

Factors that Influence Personal Stigma towards, and Desire for Social  
Distance from, a Peer with Depression in a British Adolescent Sample

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Submitted in partial fulfilment of the Doctorate in Clinical Psychology  
(Clin.Psy.D)

1<sup>st</sup> July 2010

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## Acknowledgements

My sincerest thanks to the young people who took part in this study. Without their valuable thoughts and opinions this research would not have been possible. Thank you to the head teachers who agreed for their schools to take part and for the class teachers' cooperation. A special thank you to head teacher Stuart Cooke for his enthusiasm and his help with both the study and the 'passive parental consent' procedure.

Many thanks to Professor Malcolm Adams, who was the main supervisor for this thesis, for all his help and advice. Thanks also to Dr Laura Jobson for her helpful suggestions.

Finally, a big thank you to my family and friends, in particular Anna, Melissa, and Ruth, for their unfaltering support and encouragement.

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## Abstract

*Background.* Depression is a growing problem in Britain and is predicted to be the second leading global burden of disease by 2020. It can begin in adolescence and persist into adulthood. Although treatments for depression can be effective, stigma prevents many people seeking help. Understanding attitudes towards depression can help develop effective anti-stigma strategies.

*Aims.* To investigate factors that are associated with personal stigma towards, and desire for social distance from, depression in a sample of British adolescents. The factors were: gender, age, recognition of depression from a description, familiarity with depression, and exposure to lessons or educational material about mental health. Help-seeking intentions were also explored.

*Method.* Five hundred and eighty four adolescents aged 11 – 18 years read a depression vignette and completed modified versions of the Personal Stigma Scale, the Social Distance Scale, and the Level of Contact Report. Group comparisons, correlations, and regression analyses were used. Data from the subset who recognised depression ( $N = 351$ ) were analysed separately.

*Results.* Overall, males and younger adolescents had more stigma and desire for social distance. Recognition of depression was associated with less stigma. Familiarity was associated with less stigma and less desire for social distance. Those who had seen material about mental health outside school had less stigma. There were no significant findings for help-seeking intentions. Effect sizes were small and overall the factors only accounted for a small amount of variance in the dependent variables. Stigma seemed similar but social distance higher than in adult studies.

*Conclusions.* Future research should aim to develop more appropriate models of stigma and social distance for this population. Anti-stigma strategies should target this age-group and should focus on increasing familiarity with depression and reducing discriminatory behaviours.

## CHAPTER ONE

### Introduction

#### *1.1 General Introduction*

Stigma and discrimination have been identified as major concerns for many people who have been affected by mental health problems (Dinos, Stevens, Serfaty, Weich, & King, 2004). Extensive research on the topic indicates that negative attitudes can adversely affect psychological wellbeing (Heatherton, Kleck, Helb, & Hull, 2000; Link, Struening, Rahav, Phelen, & Nuttbrock, 1997) as well as education, employment, and housing opportunities (Corrigan, Edwards, Green, Diwan, & Penn, 2001). Stigma has also been identified as a barrier to help-seeking (Barney, Griffiths, Jorm, & Christensen, 2006; Richwood, 2002; Wells, Robins, Bushnell, Jarosz, & Oakley-Browne, 1994; Wilson & Deane, 2001).

Most research to date has investigated the public's attitudes towards schizophrenia or towards mental illness generally (Jorm & Wright, 2008). Despite the growing problem of depression (Lopez & Murrey, 1998), relatively few studies have focussed on the public's attitudes towards depression specifically (Griffiths, Christensen, & Jorm, 2008). Fewer still have investigated this in the adolescent population (Jorm & Wright, 2008). This is surprising given that adolescence is a critical time during which attitudes and beliefs are shaped and young people take more initiative in their opinions and behaviours (Lindsey & Kalafat, 1998). It is also a time associated with major physical and emotional changes that can influence mental health and wellbeing, and in some cases, the onset of depressive disorders which can persist into adulthood (Baker, 2006; Ciarrochi, Deane, & Wilson,

2002). Given this gap in the literature and the growing problem of depression, it seems important that adolescents' attitudes towards depression are investigated.

### *1.2 Aims of the Present Study*

This study aims to add to the evidence by investigating a sample of British adolescents' attitudes towards depression. The two main aims are: i) to investigate the levels of stigma towards, and desire for social distance from, a description of a peer with depression; and ii) to investigate which factors have an impact on levels of stigma and desire for social distance. The factors investigated were chosen because they were found to influence attitudes in other populations. The factors were: gender, age, ability to recognise depression from a vignette, familiarity with depression, and exposure to mental health lessons or educational material. In addition to the two main aims, adolescents' willingness to seek help for depression was also explored.

### *1.3 Chapter Overview*

The concepts of stigma and desire for social distance are explained and the attribution and labelling theories, and social psychological model, are discussed. Research on the public's attitudes towards mental illness is outlined. Factors known to impact on stigma and social distance are introduced. The reasons for focussing on the adolescent population are then given. In section 1.9, a literature review of adolescents' attitudes towards mental illness is presented. This highlights gaps in the literature. Section 1.10 narrows the focus by discussing the growing problem of depression and providing a rationale for investigating adolescents' attitudes towards depression. The research questions and hypotheses are stated in section 1.12.

#### *1.4 Introduction to Attitudes Towards Mental Illness*

Historically, people with mental illness were shunned by society, subjected to violence, and institutionalised (Fink & Tasman, 1992). Thankfully, we now understand more about mental illness and the vast majority of people in Britain are treated in the community and are able to maintain fulfilling lives (Brooker & Repper, 2001).

Since 1993, the Department of Health (DoH, 2009) has asked a sample of the British adult population a number of questions about their understanding of, and attitudes towards, mental illness. The survey has been conducted annually, every three years from 1993 – 2003, then annually again since 2007. It has enabled attitudes to be tracked over time and has shown that, despite increased understanding and knowledge, overall attitudes (e.g., levels of fear and intolerance) towards people with mental illness have only become slightly better over the past 16 years. In 2009, 38% of a sample of 1,751 people disagreed with the statement ‘people with mental illness are far less of a danger than most people suppose’, and just 37% agreed that mental hospitals are an outdated means of treating people with mental illness. Thirty-one percent said that they would not be willing to work with someone with a mental health problem and 28% said they would not be willing to have a neighbour with a mental health problem.

The public’s misunderstanding, fear, and discrimination have sparked the development of anti-stigma strategies. These aim to increase understanding of common mental illnesses and to dispel myths associated with dangerousness. Campaigns such as *Time to Change* are widely publicised and backed by public figures, for example Ruby Wax, Stephen Fry, and Alistair Campbell. The effectiveness of anti-stigma strategies are currently being evaluated and some results look promising (e.g., Griffiths, Christensen, Jorm, Evans, & Groves, 2004; Henderson & Thornicroft, 2009). However, others do not

(e.g., Luty, Umoh, Sessay, & Sarkhel, 2007). In order for anti-stigma strategies to be effective, like clinical interventions, they need to be informed by theory and research (Sidani & Bradden, 1998). It has been argued that the focus of anti-stigma strategies are often made on the basis of intuition rather than on sound empirical evidence (Angermeyer, 2002; Angermeyer, Matschinger, & Corrigan, 2004). However, this is improving as the quantity and quality of research increases (Pinto-Foltz & Logsdon, 2009). There has been a call for more research in this field, specifically focussing on factors or attributes that influence the development of stigma (Sidani & Bradden, 1998). In order to do this, the concept of stigma and its theoretical basis needs to be understood.

### *1.5 Introduction to Stigma and Discrimination*

Stigma is a social cognitive process that can be understood in terms of three components: stereotypes, prejudice, and discrimination (Corrigan & Watson, 2002). Stereotypes are commonly held public beliefs about individuals or groups. For example, there is the stereotype that 'men are better drivers than women'. Stereotypes are not necessarily valid, believed by everyone, or based on truth. Individuals who are prejudiced, however, believe negative stereotypes. This can lead to emotional reactions. For example, a belief that 'people with schizophrenia are violent' is likely to result in fear; whilst a belief that 'people with depression can snap out of it' is likely to result in lack of sympathy, frustration, or anger. These emotional responses can lead to discrimination, which is the behavioural reaction. In the case of mental illness, the behavioural reaction is typically avoidance and can be measured as the desire the individual has to distance themselves from the person (Corrigan, Watson, & Ottati, 2000). The present study will focus on individuals' personal attitudes towards mental illness (personal stigma; Griffiths et al., 2004) and the

discriminatory behaviour leading from this (desire for social distance). The concepts of personal stigma and social distance are now described in further detail.

### *1.6 Definitions and Theory*

Stigma is a socially constructed phenomenon that involves: i) the recognition of difference based on a particular characteristic (or ‘mark’); and ii) the devaluation of the individual, based on this difference (Heatherton et al., 2000). Goffman (1963) suggests that stigmatised individuals are regarded as flawed, compromised, and even less than fully human. Crocker, Major, and Steel (1998; cited in Gilbert, Fiske, & Lindzey, 2010) argue that “stigmatised individuals possess (or are believed to possess) some attribute, or characteristic, that conveys a social identity that is devalued in some particular social context” (p. 505). According to the World Health Organisation (WHO, 2001) stigma can be defined as a mark of shame, disgrace, or disapproval which results in an individual being rejected, discriminated against, and excluded from participating in a number of different areas of society.

As stigma is apparent in some form in virtually every society, this suggests that it may have some functional value (Crocker, Major, & Steele, 1998). For example, stigmatising others can help to reduce the complexities of understanding them as multifaceted individuals (Allport, 1954; Hamilton, 1981); to enhance control and self-esteem (Fein & Spencer, 1977; Wills, 1981); to buffer anxiety (Heatherton et al., 2000); or to validate important world views (Greenberg et al, 1990). According to downward-comparison theory (Wills, 1981), comparing oneself to less fortunate others (actively or passively) can increase one’s subjective sense of well-being and self-esteem. Similarly, social identity theory (Tajfel & Turner, 1979) suggests that categorising people into out-groups (different from oneself) and in-groups (including oneself) aids a sense of positive

group distinctiveness. This can lead to the in-group being favoured over the out-group, motivating discrimination against ‘the others’ and improving collective and personal self-esteem (Heatherton et al., 2000).

Functional explanations are helpful in describing the reasons for stigma at an individual level. However, they are unable to predict which characteristics people use to stigmatise others and they do not explain how people treat stigmatised individuals (Heatherton et al., 2000). Broader and more complex theories, such as labelling and attribution theories, have been favoured by many researchers.

### *1.6.1 Labelling Theory*

According to the principles of labelling theory (Scheff, 1966) when a person’s behaviours are labelled as ‘mental illness’ this triggers negative stereotypes and leads to social rejection. Social rejection triggers reactions in the stigmatised person, such as secrecy and withdrawal. These reactions can have negative consequences, such as feelings of shame, lowered self-esteem, and reduced earning power. Finally, the process described above may induce a state of vulnerability and can lead to an increase of repeated episodes of mental illness (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989). Research findings have lent support for this process. For example, having a mental illness label is associated with negative consequences such as lowered self-esteem (Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001; Wright, Gronfein, & Owens, 2000); a reduction in help-seeking behaviour (Corrigan, 2005; Wells et al., 1994); discontinuation of medication (Sirey et al., 2001); and social impairment (Perlick et al., 2001).

Labelling theory has provided a framework for understanding the effects of stigma. However, it does not adequately explain the processes involved in how a label leads to

social rejection and discrimination in the first place (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). Given this, social psychologists have distinguished between public stigma (also known as personal stigma) and self stigma. For the purpose of this study, the term personal stigma will be used as this appears to be preferred more recently in the literature (Griffiths et al., 2008). Personal stigma describes the way the public personally stigmatise people with mental illness whilst self stigma describes the negative consequences felt by the stigmatised individuals (i.e., the loss of self-esteem and self-efficacy described above). Self stigma results in part from the internalisation of stigma and is the main focus of the labelling theory (Corrigan & Watson, 2002; Crocker, Major, & Steele, 1998). The mechanisms of personal stigma, on the other hand, are better explained by models based on attribution theory.

### 1.6.2 Attribution Theory

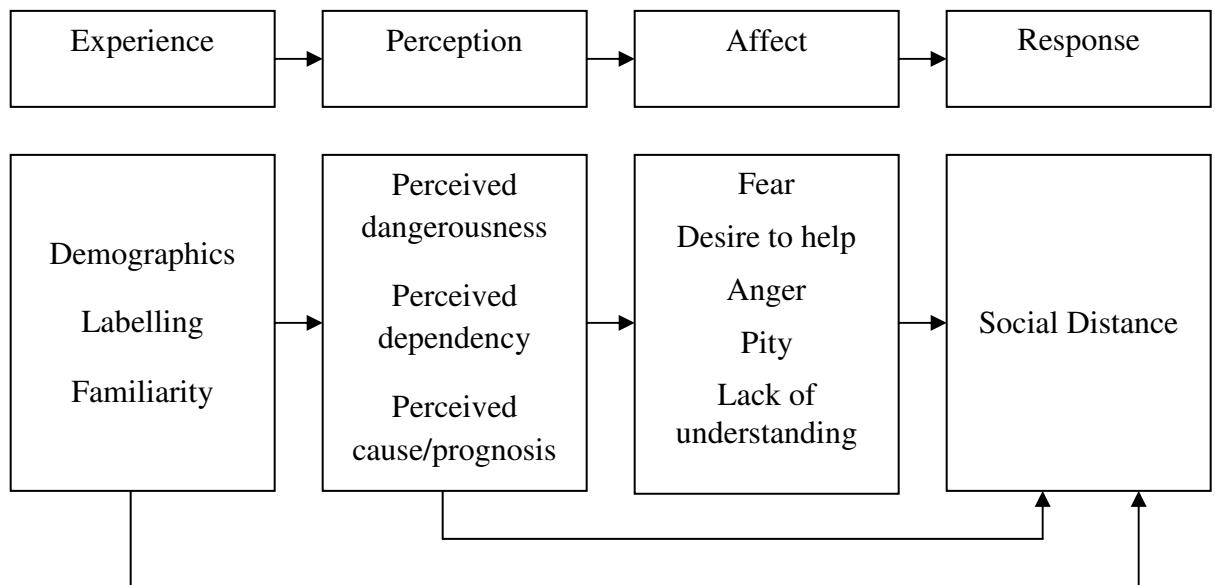
According to attribution theory (Heider, 1958), people understand others by making personal or situational attributions about their behaviour. It has become an important framework for explaining the relationship between stigmatising attitudes and discriminatory behaviour (Weiner, 1995). It suggests that people make attributions about the causes and controllability of a person's behaviour or illness. For example, aggressive behaviour could be attributed to being within or not within a person's control, depending on the situation. Attributions lead to inferences about responsibility and then to emotional reactions such as pity or anger, which can trigger helping or punishing behaviours (Corrigan, 2000). The more an individual's undesirable behaviour is attributed to factors *within* that individual's control, the more *negative* people's feelings and behaviours will be towards them, and vice versa (Weiner, 1995). This explains why illnesses more overtly linked to lifestyle 'choices' (e.g., cigarette, alcohol, and illicit substance related illnesses)

are more stigmatised than other illnesses (e.g., cancer and asthma). Mental illnesses tend to be less visible and their causes less clear cut than physical illnesses. They are almost always more stigmatised than physical illnesses (Corrigan, Lurie, et al., 2005). As attribution theory predicts, attributing personal responsibility for an illness such as depression leads to anger and punishing behaviour, or fear and avoidance behaviour. This is due to the belief that the person should have, and could have, avoided becoming depressed in the first place. Conversely, believing that the person is not to blame for their depression may lead to pity and a desire to help.

As introduced in section 1.5, a common behavioural reaction towards a person with mental illness is desire for social distance (Corrigan, Green, Lundin, Kubiak, & Penn, 2001). Having a strong desire for social distance describes a tendency to not want to interact with or spend time with a person with mental illness, in various social situations. It may also manifest itself in discriminatory behaviours such as not employing someone with mental illness or not renting accommodation to them (Corrigan et al., 2001).

### *1.6.3 Social Psychological Model*

To some extent, desire for social distance is explained by attribution theory. However, a more detailed social psychological model (Angermeyer, Beck, & Matschinger, 2003; Angermeyer & Matschinger, 2003; Angermeyer, Matschinger, & Corrigan, 2004; Corrigan, Edwards et al., 2001) based on both attribution and labelling theories, has been developed. It suggests that people hold stigmatising attitudes because of their past experiences and knowledge. They react emotionally in response to these attitudes, which leads to increased desire for social distance (Corrigan, River et al., 2000). Figure 1 shows the causal pathway according to the social psychological model.



*Figure 1.* Causal pathway for social distancing according to the social psychological model  
 (Angermeyer, Beck, & Matschinger, 2003; Angermeyer & Matschinger, 2003;  
 Angermeyer, Matschinger, & Corrigan, 2004; Corrigan, Edwards et al., 2001)

This model has a number of ‘paths’ from experience through to response. ‘Perception’ and ‘affect’ are likely to make up what we understand to be attributions within stigma, whilst ‘response’ is discrimination.

As described by attribution theory and the social psychological model, perceived causes, dangerousness, and dependency trigger emotional and behavioural responses. This has been supported by research that has investigated the attributions people make about mental illness. For example, Levey and Howells (1995) and Link and Cullen (1986) have shown that specific links exist between believing a person with mental illness is dangerous,

fearing them, and avoiding them. Generally, people make the most negative attributions about, and have greatest desire for social distance from, severe mental illness such as schizophrenia (Griffiths et al., 2006). This is followed by depression, other mental health problems, and then physical health problems (Jorm & Oh, 2009; Walker, Coleman, Lee, Squire, & Friesen, 2008).

According to the social psychological model (Figure 1), aside from attributions there are a number of factors that are thought to directly impact on social distancing. These are demographic factors (such as gender and age); labelling of a mental illness; and how familiar the individual is with mental illness. A recent literature review concluded that, in general, males, older people, and those who are not familiar with mental illness make the most negative attributions and have the greatest desire for social distance (Jorm & Oh, 2009). Each of these factors is discussed below.

### *1.7 The Impact of Demographics, Labelling, and Familiarity*

#### *1.7.1 Gender*

Gender role and socialisation theories suggest females are socialised to be more accepting of expressing emotions and seeking help (Moller-Leimkuhler, 2002). They are therefore less likely to hold negative attitudes about emotional and mental well-being (Blazina & Watkinds, 1996; Ortiga & Alegria, 2002). The majority of research has found that men tend to hold more negative attitudes about mental illness than women (Barry, Doherty, Hope, Sixsmith, & Kelleher, 2000; Crisp, Gelder, Goddard, & Meltzer, 2005; Wang, Fick, Adair, & Lai, 2007). However, some studies have shown the opposite (e.g., Chowdhury et al., 2000) or no gender differences (e.g., Dietrich et al., 2004). In terms of

desire for social distance in adults, Jorm and Oh's (2009) review of the literature revealed no consistent gender differences.

### *1.7.2 Age*

In the adult population, studies usually find that negative attitudes and desire for social distance increases with age. For example, Stuart and Arboleda-Florez (2001) found that those in the oldest age-group (70 – 90 year-olds) were almost three times more likely to express high desire for social distance than their younger counterparts (15 – 19 year-olds). Griffiths et al. (2008) also found significantly higher levels of personal stigma in participants over the age of 50 but no significant differences in personal stigma among the other participants. It is possible that this is a cohort rather than an age effect. Perhaps the more stigmatising attitudes held by older adults is as a result of them growing up in an era where people with mental illness were feared and institutionalised.

Given that adolescence is associated with rapid cognitive development, differences in developmental stages are likely to have an impact on attitudes. This makes generalising from adult research difficult. Results of the literature search in section 1.9 explores the impact of age in more detail.

### *1.7.3 Labelling*

According to the labelling theory (Scheff, 1966), the diagnostic labelling of a mental illness is thought to provoke negative reactions and behaviours. This is supported by a number of studies (e.g., Angermeyer & Matschinger, 2003; Lauber, Nordt, Falcato, & Rossler, 2004). However, these findings apply to schizophrenia or mental illness generally. In Angermeyer and Matschinger's (2003) study, there was no effect of labelling for depression.

Recently, it has been suggested that ability to label a disorder from a description could have a positive impact on attributions and behaviour. Labelling reflects knowledge about mental health. This knowledge has become known as ‘mental health literacy’ and is defined as “knowledge and beliefs about mental disorders which aid their recognition, management or prevention” (Jorm, 2000, p. 396). Generally, better mental health literacy is associated with less negative attributions and lower social distancing scores. For example, Stuart and Arboleda-Florez (2001) found this association. They suggested that participants with the highest mental health knowledge were ten times more likely to express highly tolerant attitudes towards an individual with schizophrenia compared to participants with the least knowledge. Wang and Lai (2008) also found that participants’ ability to label the person in the vignette as having depression was significantly associated with less stigmatising attitudes.

One of the aims of anti-stigma campaigns is to improve mental health literacy through the presentation of accurate information. It follows that people who have been exposed to this kind of information are going to be more likely to correctly recognise and label mental illness.

#### *1.7.4 Familiarity*

Throughout the literature, it is found that those who have regular contact with people with mental illness hold less stigmatising attitudes. For example, Lauber, Anthony, Ajdacic-Gross, and Rossler (2004) found that psychiatrists were significantly more positive towards people with schizophrenia than the general public. Wang and Lai (2008) found that people who knew a friend or family member with depression scored significantly lower on the stigma measure. Angermeyer et al. (2004) also found that those who were more familiar with mental illness scored significantly less on their social distance scale.

Despite attitudes being positively associated with familiarity, desire for social distance does not appear to demonstrate such a relationship. For example, Van Dorn, Swanson, Elbogen, & Swartz (2005) found no difference in desire for social distance between people with schizophrenia, family members of those with schizophrenia, clinicians, and the general public. Jorm and Oh (2009) reviewed the literature on social distancing and concluded that research to date is too limited to draw firm conclusions but both the quantity and the quality of the experience seem to be important.

The majority of research supporting the social psychological model has involved adult participants. There is a lack of research involving adolescents, and particularly adolescents in the UK. The rationale for focussing on the younger generation within this study is described below.

### *1.8 Involving Adolescents in Research*

Adolescence (between the ages of about 12-19; Eysenck, 2004) is a critical time during which attitudes and beliefs are shaped and young people take more initiative in their opinions and behaviours (Lindsey & Kalafat, 1998). As noted by Adams and Berzonsky (2005), later adolescence brings an increase in an individual's ability to see more subtle similarities and differences between themselves and others from different backgrounds and groups. It is associated with the development of attitudes towards politics, religion, and morality (Adelson, 1975; Fowler, 1976; Kohlberg, 1976). Therefore, it is possibly also associated with the development of attitudes towards mental illness.

Adolescence involves rapid physical and emotional development, hormonal changes, shifts in family and social relationships and in some cases, difficulties maintaining psychological well-being (Baker, 2006). The importance of including the adolescent

population in mental health research has been highlighted by Corrigan, Demming et al. (2005). They point out that both advocacy and government groups have placed emphasis on modifying negative attitudes among adolescents in order to stop them developing into adults who stigmatise individuals with mental illness. This, in turn, may help to stop further discrimination and social injustice in the future. The National Service Framework for Mental Health (DoH, 1999), The Report of the Surgeon General's Conference on Children's Mental Health (US Public Health Service, 2000) and more recently WHO (2003), have listed promoting awareness and reducing the stigma associated with mental illness as priorities.

Very few studies have examined stigma in adolescents. In 2004, Link, Yang, Phelan, and Collins estimated that stigma research in this population accounted for less than 4% of stigma research overall. This figure is likely to have changed in the last six years. However, the majority of research that does exist focuses on older adolescents (Chandra & Minkovitz, 2005; Pinto-Foltz & Logson, 2009). Early adolescence has received far less attention, despite our understanding that during this period young people's attitudes and beliefs are shaped and they begin to take more initiative in help-seeking (Lindsey & Kalafat, 1998). As Corrigan, Demming et al. (2005) suggest, differences in cognitive development between adolescents and adults challenge the extrapolation of research findings from adult to adolescent samples. Thus, research involving the adolescent population has to take priority. In order to find out what literature exists, a literature search and review was performed. This is presented below.

### *1.9 Literature Review: Factors that Influence Adolescents' Attitudes towards Mental Illness*

The aim of this review was to establish the quantity and quality of research that has looked specifically at adolescents' attitudes toward mental illness. It also aimed to consider

whether existing models can provide an appropriate basis for research in this population. The questions addressed were: i) do adolescents hold stigmatising attitudes towards people with mental illness? and ii) how do demographic factors, labelling, and familiarity influence stigma in this population?

