *OK, thinking that the worst possible thing will definitely happen isn't really helpful right now. What's most likely to happen?*
Critical self Putting ourselves down, self-criticism, blaming ourselves for events or situations that are not (totally) our responsibility *There I go, that internal bully's at it again. Would most people who really know me say that about me? Is this something that I am **totally** responsible for?*	**Black and white thinking** - Believing that something or someone can be only good or bad, right or wrong, rather than anything in-between or 'shades of grey'. *Things aren't either totally white or totally black – there are shades of grey. Where is this on the spectrum?*
Shoulds and musts - Thinking or saying 'I should' (or shouldn't) and 'I must' puts pressure on ourselves, and sets up unrealistic expectations. *Am I putting more pressure on myself, setting up expectations of myself that are almost impossible? What would be more realistic?*	**Memories** - Current situations and events can trigger upsetting memories, leading us to believe that the danger is here and now, rather than in the past, causing us distress right now. *This is just a reminder of the past. That was then, and this is now. Even though this memory makes me feel upset, it's not actually happening again right now.*

Dealing with Negative Emotions

What emotion am I feeling? What am I thinking?	• What can I notice in my body? • Where do I feel it?	**STOPP!** Take a breath. www.getselfhelp.co.uk/stopp.htm • What am I reacting to? What's pressing my buttons here? What does this situation mean or say about me? Is this fact or opinion? • Where is my focus of attention? • How could I see things differently? What would I say to someone else in this situation? How important is this? Is my reaction in proportion to the event? • Take the helicopter view!	• Do what works! • What will be the consequences of my action? • What will be the most effective action? • What will be best for me, for others and for this situation? • Is this in keeping with my principles & values?	• Where do you feel this emotion in your body? If this feeling had a colour, what would it be? What shape is it? How big is it? What consistency is it? • If you felt better: What colour would it be? What about the shape? The size? The consistency? Notice that feeling now.
Emotion	**Body**	**Thinking differently**	**Doing differently**	**Imagery**
Depression • I'm useless, I'm worthless. • Everything is hopeless	Fatigue Slowed down Do less Stay in bed/home Disinterest Can't concentrate *Action urge: Withdraw*	It's okay to feel sad about this situation, but I can get through it. I'm looking through those 'gloomy specs' again. This doesn't mean I'm a worthless person. What would be a more helpful way of looking at things? If I do something anyway – I'll feel better.	Do things anyway – in spite of how I'm feeling. Get up. Get out. Do something enjoyable or useful. Be with or contact others. Focus attention outside of me and my situation.	In your mind's eye, see yourself doing and enjoying the things you used to or would like to enjoy doing, and successfully doing what you need to do. *Visualise orange for positive energy. Breathe in orange, and breathe out blue/black.*
Anxiety • Something bad is going to happen. • I won't be able to cope	Adrenaline response – Body's alarm system. Energised for fight or flight *Action urge: Escape & avoid*	Is this threat a real one or is it really bound to happen? Am I exaggerating the threat? Am I misreading things? I feel bad, but that doesn't mean things really are so bad. I can cope with these feelings, I've got through it before. What would someone else say about this? What would be a more helpful way of looking at things?	How will doing this affect me in the long term? Don't avoid situations – go anyway, and stick it out. Problem solve or make plans if necessary. Take things slowly or gradually. Focus attention outside of me – external rather than internal focus.	Imagine yourself coping in a situation that you feel anxious about. See the situation through to a successful completion. *Visualise blue for calm. Breathe in blue and breathe out red.*
Anger • It's not fair. • Others are bad. • I won't stand for it.	Adrenaline response – Body's alarm system. Energised for fight or flight *Action urge: Attack*	What am I reacting to? What's pressing my buttons? Am I over-reacting? Is my reaction in proportion to the actual event? How important is this? I feel like I'm being unfairly treated, but maybe they didn't mean it that way. Am I misreading things? What's the best thing to do here?	Take a breath. Do the best thing – best for me, for others and for the situation. Walk away or approach gently. When feeling calm, if still appropriate, do something about it in a calm, non-aggressive but assertive way.	Visualise yourself handling this situation in a calm, non-aggressive but assertive way, respecting the rights and opinions of everyone involved. *Visualise blue for calm, or green for balance. Breathe in green/blue & breathe out red.*

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Appendix 6: Existing mental health provision of schools involved in the SchoolSpace Intervention

School mental health provision:

Existing mental health provision was discussed with a teacher from the welfare team, personal social health economic education - PSHE, or head of pastoral care within each school.

School 1

- Two learning mentors, one well-being mentor
- Well-being nurse on school nursing team
- One day a year on mental health for PSHE, additional workshops on occasion
- Behavioural pastoral care manager
- Regular visits from CAMHS to talk to vulnerable pupils
- Booklets available for staff to train themselves from

School 2

- Two full time mentors
- PHSE: Students aged 15-18; lessons on diagnoses, self-harm, self-esteem and anger. Students aged 11-14; 4 hours per year on mental health topics
- Safeguarding links for vulnerable pupils exist, e.g. links with the police

School 3

- Counsellor who comes in on an ad hoc basis
- Very little training for staff
- PSHE: covers mental health only in a very general way in health and well-being; e.g. concentration, keeping healthy etc
- Developing emotional awareness and literacy programme (DEAL): for year 9 students, 6 weeks, developed by the Samaritans, looks at mental health, depression, suicide.