### 1.9.1 *Method for Literature Search*

AMED (1985 to present), EMBASE (1980 to present), MEDLINE (1950 to present), and PsycINFO (1806 to present) were searched on May 5, 2010. Terms associated with *stigma*, *attitudes*, *mental health*, and *adolescents* were entered. The ‘thesaurus mapping’ facility was used to check for other terms associated with these topics. No additional terms were found. Thus, the keywords and Boolean connectors entered and combined with the ‘and’ function were: i) *stigma\**; ii) *attitude\** or *understand\** or *belie\** or *opinion\** or *thought\** or *view\**; iii) “*mental health*” or “*mental ill\**” or “*mentally ill*”; iv) *adolescen\** or *teen\** or *youth\** or “*young pe\**” or *pupil\**.

To optimise the retrieval of relevant literature, databases were also searched separately, and searched using the ‘limits’ facility to establish the age group required. No additional literature was found. Therefore, the search described above was considered extensive.

Three hundred and twenty one articles were found. Duplicates were removed and abstracts were screened for the presence of the appropriate keywords. Exclusion criteria included: Non-English language and not peer-reviewed; research about adults’ attitudes towards children and adolescents with mental health problems; research involving stigma towards only physical illness; research exclusively involving participants aged under 11-years-old or over 18-years-old. These exclusion criteria were set in order to find out how

many articles about adolescents' attitudes towards mental illness have been published; and to obtain the most relevant selection of articles to address the questions outlined above. To further optimise the inclusion of relevant research, the retrieved articles' reference lists were examined.

The flow chart below (Figure 2) shows the process by which articles were selected for the review. As can be seen in Table 1, 15 articles met the selection criteria.

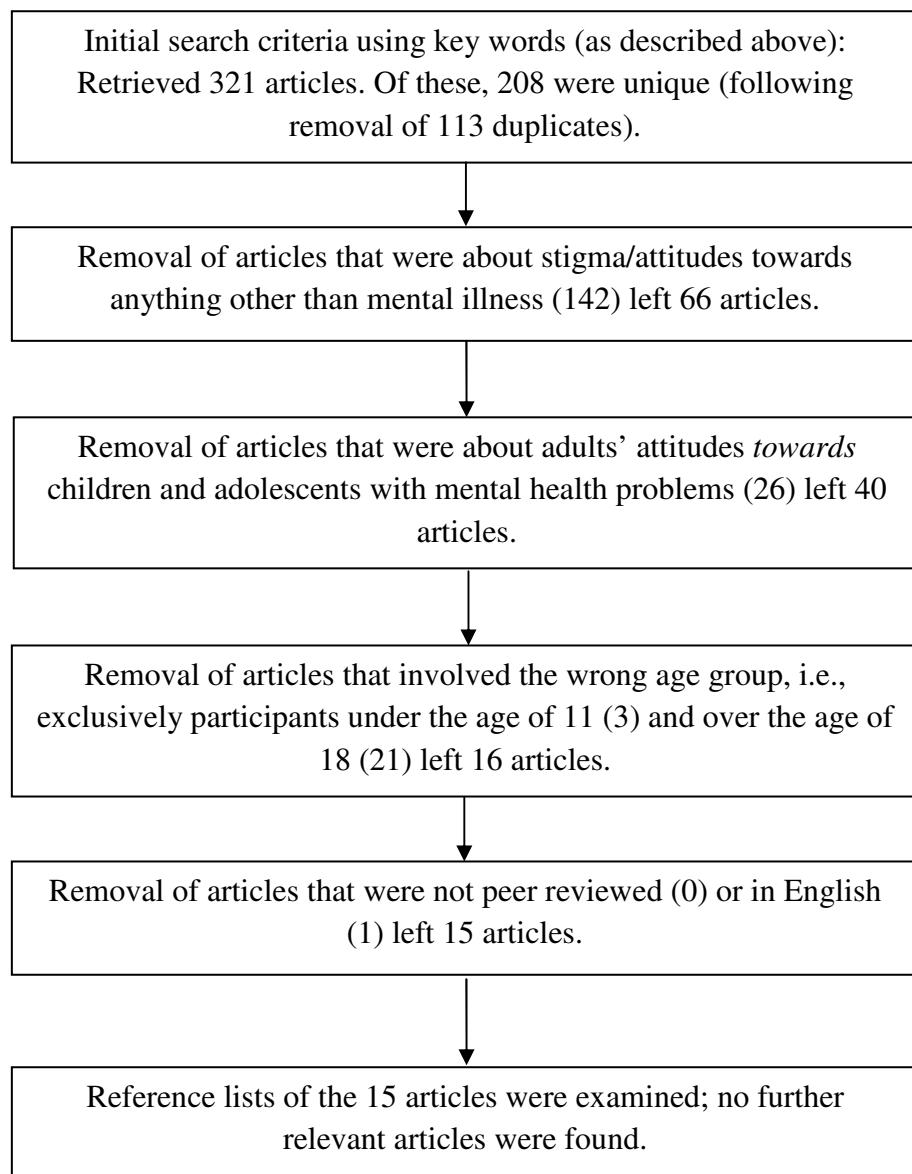


Figure 2: Flow chart describing steps within the literature search and the retrieval of 15 relevant articles.

Table 1

*Summary of Studies Investigating Adolescents' Attitudes Towards Mental Illness, Ordered by Publication Date*

	Study	Sample	Procedure & design	Factors investigated	Attitude measure used	Other comparisons	Summary of findings
1.	Norman & Malla (1983). Adolescents' attitudes towards mental illness: relationship between component and sex differences.	N = 413 Canadian students aged 15-16	Written vignettes followed by a 9-item measure. Group comparisons	Seven components of attitude; knowledge of mental illness; social distance	Measures of attitude & social distance constructed by the authors	Results compared by gender: more social distance in males	Perceived illness severity negatively related to social acceptance
2.	Lopez (1991). Adolescents' attitudes toward mental illness and perceived sources of their attitudes: An examination of pilot data.	N = 89 students from Florida, aged 14-18	Two self-administered questionnaire. Correlations	Attitudes about mental illness, sources of attitudes, & social distance	Opinions About Mental Illness scale (Struening & Cohen, 1963). Views About Mental Health scale (Lopez, 1980)	Results also compared by age: No age effect found	Males had more negative attitudes. Education improved attitudes
3.	Secker, Armstrong, & Hill (1999). Young people's understanding of mental illness.	N = 102 Scottish students aged 12-16	Written vignettes, focus groups, & individual interviews	Definition & understanding of mental illness; social distance; attitudes	Semi-structured interviews covering themes related to aspects of mental illness	Gender: No gender differences found	Adolescents draw on experience to make judgements.

	Study	Sample	Procedure & design	Factors investigated	Attitude measure used	Other comparisons	Summary of findings
4.	Bailey (1999). Young people, mental illness and stigmatisation.	N = 106 British students aged 11-17	Exploratory: series of semi-structured interviews. Qualitative & focus groups	Understanding of causes of mental illness, labels, and types of appropriate treatment	Semi-structured interview constructed by the author	None	Participants varied enormously in their level of understanding
5.	Corrigan, Demming, Goldman, Slopen, Medasani, & Phelan (2005). How adolescents perceive the stigma of mental illness and alcohol abuse.	N = 303 Californian students from 3 high schools. (aged 13-19)	Four written vignettes. Measures in questionnaire form. Group comparisons	Stigma; familiarity	A modified version of the Attribution Questionnaire as used by Watson et al. (2004) & the Level of Contact Report (Holmes et al., 1999)	Results compared by vignette & familiarity	Alcohol abuse associated with more stigma
6.	Watson, Miller, Frederick, & Lyons (2005). Adolescent attitudes towards serious mental illness.	N = 415 Students from USA, aged 14-18	Self-report questionnaire. Correlations	Attitudes (e.g., threat, control, harm); stigma; familiarity	Attitudes Toward Serious Mental Illness Scale- Adolescent Version, constructed by the authors	Results also compared by age, race, & gender	Attributions about violence and unpredictability linked to stigma

	Study	Sample	Procedure & design	Factors investigated	Attitude measure used	Other comparisons	Summary of findings
7.	Chandra & Minkovitz (2006). Stigma starts early: Gender differences in teen willingness to use mental health services.	N = 274 8 <sup>th</sup> grade students (aged 13 & 14) from 2 schools in USA	Questionnaire following a classroom-based introduction. Correlations and group comparisons.	Stigma; familiarity; mental health knowledge; willingness to use mental health services	Modified version of The Stigma Scale for Receiving Psychological Help . Measures created by authors to assess other factors	Results compared by gender	Males had less mental health knowledge and more stigma. Females 2x more likely to seek help
8.	Chandra & Minkovitz (2007). Factors that influence mental health stigma among 8 <sup>th</sup> grade adolescents.	N = 57 Subsample of the 8 <sup>th</sup> grade students	In depth face-to-face individual interviews. Transcripts reviewed. Code & theory notes recorded.	Exploration of attitudes toward seeking mental health services	Semi-structured interviews, developed through review of he literature & input from a Community Advisory Board	None	Limited mental health knowledge and lack of experience linked to more stigma.
9.	Corrigan, Watson, Otey, Westbrook, Gardner, Lamb, & Fenton (2007). How do children stigmatise people with mental illness?	N = 1,391 Students from the USA, aged 11 – 15	Written vignette, followed by questionnaire. Correlations.	Stigma, specifically views about responsibility & dangerousness	The authors adapted the original Attribution Questionnaire (Corrigan et al., 2003) for use with young people	Gender, ethnicity & grade level: No significant effects found	Perceptions of responsibility and dangerous associated with stigma

	Study	Sample	Procedure & design	Factors investigated	Attitude measure used	Other comparisons	Summary of findings
10.	Arbanas (2008). Adolescents' attitudes toward schizophrenia, depression, and PTSD.	N = 92 Croatian adolescents aged 17 & 18	Questionnaire given to students in place of their normal lesson. Group comparisons	Personal Stigma; familiarity	Modified versions of standardised scales of familiarity & stigma of: schizophrenia, depression, & PTSD	Results compared by school & age	Stigma higher for schizophrenia compared with depression and PTSD
11.	Jorm & Wright (2008). Influences on young people's stigmatising attitudes towards peers with mental disorders: national survey of young Australians and their parents.	N = 3,746 Australians aged 12 – 25 & their parents (in 68.5% of the sample)	Telephone: read one of four vignettes at random. Group comparison & correlations	Personal & perceived stigma; level of familiarity; impact of campaigns	A modified version of Griffiths et al.'s (2004 & 2006) likert-scale measure of personal & perceived stigma	Results also compared by gender	Familiarity associated with some aspects of stigma. Education reduced belief of weakness
12.	Walker, Coleman, Lee, Squire, & Friesen (2008). Children's stigmatisation of childhood depression and ADHD: Magnitude and demographic variation in a national sample	N = 1,318 Children & adolescents aged 8 – 18	Randomly assigned to vignettes about depression, ADHD or asthma. Group comparisons	Positive & negative attributions; social distance; family attitudes	Adapted version of the Attribution Questionnaire (Corrigan et al., 2003) & likert-scale measure of social distance	Results compared by demographic factors, specifically age & ethnicity	Depression had highest stigma & social distance followed by ADHD & asthma

	Study	Sample	Procedure & design	Factors investigated	Attitude measure used	Other comparisons	Summary of findings
13.	Coleman, Walker, Lee, Friesen, & Squire (2009). Children's beliefs about causes of childhood depression and ADHD: A study of stigmatisation.	N = 1,091 Children & adolescents aged 10 -18	Randomly assigned to vignettes about depression, ADHD or asthma. Group comparisons	Causal attributions	Adapted version of causal belief scale (as used by Link et al., 1999); adapted version of social distance scale (Link et al., 1987)	Gender, age, & ethnicity	Depression most associated with negative attributions
14.	Hennessy & Heary (2009). The development of children's understanding of common psychological problems	N = 116 Children aged 8 – 14 from Dublin, Ireland	Vignettes (ADHD, conduct disorder & depression) followed by focus groups & individual interviews	Perceptions of causes of behaviour and possible sources of help	Qualitative: Open ended questions	Gender & development -al stage	Developmental changes in understanding of disorders. Value placed on support from family & friends.
15.	Wolkenstein & Meyer (2009). Attitudes of young people towards depression and mania.	N = 387 Aged 16 – 34 from Germany	Vignettes (depression & mania)	Emotional, Cognitive & Behavioural reactions	Emotional & Cognitive: Likert scale developed by authors; Social distance scale	Attitudes of others as well as own	Attitudes towards mania more negative

### *1.9.2 Review of the Literature*

Of the 15 articles, five investigated adolescents' attitudes towards mental illness generally and 10 compared different disorders using vignettes. Eight studies were conducted in the USA (1991-2009) and the remaining seven were conducted in Canada (1983), Australia (2008), Croatia (2008), Germany (2009), Ireland (2009), Scotland (1999), and England (1999).

Generally, the studies supported the attribution theory and social psychological model. For example, Norman and Malla (1983) found a positive relationship between belief in psycho-social aetiology and social acceptability and optimism about prognosis. They did not use standardised measures of attitude, but it is likely that at the time of their research none of the standardised measures used currently would have existed. Whilst this makes it difficult to generalise from the study, it has generated ideas and formed a good basis for future work in the field. Sample size was adequate and the authors were clear that the relationships reported did not demonstrate a causal relationship, which is important as this can represent a major flaw in research (Holland, 1986).

Lopez (1991) found that 74.2% of the 89 adolescents asked thought that people with mental illness were unpredictable. Lopez's study has the strength of investigating many factors (including gender, age, socioeconomic status, attitude, & social distance). However, with only 89 participants and many variables, it is possible that study did not have sufficient power to detect significant effects, and this was not reported in the paper.

Both Secker, Armstrong, and Hill's (1999) and Bailey's (1999) studies were qualitative. This has the advantage of providing richer data (Ashworth, 1997, as cited in Cutcliffe & McKenna, 1999). In contrast to Norman and Malla's (1983) study, Secker et al.

(1999) found that attributions of dangerousness and unpredictability were not related to whether participants thought the person was mentally ill. Rather, they were related to the type of behaviour and the age of the character portrayed in the vignette. This type of information may not have arisen in a quantitative design. Secker et al. also provide a detailed description of the methodology, sampling, and analyses, which appear appropriate. Unfortunately, Bailey's study is very brief and does not include details of methodology or analysis.

The Corrigan, Demming, et al. (2005) study used vignettes and standardised measures to assess adolescents' attitudes towards a peer with: mental illness, mental illness caused by a brain tumour, alcohol abuse problems, and leukaemia. Their assessment of stigma yielded similar results to what would be expected given the attribution theory and the adult literature: peers with alcohol abuse were most stigmatised, followed by mental illness. Having a brain tumour mediated the stigmatising effect of mental illness, which the authors presume is because participants could attribute a biological cause to the behaviour described in the vignette. This study has a number of strengths: it employed a large sample size; investigated the difference in attitudes towards physical and mental illness; used standardised measures with good reliability and validity; and employed appropriate analyses. The authors also discuss the weaknesses of their study and provide some ideas for future research, for example, including demographic questionnaires and measuring cognitive development.

Watson, Miller, and Lyons (2005) reported similar results to those in the adult literature. In general, adolescents with the highest scores for stigma and social distancing held the strongest beliefs that people with mental illness are out of control and violent.

Despite its homogenous sample, this study used standardised measures, was clearly written and reports its results in a thorough way.

Chandra and Minkovitz published two papers (2006, 2007) based on research with the same group of participants. The first study involved 274 adolescents and the second involved 57 within focus groups. They found that many of the adolescents held stigmatising attitudes and they provide useful accounts of these, with the added advantage of more in-depth interviews. Detailed accounts of sampling methods and analyses were included, but the results were limited by restrictions imposed by the school about certain questions (e.g., regarding socioeconomic status).

The Corrigan et al. (2007) study involved younger adolescents and contributes to the literature by employing appropriate methodology and analyses, and describing a large heterogeneous sample ( $N=1,566$ ). The authors conclude that stigma theories can apply to young people's behaviour and attitudes as well as adults'.

Arbanas' (2008) Croatian study found that stigmatising attitudes were consistently (across schools) strongest towards schizophrenia compared to post traumatic stress disorder (PTSD) and depression. However, only 84.6% of the participants completed the measures entirely and correctly, which may have been explained by the fact that they did not volunteer for the research, and therefore may have not been motivated to participate.

Jorm and Wright (2008) looked at beliefs about dangerousness, weakness, and unpredictability in a large sample of adolescents and their parents ( $N=3,746$ ). They found that the adolescents held negative views about mental illness, but that the strength of this varied across different disorders. For example, vignettes describing psychosis, and depression with alcohol use, elicited beliefs about dangerousness and unpredictability,

whereas social phobia was more likely to be seen as a weakness. This piece of research supports attribution theory and reports a clear and thorough methodology. It is also the only study to date that investigates the associations between parent and adolescent attitudes toward different disorders.

Walker, Coleman, Lee, Squire, and Friesen (2008) used a large sample size (N=1,318) and found that participants demonstrated reducing degrees of stigma towards vignettes describing peers with depression, attention deficit hyperactivity disorder (ADHD), and asthma. They report effect sizes ranging from  $d=0.37$  and  $d=0.78$  (small to large effects; Cohen, 1988) and give a clear account of appropriate methodology and analyses. Hennessy and Heary (2009) also compared attitudes towards peers with ADHD, conduct disorder, and depression. Qualitative interviews revealed developmental changes in young people's levels understanding of disorders.

Finally, Wolkenstein and Meyer (2009) provided the first account of adolescent attitudes towards depression and mania. Attitudes towards mania were more negative than towards depression. The authors attribute this finding to the elevated perceptions of unpredictability and dangerousness. For example, 10% of participants judged the person with depression to be aggressive compared to 45% for mania. In terms of social distance, 66% said they would not be willing to accept marriage of an individual with depression into their own family. In Angermeyer and Matschinger's (2003) study with adults, this figure was 48%. However, comparisons between studies should be interpreted with caution because samples and methodologies differ. Wolkenstein and Meyer report frequencies for each item within their measures in order to allow comparisons to other studies. For example, they report frequencies and percentages of participants who endorsed attributions of dangerousness, unpredictability and so on. However, their analyses are based on the

dependent variable measures as a whole. As such, mean scores for each measure were entered into multivariate analyses of variance and correlations. This allows for more in-depth and powerful analyses of each variable.

### *1.9.3 Are Demographic Factors, Labelling, and Familiarity Associated with Attitudes?*

*1.9.3.1 Gender.* All of the studies reviewed found that to some extent, negative attitudes were stronger in males than females. This difference was statistically significant in some cases. This is similar to adult stigma research, as discussed in section 1.7.1. The studies that measured social distance found that males tended to express higher desire for social distance than females. This was particularly apparent in Jorm and Wright's (2008) study.

*1.9.3.2 Age.* Despite age, and therefore developmental stage, being a seemingly important focus for research in this population, few studies have investigated this factor. Lopez (1991) found no effects of age or grade level, although only adolescents in grades 10 and 11 were involved in her study. Jorm and Wright (2008) found that age differences in stigma showed complex trends. Belief in a person being weak rather than sick decreased with age. Desire for social distance also decreased with age. Belief in the person being dangerous and unpredictable on the other hand, increased with age. Similarly, reluctance to disclose increased with age. Within Jorm and Wright's analyses they used multivariate tests to control for variables relating to familiarity and experience with mental illness, and exposure to educational material. They conclude that age and gender differences are not simply due to differential exposure. They recommend that the impact of age is investigated in future studies.

In addition to the studies presented here, a review of the social distance literature by Jorm and Oh (2009) further suggests that age is an important factor but that findings tend to be inconsistent. They suggest that desire for social distance tends to decrease over the course of adolescence and that this is likely to reflect developmental trends rather than a cohort effect.

*1.9.3.3. Labelling and Mental Health Knowledge.* Norman and Malla (1983) found that the more behaviour is seen as being indicative of a mental illness, the less likely it would be seen as socially acceptable. This supports the labelling theory. However, Chandra and Minkovitz (2006 & 2007) and Jorm and Wright (2008) looked specifically at the role of labelling within mental health literacy. Their findings support what we would expect given the findings from adult literature, i.e., that stigma decreases as mental health literacy increases. It is worth noting that knowledge was measured by mental health questionnaires, which may lack reliability and validity; and exposure to mental health campaigns, which may simply reflect exposure, rather than knowledge *per se*. Many authors discuss knowledge and the role of educational material within their discussions as important areas for future research.

*1.9.3.4 Familiarity.* Interestingly, Lopez (1991) found that attitudes were not significantly different for those who had known someone with a mental illness compared with those who had not. The Corrigan, Demming, et al. (2005) study also yielded unexpected results: that those who reported more familiarity with mental illness held more stigmatising attitudes. However, this finding should be interpreted with caution because although the Level of Contact Report (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999) reports good reliability, it was modified for use in the study. Furthermore, whilst the path coefficients were significant for the models, the effect sizes were very small and the

range of scores on the Level of Contact Report were restricted, thereby limiting the power of the findings.

The results of Watson et al. (2005) reflected those in adult literature and theory: that the more familiar people are with mental illness the more positive their attitudes. However, they found no effects of personal experience on stigma. This could be because the subsample was too small to detect significant findings. Chandra and Minkovitz (2006 & 2007) used a larger sample, and standardised measures, and found that 59.1% of participants indicated a moderate degree of familiarity. Unfortunately, they did not look specifically at the association between experience and stigma, but they did find that adolescents who had more experience and familiarity would be significantly more willing to use mental health services. This was further supported by Jorm and Wright's (2008) findings.

#### *1.9.4 Summary*

The literature review highlights some consistencies with the adult literature and lends support for theory discussed in section 1.6. Given the importance of involving adolescents in stigma research, it is surprising that there are so few studies that involve this age-group. It is encouraging that over half of the studies investigated attitudes towards depression. However, none of these involved English adolescents. The rationale for focussing on depression within this study is outlined below.

#### *1.10 Depression*

Depression is a mental health problem that affects between about 2% and 8% of adolescents aged 12-17 in the UK (Essau 2009; Rutter, Taylor, & Hersov, 1994) and strongly predicts major depression in adulthood (Pine, Cohen, Cohen, & Brook, 1999). An

episode of depression puts adolescents at greater risk of sustained impairment in various life domains such as work, social activities, academic functioning, physical health, and interpersonal relationships (Fergusson & Woodward, 2002; Harrington et al. 1990), as well as increased risk of anxiety, substance use, and other co-morbid disorders (Kovacs, Goldston, & Gatsonis, 1993; Rao et al., 1995).

Research suggests that depression appears to be increasing among the younger generation (Essau, 2009; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993).

Explanations for this include changes in family life (e.g., an increase in single-parent families) which may expose children to more frequent and earlier challenges (Fombonne, 1995); earlier onset of puberty (Hayward, Gotlib, Schraedley, & Litt, 1999); presence of negative events (e.g., parental divorce); and chronic stressors (e.g., academic demands; Essau, 2009). Gender differences in the incidence of depression are well established, with about twice as many girls than boys meeting diagnostic criteria for major depressive disorder at some point in their lives (Anderson, Williams, McGee, & Silva, 1987; Cohen et al., 1993; Reinherz et al., 1993). This gender difference appears to emerge around puberty and persists throughout adulthood (Essau, 2009). Explanations include biological and psychosocial differences between males and females such as hormonal differences (Peterson, Sarigiani, & Kennedy, 1991), coping styles (Aro, 1994), peer support, and resilience (Peterson et al., 1991).

Depression is characterised by symptoms such as depressed mood (or irritable mood in children and adolescents); diminished interest or pleasure in previously enjoyable activities; significant changes in weight, sleep, and appetite; fatigue; impaired concentration; psychomotor retardation or agitation; feelings of worthlessness or excessive or inappropriate guilt; indecisiveness; recurrent thoughts of death; and suicidal ideation.

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994), for a diagnosis of major depressive disorder, a combination of at least five symptoms need to be experienced more days than not for at least two weeks, and they need to represent a change from the individuals previous functioning.

Sadly, a severe episode of depression can lead to overwhelmingly negative feelings of hopelessness, worthlessness or guilt which can trigger an individual to engage in risky behaviours such as self-harm and suicide. Depression is associated with a 30-fold increased risk of completed suicide (Stolberg, Clark, & Bongar, 2002) and currently, suicide is the third leading cause of death among adolescents (Arias, Anderson, Kung, Murphy, & Kochanek, 2003).

As for the adult population, death by suicide is more common in males than females. It is estimated that this gender difference may be more pronounced in younger adults (with males aged 20 - 24 being up to four times more likely to commit suicide than females in this age bracket; National Institute of Mental Health in England, 2007), compared to the adult population as a whole (where males are up to three times more likely to commit suicide than females). In 15-19 year-olds, girls are more likely to attempt suicide, but boys are more likely to die as a result of a suicide attempt (Hawton, 2000).

The Mental Health Foundation (1997) estimates that over 70% of recorded suicides are by people with depression, and this is often undiagnosed. Between 1997 and 2003, Windfuhr et al. (2008) found that only 20% of females and 12% of males aged 10 – 19 years who had committed suicide were in contact with mental health services in the year leading up to their death. Furthermore, as Lewinsohn et al., 1993 and Newman et al., 1996

point out, despite the ubiquity of depression, the vast majority of depressed adolescents will never receive treatment. This low rate of service contact has been the focus of much research, as it is well documented that treatment for depression can be effective (Herbert, 2006).

In addition to the increased risk of suicide, untreated depression has serious and wide-ranging implications for both the individual and society. Depression can be a chronic illness that causes considerable and persistent impairment in everyday life. For example, depression in adolescence is associated with impaired social functioning and family relations; deterioration in physical well-being; decreased self-esteem; increased risk of being involved in the criminal justice system; and low academic achievement and occupational performance (Essau, 2009; Geller, Zimmerman, Williams, Bolhofner, & Craney, 2001; Roa et al., 1995). It also shows substantial comorbidity with many disorders, especially anxiety, eating, conduct, and substance use disorders (Anderson, Williams, McGee, & Silva, 1987; Goodyer & Cooper, 1993).

Currently, depression is the leading cause of disability amongst 15-44 year-olds in developed countries (as measured by years of employment lost due to disability) and the fourth leading contributor to the global burden of disease (Lopez & Murray, 1996). WHO predicts that by 2020, depression will become the second leading contributor to global burden of disease for all ages and both sexes, exceeded only by heart disease (Lopez & Murray, 1998). Given that depression can begin in early life (i.e., childhood and adolescence) and continues into adulthood, there is a need to focus on early intervention (Essau, 2009).

An explanation for low rates of help-seeking behaviour and service use is that the stigma associated with having a mental illness represents a barrier (Windfuhr et al., 2008). This is consistent with theoretical models of help-seeking, which typically conceptualise help-seeking as a process influenced by social factors (Rosenstock, 1966). Research involving both clinical and non-clinical populations suggest that negative attitudes towards help-seeking (including expectations of embarrassment and fearing what others may think) reduce the likelihood of perceiving the need for help and then going on to seek help (Kessler, et al., 2001; Mojtabai, Olfson, & Mechanic, 2002). For example, in Wilson and Deane's (2001) and Rickwood and Braithwaite's (1994) studies, statements relating to embarrassment and being teased by peers were common and were associated with reduced help-seeking intentions.

In terms of help-seeking for depression specifically, research is limited (Griffiths, Christensen, & Jorm, 2008). The few studies that have examined this suggest that rates of health service use are low. For example, Essau (2005) found that 23% of adolescents with major depressive disorder received treatment at some point in their lives. Other figures vary from 15% to 65% (Cuffe, McKeown, Addy, & Garrison, 2005; Offord et al., 1987). In light of this lack of research and the growing problem of depression, it seems important that adolescents' attitudes towards depression, and their hypothetical help-seeking intentions, are investigated.

### *1.11 Present Study*

The present study aimed to survey a large sample of adolescents (aged 11-18, recruited from schools in Britain) on their perceptions of a peer described in a vignette as having symptoms of depression. Participants completed paper questionnaires on their own and anonymously in order to reduce response bias. The study was exploratory in nature.

Participants were asked questions on: demographics, depression recognition, personal stigma, desire for social distance, familiarity, exposure to mental health lessons and educational material inside and outside school, and hypothetical help-seeking. These factors were chosen because the social psychological model would support the hypothesised associations and they have been found to be significantly correlated with stigmatising attitudes in other populations. Responses were analysed to determine which factors influenced attitudes towards depression. Implications of the results are discussed, with particular reference to educational and anti-stigma programmes.

### *1.12 Research Questions and Hypotheses*

*Research Question 1:* Do demographic factors influence adolescents' attitudes towards a peer with depression?

*Hypothesis 1:* There will be significant differences in attitudes towards a peer with depression based on participants' age and gender. It is predicted that males and younger adolescents will have higher stigma and social distance scores.

*Research Question 2:* Does recognition of depression influence adolescents' attitudes towards a peer with depression?

*Hypothesis 2:* Recognition of the problem as depression will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents who identify the peer as having depression (or as being depressed) will have lower stigma and social distance scores.

*Research Question 3:* Is familiarity with depression associated with attitudes towards a peer with depression?

*Hypothesis 3:* Familiarity with depression will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents with a greater

familiarity (measured in terms of level of contact) with depression will have lower stigma and social distance scores.

*Research Question 4:* Does exposure to lessons or educational material about mental health influence attitudes towards a peer with depression?

*Hypothesis 4:* Exposure to lessons or educational material about mental health will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents who have been exposed to lessons or educational material about mental health either in or outside of school will have lower stigma and social distance scores.

*Research Question 5:* Are attitudes towards a peer with depression associated with hypothetical help-seeking intentions?

*Hypothesis 5:* Attitudes towards a peer with depression will be significantly associated with whether or not the adolescent would consider seeking help if they had a similar problem. It is predicted that adolescents with high scores on stigma and social distance will be less likely to consider seeking help from a wide range of sources.

## CHAPTER TWO

### Method

#### *2.1 Chapter Overview*

The study design is outlined, followed by a description of participant characteristics and the recruitment method. The measures used within the questionnaire are described and their reliability and validity are discussed. A rationale for modifications to standardised measures is given. The procedure for the study is outlined, followed by relevant ethical considerations. Finally, a plan for the statistical analyses is provided in section 2.8.

#### *2.2 Design*

The study was a single group design, aiming to examine the relationships between personal stigma and social distancing scores and: gender, age, familiarity, recognition of depression, exposure to lessons or educational material about mental health inside and outside school, and help-seeking intentions. All of these factors were brought together into a short questionnaire (provided in paper form, see Appendices A & B). Information sheets, including consent forms, were constructed for the purpose of the study (Appendices C – G).

Parent/guardian and student information sheets were constructed in a way that withheld the fact that the research was about attitudes towards mental illness or depression. They stated that the research was about attitudes towards health problems. This enabled accurate measurement of participants' recognition and understanding of depression within the questionnaire (see section 2.5.3).

Information sheets and questionnaires were piloted on three adolescents (aged 12, 13, & 15) and their parents. This was to ensure that the material provided was

straightforward to read and understand; that there were no ambiguous questions; and that the debrief information was adequate. The pilot demonstrated that the questionnaire would take adolescents between 10 and 15 minutes to complete.

### *2.3 Participants*

Participants were adolescents aged 11-18 recruited from schools. To obtain sufficient power a minimum sample size was calculated. Similar research with adults and adolescents has demonstrated a range of effect sizes. For example, Coleman, Walker, Lee, Friesen, and Squire (2009) found a range of effect sizes from small to large when investigating the impact of demographics and attributions on stigma and desire for social distance. Angermeyer and Matschinger (2003) demonstrated that individual factors accounted for between 3.8% and 19% of the variance in social distance scores. Other studies (e.g., Corrigan, Lurie, et al., 2005; Griffiths, Christensen, Jorm, Evans & Groves, 2004) also report small to large effect sizes.

Statistical power analysis package G\*Power 3.0.3 (Faul, Erdfelder, Lang, & Buchner, 2007) was used to calculate sample size in order to obtain power of .80 at an alpha level of .05. Given that effect sizes vary in the literature and the aim should be to detect minimal meaningful differences (Kirk, 1995), the minimum sample size for medium effects was calculated. For group comparisons and correlations for the hypothesis testing, where medium effects are assumed, at least 160 participants are required. For multiple regression analyses, at least 98 participants are required. Therefore, the aim was to recruit at least 160 participants. However, in order to avoid missing any potential small effects, as many participants as possible were recruited within the available time and financial

restraints. Effect sizes were reported alongside statistical significance throughout the results, as recommended by Tabachnick and Fidell (2007).

The study aimed to recruit a normal population sample of students from schools in Britain. To gain a representative sample, the only exclusion criterion was proficiency in English. Responses from adolescents who did not understand the questions (after support by the researcher or their teacher) were excluded. Participants were recruited between November 2009 and February 2010.

#### *2.4 Recruitment*

Head teachers of eight schools were sent a letter (Appendix H). This outlined the research and asked them to contact the researcher if they were interested in their school taking part. Letters were followed up via email or telephone. The letters were sent out on a rolling basis until enough schools were recruited for the sample size to be adequate with an even spread across the age-groups. Three of the schools approached were in Cambridgeshire, three in Sussex, and two in Worcestershire. Recruitment took place in these regions because they were convenient for the researcher to travel to. All were mixed comprehensive middle or secondary schools except one, which was a sixth-form college. As an incentive to participate and to express gratitude to the schools, the researcher offered to deliver a talk to students after the study about studying psychology, becoming a psychologist, or the work of a clinical psychologist.

Of those approached, three schools expressed an interest in taking part in the research: a middle school and a sixth-form college in Sussex; and a secondary school in Worcestershire. Of the schools approached who did not agree to take part, one head teacher raised concerns about the consequences of their students answering questions about mental

health problems without a more thorough debriefing system in place; two did not have time to accommodate additional research within their curriculum; and two did not give a reason.

Face-to-face meetings took place between the researcher and the three head teachers who expressed an interest in their schools participating. These aimed to: explain the rationale for the research in more detail; outline the recruitment procedure; provide example copies of the information sheets and questionnaires; and to answer questions. Following these meetings, all three head teachers gave permission for the researcher to recruit students from their schools.

Head teachers were given the choice of the researcher using 'active' parental consent or 'passive' parental consent. Active parental consent is where parent/guardian consent is obtained prior to participation. Passive parental consent is where parents/guardians are able to opt their child out of the research if they want to, but otherwise participation is assumed. A discussion of the advantages and disadvantages, and ethical issues associated with these procedures, is provided in section 2.7.

#### *2.4.1 Middle School*

The middle school is a mixed, rural, community, 'middle deemed secondary' school for students aged 10 – 13 (Years 6, 7, and 8). According to the school's most recent Ofsted report, the number of students eligible for free school meals is well below average. The proportion of students from minority ethnic backgrounds is below that found in most schools and very few speak English as an additional language. The proportion of students with special educational needs and/or disabilities is similar to that found in most schools.

This school's head teacher requested the active parental consent method. Thus, all 280 students in Years 7 and 8 (aged 11–13) were given parent/guardian and student

information sheets to take home (Appendices C & D). Fifty-two families returned parent/guardian consent forms. These were brought into school by students and put in a purpose-made box in reception. This enabled a list of participating students to be generated. Of these, 42 completed the questionnaire.

#### *2.4.2 Secondary School*

The secondary school is a small, mixed, rural school for students aged 11 – 16 (Years 7-11). According to the school's most recent Ofsted report, students come from a rural area that has some pockets of socio-economic disadvantage. The proportion of students eligible for free school meals is lower than average. The proportion of students with moderate and severe learning difficulties is slightly above average. The vast majority of students on roll are White British.

The secondary school's head teacher preferred the passive parental consent method as this was regularly used within the school for other research and extra-curricular activities. Thus, all 442 students in Years 7 – 11 (aged 11–16) were given student information sheets (Appendix F), via school registers, to take home from school. Parent/guardian information sheets were posted to their home addresses (Appendix E). This was done to ensure that the information got home (i.e., that the information sheets were not lost or left in school bags). The distribution of information sheets was done by the researcher with support from the head teacher and school secretary. Parents/guardians were given the option of either emailing the researcher directly or posting back a form requesting that their son/daughter be excluded from participating. They were also given the option of having their postage reimbursed. A time-frame within which to respond was set and parents/guardians were encouraged to contact the researcher if they wanted further

information about the study. Of the 440 invited students, 25 parents/guardians chose to exclude their son or daughter from the research. Of the remaining students, 352 participated.

#### *2.4.3 Sixth-form College*

The sixth-form college is a medium-sized college located in a coastal borough in Sussex. The proportion of young people who stay on in education or training in this town at 16 years-old is high against the national average, but below the rate for Sussex as a whole. The college offers both academic and vocational courses. According to the college's most recent Ofsted report, the proportion of students from minority ethnic backgrounds is 12%, compared to 5% in the local population.

As the students at the sixth-form college were aged 16 and above, it was not necessary to involve their parents as part of the recruitment process. All 215 students in Years 12 and 13 (aged 16 – 18) were given information sheets (Appendix G) and questionnaires. Of these, 190 completed the questionnaires.

In total, 584 students completed the questionnaire. Further details of participant characteristics can be found in section 3.2.

#### *2.5 Measures*

The questionnaire was made up of eight sections. These were: i) basic demographic questions; ii) a vignette to read; iii) a measure of whether or not participants recognized depression from the vignette; iv) a measure of social distance; v) a measure of personal stigma; vi) a measure of level of contact (familiarity); vii) a measure of exposure to lessons and educational material; viii) a measure of hypothetical help-seeking behaviour; ix) an

opportunity to comment on the experience of completing the questionnaire; x) a tear-off debrief sheet for students to take away with them. Copies of the questionnaires can be seen in Appendices A and B.

All measures were chosen because they targeted the research questions; were straightforward and quick to fill in and score; were based on measures with good reliability and validity; and had been used within existing research. Some were modified slightly to be more applicable to the age-range in this study. Although this will have affected their validity and reliability, a rationale for each modification is provided. The measures used are described below in the order they appear in the questionnaire.

### *2.5.1 Demographics*

Participants were asked to record their gender, date of birth, and ethnicity. The classifications of ethnic groups were those recommended by the Office of National Statistics (2001) Level One groupings.

### *2.5.2 Vignette*

Participants were asked to read a vignette describing a young person with depression. Whilst vignettes cannot depict real-life, they are thought to produce valid and reliable measures of respondent opinion (Alexander & Becker, 1978). The vignette in this study is based on one used by Jorm and Wright (2008) with 3,746 Australians aged 12 - 25. This was a modified version of a vignette used previously (e.g., Caldwell & Jorm, 2000; Griffiths et al., 2008; Jorm, Korten, Jacomb, Rodgers, & Pollitt, 1997) that was written to satisfy DSM-IV and ICD-10 criteria for Major Depressive Disorder. Jorm and Wright modified the 'adult' vignette to be more age-appropriate by changing the age of the character to from 30 to 15, referring to 'school' rather than 'work' and replacing 'this has

come to the attention of his boss, who is concerned about John's lowered productivity' to 'his parents and friends are very concerned about him'.

Jorm and Wright (2008) state that this 'young person' vignette was validated by asking mental health professionals what was wrong with the person described. This study, by Lubman, Hides, Jorm, and Morgan (2007), found that at the 95% confidence interval, 83.8% of the 1,230 health professionals surveyed identified the diagnosis. As in Jorm and Wright's study, two versions of the vignette were used in this study: portraying a male or a female character (both named Alex; see Appendices A & B). Participants were given gender-matched versions by the researcher to maximise the extent they could relate to Alex (Jorm, personal communication, May 15, 2010). Alex was described as being 14-years-old because this was estimated to be the median age of participants. This followed the same design as Jorm and Wright's study.

### *2.5.3 Recognition of Depression*

Correct recognition of depression was assessed by the question *what word, label, or diagnosis would you give a problem like Alex's?* This open ended question enabled participants to write down their response. For preliminary analyses, responses were collapsed into 11 categories: 1 = depression; 2 = problem relating to eating/food; 3 = problem relating to sleep; 4 = physical health problem; 5 = unsure; 6 = stress or anxiety; 7 = difficult circumstances; 8 = other; 9 = description of depressive symptoms; 10 = psychosis; 11 = an answer relating to seeking help (rather than a label or diagnosis). Where multiple answers were given, if 'depression' or 'depressed' was stated this was recorded. For other multiple answers, a word coming closest to depression or another mental health problem was recorded. For the main analyses, responses were collapsed into two

categories: 1 = recognised depression; 2 = did not recognise depression. A similar type of question has been used previously in a study by Hay (2007), where inter-rater reliability (measured using Cohen's kappa) reached .91. Inter-rater reliability for this study is discussed in section 3.4.2.

#### 2.5.4 Social Distance

The Social Distance Scale (Link, Cullen, Frank, & Wozniak, 1987; Penn et al., 1994) is a seven-item measure that assesses willingness to interact with a person in various social situations. Using a Likert scale ranging from *definitely willing* (1) to *definitely not willing* (4), participants indicate to what extent they would, in the situation presented, accept the character portrayed in the vignette. Higher overall scores represent a greater desire to distance themselves from someone with mental illness. The Social Distance Scale has been widely used in mental health research (e.g., Griffiths et al., 2006; Lauber, Anthony, Adjacic-Gross, & Rossler, 2004) and has high internal consistency (Cronbach's alpha: .77 & .75, Griffiths, Christensen, & Jorm, 2008a; .76, Griffiths et al., 2004; .92, Link et al., 1989; .75, Penn et al., 1994; .72, Wang & Lai, 2008). It is also considered to be the most widely used and accepted proxy measure for behavioural indexes of discrimination against mental illness (Holmes et al., 1999; Penn et al., 1994).

Use of the Social Distance Scale in the adolescent population is currently limited. This may reflect a lack of this type of research with this population generally. Unfortunately, the scale contains two items that are not applicable to the majority of adolescents: *would you like your child to marry a person like...* and *would you trust a person like....to take care of your child*. Additionally, three of the items are inappropriately worded: *would you be willing to start work with a person like.....*; *would you rent a room to*

*a person like....; and would you recommend a person like....for a job.* Despite these limitations, at the time of the research it was still considered the most appropriate measure of social distance. In order to make the items as appropriate to the adolescent population as possible, a modified version of the Social Distance Scale was used. This modified five-item version was used by Jorm and Wright (2008). They took out the two non-applicable items stated above and modified the inappropriately worded items to read: *work closely at school with....; spend an evening socialising with....; and invite....round to your house.*

### 2.5.5 Stigma

Personal stigma was assessed using a nine-item measure taken from an 18-item measure developed by Griffiths, Jorm, Evans, and Groves (2004). The original measure assessed personal stigma (reflecting participants' personal attitudes, with nine-items) and perceived stigma (reflecting participants' beliefs about the attitudes of others, with nine-items). In order to answer the research questions in this study, only the personal stigma items were used.

This brief self-report measure of personal stigma has been used extensively in research within the adult population, and has demonstrated good reliability: .75 (Griffiths et al., 2004) and .72 (Wang & Lai, 2008). Using a five-point Likert scale ranging from *strongly disagree* (0) to *strongly agree* (4), participants indicate how much they personally agree or disagree with nine statements. These statements are based on themes associated with stigma and depression. These themes include status of depression as an illness; extent to which it is under personal control/fault; character flaw; dangerousness; unpredictability; shame/concealment; avoidance; and discrimination. Total scores range from 0 to 36, with higher scores indicating greater stigma.

For use in this study, ‘depression’ was replaced with ‘a problem like Alex’s’. This was done in the same way as by Griffiths et al. (2006). This allows for the measure of attitudes towards the character portrayed in the vignette rather than the depression label itself. This was considered important because in real life, students’ attitudes about a peer would be based on observations of their behaviours rather than on a particular label. This also allowed for comparisons to be made between attitudes of those who recognized that Alex’s problem was depression versus those who did not. Further discussion regarding the choice to omit the diagnostic label can be found in section 4.3.4.

#### 2.5.6 *Familiarity*

The Level of Contact Report (Holmes et al., 1999) assesses experience with mental illness with 12 options, from the least intimate contact (never observed a person with a mental health problem) to most intimate contact (personally having a mental health problem). Reliability of this report has been assessed by asking mental health professionals to rank the situations in order of intimacy, and calculating the inter-rater reliability, Holmes et al. (1999) found this to be .83. Modified versions of this measure have been used successfully with adolescents to assess familiarity (e.g., Corrigan, 2005). For the purpose of this study, two questions from the original measure were removed (questions relating to working in the field of mental health) and one of the questions was reworded (*worked with* replaced by *been in a class with*) to make it more age-appropriate. Additionally, as in Jorm and Wright’s (2008) study, terms associated with mental health were replaced by ‘a problem like Alex’s’. This enables the measurement of attitude towards the description of a person with depression rather than the label itself, as described in the previous section.

### *2.5.7 Exposure to Lessons and Educational Material*

Prior to this question, participants were informed within the questionnaire that *Alex's problem could be a mental health problem called depression*. They were then asked if they have ever had any lessons or seen any information about mental health problems inside or outside school. This resulted in a yes/no dichotomous result for exposure to lessons and educational material inside and outside school.

### *2.5.8 Help-seeking Intentions*

Hypothetical help-seeking was assessed by asking participants if, and if so where, they might seek help if they suffered from a problem like Alex's. Participants were able to tick as many options as they liked from: friends, family, teachers, school nurse/counsellor, GP, psychologist, other, and would not seek help. Descriptive statistics of where participants would seek help are provided in section 3.9. However for the main analysis, these help-seeking intentions were made into a continuous variable of 'propensity to seek help from multiple sources'. This ranged from 0 – 7, with 0 being would not seek help and 7 being would seek help from all sources stated on the questionnaire. This measure was constructed for this study as at the time of the research there was no suitable standardised measure that was considered short enough to be included in the questionnaire.

### *2.5.9 Additional Comments*

At the end of the questionnaire, participants were given the option of writing comments about the experience of filling in the questionnaire or the topics covered within it. These comments were not directly included as part of the analysis, but were considered as part of the discussion (section 4.6).

### 2.5.10 Debrief-sheet

A debriefing sheet at the end of the questionnaire was provided and adolescents were encouraged to tear it off and take it home with them. This explained that the character in the vignette ‘may have a mental health problem called depression’ and gives a brief, age-appropriate description of what depression is. This was constructed for the purpose of this study but is based on DSM-IV criteria for major depression. Details of where to seek help (including a website and 24 hour help-line telephone number) were provided in case participants became worried about themselves or someone else.

### 2.6 Procedure

Once recruitment had taken place (via active or passive parental consent), lists of names and tutor groups of students participating or not participating in the study were made by the researcher. A day was organised for the researcher to visit the school with the questionnaires. Head teachers arranged for students to be released from their lessons and to complete the questionnaire together, in year groups, in a large classroom or school hall. This was done via lists of student names in school registers. Teachers were instructed not to tell their students that the study was psychological or to mention ‘mental health’ or ‘depression’ as this may have influenced responses to the questionnaire. The researcher and at least one teacher were present whilst participants completed the questionnaire. In line with British Psychological Society guidance on research (BPS, 2004), the researcher introduced herself to the participants and gave the following instructions:

*“This is a study investigating young peoples’ attitudes towards health problems. You are here today because you and your parents or guardians have agreed for you to participate in the study. In a minute I will hand out a questionnaire. It is up to you if you fill*

*it in - you don't have to complete it, and you can start and then not finish, that's fine. The questionnaire is two sheets of paper, but there are questions on both sides of each sheet. There are three important things to remember when filling in the questionnaire. The first is that I'm interested in your opinions, so please fill it in without talking to people sitting next to you. The second is that there are no right or wrong answers. Finally, please answer each question in turn. By that I mean don't turn over the page before completing the one before. If you have any questions or need help understanding anything, please put your hand up and I will come and help. I will also be here afterwards if you want to speak to me".*

Instructions given to the sixth form students (aged 16-18) differed slightly. The second sentence was replaced by: "*Please take time to read the information sheet attached to the front of the questionnaire so you can decide whether or not you want to participate*".

The questionnaires were handed out by the researcher and the teacher. Female students received the female version of the questionnaire and male students received the male version. These were printed on different coloured paper to make this process more straightforward.

If participants required help with reading the questions this was provided. Additional queries about the meaning of the questions were answered, with the most succinct and neutral response as possible to avoid biasing the participant's answer. For example, a common query was "what does *Alex could snap out of it if (s)he wanted to mean?*" which was answered by "it means Alex could suddenly stop having the problem if (s)he wanted to". Where participants with literacy difficulties, such as dyslexia, requested help, the researcher reminded them that their answers were confidential and anonymous,

before providing support with reading and/or writing. No participants were excluded on the basis of proficiency in English.

Students were thanked for their time and any remaining questions were answered. All questionnaires were collected and responses were coded and entered into an electronic database for analysis. Each school was reminded of the researcher's contact details and encouraged to get in touch with any queries. A summary of the findings will be sent to participating schools once the study is complete.

### *2.7 Ethical Issues*

Three ethical issues were considered: consent, debriefing, and data protection. Permission to conduct the research was granted by the University of East Anglia Faculty of Health Ethics Committee (Appendix I).