School 4

- Qualified counsellor one hour per week
- SEAL policies targeted for vulnerable pupils only; promotion of social and emotional learning skills, behaviour, attendance, and emotional health and well-being

- PSHE: 6 – 8 weeks on mental health topics
- Classes and groups for vulnerable pupils; self-esteem and anger classes, young carers group, divorce and separation group, Attend and Support; 6 week course for students with below average attendance
- Year 8 (age 12-13) mentor primary school students regarding behaviour
- Year 7 (11-12) team building day
- Pastoral staff have regular training on mental health and well-being topics, which is then disseminated to other staff

School 5

- Full time mentors
- Behavioural Support Services; regular external speakers
- PSHE: some lessons on mental health
- Only wellbeing staff receive training on mental health

School 6

- Two full time mentors
- Mental health training available for all staff
- PSHE: year 7 and 8 (ages 11-13); five lessons on emotional health and well-being, year 9 and 10 (13-15); lessons on sexual health, wellbeing and peer pressure, years 11, 12, and 13 (15 -18); lessons on stress management.
- 'protective behaviour', wellbeing and decision making classes for years 7, 8, and 9
- Behavioural Support Services
- Regular external speakers; e.g. young carers project, and mental health group 'Mind'

Appendix 7: Fidelity of implementation checklist

Fidelity of Implementation: Observation checklist

Condition checked: CandE   /   Eonly

Session checked: 1ˢᵗ(being normal)   /   2ⁿᵈ(anxiety and stress)

Pace and speed:

Timing from first slide to beginning of first class exercise _____

Time allocated to first class exercise _____

Do the intervention Leads skip any of the presentation slides?   Y / N

Are pupils given adequate time to ask questions/ ask for clarification?   Y / N

Engagement:

Are pupils alert- do you see examples of the following behaviours in a majority of pupils:

Watching the board/ front of class   Y / N

Answering required questions (e.g. as volunteering an answer opposed to replying 'I don't know' or similar)   Y / N

Engaging in-group activities   Y / N

Interacting with class Leads and/or Assistants   Y / N

Are pupils' questions satisfactorily answered by the Lead and/or Assistants? Y / N

Group work:

What size of groups are pupils in for the first exercise _____

Does a facilitator go round each group at least once? Y / N

Do all groups manage to finish the group activity? Y / N

Appendix 8: Power calculation for the SchoolSpace Intervention Research

1+((cluster size - 1) x ICC)

and

N= (32/d squared)

1+ ((30-1) x 0.037= 2.073

To detect a 0.4 effect size:

N= 32/0.4 squared = 200

2.073 x 200 = 415 participants

To detect a 0.3 effect size:

N= 32/0.3 squared = 356

2.073 x 356 = 738 participants

To detect a 0.2 effect size:

N= 32/0.2 squared = 800

2.073 x 800 = 1658 participants

Appendix 9: Review Search Strategy

Databases searched July 2012:

- Web of knowledge
- Psyc Info
- ERIC
- Pub Med

Search terms used:

'Contact psychiatric stigma' and 'Contact mental stigma'

Inclusion criteria

- The research evaluates a secondary school based intervention designed to impact on stigma of mental illness.
- The research uses contact, either directly (e.g. face to face) or indirectly (e.g. in DVD form, through theatre groups etc.)
- Contact in these studies will act as the independent variable, with a measure of stigma of mental illness as the dependent variable.
- The research is experimental, rather than correlational.

PRISMA diagram
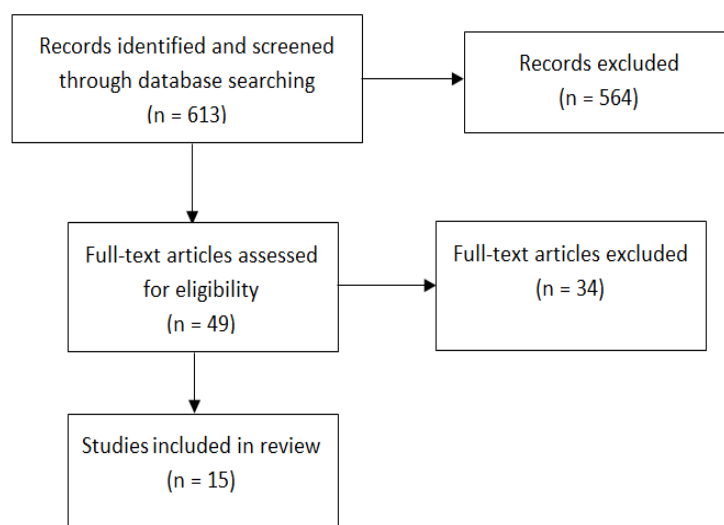
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