#### *2.7.1 Consent*

Head teachers were given the choice of parents/guardians 'actively' or 'passively' providing consent for their children to participate in the study. Students aged 16 – 18 years-old at the sixth-form college were considered able to consent for themselves (BPS, 2004). Recruitment of students aged 16 at the secondary school followed the same procedure as their younger peers.

Both passive and active consent methods have advantages and disadvantages. Active parental consent ('opt-in consent') is often preferred as it is more ethically sound when research has the potential to cause the participants distress (Ellickson & Hawes, 1989). However, previous research (e.g., Hawton, Rodham, & Evans, 2006) has found that adolescents wishing to participate often lost or forgot to bring their signed consent forms

from home. In these instances, adolescents felt disappointment at being excluded from the research. Additionally, as only a few adolescents were able to participate, the sample could not be regarded as representative. Ellickson and Hawes reviewed different methods for obtaining parental consent and concluded that the active method can introduce selection-bias. Also, participants may be qualitatively different from nonparticipants (i.e., they have less mental health stigma; Chandra & Minkovitz, 2006). Thus, the passive parental consent method may be considered advantageous when recruiting adolescents to this type of research (Dent, Galaif, Sussman, & Stacey, 1993; Unger et al., 2004). For these reasons it was decided to offer head teachers the choice of which consent method they preferred.

### *2.7.2 Debriefing*

As explained, a debrief sheet was provided for participants to take home and read. In addition to this, schools were encouraged to contact the researcher if they had any further queries from students or parents/guardians.

### *2.7.3 Data Protection*

Participants were instructed not to write their name on the questionnaire. In accordance with the Data Protection Act (1998) all data collected (including consent forms) were stored securely in a locked cabinet. This was only available to the researcher and will be kept for five years before being destroyed.

## *2.8 Plan of Analysis*

In light of the lack of existing research in this area, this study was designed to be exploratory. Data from the questionnaires were entered into a spreadsheet. Statistical Package for the Social Sciences (SPSS) version 16 was used for the analyses. Each variable

was screened and checked for outliers and normality. Reliability of the measures was also established. As part of the preliminary analysis, differences between schools on each measure were checked.

Where assumptions for parametric tests were met, Pearson's Product Moment Correlation was used to determine correlations between variables. Where non-parametric tests were considered more appropriate, Spearman's Rank Order Correlation was used.

Personal stigma, social distance, age, level of contact, and propensity to seek help are continuous variables. Gender, recognition of depression, exposure to lessons or educational material (inside & outside school), and age (when collapsed into age-groups) are dichotomous nominal variables, which, for the purpose of the analysis were assigned arbitrary values (e.g., 0 & 1). With these factors, group comparisons were made and therefore t-tests (or non parametric alternatives, e.g., Mann Whitney U tests) were used. Similarly, for variables with more than two categories (e.g., age groups) one way ANOVAs (or non-parametric alternatives) were used. Where significant differences were found between groups, post hoc tests were carried out to investigate these differences.

In order to test the social psychological model, regression analyses were used to investigate how much each factor impacted on the variance in personal stigma and social distance scores.

Each analysis was conducted separately for the sample as a whole and for the sample of participants who correctly recognised that Alex has depression.

## CHAPTER THREE

### Results

#### *3.1 Chapter Overview*

This chapter begins with a description of the composition of the sample and details response rates during the recruitment phase. The demographic characteristics of the participants are then provided.

Inter-item reliabilities of the measures are investigated and items are dealt with appropriately. Responses on the stigma and social distance scales are explored to examine descriptive statistics, outliers, and to check that assumptions for parametric tests are met. Descriptive statistics for the level of contact report are provided along with responses for individual levels of contact. Scores for each of the measures are compared by school, in order to check for significant differences in responses between schools (and therefore consent methods). Where effect sizes are reported, eta squared ( $\eta^2$ ) is used. Small, medium, and large effects are .01, .09, and .25 respectively (Cohen, 1988).

Each research hypothesis is examined in turn by appropriate analyses. Given that stigma and social distance scores were reasonably normally distributed, parametric tests were used. Pearson's Product Moment Correlation was used to investigate correlations between continuous variables (e.g., stigma and age), whilst t-tests and ANOVAs were used to investigate relationships between categorical and continuous variables (e.g., identification of depression and social distance). Chi-square tests were used to investigate relationships between categorical variables (e.g., school and lessons about mental health). Analyses involving level of contact scores used non-parametric tests such as Spearman's Rank Order Correlation, Mann-Whitney U test, and the Kruskal-Wallis test.

Throughout the preliminary analyses and hypotheses testing, results for the whole sample are reported as well as results for the subsample of participants who correctly recognised the problem as depression. This allows for an investigation of the participants' attitudes towards the description of Alex's behaviour, regardless of what they think the problem is; and also an investigation of attitudes held by a subsample of participants who were aware that Alex has depression.

Finally, the factors are entered into regression analyses. This allows for an investigation of the amount of variance in stigma and social distance scores that each of the factors accounts for as a whole and individually. A summary of results is then given which leads into the discussion.

### *3.2 Sample Composition*

Three schools were involved in the study: one middle school, one secondary school, and one sixth-form college. Table 2 breaks down the drop-out (attrition) rate from the number invited to participate to the number who completed questionnaires.

Table 2

*Attrition Rates from Invitation to Participation. Percentages, Shown in Brackets, are Percentage from the Initial Numbers Invited to Participate*

School (Age-range)	Consent Method	Number Invited	Number Assented/Consented	Completed Questionnaires
Middle (11-13)	Active	280	52 (18.6)	42 (15.0)
Secondary (11-16)	Passive	442	417* (94.3)	352 (79.6)
Sixth-form (16 – 18)	Self-consent	215	190 (88.4)	190 (88.4)
Total	-	937	659 (70.3)	584 (62.3)

\* Twenty-five parents / guardians chose to exclude their child(ren) from the study. Eight emailed to request this and 17 posted back the form. None asked for their postage to be reimbursed.

The percentage of adolescents who participated when passive parental consent was used was 80% compared to 15% for active parental consent. This highlights the advantage of using passive parental consent: a larger and more representative sample can be obtained. The attrition rate between consenting and completing the questionnaire reflects absence from school on the day the research took place; that the student was engaged in another activity (e.g., a music lesson); or that the student chose not to complete the questionnaire.

### 3.3 Demographics

The total number of participants was 584. There were 256 (43.8%) male and 328 (56.2%) female participants. The mean age was 14.2 years (SD = 2.07) with a range of 11 – 18 years. Fifty-eight participants were 11, 104 were 12, 76 were 13, 79 were 14, 63 were 15, 108 were 16, 75 were 17, and 21 were 18 years-old on the day they completed the questionnaire. There was a reasonably even mix of male and female participants across the age ranges (48.1% males in the 11-12 age-group; 49.0% in the 13-14 age-group; 42.7% in the 15-16 age-group; and 30.2% in the 17-18 age-group).

In terms of race, 96.2% considered their racial group to be white; 1.7% mixed; 1.5% Asian or Asian British; and 0.5% black or black British. Due to the disproportionate number of participants identified as white, analyses comparing differences by race were not appropriate.

### 3.4 Preliminary Analysis

#### 3.4.1 Internal Reliability of Measures

Cronbach's alpha ( $\alpha$ ) was calculated to assess inter-item reliability for the stigma and social distance measures. This can be seen in Table 3. Results indicate that the stigma scale contained one item (item 7: *if I had a problem like Alex's I wouldn't tell anyone*) that decreased the overall scale reliability. When this item was removed, reliability improved to  $\alpha = .73$ . Field (2006) reports that a Cronbach's alpha value above .7 is acceptable and indicates a reliable scale. Given this, item seven on the stigma scale was removed prior to the analyses.

Table 3

*Description of Stigma and Social Distance Scales, Number of Items in Each and Cronbach's Alpha ( $\alpha$ )*

Scale	Number of items	$\alpha$	Removal of item	Final number of items	Final $\alpha$
Modified version of Griffiths, Jorm, Evans, & Groves (2004) personal stigma scale	9	.69	Deletion of item 7 increases inter-item reliability	8	.74
Modified version of the Link et al. (1987) social distance scale	5	.87	Not necessary	5	.87

Stigma and social distance scores were screened and checked for outliers. There were no outliers and therefore all scores were included in the analyses.

### *3.4.2 Identification of Depression from the Vignette*

Participants' recognition of the problem portrayed in the vignette was recorded by asking *what word, label or diagnosis would you give a problem like Alex's?* followed by space for them to write their response. Responses were collapsed and coded into two (depression or not) and then 11 categories. Three-hundred and fifty one (60.1%) of the

participants correctly identified the problem as depression. Of these, 228 (65%) were female and 123 (35%) were male.

One-hundred randomly selected responses from the whole sample were independently coded by another researcher, allowing inter-rater reliability to be calculated. This was found to be 99% for the 11 categories and 100% for the 'depression or not'. Kappa for the agreement of ratings was .98 for the 11 categories and 1.0 for the two categories. This indicates very good agreement.

Table 4 shows the responses (collapsed into 11 categories) given by participants.

Table 4

*Responses to "What Word, Label, or Diagnosis Would You Give a Problem Like Alex's?" Percentages Refer to % of Total (N = 584)*

'Word, label or diagnosis' categories	Gender N (%)		Age N (%)			Totals
	Males	Females	11-13	14-16	17-18	
Depression or depressed	123 (21.1)	228 (39.0)	98 (16.8)	171 (29.3)	82 (14.0)	351 (60.1)
Description of depressive symptoms (e.g., 'miserable', 'sad', 'upset')	7 (1.2)	2 (0.3)	8 (1.4)	1 (0.2)	0 (0.0)	9 (1.5)
Problem relating to eating / food	18 (3.1)	25 (4.3)	29 (5.0)	14 (2.4)	0 (0.0)	43 (7.4)
Problem relating to sleep	13 (2.2)	9 (1.5)	11 (1.9)	10 (1.7)	1 (0.2)	22 (3.8)
Physical health problem	9 (1.5)	7 (1.2)	10 (1.7)	4 (0.7)	2 (0.3)	16 (2.7)
Stress or anxiety	12 (2.1)	17 (2.9)	15 (2.6)	9 (1.6)	5 (0.9)	29 (5.0)
Difficult circumstances (bullying/been dumped/too much homework)	12 (2.1)	8 (1.4)	15 (2.6)	4 (0.7)	1 (0.2)	20 (3.4)
Other ('troubled' / derogatory label, e.g., 'retard', 'queer', 'spaz' / any other label not otherwise specified)	26 (2.1)	4 (0.7)	15 (2.6)	13 (2.2)	2 (0.3)	30 (5.1)
Psychosis (e.g., 'schizophrenia')	1 (0.2)	0 (0.0)	0 (0.0)	1 (0.2)	0 (0.0)	1 (0.2)
Label relating to need to seek help or advice from professionals	6 (1.0)	7 (1.2)	7 (1.2)	5 (0.9)	1 (0.2)	13 (2.2)
Unsure / do not know	26 (4.5)	19 (3.3)	29 (5.0)	15 (2.6)	1 (0.2)	45 (7.7)
Missing data	3 (0.5)	2 (0.3)	1 (0.2)	3 (0.5)	1 (0.2)	5 (0.9)

The design of the questionnaire meant that if a participant believed, for example, that the vignette portrayed a person with an eating disorder (or any other problem), they continued through the questionnaire answering the questions on the basis of this, rather than in the knowledge the problem was depression. In other words, this means that 233 (39.9%) participants were not necessarily answering questions about stigma, level of contact, and social distance towards depression *per se*; rather, they were answering the questions about the impression they obtained from the vignette. For this reason, analyses were done separately for the participants as a whole (N=584) and the participants who correctly labelled the problem as depression (N=351). Comparisons for those who recognised depression versus those who did not (N = 233) are made in section 3.10.2.

### *3.5 Personal Stigma Scores*

#### *3.5.1 Descriptive Statistics*

The minimum possible score on the stigma scale was zero (a score of 0 per item) and the maximum was 32 (a score of 4 on each of the 8 remaining items). Lower scores indicate less stigmatising attitudes.

Prior to each analysis described below (and the hypotheses testing in section 3.9), analyses were run in order to check that assumptions for parametric tests had been met. Given that the sample is large, as recommended by Tabachnick and Fidell (2007), statistical measures of normality were not used. This is because in large samples, variables with statistically significant skewness and kurtosis often do not deviate enough from normality to make a substantive difference in the analyses (Tabachnick & Fidell, 2007). Instead, as recommended, graphical methods were used, i.e., histograms and P-P plots were inspected. Assumptions for parametric tests were met for stigma scores as a whole; when they are

broken down by school, age and gender; and for the subsample that correctly recognised depression from the vignette versus those who did not. Histograms and P-P plots can be seen in Appendix J. Additionally, as recommended by Hayes and Cai (2007), where t-tests were used, variances were not assumed to be equal. This gives better control of Type 1 errors than the conditional procedure of first checking for equality of variances and then choosing which t-test to use based on this test (Zimmerman, 2004).

Table 5 provides descriptive statistics for responses on the personal stigma scale for the whole sample.

Table 5

*Descriptive Statistics for Responses on the Personal Stigma Scale*

	N	Min-max (range)	Mean	SD	Median	Mode	Skewness (SE)	Kurtosis (SE)
Whole sample	584	0 – 32	12.20	4.91	12	11	.280 (.101)	.644 (.202)

Further descriptive statistics of individual responses on the stigma scale can be seen in Appendices K and L. Although not directly relevant for the hypothesis testing within this study, this information allows for comparisons to other studies. These comparisons are discussed in the next chapter.

It was considered important to check for differences in personal stigma scores between each school. This also allowed for comparisons in stigma scores between consent

method and the area in which the participants lived. Mean stigma scores between each school were compared using a one-way between groups ANOVA. This showed that there were significant differences on stigma scores between each school ( $F (2, 581) = 6.0, p = .003$ ). Despite reaching statistical significance, the actual difference in mean stigma scores between the schools was quite small (Cohen, 1988). The effect size, calculated using eta squared, was  $\eta^2 = .02$ . Post-hoc comparisons using the Tukey HSD test (in order to reduce the possibility of Type 1 error) indicated that participants from the secondary school had significantly higher stigma scores ( $M=12.73, SD=5.10$ ) than those from the sixth form college ( $M=11.21, SD= 4.53$ ). There was no significant differences in mean stigma between the middle school ( $M= 12.19, SD= 4.30$ ) and the other two schools. It is possible that this difference was due to age and this is investigated further when hypothesis one is addressed (section 3.10).

### *3.5.3 Those who Correctly Recognised Depression*

Table 6 provides stigma scale descriptive statistics for the subsample of participants who correctly identified depression from the vignette ( $N = 351$ ).

Table 6

*Descriptive Statistics for Responses on the Personal Stigma Scale Within the Subsample who Correctly Recognised Depression*

	N	Min-max (range)	Mean	SD	Median	Mode	Skewness (SE)	Kurtosis (SE)
All schools	351	0 – 30 (32)	11.56	4.68	11	10	.095 (.130)	.181 (.260)

The same analysis was conducted on data from the participants who recognised the problem as depression. This revealed no significant differences in stigma scores between schools for this subsample ( $F(2, 348) = 1.633, p = .197$ ).

### *3.6 Social Distance Scores*

#### *3.6.1 Descriptive Statistics*

The minimum possible score on the social distance scale was five (a score of 1 per item) and the maximum was 20 (a score of 4 per item). Lower scores indicate less desire for social distance.

Prior to each analysis described below, and the hypotheses testing in section 3.10, analyses were run in order to check that assumptions for parametric analyses had been met for social distance scores. As for stigma scores, graphical methods were used. Assumptions for parametric tests were met for social distance scores as a whole; when they are broken down by school, age, and gender; and for the subsample who correctly recognised

depression versus those who did not. Histograms and P-P plots can be seen in Appendix J. Finally, as for stigma scores, where t-tests were used, variances were not assumed to be equal (Hayes & Cai, 2007), enabling greater control for Type 1 errors (Zimmerman, 2004).

Table 7 provides a descriptive statistics for responses on the social distance scale for the whole sample.

Table 7

*Descriptive Statistics for Responses on the Social Distance Scale*

	N	Min-max (range)	Mean	SD	Median	Mode	Skewness (SE)	Kurtosis (SE)
Whole sample	584	5 - 20	11.54	3.38	11	10	.100 (.101)	-.123 (.202)

Further descriptive analysis of individual responses on the social distance scale can be seen in appendices M and N. Although not directly relevant for the hypothesis testing within this study, this information allows for comparisons to other studies. These comparisons are discussed in chapter four.

As for stigma scores, social distance scores were compared across the three schools. The mean social distance scores between each school (and therefore consent method and area in which they live) were compared using a between groups one-way ANOVA. There were no significant differences in social distance scores between schools ( $F(2, 581) = 1.797, p = .147$ ).

### 3.6.2 Those who Correctly Recognised Depression

Table 8 provides descriptive statistics for the subsample of participants who correctly recognised depression from the vignette (N = 350). One participant of the 351 did not complete the social distance measure within the questionnaire, and therefore was excluded from these analyses.

Table 8

*Descriptive Statistics for Responses on the Social Distance Scale Within the Subsample of Participants who Correctly Identified Depression.*

	N	Min- max (range)	Mean	SD	Median	Mode	Skewness (SE)	Kurtosis (SE)
Subsample	350	5 - 20	11.42	3.17	12	12	-.134 (.130)	-.187 (.260)

Within this sub-set there were no significant differences in social distance scores between schools ( $F (2, 347) = .676, p = .510$ ).

### 3.6.3 Relationship between Personal Stigma and Desire for Social Distance

As expected, there was a correlation between stigma and social distance scores, such that higher stigma scores were associated with higher desire for social distance. Pearson's Product Moment Correlation indicated that  $r = .36, n = 583 p < .001$ .

### 3.7 Level of Contact Report Scores

#### 3.7.1 Descriptive Statistics

The range of scores on the level of contact report was 1 – 10 (the higher the score the more intimate contact a participant has had with someone with a problem similar to that portrayed in the vignette). When participants ticked more than one statement that applied to them, they received a rank score of the highest level of contact. Non-parametric tests were used for analyses involving level of contact because it is a rank rather than a continuous scale (Howitt & Cramer, 2008). Table 9 gives descriptive statistics for the level of contact report. Nineteen of the 584 participants did not complete the level of contact measure within the questionnaire and therefore were not included in these analyses.

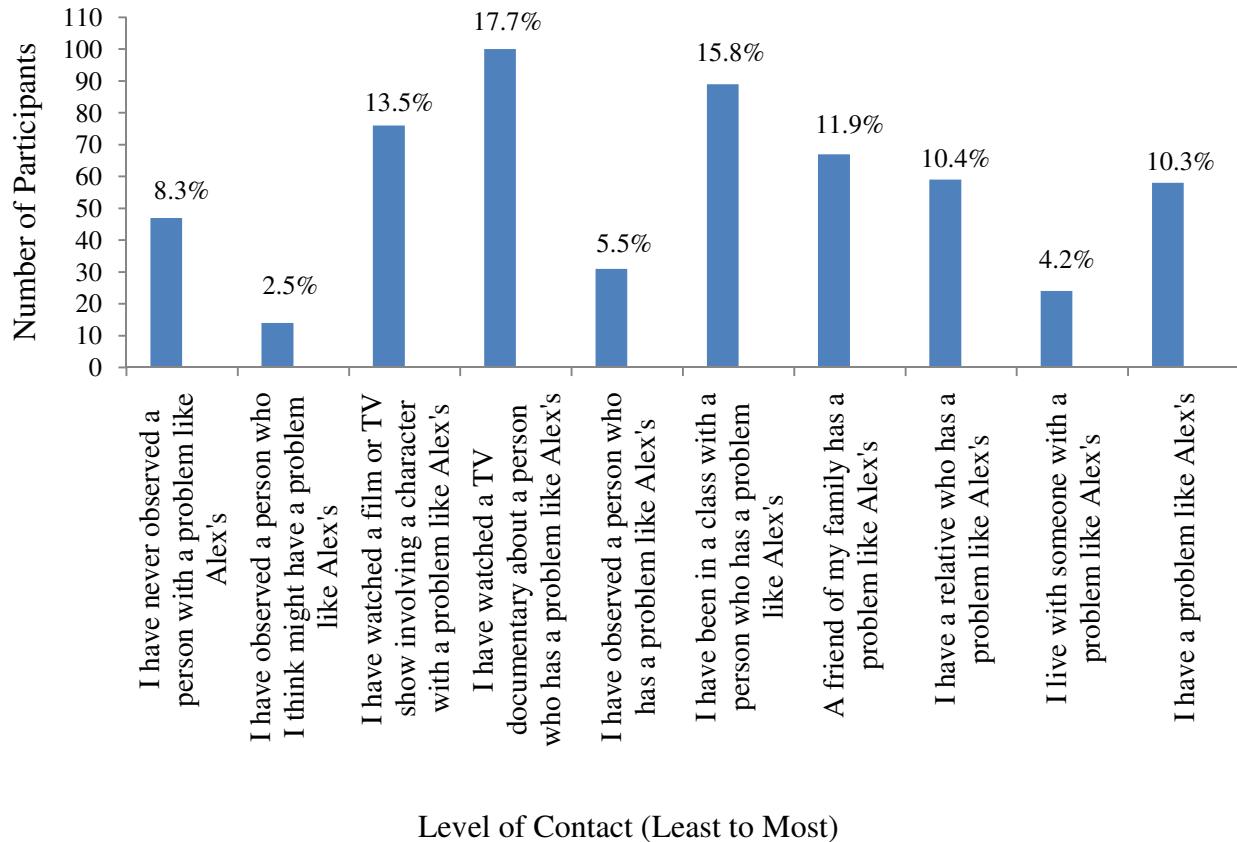
Table 9

#### Descriptive Statistics for Responses on the Level of Contact Report

N	Min-max (range)	Median	Mode	Interquartile range
565	1-10 (9)	6	4	3.5

As Table 9 shows, the median level (Mdn) of contact report score was 6. This is a level of contact that corresponds to *having been in a class with a person with a similar problem*. The most common response was 4 which was *I have watched a TV documentary about a person who has a problem like Alex's*. At the two extremes, 10% participants said that they personally have a problem like Alex's, whilst 8% said that they had never

observed a problem like Alex's. Figure 3 shows participants' maximum (i.e., most intimate contact) scores on this measure.



*Figure 3.* Participants' highest level of contact. Axis labels show percentages of total sample.

In terms of differences between genders, a Mann-Whitney U test showed there was a significant difference in level of contact between males (Mdn= 5, IQR= 4) and females, such that females were more familiar with a problem like Alex's (Mdn= 6, IQR= 4;  $U = 33254.5$ ,  $z = -3.10$ ,  $p = .002$ ). Despite reaching statistical significance, the actual difference in median scores was small. When age (as a continuous variable) was entered into a Spearman's Rank Order Correlation, there was a small but significant association between

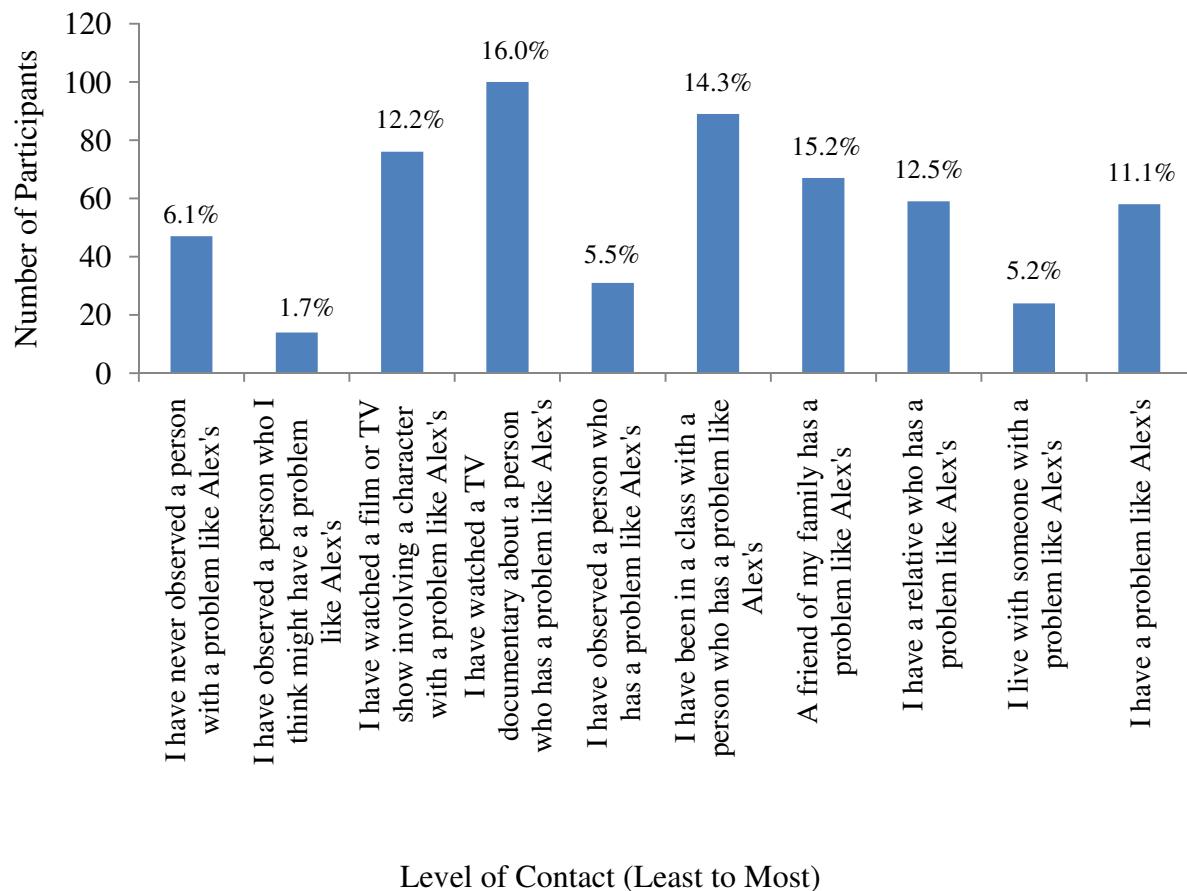
age and level of contact, such that (as expected) younger adolescents reported lower level of contact than older adolescents ( $r = .153$ ,  $n = 565$ ,  $p < .001$ ).

Level of contact scores were compared between the three different schools. A Kruskal-Wallis test revealed that there were significant differences in level of contact scores ( $H (2) = 10.855$ ,  $p = .004$ ). Mann-Whitney U tests were used to follow up this finding. A Bonferroni correction was applied to reduce the chance of Type I error. This showed that the sixth-form college had higher level of contact scores ( $Mdn = 6$ ,  $IQR = 4$ ) than the secondary school ( $Mdn = 5$ ,  $IQR = 4$ ;  $U = 27054$ ,  $z = -2.756$ ,  $p = .018$ ).

Participants from the sixth-form college also had higher levels of contact scores than those from the middle school ( $Mdn = 4$ ,  $IQR = 4$ ;  $U = 2734$ ,  $z = -2.69$ ,  $p = .021$ ). There was no significant difference in level of contact scores from participants in the secondary school and the middle school ( $U = 6015$ ,  $z = -1.151$ ,  $p = .75$ ). It is possible that this difference was due to age (as there is a correlation between age and level of contact, see above).

### *3.7.2 Those who Correctly Recognised Depression*

The median and most common responses were the same as for the whole sample. At the two extremes, 11% participants said that they personally have a problem like Alex's, whilst 6% said that they had never observed a problem like Alex's. Figure 4 shows this subsamples' highest level of contact.



*Figure 4.* Highest level of contact for the subsample who recognised depression from the vignette. Axis labels show percentages.

Within this subsample, there were also significant differences in level of contact scores between genders. As with the whole sample, males (Mdn= 6, IQR = 3) had significantly lower level of contact report scores than females (Mdn= 7, IQR = 4, U = 10279,  $z = -3.46$ ,  $p = .001$ ). Despite reaching statistical significance, the actual difference in medians was small. Spearman's Rank Order Correlation indicated a small but significant association between age and level of contact scores in this subsample, such that the younger adolescents reported lower level of contact than the older adolescents ( $r = .194$ ,  $n = 343$ ,  $p <.001$ ). In terms of differences in level of contact scores between schools, a Kruskal-Wallis

test revealed a significant difference ( $H(2) = 6.282, p = .043$ ). This was followed up by Mann-Whitney U tests. When Bonferroni corrections were applied, the tests showed no significant differences in level of contact between the sixth-form college and the secondary school ( $U = 11592, z = -1.979, p = .144$ ); the sixth-form college and the middle school ( $U = 940, z = -1.984, p = .141$ ); or the secondary school and the middle school ( $U = 1229, z = -1.026, p = .915$ ).

### *3.8 Exposure to Lessons or Educational Material about Mental Health In/Outside School*

One-hundred and ninety three (33%) participants indicated that they had received lessons or educational material about mental health in school, whilst 409 (70%) indicated that they had received lessons or educational material about mental health outside school.

Age was normally distributed within the two groups who had received lessons and not received lessons, both inside and outside school (see Appendix J). Independent t-tests showed that there were small but significant differences in mean age between those who indicated they had received lessons or education material both inside and outside school and those who had not. As would be expected, average age was higher for those who had received such lessons within school ( $M = 14.56, SD = 2.13$ ) compared to those who had not ( $M = 14.08, SD = 2.03; t(369.78) = 2.59, p = .010$ ). The same was true for those who had received lessons outside school ( $M = 14.49, SD = 2.05$ ) compared to those who had not ( $M = 13.58, SD = 1.97; t(299.09) = 4.91, p <.001$ ). The magnitudes in these differences were small:  $\eta^2 = .01$  and  $.04$  respectively.

Chi-square analyses were used to determine whether there were differences in lessons or educational material between the schools. This indicated that there was a significant association between school and exposure to lessons in school ( $\chi^2 = 10.410, df =$

2,  $p = .005$ ) and outside school ( $\chi^2 = 15.970$ ,  $df = 2$ ,  $p < .001$ ). As expected, participants from the sixth-form were most likely to have received lessons in school, followed by participants from secondary school and then participants from the middle school. This was the same for exposure to educational material outside school.

### 3.9 Help-Seeking Intentions

Figure 5 shows the numbers of participants who would consider using each source of help. Participants were allowed to tick more than one source of help.

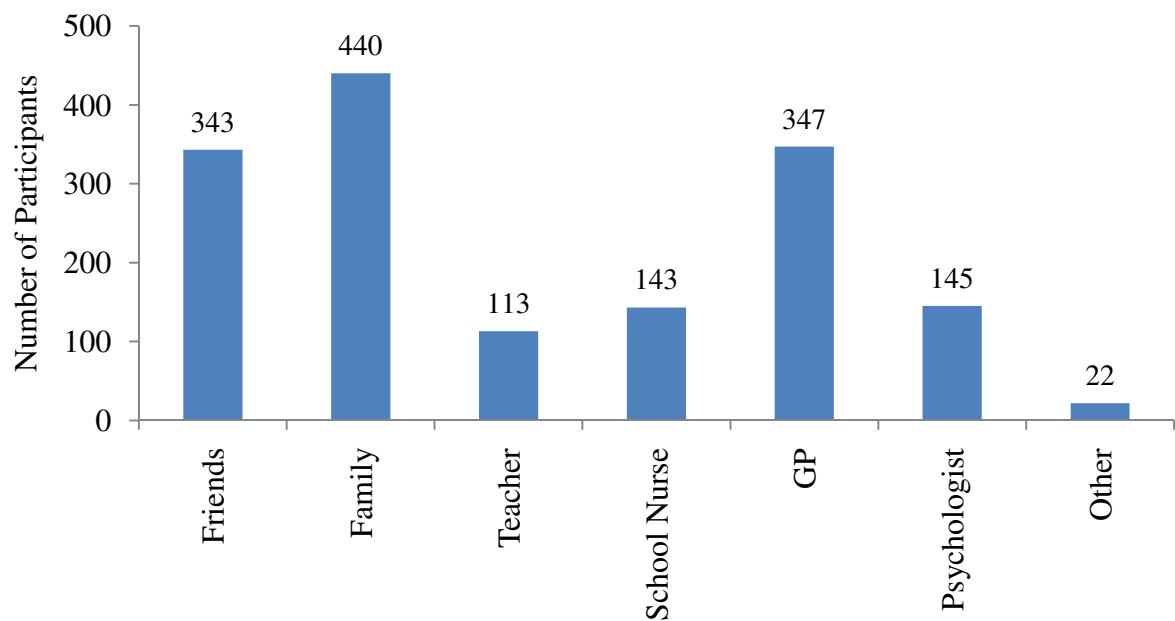


Figure 5. Numbers of participants who said they would use each of the sources of help.

Axis labels refer to frequencies.

For the preliminary analysis, participants' responses were recoded into a measure of 'propensity to seek help'. This became a measure of how many sources of help they would consider using and ranged from 0 – 7 with 0 being *would not seek help* and 7 being *would seek help from 7 sources* (i.e., friends, family, GP, teachers, psychologist, school

nurse/counsellor, & other). Help-seeking when coded in this way was reasonably normally distributed as a whole and by school, gender, and age-group (Appendix J).

The average number of sources of help participants thought they might access *if they had a problem like Alex's* was 2.70 (SD = 1.48). The most common response was 3 sources of help.

Independent t-tests showed no significant difference in help-seeking intentions (in terms of propensity to seek help) between males ( $M = 2.76$ ,  $SD = 1.52$ ) and females ( $M = 2.64$ ,  $SD = 1.44$ ;  $t(519.49) = .958$ ,  $p = .339$ ). There was not a significant difference between schools ( $F(2, 575) = 3.84$ ,  $p = .061$ ), but there was a weak but significant negative correlation between help-seeking intentions and age, such that as the age of participants increased, the number of sources of help they might access reduced ( $r = -.116$ ,  $n = 576$ ,  $p = .005$ ). In order to investigate this further, a one-way between groups ANOVA and post-hoc Tukey HSD test was used to investigate differences between the age-groups ( $F(2, 573) = 4.82$ ,  $p = .008$ ). This showed the only significant difference in help-seeking intentions was between the youngest (11-13 year-olds,  $M = 2.89$ ,  $SD = 1.55$ ) and the oldest (17-18 year-olds,  $M = 2.36$ ,  $SD = 1.48$ ) participants. Despite reaching statistical significance, the actual difference in mean scores between these age-groups was very small ( $\eta^2 = .017$ ).

### *3.10 Hypothesis Testing*

Each hypothesis is now stated and examined in turn.

#### *3.10.1 Hypothesis One*

*There will be significant differences in attitudes towards a peer with depression based on participants' age and gender. It is predicted that males and younger adolescents will have higher stigma and social distance scores.*

*3.10.1.1 Whole sample.* Table 10 provides descriptive statistics for stigma and social distance scores by gender and age-group.

Table 10

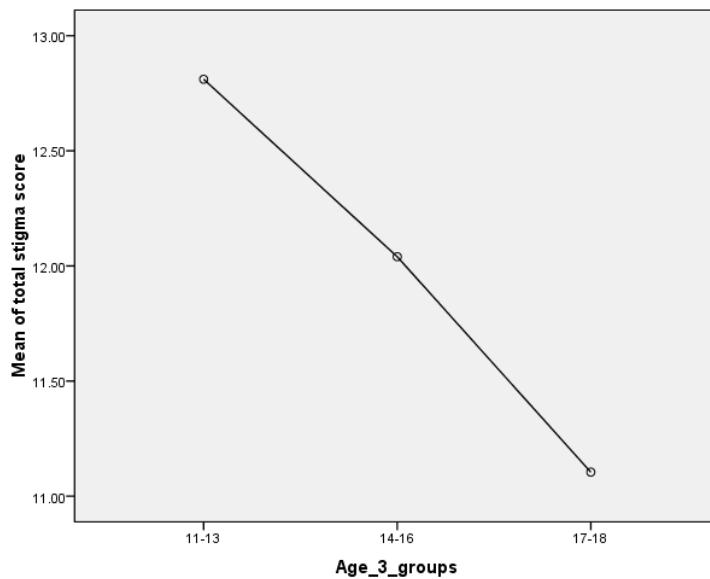
*Descriptive Statistics for Stigma and Social Distance Scores by Gender and Age-Group*

	N	Min-max (range)	Mean	SD	Median	Mode	Skewness (SE)	Kurtosis (SE)
Stigma scores								
Males	256	1-32 (31)	13.31	5.14	14	14	.193 (.152)	.562 (.303)
Females	328	0-32 (32)	11.33	4.55	11	10	.252 (.135)	.756 (.268)
11-13 year olds	238	3-32 (29)	12.81	4.58	13	11	.555 (.158)	1.598 (.314)
14-16 year olds	250	0-30 (30)	12.04	5.21	12	10	.260 (.154)	.224 (.307)
17-18 year olds	96	0-21 (21)	11.10	4.72	11	15	-.116 (.246)	-.504 (.488)
Social distance scores								
Males	256	5-20 (15)	12.24	3.52	12	10	.072 (.152)	-.124 (.303)
Females	327	5-19 (14)	10.99	3.17	11	10	.020 (.135)	-.246 (.269)
11-13 year olds	238	5-20 (15)	11.56	3.47	11	10	.287 (.158)	-.256 (.314)
14-16 year olds	249	5-20 (15)	11.62	3.43	12	10	-.018 (.154)	-.083 (.307)
17-18 year olds	96	5-18 (13)	11.29	3.05	11	11	-.213 (.147)	.147 (.488)

Independent samples t-tests were conducted to investigate differences in stigma and social distance scores between the genders. As predicted, it was found that there was a significant difference in personal stigma scores between males and females, such that males had significantly higher stigma scores ( $M = 13.31$ ,  $SD = 5.14$ ) than females ( $M=11.33$ ,  $SD = 4.55$ ;  $t (512.71) = 4.86$ ,  $p = <.001$ ). The magnitude of the differences in the means was small ( $\eta^2 = 0.04$ ). It was also found that there was a significant difference in social distance scores between males and females, such that males expressed a greater desire for social distance ( $M=12.23$ ,  $SD= 3.52$ ) than females ( $M=10.99$ ,  $SD = 3.17$ ;  $t (518.90) = 4.44$ ,  $p < .001$ ). The magnitude of the differences in the means was small ( $\eta^2 = .03$ ).

Pearson's Product Moment Correlations were conducted in order to establish if there were associations between age and stigma and social distance scores. It was found that there was a weak but significant negative correlation between age and stigma scores ( $r = -.145$ ,  $n = 584$ ,  $p < .001$ ), with older age associated with lower stigma scores (i.e., less negative attitudes). There was no correlation between age and social distance scores ( $r = -.007$ ,  $n = 583$ ,  $p = .871$ ).

In order to investigate this further, stigma scores were compared across the age-groups (11-13, 14-16, 17-18) using a one-way ANOVA and Tukey post-hoc tests (see Figure 6). This revealed that the significant differences in stigma scores were between the youngest and the oldest participants. Eleven, 12, and 13 year-olds had significantly higher scores on the stigma scale ( $M= 12.81$ ,  $SD= 4.58$ ) than the 17 and 18 year olds ( $M= 11.10$ ,  $SD = 4.72$ ;  $F (2, 281) = 4.414$ ,  $p = .013$ ). Despite reaching statistical difference, the actual difference in mean scores between the groups was small ( $\eta^2 = .015$ ).



*Figure 6.* Differences in mean personal stigma scores by age-group, for the whole sample

*3.10.1.2 Those who correctly recognised depression.* It is possible that the significant results above reflect the influence of many other variables than age and gender (particularly as the effects sizes are small). One of these variables is whether or not the participant thought that the problem portrayed in the vignette was depression. Thus, the same analyses were conducted on the subsample who recognised that the character had depression (N= 351). Table 11 provides descriptive statistics for stigma and social distance scores by gender and age-groups for this subsample.

Table 11

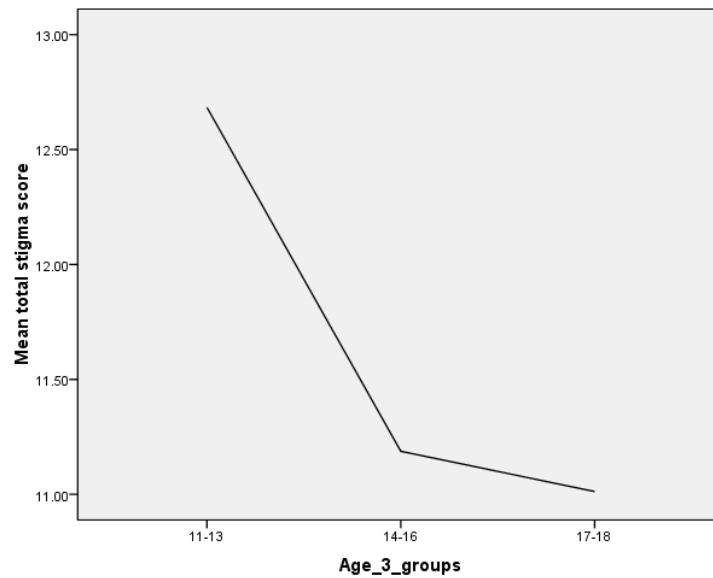
*Descriptive Statistics for Stigma and Social Distance Scores by Gender and Age-Group, for the Subsample*

	N	Min-max (range)	Mean	SD	Median	Mode	Skewness (SE)	Kurtosis (SE)
Stigma scores								
Males	123	1-30 (29)	12.84	4.74	13	14	.095 (.218)	.851 (.433)
Females	228	0-23 (23)	10.88	4.51	11	10	.050 (.161)	-.248 (.321)
11-13 year olds	98	3-24 (21)	12.68	4.39	13	11	.104 (.244)	-.305 (.483)
14-16 year olds	171	0-30 (30)	11.19	4.75	11	10	.204 (.186)	-.305 (.483)
17-18 year olds	82	0-21 (21)	11.01	4.69	11	12	-.029 (.266)	-.510 (.526)
Social distance scores								
Males	123	5-20 (15)	11.89	3.25	12	13	-.221 (.218)	-.226 (.433)
Females	227*	5-19 (14)	11.17	3.11	11	11	-.108 (.162)	-.109 (.322)
11-13 year olds	98	5-20 (15)	12.13	3.32	12	12	-.031 (.244)	-.378 (.483)
14-16 year olds	170*	5-19 (14)	11.13	3.16	11	12	-.261 (.186)	-.342 (.370)
17-18 year olds	82	5-18 (13)	11.17	2.93	11	11	-.166 (.266)	.297 (.526)

\* One participant did not complete the social distance measure

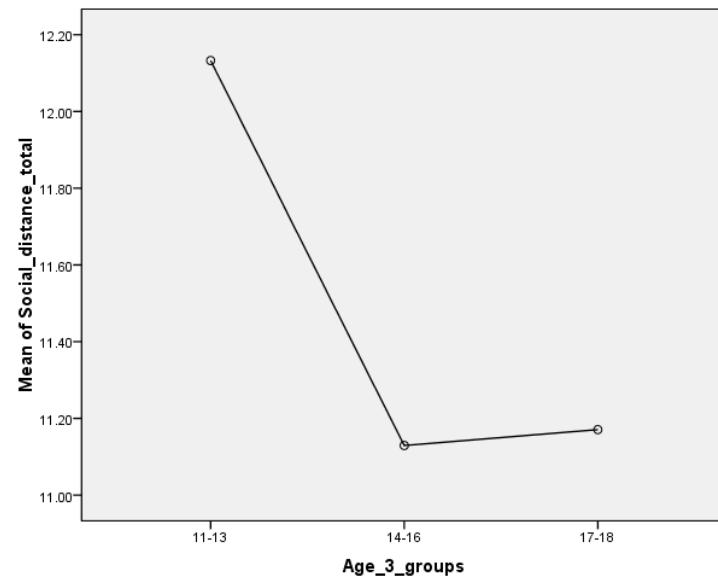
As in the whole sample, t-tests showed that there were significant differences based on gender. Males had higher stigma scores ( $M = 12.837$ ,  $SD = 4.74$ ) than females ( $M = 10.88$ ,  $SD = 4.51$ ;  $t(239.39) = 3.76$ ,  $p < .001$ ) and higher social distance scores ( $M = 11.89$ ,  $SD = 3.25$ ) than females ( $M = 11.17$ ,  $SD = 11.17$ ;  $t(241.16) = 2.01$ ,  $p = .046$ ). Despite reaching statistical significance, the magnitude of differences in means for stigma and social distance were small ( $\eta^2 = .04$  &  $.01$  respectively).

Weak but significant negative correlations between age and stigma scores ( $r = -.156$ ,  $n = 351$ ,  $p = .003$ ) and age and social distance scores ( $r = -.105$ ,  $n = 350$ ,  $p = .049$ ) were found for this subsample. This indicated that the younger adolescents had more stigmatising attitudes and a greater desire for social distance than older adolescents, even when they recognised that the problem was depression. This was investigated further by taking stigma and social distance scores and comparing them across the age-groups using a one-way between groups ANOVA and post-hoc Tukey HSD tests. This showed that for stigma ( $F(2, 348) = 3.99$ ,  $p = .019$ ) the younger adolescents had significantly higher stigma scores than the 14-16 year-olds and the 17-18 year-olds. This is represented below in Figure 7.



*Figure 7.* Differences in mean personal stigma scores by age-group, for the subsample.

For social distance, the 11-13 year-olds had significantly higher scores (i.e., greater desire for social distance) than the other two age groups ( $F (2, 347) = 3.483, p = .032$ ). This is represented in Figure 8.



*Figure 8.* Differences in mean social distance scores by age-group, for the subsample.

*3.10.1.3 Summary.* Both gender and age were found to be associated with stigma and social distance scores. As predicted, males had significantly higher stigma and social distance scores than females, regardless of whether depression was recognised from the vignette. Age was significantly negatively correlated with stigma scores (i.e., as age increased stigma scores decreased) in both the whole sample and the subsample who recognised depression. Age was also significantly negatively correlated with social distance scores in the subsample who recognised depression, but not in the whole sample. These results confirm the hypothesis. However, they should be interpreted with caution because age and gender were only found to have a small impact on the variance in stigma and social distance scores (see section 3.11).

### *3.10.2 Hypothesis Two*

*Recognition of the problem as ‘depression’ will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents who identify the peer as having depression (or as being depressed) will have lower stigma and social distance scores.*

Table 12 shows descriptive statistics for stigma and social distance scores for participants who correctly recognised depression and for those who did not.

Table 12

*Descriptive Statistics for Participants who Correctly Recognised Depression from the Vignette Versus Participants who Did Not.*

Recognised depression?	N	Min-max (range)	Mean	SD	Median	Mode	Skewness (SE)	Kurtosis (SE)
Stigma scores								
Yes	351	0-30 (30)	11.56	4.68	11	10	.095 (.130)	.101 (.260)
No	233	1-32 (31)	13.16	5.11	13	15	.426 (.159)	.910 (.318)
Social distance scores								
Yes	350*	5-20 (15)	11.42	3.17	12	12	-.134 (.130)	-.187 (.260)
No	233	5-20 (15)	11.73	3.68	11	10	.289 (.159)	-.240 (.318)

\* One participant did not complete the social distance measure

An independent samples t-test was used to investigate differences in mean stigma and social distance scores between participants who recognised the problem as depression (i.e., stated ‘depression’ or ‘depressed’) and those who did not. For stigma scores, a significant difference was found. Participants who identified the problem as depression had lower stigma scores (i.e., less negative attitudes;  $M=11.56$ ,  $SD = 4.68$ ) than those who thought the problem was something else or did not know ( $M = 13.16$ ,  $SD = 5.11$ ;  $t (466.66) = -3.82$ ,  $p < .001$ ). The magnitude of this difference was small ( $\eta^2 = .025$ ).

For social distance scores, there was no significant difference between those who identified the problem as depression ( $M= 11.42$ ,  $SD= 3.17$ ) and those who did not ( $M=11.73$ ,  $SD = 3.68$ ,  $t (446.44) = -1.036$ ,  $p = .301$ ).

In summary, hypothesis two has been partially confirmed. Participants who identified the character in the vignette as having depression scored significantly lower on the stigma scale (i.e., had less negative attitudes) than the other participants. However, this was not the case for social distance, where there was no significant difference in scores between those who recognised depression and those who did not.

### *3.10.3 Hypothesis Three*

*Familiarity with depression will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents with a greater familiarity (measured in terms of level of contact) with depression will have lower stigma and social distance scores.*

*3.9.3.1 Whole sample.* As the level of contact report scores were rank rather than continuous, Spearman's Rank Order Correlation was used to investigate relationships between familiarity with depression (level of contact) and stigma and social distance scores. Level of contact was significantly negatively correlated with stigma scores ( $r = -.151$ ,  $n = 565$ ,  $p < .001$ ), such that the more contact the adolescent has had with someone like Alex, the lower their stigma scores (i.e., the less negative attitudes they have). Similarly, level of contact was significantly negatively correlated with social distance scores ( $r = -.106$ ,  $n = 564$ ,  $p = .012$ ), such that the more contact the adolescent has had with someone like the character in the vignette, the less desire they had to distance themselves

from the person. The effect sizes, based on the correlation coefficients, were very low (Cohen, 1988).

*3.10.3.2 Those who correctly recognised depression.* For this subsample, level of contact was also weakly but significantly negatively correlated with stigma scores ( $r = -.216$ ,  $n = 343$ ,  $p < .001$ ) and with social distance scores ( $r = -.143$ ,  $n = 342$ ,  $p = .008$ ). Again, based on the correlation coefficients, the effect size was low (Cohen, 1988).

*3.9.3.3 Summary.* Hypothesis three has been confirmed by the data, in that the more contact the adolescents have had with someone like Alex, the lower their stigma and social distance scores. However, this needs to be interpreted with caution, as level of contact only explains a small amount of the variance in participants attitudes (between 1.1% and 4.7%; calculated using the correlation coefficients).

#### *3.10.4 Hypothesis Four*

*Exposure to lessons or educational material about mental health will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents who have been exposed to lessons or educational material about mental health either in or outside school will have lower stigma and social distance scores.*

Prior to this question, participants are informed that the problem portrayed in the vignette *could be a mental health problem called depression*. Therefore, there was no need to break the analyses down into whole sample and subsample.

Table 13 provides descriptive statistics for stigma and social distance scores for participants who did and did not report receiving mental health lessons inside and outside school.

Table 13

*Descriptive Statistics for Stigma and Social Distance Scores for Participants who Report Receiving and Not Receiving Lessons / Educational Material Inside and Outside School*

Lessons about mental health?	N	Min-max (range)	Mean	SD	Median	Mode	Skewness (SE)	Kurtosis (SE)
Stigma scores								
In school	193	0-25 (25)	12.28	4.96	12	14	.037 (.175)	-.422 (.348)
Not in school	378	0-32 (32)	12.17	4.92	12	10	.408 (.125)	1.22 (.250)
Outside school	409	0-30 (30)	11.75	4.78	11	10	.255 (.121)	.216 (.241)
Not outside school	159	0-32 (32)	13.32	5.16	14	14	.245 (.192)	1.48 (.383)
Social distance scores								
In school	193	5-20 (15)	11.27	3.25	11	10	.202 (.175)	.193 (.348)
Not in school	377	5-20 (15)	11.69	3.44	12	10	.026 (.126)	-.259 (.251)
Outside school	408	5-20 (15)	11.38	3.29	11	10	.094 (.121)	.048 (.241)
Not outside school	159	5-20 (15)	11.87	3.58	12	13	.013 (.192)	-.497 (.383)

*3.10.4. 1 Lessons or educational material in school.* T-tests revealed no significant differences in mean stigma ( $t (383.79) = .240$ ,  $p = .810$ ) or mean social distance scores ( $t$

(406.73) = 1.43,  $p = .143$ ) between those participants who indicated that they had received lessons or educational material about mental health in school and those who had not.

*3.10.4.2 Lessons or educational material outside school.* There was a significant difference in stigma scores for those participants who indicated that they had received lessons or educational material about mental health outside school ( $M = 11.75$ ,  $SD = 4.78$ ) compared to those who had not ( $M = 13.32$ ,  $SD = 5.16$ ). This suggests that adolescents who had received information outside school had significantly lower stigma scores than those who had not received such information ( $t(269.69) = 3.33$ ,  $p = .001$ ). The magnitude of this difference was small ( $\eta^2 = .02$ ). There was no significant difference in social distance scores between those who indicated they had received lessons or educational material about mental health outside school and those who had not ( $t(267.36) = 1.52$ ,  $p = .129$ ).

*3.10.4.3 Summary.* Hypothesis four has not been fully supported by the data. There were no significant differences in stigma or social distance scores between participants who reported having received lessons about mental health problems in school and those who had not. There was also no significant difference in social distance scores between participants who had seen information about mental health outside school versus those who had not. There was a statistically significant difference in stigma scores between these latter two groups, but the actual difference was small.

### *3.10.5 Hypothesis Five*

*Attitudes towards a peer with depression will be significantly associated with whether or not the adolescent would consider seeking help if they had a similar problem. It is predicted that adolescents with high scores on stigma and social distance will be less likely to consider seeking help from a wide range of sources.*

Assumptions for the use of parametric tests were met (Appendix J). Pearson's Product Moment Correlation was used to investigate the relationship between stigma scores and the number of sources of help participants would consider using. This showed that there was no correlation between stigma scores and help-seeking ( $r = .016$ ,  $n = 576$ ,  $p = .697$ ). There was also no correlation between social distance scores and help-seeking ( $r = -.055$ ,  $n = 575$ ,  $p = .188$ ).

*3.10.5.1 Summary.* Hypothesis five has not been supported by the data, as no relationship between help-seeking and stigma and social distance were found. This will be discussed further in chapter four.

### *3.11 Factors that Predict Attitudes towards a Peer with Depression*

The analyses above indicate that there are a number of factors that are significantly associated with both stigma and social distance scores. In order to investigate how well these factors predict desire for social distance as a whole and individually, multiple regression analyses were conducted. This enables the social psychological model (discussed in section 1.6) to be tested. The amount of variance in stigma and social distance scores explained by the factors was also calculated using this method. Appendix O provides output from the regression analyses.

#### *3.11.1 Personal Stigma Scores for the Whole Sample*

Regression analysis indicated that the following factors overall explained 8.2% of the variance in personal stigma scores: gender, age, recognition of depression, level of contact, and lessons about mental health inside and outside school ( $R^2 = .082$ ; adjusted  $R^2 = .072$ ). Significant predictors were gender (Beta = .152  $p < .001$ ); level of contact scores

(Beta = .107, p = .012); and lessons outside school (Beta = .103, p = .017). Gender made the largest contribution, but still only explained 2.2% of the variance in stigma scores.

### *3.11.2 Social Distance Scores for the Whole Sample*

Regression analysis indicated that the following factors explained 5.0% of the variance in social distance scores overall: gender, age, recognition of depression, level of contact, and lessons about mental health inside and outside school ( $R^2 = .050$ ; adjusted  $R^2 = .039$ ). Significant predictors were gender (Beta = .175,  $p < .001$ ) and level of contact (Beta = .098, p = .022). Gender made the largest contribution, but still only explained 2.9% of the variance in social distance scores.

Stigma scores explained 10.7% of the variance in social distance scores. When the factors above were included in this model, 15.6% of social distance scores were explained by the model overall ( $R^2 = .156$ ; adjusted  $R^2 = .145$ ). This means that demographics, labelling, familiarity, experience, and stigma (as measured within this study) made up 15.6% of the variance in the adolescents' hypothetical behaviour (social distancing). The other 84.4% remains unaccounted for and is discussed in section 4.4.

### *3.11.3 Personal Stigma Scores for the Subsample who Recognised Depression*

Within this subsample, regression analysis indicated that the following factors explained 8.6 % of the variance in personal stigma scores overall: gender, age, level of contact, and lessons about mental health inside and outside school ( $R^2 = .086$ ; adjusted  $R^2 = .072$ ). Significant predictors were gender (Beta = .149, p = .006) and level of contact (Beta = .158, p = .004). Level of contact made the largest contribution, but still only explained 2.3% of the variance in stigma scores for this subsample.

### *3.11.4 Social Distance Scores for the Subsample who Recognised Depression*

Within this subsample, regression analysis indicated that the following factors explained 4.1% of the variance in social distance scores overall: gender, age, level of contact, and lessons about mental health inside and outside school ( $R^2 = .041$ ; adjusted  $R^2 = .026$ ). The only significant predictor was level of contact (Beta = .128,  $p = .023$ ), but this still only explained 1.5% of the variance in social distance scores for this subsample.

Stigma scores explained 10% of the variance in social distance scores. When the factors above were included in this model, 14.1% of social distance scores were explained by the social psychological model overall ( $R^2 = .141$ ; adjusted  $R^2 = .126$ ). Further discussion regarding the remaining 85.9% of variance can be seen in section 4.4.

### *3.12 Summary of Results*

The results suggest that hypotheses one to four have, in the most part, been supported. There appeared to be no association between attitudes and help-seeking intentions (hypothesis 5). Stigma scores were better predicted by the factors (e.g., gender, age, level of contact, and recognition of depression) than social distance scores were. Results from the multiple regression analyses indicate why caution should be taken when extrapolating from the results, even where relationships are statistically significant. The factors individually and together only account for a small amount of the variance in stigma and in social distance scores. This suggests that there are many other factors operating in stigmatising attitudes and desire for social distance than the factors involved in this study. Thus, even though many of the results found within these analyses were statistically significant, this does not translate to real-world significance. This will be discussed, along with the implications of the results, in the next chapter.

## CHAPTER FOUR

### Discussion

#### *4.1 Chapter Overview*

This chapter begins with a summary and evaluation of the results and compares them to findings from other studies. A critical evaluation of the study is then given. This provides a discussion of the methodological strengths and weaknesses and in particular, highlights limitations associated with the use of the measures with this population. In section 4.4, theoretical and clinical implications of the study are examined. This leads into a discussion of directions for future research. Section 4.6 gives a summary of the study, provides examples of the comments and feedback from the participants, and draws the study to an end with final conclusions.

#### *4.2 Summary and Evaluation of Results*

The adolescents' attitudes are summarised and compared against other research. Each hypothesis is then examined and findings are reviewed in relation to the existing literature. Where possible, the findings are reviewed in relation to other research that has investigated factors that influence adolescents' attitudes towards depression. However, as this is somewhat limited, findings are also reviewed in relation to both adolescents' and adults' attitudes towards depression and other mental health problems.

##### *4.2.1 Descriptive Statistics: Personal Stigma, Desire for Social Distance, and Level of Contact*

As the measures of stigma and social distance demonstrated adequate internal consistency ( $\alpha = .74$  &  $\alpha = .87$  respectively) it was decided to use the scores as a whole

(and their mean values) within the hypothesis testing. This was done in the same way as in the recent studies by Wolkenstein and Meyer (2009) and Wang, Fick, Adair, and Lai (2007). As Wolkenstein and Meyer did, frequencies for the individual items within the scales were provided to enable comparisons to other studies that have reported these individually. Appendices L and N display percentages of beliefs in each attribution and desire for social distance for each item.

*4.2.1.1. Stigma.* The mean (12.2), median (12), range (0 - 32) and skewness (.28) of scores were roughly similar to another study using the same scale (Wang, Fick, Adair, & Lai, 2007: mean 11.0, median, 11.05, range 0 – 34, skewness .26).

As in other studies, frequencies and percentages for ‘strongly agreed’ and ‘agreed’ were combined to give a ‘percentage who believed in each statement’. This can be seen in Appendix L. Table 14 compares percentages of participants in this study who believed in each statement with findings from two other studies that investigated depression stigma using the same scale.

Table 14

*Percentages of Participants Agreeing and Strongly Agreeing to Each Statement on the Personal Stigma Scale: Comparisons Between Studies*

Personal Stigma Item	This study 584 British adolescents	Griffiths et al. (2006) 1,001 Australian adults	Griffiths et al. (2006) 500 Japanese adults	Cook & Wang (2010) 2,987 Canadian adults
1. Person could snap out of the problem	15	25	47	17
2. Sign of personal weakness	27	13	45	10
3. Not a real medical illness	15	15	40	9
4. Dangerous	18	12	15	22
5. Avoid people with the problem	6	7	8	3
6. Unpredictable	29	42	19	46
7. Wouldn't tell anyone	23	17	27	14
8. Would not employ	26	22	39	22
9. Would not vote for politician with problem	26	30	58	40

Unfortunately, none of the studies involving adolescents and the personal stigma scale report frequencies or percentages for individual items. However, comparing them against Griffiths et al. (2006) and Cook and Wang (2010) studies shows that on the whole,

the adolescents in this study made similar attributions (e.g., about dangerousness and the problem not being a real medical illness) as the adults. On some items, the adolescents in the present study were more positive. For example, fewer participants thought the person was unpredictable (29%) compared to in Griffiths et al. (2006) and Cook and Wang's (2010) studies (42% & 46% respectively). However, more adolescents thought that the problem was a sign of personal weakness (27%) compared to the adult studies (13% & 10%). The sample of participants in the Griffiths et al. (2006) study from Japan scored higher almost consistently on the stigma scale compared to the other participants. This suggests cultural differences in attributions about depression.

*4.2.1.2 Desire for social distance.* As in other studies, frequencies and percentages for 'probably not' and 'definitely not' were combined to give a 'percentage who disagreed with each statement'. This can be seen in Appendix N. Table 15 compares percentages of participants in this study who disagreed with each statement with findings from two other studies that investigated social distance from depression using similar scales.

Table 15

*Percentages of Participants Disagreeing and Strongly Disagreeing to Each Statement on the Social Distance Scale: Comparisons Between Studies*

Social Distance Item	This study 584 British adolescents	Griffiths et al. (2006) 1,001 Australian adults	Griffiths et al. (2006) 500 Japanese adults	Wolkenstein & Meyer (2008) 96 16-34 year-olds
1. Live next door	37	12	82	11
2. Evening socializing	38	11	63	-
3. Make friends	27	8	57	-
4. Work closely	40	21	53	24
5. Invite to house	50	-	-	-

On the whole, adolescents in this study appeared to have a greater desire for social distance than in the German and Australian adult studies mentioned above. Wolkenstein and Meyer (2008) did not report if they included a 'neutral' option on their Likert scale (this study and Griffiths et al., 2006, did not). If they did, which seems possible, this would have made their results difficult, and unhelpful, to compare against. However, the Griffiths et al. (2006) study can be used for comparisons and findings indicate that the adolescents in this study have more desire for social distance from depression than Australian adults but less than Japanese adults. This could reflect cultural differences, age differences, or both.

The high desire for social distance could possibly reflect something about adolescents' behaviours being influenced by their peer group. During younger adolescence, friendships are often based on acceptance within the peer group which can impact on self-

esteem and mental well-being (Parker & Asher, 1993). Desire for social distance reduced as age increased (hypothesis 1), suggesting that perhaps the need for peer group acceptance reduces with age (which is supported by research in this field, e.g., Degirmencioglu, Urberg, Tolson, & Protima, 1998). Another explanation may be the impact of social desirability bias. Adults may be more likely than adolescents to score lower on social distance measures in order to appear non-judgemental and caring. It is also worth noting that many of the adult studies used telephone or face-to-face interviews. These reduce anonymity and could increase the chance that participants respond in socially desirable ways.

*4.2.1.3 Level of contact.* In terms of the highest level of contact experienced by participants, 8% had never observed a person like Alex; 3% had observed a person who they thought might have a problem like Alex's; 14% had watched a film or TV show involving a person like Alex; 18% had watched a TV documentary about a person like Alex; 6% had observed someone who had a problem like Alex's; 16% had been in a class with a person like Alex; 12% had a friend of their family with a problem like Alex's; 10% had a relative with a problem like Alex's; 4% live with someone with a problem like Alex's; and 10% had a problem like Alex's themselves.

The number who said they had experienced a problem like Alex's is probably what would be expected given the prevalence of depression symptoms in the adolescent population (Essau 2009). In the adult UK general population it was reported that 58% said either a relative or friend of their family has had a similar problem (DoH, 1999). This is higher than in the present study, but adults are perhaps more likely to be aware if their relative or family friend has had a mental health problem.

Corrigan, Lurie, et al. (2005) used the same modified level of contact report with 303 adolescents from California. They found that 11% had never observed a person with mental illness and 4% said they had a mental illness themselves. Compared to Corrigan, Lurie et al. (2005) Californian adolescents, the adolescents in this study reported similar amount of familiarity although a higher proportion said that they had experienced the problem themselves.

#### *4.2.1.3 Summary of Descriptive Statistics*

Attributions about Alex were similar to those found in other studies. It is encouraging that attributions about unpredictability were less common. Desire for social distance on the other hand seemed to be relatively strong in this study. Without raw data from other adolescent studies to compare against, it is difficult to establish if this is what we would expect from this population. Section 4.4 provides further discussion of these findings. Each hypothesis is now examined in turn.

#### *4.2.2 Hypothesis One*

*There will be significant differences in attitudes towards a peer with depression based on participants' age and gender. It is predicted that males and younger adolescents will have higher stigma and social distance scores.*

*4.2.2.1 Gender.* The results indicated that overall males had higher stigma scores (i.e., more negative attitudes) than females. This was the case for both participants who correctly identified depression from the vignette and for those who did not. Similarly, males had higher social distance scores (i.e., a greater desire for social distance) than females. This was also the case for both participants who correctly recognised depression from the vignette and for those who did not.

These results are comparable to other research involving the adolescent population. For example, Chandra and Minkovitz (2008) found a similar gender difference in their sample. Research involving the adult population also often find gender differences in stigma and social distance, such that males have more negative attitudes and behaviour than females (e.g., Barry et al., 2000; Crisp et al., 2005; Griffiths et al., 2008; Wang et al., 2007).

Explanations for gender differences include gender role and socialisation theories (Moller-Leimkuhler, 2002). These suggest females are socialised to be more accepting of expressing emotions and seeking help. They are therefore less likely to hold negative attitudes about emotional and mental well-being (Blazina & Watkinds, 1996; Ortiga & Alegria, 2002). It is also worth considering other variables that may be mediating the effect of gender in this study. For example, females were more likely to correctly recognise depression from the vignette than males. Thus, perhaps the findings reflect differing levels of understanding between males and females. Understanding and knowledge make up part of the definition of stigma, but more in-depth research is required to understand the precise mechanism operating in these associations.

A recent comprehensive review of the literature by Jorm and Oh (2009) found that gender differences in desire for social distance are inconsistent. Thus, the findings from this study should be taken within the context of findings from other studies. Additionally, the gender differences in this study, although statistically significant, should be interpreted with caution. This is because the actual difference in stigma and social distance scores between males and females was very small. Given the large number of participants, there is also potential that statistically significant differences were detected when they do not actually exist. This is discussed further in section 4.3.1.

*4.2.2.2 Age.* Results indicated that there was a negative correlation between stigma scores and age, such that as age increased, stigma scores decreased. Further investigation revealed that the youngest adolescents had significantly higher stigma scores than the oldest adolescents. This was the case for both participants who correctly recognised depression from the vignette and for those who did not.

In terms of desire for social distance, in the whole sample there was no difference based on age. However, within the subsample who correctly identified depression from the vignette, the youngest adolescents had a significantly greater desire for social distance from someone with depression than the older adolescents.

The trend of stigma and desire for social distance decreasing with age may have a variety of different explanations. Firstly, cognitive development between the ages of 11 to 18 years is likely to have an impact on the way that adolescents appraise situations and behaviours. Secondly, the effect of age might reflect life experience and increasing knowledge about mental health problems (Gonzalez, Alegria, & Prihoda, 2005). Level of contact scores in this study (i.e., familiarity) increased with age, as did likelihood of having received lessons or having been exposed to mental health education, and ability to recognise depression from the vignette. Thirdly, variables associated with the different schools, different consent methods, and differences in locations within the UK also corresponded with the age-groups (because participants were from a middle school, secondary school, and sixth-form college). Effects of these variables were checked within the preliminary analysis however it was difficult to tease these apart from effects of age.

Differences based on age in this study reflect findings from other studies (e.g., Dietrich et al., 2006; Jorm & Oh, 2009 Jorm & Wright, 2008). As with the other factors,

caution must be taken when extrapolating from these findings because other variables were not controlled for and age only explained a very small amount of variance in stigma and social distance scores.

#### 4.2.3 Hypothesis Two

*Recognition of the problem as ‘depression’ will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents who identify the peer as having depression (or as being depressed) will have lower stigma and social distance scores.*

Sixty percent of participants in this study correctly identified Alex as being ‘depressed’ or having ‘depression’. Of those who correctly recognised depression, 65% were females and 35% were males. This is a higher proportion of females than in the sample as a whole (56% female & 44% male). The rate of case recognition is comparable to Angermeyer and Matschinger’s (2003) study, where 62% of participants identified depression; and Cook and Wang’s (2010) study where 76% (with a similar gender divide) correctly recognised depression.

Participants who recognised depression had significantly lower stigma scores than those who thought the vignette was portraying another problem (or did not know). In other words, those who recognised depression and were able to label it as such had less negative attitudes. This is similar to some studies (e.g., Cook & Wang, 2010); but dissimilar to others, where correct identification of depression had no effect on attitudes (e.g., Angermeyer & Matschinger, 2003).

Interestingly, desire for social distance did not appear to be affected by whether or not the participant thought Alex had depression. This is dissimilar to some previous

research (e.g., Angermeyer, Beck, & Matschinger, 2003). However, this study did not focus on depression specifically. In studies that do, for example by Angermeyer and Matschinger (2003) and Angermeyer et al., (2004) in Germany and Jorm and Griffiths (2008) in Australia, no significant relationship between labelling depression and desire for social distance was found.

#### *4.2.4 Hypothesis Three*

*Familiarity with depression will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents with a greater familiarity (measured in terms of level of contact) with depression will have lower stigma and social distance scores.*

As expected, more contact (familiarity) with depression was associated with lower stigma scores (less negative attitudes) and lower social distance scores (less desire for social distance). This is consistent with previous research (e.g., Alexander & Link, 2003; Angermeyer, Matschinger, & Corrigan, 2004; Corrigan, Green, Lundin, Kubiak, & Penn, 2001). The findings support the attribution theory which suggests that interpersonal contact shifts belief that the person's behaviour is within their control and they are dangerous and dependent. This shift in attribution corresponds with a change in feelings which reduce desire for social distance.

It is probably fair to assume that if the contact that someone has with an individual with depression is generally a positive one (i.e., an experience that provokes empathy and a desire to help that person, as opposed to fear and anger) subsequent stigma and desire for social distance will be reduced (Alexander & Link, 2003). As suggested by Jorm and Oh (2009), this would be an interesting focus for future research.

It is important to note that although statistically significant, the associations between level of contact and stigma and social distance scores were weak. Furthermore, as demonstrated by the regression analyses, level of contact only accounted for a very small amount of the variance in stigma and social distance scores.

#### 4.2.5 Hypothesis Four

*Exposure to lessons or educational material about mental health will be significantly associated with attitudes towards a peer with depression. It is predicted that adolescents who have been exposed to lessons or educational material about mental health either in or outside of school will have lower stigma and social distance scores.*

Fewer participants reported having received lessons or seen educational material in-school (33% of the whole sample) compared to outside school (70% of the whole sample). Given participants' comments about the questionnaire (section 4.6 and Appendix P) it is a shame that such a small proportion have received lessons or educational material in school. This may change in the future as schools begin to integrate mental health and depression awareness into their curriculums, for example as part of personal social health and citizenship education (PSHCE) lessons.

There was only one significant difference in stigma and social distance scores related to this hypothesis. Participants who said they had seen educational material outside school had significantly lower stigma scores than those who had not. Firm conclusions cannot be drawn from this finding given that the actual difference between means was small and that details about the type of educational material was not investigated. However, if this finding is replicated in future studies it could have implications for anti-stigma strategies. For example, as Jorm (2000) suggests, providing young people with accurate

mental health information has a positive impact on their understanding of, and attitudes towards, mental health problems. This is also likely to have a positive effect on ability to look after their mental health (Regier et al., 1993); their help-seeking behaviour (Priest, Vize, Roberts, Roberts, & Tylee, 1996); their ability to communicate with health practitioners (Kessler, Lloyd, Lewis, & Gray, 1999); and on first steps towards effective treatment (Jorm, 2000).

#### *4.2.6 Hypothesis Five*

*Attitudes towards a peer with depression will be significantly associated with whether or not the adolescent would consider seeking help if they had a similar problem. It is predicted that adolescents with high scores on stigma and social distance will be less likely to consider seeking help from a wide range of sources.*

There were no associations between stigma or desire for social distance and help-seeking intentions. Other studies have demonstrated similar results, for example Goldberstein, Eisenberg, and Gollust (2008) and Jorm et al. (2000) did not find that stigma was associated with help-seeking intentions or behaviour. However, more often it is found that less stigma and lower desire for social distance is associated with greater help-seeking intentions (Chandra & Minkovitz, 2006; Rickwood, et al., 2005). It could be that there are significant gaps between attitudes, intentions, and behaviours (Kim & Hunter, 1993). It could also be that this study did not investigate help-seeking thoroughly enough or in the best way. This will be discussed in section 4.3.6.5.

#### *4.2.7 Summary of Findings*

It is encouraging to find that adolescents' attributions about a description of a peer with depression (particularly about unpredictability and ability to snap out of the problem)

did not appear to be as negative as in other populations. Desire for social distance on the other hand was relatively strong when compared to other populations. Future research should aim to investigate this further by making direct comparisons between studies.

Hypotheses one to four all demonstrated some statistically significant results in the directions predicted. An important finding is that effect sizes were small and the factors only accounted for a small amount of the variance in stigma and social distance scores. This means that the findings about differences based on gender, age, familiarity and exposure to lessons or educational material could represent statistically significant findings but not findings that are significant in the 'real-world'. Similar future research should aim to use appropriately sized samples in order to detect small effects.

#### *4.3 Critical Evaluation of the Study*

This section discusses the strengths and weaknesses of the study.

##### *4.3.1 Sample*

A strength of this study is its sample size. Although some large-scale national research involves over 1,000 participants (e.g., Corrigan et al., 2007; Jorm & Wright, 2008; Walker, et al., 2008), as highlighted by the literature search (section 1.9), the majority of similar research involves samples of less than 400 participants. Having an adequate sample size increases the study's power and therefore helps to reduce the chance of significant results being missed (Cohen, 1988). Having a large sample size also enabled separate analysis of the subsample of participants who correctly recognised depression. If the study was underpowered, this may not have been possible. This said, when a study is overpowered (i.e., when a sample size is too large) rejection of the null hypothesis is virtually certain (Tabachnick & Fidell, 2007). Without many previous studies to base this

study on and a lack of information on what effect sizes to expect, it is difficult to accurately predict an appropriate sample size for meaningful differences (Kirk, 1995).

Despite the sample being relatively large, it cannot be considered representative of the British adolescent population. The sample was homogeneous in terms of race and (although not directly measured) probably in terms of socioeconomic status because participants were only recruited from three schools (two of which were within the same county). This said, as in Wolkenstein & Meyer's (2009) study, the sample represents the 'next generation' of people who will be entering adulthood and who will be young adults in 2010 when depression is predicted to be the second leading global burden of disease. Capturing this age-group's beliefs and then possibly putting interventions in place seems like an important step to minimise the impact of the growing problem of depression.

#### *4.3.2 Recruitment and Consent*

Ideally, more schools would have been involved in this study in order to obtain a sample that was more representative. However, time and financial limitations made this unrealistic.

Giving head teachers the choice of which consent method they preferred was a helpful way of engaging and developing rapport with them prior to recruiting their students. However, as three types of consent were used this may have impacted on the results in subtle ways. For example, the middle school chose an active parental consent which may have meant participants were not representative of students as a whole. Participants may have come from families where parents/guardians were interested in research; where they were interested in health problems; or simply where parents/guardians had the ability and time to discuss and complete the consent form.

The secondary school chose passive parental consent which enabled a larger and more representative sample to be obtained. Only 6% of parents / guardians chose not to allow their son or daughter to participate in the research. There were no complaints from students, school staff, or parents/guardians regarding this approach. In fact, the study was met with interest and positive feedback from all three schools. It is also worth noting here that the Faculty of Health Ethics Committee approved the passive parental consent procedure (Appendix I). Traditionally, ethics committees would be, and may still be, wary of giving approval for this type of procedure (as discussed in section 2.7). Given that for this study it proved to be an efficient and straightforward way to recruit a large sample of participants, and that it was met by enthusiasm and positive feedback, this could have implications for similar studies in the future.

#### *4.3.3 Wording and Structure of the Questionnaire*

The questionnaire was designed to be easy to understand and straightforward to fill-in and to score. One of the reasons that over 500 participants took part was that it was a short and simple questionnaire that did not significantly interfere with students' lesson time. It followed a similar format to the questions used in Jorm and Wright's (2008) study. As diagnostic labels were not used, Alex's diagnosis needed to be described in such a way that did not reveal he/she had depression. As in Wang and Lai (2008) and Jorm and Wright's (2008) studies, the phrase 'a problem like Alex's' was used throughout the measures within the questionnaire. It could be argued that using the word 'problem' introduces negativity (and therefore possibly stigma) and thus a more neutral phrase should have been used. In Wolkenstein and Meyer's (2009) study for example, they described the character and then used the phrase 'such a person'. However, the reality for many people with clinical depression is that it is a problem that causes them significant distress and

impairment of functioning. Furthermore, 'a problem like Alex's' is simple for young people to understand and does not introduce too much ambiguity into the questions.

#### *4.3.4 Omission of the Diagnostic Label*

The questionnaire was constructed in a way that meant Alex was not labelled as having depression until the very end of the questionnaire. There are both advantages and disadvantages to this type of design (Wolkenstein & Meyer, 2009). In terms of disadvantages, there will always be a subsample of participants who think the vignette is portraying another problem (in this case, approximately 40% did not recognise depression). This then means that some participants' attitudes will not be towards the underlying problem of the person described. However, this was considered to be the best way to construct the questionnaire because, as Wolkenstein and Meyer point out, if we get to know someone or observe them in a public setting, we only see how they act and behave (i.e., it is highly unlikely that we know their diagnosis). Furthermore, a formal diagnosis can have a negative influence on attitudes itself, regardless of the behaviour of that individual (e.g., Angermeyer & Matschinger, 2003; Link et al., 1987). Thus, it was considered important to measure adolescents' attitudes towards a description of a set of behaviours (as they might perceive them in a peer) rather than their attitudes towards the 'depression' label. The possible weaknesses associated with the decision to omit the diagnostic label were further overcome by separately analysing results from those who recognised the problem was depression versus all of the participants.

#### *4.3.5 Gender-matched Vignettes*

Like some similar research (e.g., Jorm & Wright, 2008), but unlike others (e.g., Griffiths et al., 2008), the gender of the character in the vignette was matched to the gender

of the participant. The advantage of this is that participants are more likely to relate to the character in the vignette (A. F. Jorm personal communication, May 15, 2010). The disadvantage was that 25 of the 'female' vignettes were labelled by female participants as having an eating disorder (most commonly anorexia). Given that anorexia is typically associated with female adolescents, it would have been interesting to see if the same labelling would have happened if, for example, all participants had been given a 'male' vignette. Furthermore, some research suggests that attitudes vary based on the gender of person with the mental illness (Schnittker, 2000). By gender-matching vignettes, a further confounding variable could have inadvertently been introduced.

#### *4.3.6 Choice of Measures*

*4.3.6.1 Vignette.* The vignette was chosen because it has been used successfully in other studies. Vignettes are a useful way of providing participants with a succinct and descriptive account of a person. However, they cannot mimic real life and this may compromise the ecological validity of the findings. The vignette was a person called Alex and participants were asked to imagine he/she was a student at their school. However, the extent that participants are able to imagine this is probably limited. When they encounter a peer in real life they have many other sources of information (i.e., appearance, non-verbal cues, reactions of peers) from which to base their attitudes and behaviours. Thus, when vignettes are used responses may not represent actual attitudes or behaviours because these are influenced by so many other factors (Thornicroft, Rose, Kassam, & Sartorius, 2007).

The vignettes were gender-matched but not age-matched. Alex was described as being 14-years old. Matching Alex's age to the age of the participant, or simply stating '*imagine Alex is a student the same age as you*' may have enabled participants to better

relate to Alex. This is something that future research with a similar design could consider doing.

*4.3.6.2 Personal stigma scale.* This scale was originally developed by Griffiths et al (2004) and then modified by Jorm and Wright (2008) for use with adolescents. It was chosen for this study because it has been used successfully in previous research and demonstrates adequate reliability.

Item 7 (*if I had a problem like Alex's I would not tell anyone*) limited the internal consistency in this sample. This was the same in Jorm and Wright's (2008) study involving Australian young people. They also found that this item stood on its own and they concluded that 'reluctance to disclose' represents a different construct to the other stigma components. This is an important finding that should have implications for future research. Now that at least two studies (involving a combined total of 4,430 young people) have used this modified personal stigma scale and found that item 7 limits the internal consistency, other studies should consider removing this item from the scale.

Items 8 and 9 (*if I owned a company I would not employ someone if I knew they had a problem like Alex's and when I'm allowed to vote, I would not vote for a politician if I knew they suffered from a problem like Alex's*) were modified versions of items from the original scale. This made them age-appropriate for people under working and voting age. However, it could be argued that they are too hypothetical to warrant reliable responses, especially from the younger participants. The fact that a scale originally developed for adults is being used with the adolescent population highlights the need for new reliable and valid measures of stigma to be developed for this age-group. This would need to incorporate items that tap attributions in a clear and accessible way.

In terms of analyses, each item on the stigma scale could have been explored separately, as in the Jorm and Wright (2008) and Wang and Lai (2008) studies. This would have allowed for findings to be discussed in relation to, and linked more closely to, attribution theory. However, given that the aim of this study was to focus on factors that influence stigma and desire for social distance, it was decided to limit the focus to the research questions. Furthermore, the internal consistency of the scale was found to be adequate, therefore it was considered to be a reasonable overall measure of stigma.

*4.3.6.3 Social distance scale.* In this study, half of the participants disagreed or strongly disagreed that they would be willing to *live next door to Alex*. This is a higher percentage than generally reported in other studies. Participants could have possibly interpreted this as actually having to move house. This type of ambiguous question may impair the reliability and validity of such a scale for use in this population.

Some researchers use a five-point Likert scale (yes definitely, yes probably, not sure, probably not, definitely not), whereas others use a four-point scale (yes definitely, yes probably, probably not, definitely not; Griffiths et al., 2006). The latter ‘forces’ the respondent to make a choice and therefore avoids too many neutral responses (A. F. Jorm, personal communication, May 15, 2010). It was considered helpful to compare the findings to other studies investigating desire for social distance from depression and therefore a four-point scale was used. Establishing consistency for this measure would be helpful for future research.

Currently, there is not a single, favoured measure of social distance towards mental health problems for use with this age-group. An alternative is Schulze, Richter-Werling, Matschinger, and Angermeyer’s (2003) scale. This assesses social distance towards a

person with schizophrenia. Their scale was developed following a focus group comprising 60 adolescents and was designed to include situations relevant to this age group's lives. For example, it contains items such as 'talking to', 'sitting next to in class', 'inviting to party', 'falling in love with', and 'bringing them along when I meet my friends'. It demonstrated good internal consistency (Cronbach's alpha between .80 and .85 at different time points) and appears to be a clear and straightforward scale to both complete and score. However, because it has only been used in the Schulze et al. (2003) study, this makes comparisons between different studies (e.g., to studies involving adults) more difficult. This is why it was not used in this study. It could be considered for future studies involving adolescents and could potentially be reworded to omit the diagnostic label.

*4.3.6.4 Level of contact report.* This measure was chosen to assess familiarity because it provides more accurate information than a basic yes/no question as used in some research (Penn et al., 1994) or by ranked responses using four levels of closeness (Angermeyer et al., 2004). However, it is still limited in some respects. It does not provide information about the kind of contact experienced (i.e., whether the experience was positive or not). The range of scores is also small which may limit the power of the analyses.

The level of contact report may not be an ideal measure for use within the adolescent population. Firstly, it is quite long and a lot of the statements are quite similar (*I have observed; I think I have observed*). Secondly, the wording is not particularly clear. For example, rather than 'met' 'know' or 'seen', the word 'observed' is used throughout. It is also possible that some of the younger adolescents in this sample did not understand the statements. For example, some may not have known the difference between a 'TV show' and a 'TV documentary'. It would be helpful for a more age-appropriate measure to be developed. This would need to include statements that adolescents could relate to. For

example, *I have a friend who has a similar problem; someone in my class has a similar problem* and so on. Despite these criticisms, at the time of this research the adapted Level of Contact Report was the most widely used measure of familiarity with mental illness.

**4.3.6.5 Measures of other factors.** Exposure to lessons or educational material inside and outside school could have been explored in further detail by asking participants for examples. Exposure within school could have been established more reliably by asking the school if students had received lessons about mental health. However, as part of a preliminary piece of research, these questions formed an interesting component and provided an indication of the numbers of adolescents who had received information about mental health.

No associations between stigma or social distance and help-seeking intentions were found. For analyses, help-seeking was collapsed into a measure of propensity to seek help from multiple sources. This could have been why there were no significant findings. It is likely that if adolescents consider seeking help they would do this from a small number of people who they trust, rather than lots of people. It would have been helpful to use a Likert-scale to assess level of willingness to seek help from the various sources. A well-established measure of help-seeking intentions such as the General Help-Seeking Questionnaire (Raviv, Maddy-Weitzman, & Raviv, 1992) would have enabled more accurate and thorough exploration of this factor.

#### **4.3.7 Overall Validity of the Self-Report Method**

Self-report measures in the form of paper questionnaires have advantages and disadvantages (McDonald, 2008). On the one hand, they provide an anonymous way of participants reporting their opinions. On the other, they give participants the opportunity to

copy each other's responses or to change their answers once they have looked through the whole questionnaire. For example, in this study participants could have changed their answer to question three after they had found out Alex's diagnosis. These possibilities were controlled for by making sure participants did not sit too closely together and giving them clear instructions (section 2.6). However, the design of the questionnaire meant that it would have been impossible to completely control for this. Another potential disadvantage is that, although support was made available, participants may not have fully understood the questions. Specifically, the Likert scales and wording of the questions may have been confusing to some participants, particularly the younger adolescents and those with learning difficulties. Although the questionnaire was anonymous, previous research has indicated that responses can be influenced by various responder biases (Moskowitz, 1986). For example, socially desirable responding is where participants respond in a way that presents them in a more favourable light. Acquiescent responding is where participants record their responses without considering what the question is asking, and extreme responding is where extreme responses are given (Paulhus & Vazire, 2007). All of these responder biases may have impaired the reliability and validity of the measures.

#### *4.4 Implications of the Results*

##### *4.4.1 Theoretical Implications*

This study primarily focussed on the path from 'experience' to 'response' within the social psychological model (section 1.6). Age, gender, labelling and familiarity accounted for 4.3% of the variance in desire for social distance. Overall, these factors plus stigma scores only accounted for 15.1% of the variance in desire for social distance. Similarly, even when the differences between variables were highly statistically significant, the effect

sizes were consistently small. These are important findings in themselves and have theoretical implications.

There are likely to be many other factors that influence stigma and desire for social distance within the adolescent population that were not tested in this study. Although it would be impossible to measure (or indeed imagine) all of the possible factors, it is possible to speculate what may have made up the majority of variance that was not accounted for in this study. As attitudes and behaviours develop within the context of family and peers, it is likely that others' opinions play a role. Jorm and Wright (2008) found specific associations between the pattern of attitudes in young people and in their parents. Similarly, friendships and peer acceptance are important at this age and thus the impact of this should be incorporated into models. For example, Goeree, McConnell, Mitchell, Tromp, and Yariv (2007) investigated patterns of social relations in teenage girls and found evidence for a form of preferential attachment manifesting itself as a strong preference for cliques. In other words, teenagers had stronger links to others with similar attributes to themselves and to those who were already close. Mayer and Puller (2007) also found that proximity of age, race, and college course studied were significant proxies for friendship formation. These findings support McPherson, Smith-Lovin, and Cook's (2001) research on homophily: the tendency of people to connect to those similar to them. This concept is thought to be particularly apparent in adolescence as individuals strive to develop their own identity and sense of self, based on information from their environment, particularly from their peers (Viner, 2005). This could partly explain why desire for social distance was greater in this study than in similarly designed adult studies. As soon as someone (in this case 'Alex') is described as being 'different' in some way, adolescents are perhaps more likely to distance themselves from that person. The reasons behind why this

might happen are wide-ranging. For example, as introduced in section 1.6, adolescents, in their quest for identity and peer acceptance, may behave in ways that strengthen the in-group out-group divide (Heatherton et al., 2000). The result of this would be a clearer divide between groups of individuals, the development of cliques, and less acceptance of the out-group.

Another factor may be that a lack of understanding of depression, or mental illness generally, leads adolescents believe that they may somehow 'catch' or develop the problem themselves. Approximately 6% of participants in this study agreed or strongly agreed that 'it is best to avoid people with a problem like Alex's so you don't develop this problem' and 11% neither agreed nor disagreed with this statement. It may be that, beyond this small minority of participants, others believed that spending time with Alex would make them sad, low, or depressed themselves. They may instead choose who they spend time with based on who will be fun, or who will 'make them look fun' to their peers. This makes sense because befriending someone with depression, particularly severe depression, could be demanding and could increase anxiety, low mood, and the experience of being responsible for another person. On that note, it could be hypothesised that the prospect of becoming involved with someone 'like Alex' may make adolescents think that they are responsible for Alex's behaviour or emotions. As suggested by models of bystander apathy (e.g., Darley & Latane, 1968; Hudson & Bruckman, 2004) individuals tend to avoid situations that they think might carry risk or negative consequences to themselves. Furthermore, not knowing what to do (i.e., feeling helpless and being unable to provide mental health 'first aid') in a situation is known to increase anxiety, guilt, and avoidance behaviour (Lam, Jorm, & Wong, 2010).

Adolescence is also typically associated with being self-conscious and internally-focussed (Arnett, 2001). Therefore, whilst adolescents may be starting to take responsibility for themselves, they may not be as able as adults to take responsibility for others. This further lends support for the idea that bystander apathy may be playing a role in social distancing in this age-group. It would be interesting, and important for future research, to investigate whether these hypotheses are valid and whether they make up part of the variance not accounted for in this study. This could be done by incorporating questions that tap attributions associated with the *consequences* of being in close proximity of someone with depression, for example, 'what would you think and how would you behave if you had to work closely at school with Alex?'.

Other interesting variables that may be worth investigating are intellectual or cognitive ability, academic ability, and stage of cognitive development as these may have an impact on stigma and desire for social distance within this population. To date there is little research which looks specifically at this. However, we know that discrimination is based on prejudice, which are beliefs about someone or something without knowledge of the facts. Valuable future research could investigate this in relation to the stages of cognitive development (and associated abstract reasoning and executive functioning) that adolescents go through from early to later adolescence. This could then be incorporated into a broader model of social distance.

Stigma and social distancing are such a complex phenomena, and this is possibly why there are limited comprehensive theoretical models available (Deacon, 2006; Link & Phelan, 2001). The findings from this study suggest that the social psychological model does not adequately explain adolescents' responses to individuals with depression. In many ways it demonstrates the extent of our ignorance about such an important topic. Therefore it

will be important, albeit challenging, to develop a more appropriate theoretical framework for this population that incorporates as many of the variables as possible. As discussed, these include demographics; familiarity (including personal experience); attributions about the disorder and its consequences to the self and others (i.e., the pros and cons of social distance); stage of cognitive development; knowledge and beliefs about not only the diagnostic label but also how to support that person (i.e., mental health literacy and mental health 'first aid'); and the impact of family and peer attitudes and behaviour. Without incorporating these additional factors, it will be difficult to develop an evidence base that will support effective anti-stigma strategies.

#### *4.4.2 Clinical Implications*

Level of contact was associated with less stigma and less desire for social distance. Those who had seen material about mental health outside school held less stigmatising attitudes than those who had not. Thus, this study supports the argument that anti-stigma strategies should provide accessible and accurate mental health information and should aim to increase adolescents' familiarity with mental illness. This could possibly be done by service users themselves who are able to 'tell their story' (e.g., Jones & Black, 2008).

Given the relatively high desire for social distance compared to that found in adult studies, rather than placing the emphasis on improving attitudes, perhaps anti-stigma strategies should target young people's discriminatory behaviour. How this could be done is difficult to know. However, relating these findings to adolescent peer group relation theories and models may be a first step. Focussing on behavioural responses (e.g., avoidance) directly within education rather than only focussing on shifting attributions may also prove helpful.

The small effect sizes found within the results support the argument that anti-stigma strategies should be universal rather than targeted. For example, whilst there were statistically significant gender and age differences these are unlikely to equate to real life significant differences. Thus, this study suggests that whole school approaches are likely to be most beneficial.

#### *4.5 Directions for Future Research*

Research in this field is currently limited but the scope for future research is extensive and exciting. It will be important for clear distinctions to continue to be made between the different types of stigma. This has caused much confusion and conflicting results previously (Rüsch, Angermeyer, & Corrigan, 2005) and remains a challenge because each type is likely to be correlated (Griffiths et al., 2008). It will be important to aim towards developing more appropriate models of mental illness stigma within this population and then to continually test this with appropriately sized samples to achieve adequate power.

This study has highlighted the potential problems associated with adapting measures of stigma, social distance, and familiarity that were originally designed for use in the adult population. There is a need for future research to design and establish reliability for concise, age-appropriate measures. Other factors that will be important for researchers to focus on include developmental stage; the quality as well as quantity of experience with someone with a mental health problem; and family and peer attitudes and experiences. In addition to more quantitative research there is also a great deal of scope for qualitative research. This would allow richer information to be gathered. Findings from qualitative

research could also provide the basis for the design of more appropriate quantitative measures.

#### *4.6 Final Conclusions*

This study aimed to add to the limited evidence by investigating adolescents' stigma towards, and desire for social distance from, a peer with depression. Results suggested that males and younger adolescents tended to have more stigmatising attitudes and more desire for social distance than older adolescents and females. Correct recognition of depression, familiarity with depression, and exposure to lessons or educational material about mental health outside school were associated with less stigma and in some cases less desire for social distance. There appeared to be no associations between stigma or desire for social distance and hypothetical help-seeking behaviour. Despite findings being statistically significant, effect sizes were consistently small and the factors only explained a very small amount of variance in stigma and social distance scores overall. Therefore, they should be interpreted with caution as they are unlikely to equate to 'real life' significance. As proposed in the social psychological model presented in section 1.9, there are many variables that contribute to participants' attitudes. Thus, future research should incorporate measures that investigate each of the pathways within the model more thoroughly and should aim to control for as many confounding variables as possible.

A number of participants chose to write comments at the end of the questionnaire. It became apparent that they thought the topic was interesting and relevant. Many of the comments reflect a high level of mental health literacy and a desire to find out more. A selection of these comments are as follows and the rest can be seen in Appendix P: "*This is a simple questionnaire but covers a very serious topic*"(12-year-old girl); "*I think we don't*

*talk enough about depression in school and I think we should talk about it more" (13-year-old boy); "I think more things like this should be done in order for people to recognise that it isn't 'just a phase'. People like that need support. I don't think mental health needs a stigma attached" (16-year-old girl); "I think more people are getting depression and we need to be taught about it from this questionnaire. It is very relevant" (13-year-old girl).*

Finally, there are many areas that future research could focus on in order to advance this important field. Developing a more appropriate theoretical framework seems to be a priority. Designing or adapting measures that are suitable for this population will enable more reliable and valid findings. It will also be useful to determine whether attitudes actually equate to real-life behaviour rather than simply to hypothetical behaviour. Useful future research in this field would use qualitative as well as quantitative methodology and would help to inform anti-stigma strategies.

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**“Factors that affect young  
people’s attitudes towards illness”**

Thank you for participating in this study. Please do **not** put your name on the questionnaire. All your answers are confidential and anonymous. If you don’t understand any of the questions or need help reading them, please ask me or a teacher.

**1. Please answer the following questions about yourself:**

I am: Male  Female

Date of Birth: .....

I am: White <input type="checkbox"/>	Black or Black British <input type="checkbox"/>
Mixed <input type="checkbox"/>	Chinese <input type="checkbox"/>
Asian or Asian British <input type="checkbox"/>	Other .....

**2. Please read this description of Alex. Imagine Alex is a 14-year-old student at your school:**

“Alex has been feeling unusually sad and miserable for the last few weeks. Even though he is tired all the time, he has trouble sleeping nearly every night. He doesn’t feel like eating and has lost weight. He can’t keep his mind on his school-work and his marks have dropped. He puts off making any decisions and even day-to-day tasks seem too much for him. His parents and friends are very concerned about him.”

**3. What word, label, or diagnosis would you give a problem like Alex’s?**

.....

**4. Please tell us how happy you would be to:**

(tick the boxes)

	Yes, definitely	Yes, probably	Probably not	Definitely not
Live next door to Alex				
Spend an evening socialising with Alex				
Make friends with Alex				
Work closely at school with Alex				
Invite Alex round to your house				

**5. Please tell us how strongly you *personally* agree or disagree with each statement:**

(tick the boxes)

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
People with a problem like Alex's could snap out of it if they wanted					
A problem like Alex's is a sign of personal weakness					
Alex's problem is not a real medical illness					
People with a problem like Alex's are dangerous					
It is best to avoid people with a problem like Alex's so you don't develop this problem					
People with a problem like Alex's are unpredictable					
If I had a problem like Alex's I would not tell anyone					
If I owned a company, I would not employ someone if I knew they had a problem like Alex's					
When I am allowed to vote, I would not vote for a politician if I knew they suffered from a problem like Alex's					

**6. Now tell us how much contact you have had with someone with a problem like Alex's.**  
(Tick all that are true for you):

- I have watched a film or TV show involving a character with a problem like Alex's
- I have observed a person who I think might have a problem like Alex's
- I have observed a person who has a problem like Alex's
- I have a problem like Alex's
- I have been in a class with a person who has a problem like Alex's
- I have never observed a person with a problem like Alex's
- A friend of my family has a problem like Alex's
- I have a relative who has a problem like Alex's
- I have watched a TV documentary about a person who has a problem like Alex's
- I live with someone with a problem like Alex's

**7. If you had a problem like Alex's where would you try to get help?**  
(Tick all that are true for you):

<input type="checkbox"/> Friends	<input type="checkbox"/> GP (doctor)
<input type="checkbox"/> Family	<input type="checkbox"/> Psychologist
<input type="checkbox"/> Teachers	<input type="checkbox"/> I wouldn't try to get help
<input type="checkbox"/> School nurse/counsellor	<input type="checkbox"/> Other .....

Please turn over to the final page.....

Alex's problem could be a mental health problem called **depression**.

**8. Have you had any lessons or seen any information about mental health problems?:**

At school:  Yes  No

Out of school (e.g., on TV or on posters):  Yes  No

If you want, you can add some comments here about your experience of filling in this questionnaire or the topics covered in it:

.....  
.....  
.....  
.....

**Thank you for taking part!** Remember, all your answers are confidential and anonymous. Please tear off the bottom part of this page and keep it

.....

Depression is a mental health problem that affects between about 2% and 8% of people your age. Everyone gets sad from time to time, but depression is different. Someone who has depression is low in mood or irritable most of the day, nearly everyday for more than 2 weeks at a time. They lose pleasure in things they normally enjoy doing and can have changes in their concentration, energy, appetite and sleeping. They may also have thoughts that they are worthless or that life is hopeless.

If you are worried about yourself or someone you know, or would like to find out more about mental health problems, here are some useful contacts details:

- Speak to any member of staff at school (e.g. your form tutor)
- Find out if there are counselling facilities at your school/college
- Your local GP (doctor) surgery or health centre
- Young minds website: [www.youngminds.org.uk](http://www.youngminds.org.uk)
- Samaritans for 24 hours-a-day telephone support: 08457 90 90 90

**“Factors that affect young  
people’s attitudes towards illness”**

Thank you for participating in this study. Please do **not** put your name on the questionnaire. All your answers are confidential and anonymous. If you don’t understand any of the questions or need help reading them, please ask me or a teacher.

**1. Please answer the following questions about yourself:**

I am: Male  Female

Date of Birth: .....

I am: White <input type="checkbox"/>	Black or Black British <input type="checkbox"/>
Mixed <input type="checkbox"/>	Chinese <input type="checkbox"/>
Asian or Asian British <input type="checkbox"/>	Other .....

**2. Please read this description of Alex. Imagine Alex is a 14-year-old student at your school:**

“Alex has been feeling unusually sad and miserable for the last few weeks. Even though she is tired all the time, she has trouble sleeping nearly every night. She doesn’t feel like eating and has lost weight. She can’t keep her mind on her school-work and her marks have dropped. She puts off making any decisions and even day-to-day tasks seem too much for her. Her parents and friends are very concerned about her.”

**3. What word, label, or diagnosis would you give a problem like Alex’s?**

.....

**4. Please tell us how happy you would be to:**

(tick the boxes)

	Yes, definitely	Yes, probably	Probably not	Definitely not
Live next door to Alex				
Spend an evening socialising with Alex				
Make friends with Alex				
Work closely at school with Alex				
Invite Alex round to your house				

**5. Please tell us how strongly you *personally* agree or disagree with each statement:**

(tick the boxes)

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
People with a problem like Alex's could snap out of it if they wanted					
A problem like Alex's is a sign of personal weakness					
Alex's problem is not a real medical illness					
People with a problem like Alex's are dangerous					
It is best to avoid people with a problem like Alex's so you don't develop this problem					
People with a problem like Alex's are unpredictable					
If I had a problem like Alex's I would not tell anyone					
If I owned a company, I would not employ someone if I knew they had a problem like Alex's					
When I am allowed to vote, I would not vote for a politician if I knew they suffered from a problem like Alex's					

**6. Now tell us how much contact you have had with someone with a problem like Alex's.**  
(Tick all that are true for you):

- I have watched a film or TV show involving a character with a problem like Alex's
- I have observed a person who I think might have a problem like Alex's
- I have observed a person who has a problem like Alex's
- I have a problem like Alex's
- I have been in a class with a person who has a problem like Alex's
- I have never observed a person with a problem like Alex's
- A friend of my family has a problem like Alex's
- I have a relative who has a problem like Alex's
- I have watched a TV documentary about a person who has a problem like Alex's
- I live with someone with a problem like Alex's

**7. If you had a problem like Alex's where would you try to get help?**  
(Tick all that are true for you):

<input type="checkbox"/> Friends	<input type="checkbox"/> GP (doctor)
<input type="checkbox"/> Family	<input type="checkbox"/> Psychologist
<input type="checkbox"/> Teachers	<input type="checkbox"/> I wouldn't try to get help
<input type="checkbox"/> School nurse/counsellor	<input type="checkbox"/> Other .....

Please turn over to the final page.....

Alex's problem could be a mental health problem called **depression**.

**8. Have you had any lessons or seen any information about mental health problems?:**

At school:  Yes  No

Out of school (e.g., on TV or on posters):  Yes  No

If you want, you can add some comments here about your experience of filling in this questionnaire or the topics covered in it:

.....

.....

.....

.....

**Thank you for taking part!** Remember, all your answers are confidential and anonymous. Please tear off the bottom part of this page and keep it

.....

Depression is a mental health problem that affects between about 2% and 8% of people your age. Everyone gets sad from time to time, but depression is different. Someone who has depression is low in mood or irritable most of the day, nearly everyday for more than 2 weeks at a time. They lose pleasure in things they normally enjoy doing and can have changes in their concentration, energy, appetite and sleeping. They may also have thoughts that they are worthless or that life is hopeless.

If you are worried about yourself or someone you know, or would like to find out more about mental health problems, here are some useful contacts details:

- Speak to any member of staff at school (e.g. your form tutor)
- Find out if there are counselling facilities at your school/college
- Your local GP (doctor) surgery or health centre
- Young minds website: [www.youngminds.org.uk](http://www.youngminds.org.uk)
- Samaritans for 24 hours-a-day telephone support: 08457 90 90 90

**School of Medicine, Health Policy and Practice**



## Information Sheet for Parents / Guardians: Opt-in Consent

### **“Factors that affect young people’s attitudes towards illness”**

*Jane Emerton*

Elizabeth Fry Building

University of East Anglia

Norwich NR4 7TJ

*J.Emerton@uea.ac.uk*

**0781745\*\*\*\***

Your son/daughter has recently been invited to take part in some research. This is organised by the University of East Anglia (UEA). Please take time to read the information below carefully so you can decide whether or not you would like your son / daughter to take part.

#### **What is the study about?**

The study is about young people’s attitudes towards health problems.

#### **Why has your son/daughter been chosen to take part?**

Lots of students in years 7 to 13 have been invited to take part, from different schools across England. It is helpful to get opinions from lots of young people so we can get a good idea about what they think.

#### **Do they have to take part?**

No. The study is completely voluntary. They can choose on the day if they want to take part or not. If they decide they want to, then change their mind, that’s ok too – they don’t have to give a reason. If your child is under 16 consent needs to be obtained from you before they take part. If you are happy for them to take part, please complete the form at the bottom of this letter.

#### **What do I need to do?**

Your child’s head teacher has agreed that in the next couple of months I can come into school with some questionnaires. Participation will involve reading a short description of a person with a health problem and answering some questions about it. The questionnaire takes about 15 minutes to fill in. Help can be provided by myself or a teacher for children who may have difficulties with understanding, reading, or filling in the questionnaire. There are no right or wrong answers to the questions.

#### **Are there any risks or dangers of taking part?**

Although unlikely, it is possible that the health problem described in the questionnaire might make your child feel worried about themselves or someone they know. To help with this, a list of telephone numbers and websites will be given to them to keep at the end of the questionnaire.

#### **Is it confidential?**

Yes! The study is completely confidential and anonymous. Your child will not put their name or any other identifiable information on the questionnaire. The school will not have access to any filled in questionnaires.

**What happens at the end of the research?**

The information gathered will be entered into the study. It will be kept securely at UEA for 5 years, which is the normal policy for research. After that time, it will be destroyed.

**Who has reviewed this study?**

Before any research goes ahead it has to be approved by a Research Ethics Committee. They make sure that the research is fair. This project has been approved by the Faculty of Health Research Ethics committee.

**Now what do I do?**

If you are happy for your child to take part in the study, please complete the form below. This needs to put it in the box in your child's school reception marked "UEA STUDY". If this form is not returned it will be assumed you do not want your child to take part, and they will not be allowed to take part. If you do not want your child to take part in this study, just ignore this letter.

**Thanks for taking time to read this. If you have any other questions I can be contacted on:  
J.Emerton@uea.ac.uk or at the address at the top of this letter.**

.....

This is to confirm that I have read and understood the information sheet about the UEA study exploring young people's attitudes towards health problems. I am happy for my child to take part in the research study.

Signed (Parent / Guardian):.....

Name of child:.....

Name of school:.....

Year group:.....

There is a box marked "UEA STUDY" in reception of your child's school. All completed consent forms need to be posted into the box before your child will be allowed to take part.

**School of Medicine, Health Policy and Practice***Jane Emerton*

Elizabeth Fry Building  
University of East Anglia  
Norwich NR4 7TJ

*J.Emerton@uea.ac.uk*

**0781745\*\*\*\***

**Information Sheet for Students: Opt-in Consent****“Factors that affect young people’s attitudes towards illness”**

You have been invited to take part in some research. This is organised by the University of East Anglia (UEA). Please take time to read the information below carefully so you can decide whether or not you want to take part.

**What's the study about?**

The study is about young people’s attitudes towards health problems.

**Why have I been chosen to take part?**

Lots of students in years 7 to 13 have been invited to take part, from different schools across England. It is helpful to get opinions from lots of young people so we can get a good idea about what you think.

**Do I have to take part?**

No. The study is completely voluntary. If you decide to take part, then change your mind then that's ok too – you don't have to give a reason.

**What do I need to do?**

In the next couple of months I will be coming to your school with some questionnaires. You will read a short description of a person with a health problem and you will be asked to answer some questions about it. The questionnaire takes about 15 minutes to fill in, and that's all there is to it! There are no right or wrong answers to the questions - what is important is that you answer them as truthfully as you can.

**Are there any risks or dangers of taking part?**

It is possible that the health problem described in the questionnaire might make you feel worried about yourself or someone you know. To help with this, a list of telephone numbers and websites will be given to you to take home at the end of the questionnaire.

**Is it confidential?**

Yes! The study is completely confidential. You don't put your name on the questionnaire and your teachers, friends, or parents don't get to see your answers.

**What happens at the end of the research?**

The information gathered will be entered into the study. It will be kept securely at UEA for 5 years, which is the normal policy for research. After that time, it will be destroyed.

**Who has reviewed this study?**

Before any research goes ahead it has to be approved by a Research Ethics Committee. They make sure that the research is fair. This project has been approved by the Faculty of Health Research Ethics committee.

**Now what do I do?**

If you are under 16, your parent / guardian has been given some information about the study. If they are happy for you to take part, and you would like to, ask them to sign the consent form that they have been given. Bring this back into school and put it in the box in reception marked “**UEA STUDY**”. When I come into your school you can take part in the study. If you don’t want to, or your parent / guardian doesn’t want you to take part, simply ignore this letter. This means that I won’t contact you when I come into your school.

If you are aged 16 – 18 you can decide yourself on the day I come into your school or college whether you want to take part.

**Thanks for taking time to read this. If you have any other questions I can be contacted on: [J.Emerton@uea.ac.uk](mailto:J.Emerton@uea.ac.uk) or at the address at the top of this information sheet.**

**School of Medicine, Health Policy and Practice****Information Sheet for Parents / Guardians: Opt-out Consent****“Factors that affect young people’s attitudes towards illness”*****Jane Emerton***

Elizabeth Fry Building

University of East Anglia

Norwich NR4 7TJ

***J.Emerton@uea.ac.uk******0781745\*\*\****

Your son/daughter has recently been invited to take part in some research. This is organised by the University of East Anglia (UEA) and has been approved by your child’s head teacher. Please take time to read the information below carefully so you can decide whether or not you would like your son/daughter to take part in the research.

**What’s the study about?**

The study is about young people’s attitudes towards health problems.

**Why has your son/daughter been chosen to take part?**

Lots of students in years 7 to 13 have been invited to take part, from different schools across England. It is helpful to get opinions from lots of young people so we can get a good idea about what they think.

**Do they have to take part?**

No. The study is completely voluntary. They can choose on the day if they want to take part or not. If they decide they want to, then change their mind, that’s ok too – they don’t have to give a reason. If you would rather they did not take part, then please let me know via email or post (see the end of this letter). This will ensure that your child will not have access to the questionnaire or take part in the study.

**What do I need to do?**

Your child’s head teacher has agreed that in February 2010 I can come into school with some questionnaires. Participation will involve reading a short description of a person with a health problem and answering some questions about it. The questionnaire takes about 10 minutes to fill in. Help can be provided by myself or a teacher for children who may have difficulties with understanding, reading, or filling in the questionnaire. There are no right or wrong answers to the questions.

**Are there any risks or dangers of taking part?**

Although unlikely, it is possible that the health problem described in the questionnaire might make your child feel worried about themselves or someone they know. To help with this, a list of telephone numbers and websites will be given to them to keep at the end of the questionnaire. So far, over 300 young people have completed the questionnaire and UEA researchers have not received any negative feedback.

**Is it confidential?**

Yes! The study is completely confidential and anonymous. Your child will not put their name or any other identifiable information on the questionnaire. The school will not have access to any filled in questionnaires.

**What happens at the end of the research?**

The information gathered will be entered into the study. It will be kept securely at UEA for 5 years, which is the normal policy for research. After that time, it will be destroyed.

**Who has reviewed this study?**

Before any research goes ahead it has to be approved by a Research Ethics Committee. They make sure that the research is fair. This project has been approved by the Faculty of Health Research Ethics committee.

**Now what do I do?**

**If you are happy for your child to take part, you do not need to do anything.**

If you would rather your child did not take part in the study please let me know by the end of January 2010. This can be done by:

1. Emailing **J.Emerton@uea.ac.uk** stating your name and your child/children's name(s).
- or
2. Completing and posting back the form below (your postage costs can be reimbursed).

Thanks for taking time to read this. **If you have any other questions I can be contacted on: J.Emerton@uea.ac.uk or on the telephone number at the top of this letter.**

.....

*Opt-out slip (alternative to email):* This is to confirm that I have read and understood the information sheet about the UEA study exploring young people's attitudes towards health problems. **I DO NOT** want my child to take part in the research study.

Signed (Parent / Guardian):.....

Name of child/children.....

Year group(s)..... School:.....

Address (if you would like your postage costs reimbursed):.....

.....

.....

Please send this back **by the end of January 2010** (to: Jane Emerton, c/o Kerensa Rands, Room 2.01, Elizabeth Fry Building, UEA, Norwich, NR4 7TJ) to ensure that your child or children are excluded from the research.

**School of Medicine, Health Policy and Practice*****Jane Emerton***

Elizabeth Fry Building  
University of East Anglia  
Norwich NR4 7TJ

***J.Emerton@uea.ac.uk***

***0781745\*\*\****

**Information Sheet for Students: Opt-out Consent****“Factors that affect young people’s attitudes towards illness”**

You have been invited to take part in some research. This is organised by the University of East Anglia (UEA). Please take time to read the information below carefully so you can decide whether or not you want to take part.

**What's the study about?**

The study is about young people’s attitudes towards health problems.

**Why have I been chosen to take part?**

Lots of students in years 7 to 13 have been invited to take part, from different schools across England. It is helpful to get opinions from lots of young people so we can get a good idea about what you think.

**Do I have to take part?**

No. The study is completely voluntary. If you decide to take part, then change your mind then that's ok too – you don't have to give a reason.

**What do I need to do?**

In the next couple of months I will be coming to your school with some questionnaires. You will read a short description of a person with a health problem and you will be asked to answer some questions about it. The questionnaire takes about 15 minutes to fill in, and that's all there is to it! There are no right or wrong answers to the questions - what is important is that you answer them as truthfully as you can.

**Are there any risks or dangers of taking part?**

It is possible that the health problem described in the questionnaire might make you feel worried about yourself or someone you know. To help with this, a list of telephone numbers and websites will be given to you to take home at the end of the questionnaire.

**Is it confidential?**

Yes! The study is completely confidential. You don't put your name on the questionnaire and your teachers, friends, or parents don't get to see your answers.

**What happens at the end of the research?**

The information gathered will be entered into the study. It will be kept securely at UEA for 5 years, which is the normal policy for research. After that time, it will be destroyed.

**Who has reviewed this study?**

Before any research goes ahead it has to be approved by a Research Ethics Committee. They make sure that the research is fair. This project has been approved by the Faculty of Health Research Ethics committee.

**Now what do I do?**

If you are under 16, your parent / guardian has been sent (in the post) some information about the study. If they don't want you to take part they will send back something to let me know this. In this case, you won't be able to take part in the study. If they are happy for you to take part, and you want to, then just wait until I come into school to meet you and your class.

**Thanks for taking time to read this. If you, or your parents / guardians have any other questions I can be contacted on: [J.Emerton@uea.ac.uk](mailto:J.Emerton@uea.ac.uk) or on the telephone number at the top of this letter.**

**School of Medicine, Health Policy and Practice**

*Jane Emerton*

Elizabeth Fry Building

University of East Anglia

Norwich NR4 7TJ

*J.Emerton@uea.ac.uk*

**Information Sheet for Students Aged 16+****“Factors that affect young people’s attitudes towards illness”**

You have been invited to take part in some research. This is organised by the University of East Anglia (UEA). Please take time to read the information below carefully so you can decide whether or not you want to take part.

**What's the study about?**

The study is about young people’s attitudes towards health problems.

**Why have I been chosen to take part?**

Lots of students in years 7 to 13 have been invited to take part, from different schools and colleges across England. It is helpful to get opinions from lots of young people so we can get a good idea about what you think.

**Do I have to take part?**

No. The study is completely voluntary. If you decide to take part, then change your mind then that's okay too – you don't have to give a reason.

**What do I need to do?**

You will read a short description of a person with a health problem and you will be asked to answer some questions about it. The questionnaire takes about 15 minutes to fill in, and that's all there is to it!

There are no right or wrong answers to the questions - what is important is that you answer them as truthfully as you can.

**Are there any risks or dangers of taking part?**

It is possible that the health problem described in the questionnaire might make you feel worried about yourself or someone you know. To help with this, a list of telephone numbers and websites will be given to you to take home at the end of the questionnaire.

**Is it confidential?**

Yes! The study is completely confidential. You don't put your name on the questionnaire and your teachers, friends, or parents don't get to see your answers.

**What happens at the end of the research?**

The information gathered will be entered into the study. It will be kept securely at UEA for 5 years, which is the normal policy for research. After that time, it will be destroyed.

**Who has reviewed this study?**

Before any research goes ahead it has to be approved by a Research Ethics Committee. They make sure that the research is fair. This project has been approved by the Faculty of Health Research Ethics Committee at UEA.

**Now what do I do?**

As you are aged 16 or over, you can decide for yourself whether or not you would like to take part. **If you have read and understood the information on this sheet and would like to take part, please turn over the page and fill in the questionnaire.** If you have any questions, please ask. If you have any further queries about the study you can contact me via the address or email at the top of this information sheet.

**School of Medicine, Health Policy and Practice**  
**Doctoral Programme in Clinical Psychology**



**Trainee Clinical Psychologist**

Elizabeth Fry Building  
 University of East Anglia  
 Norwich NR4 7TJ England

***j.emerton@uea.ac.uk***

**078174\*\*\*\***

**“Factors that affect young people’s attitudes towards depression”**

Dear Head Teacher,

I am a trainee clinical psychologist on the Doctoral Programme in Clinical Psychology at the University of East Anglia. As part of the programme, I am required to undertake a research project for my thesis, which may result in a publication. I am writing to ask whether you would allow me to recruit some of your students to participate in my research.

**What is the Research About?**

I am interested in finding out about young people’s attitudes towards people of their own age with depression. As you will be aware, depression is a common mental health problem that can begin in the teenage years. Existing research suggests that there is often misunderstanding and stigma associated with depression. My aim is to investigate this, and to find out what kinds of factors influence young people’s attitudes.

**Why is it Important?**

Anti-stigma and education campaigns focussing on mental health are being implemented throughout the world. These have been targeting both adults and young people in schools, in an attempt to increase understanding and reduce stigma. For these campaigns to be effective it is important that we have more of an understanding of the factors that influence stigma. Unfortunately at the moment, research looking at young people’s attitudes is very limited.

**What Would it Involve?**

I need to recruit as many young people as possible, which is why this research is being run in a number of different schools across the UK. Students in years 7 – 13 would be eligible to participate. Participation would involve reading the following description...

*“Alex has been feeling unusually sad and miserable for the last few weeks. Even though he is tired all the time, he has trouble sleeping nearly every night. He doesn’t feel like eating and has lost weight. He can’t keep his mind on his school-work and his marks have dropped. He puts off making any decisions and even day-to-day tasks seem too much for him. His parents and friends are very concerned about him”*

...followed by a few questionnaires, assessing their beliefs about what sort of problem Alex might have, their willingness to be in close proximity to Alex, whether they have any personal experience or are familiar with a problem like Alex’s, and if and where they might seek help if

they had a problem like Alex's. I would also obtain some basic demographic information such as the participant's age, gender and ethnicity.

The final page of the questionnaire is a 'debriefing sheet' explaining that Alex may be suffering from depression, and a brief description of what depression is (appropriate to their age-group). This would be followed by contact details if they feel worried about themselves or anyone they know (e.g., the Samaritans).

### **Confidentiality and Consent**

All completed questionnaires would be confidential and anonymous.

Consent can be obtained by either one of two methods, based on your school's policy.

1. "Opt-in method". This is where those under 16 are asked for their consent, and their parent/guardian's consent. They would be given information sheets and a consent form to take home in order to gain consent. This would have to be brought back in for them to participate.
2. "Opt-out method". This is where the teenagers are asked to consent for themselves. Parents/guardians are able to withdraw the consent should they wish to. This would be done in the same way as above, but only those who do not wish their child to participate would send back the form. This is done before the research takes place.

Both of these methods have their advantages and disadvantages, and I am happy to discuss them with you in more detail.

### **Time**

It should take most teenagers about 10 - 15 minutes to complete the research. This ideally would be done in a quiet room to minimise distractions, perhaps in registration time or a general studies lesson. The questionnaire would be given out by myself.

### **Why Participate?**

This is a currently under researched area, therefore the more we can find out about young people's attitudes the better! I will also be happy send your school the results of the study once they have been collected.

### **What Next?**

The project has received ethical approval from the Faculty of Health Ethics Committee based at the University of East Anglia. The information sheets and consent forms provided to students and parents do not state that the study is about mental health or depression. This is to preserve the finding's reliability – if students know that Alex has depression before answering the questions this might influence their responses. Thus it is important that this element of the study is kept secret from the students until they have completed the questionnaires. In line with ethics guidelines, as stated earlier, participants will be provided with a 'debriefing sheet' at the end of the questionnaire. If you have any questions about the research, would like to arrange a meeting with me, or would like your students to be involved, please get in touch via the contact details above.

Thank you for taking the time to read this information.

Yours sincerely,

Jane Emerton  
Trainee Clinical Psychologist

Jane Emerton  
Trainee Clinical Psychologist  
Learning Disability Service  
Stourmead Close  
Kedington  
Haverhill  
Suffolk  
CB9 7PA  
7 November 2010

Research Office, Room 1.09  
Chancellors Drive Annex  
University of East Anglia  
Norwich NR4 7TJ  
United Kingdom  
Email: [jane.carter@uea.ac.uk](mailto:jane.carter@uea.ac.uk)  
Tel: +44 (0) 1603 591023  
Fax: +44 (0) 1603 591132  
Web: [www.uea.ac.uk](http://www.uea.ac.uk)  
Web: <http://www.uea.ac.uk>

Dear Jane

**Factors that influence Personal Stigma towards, and a Desire for Social Distancing from, a Peer with Depression in a British Adolescent Sample- 2009025**

The amendments of your above proposal have now been considered by the Chair of the FOH Ethics Committee and we can now confirm that your proposal has now been approved.

Please could you ensure that any amendments to either the protocol or documents submitted are notified to us in advance and also that any adverse events which occur during your project are reported to the committee. Please could you also arrange to send us a report once your project is completed.

The committee would like to wish you good luck with your project.

Yours sincerely

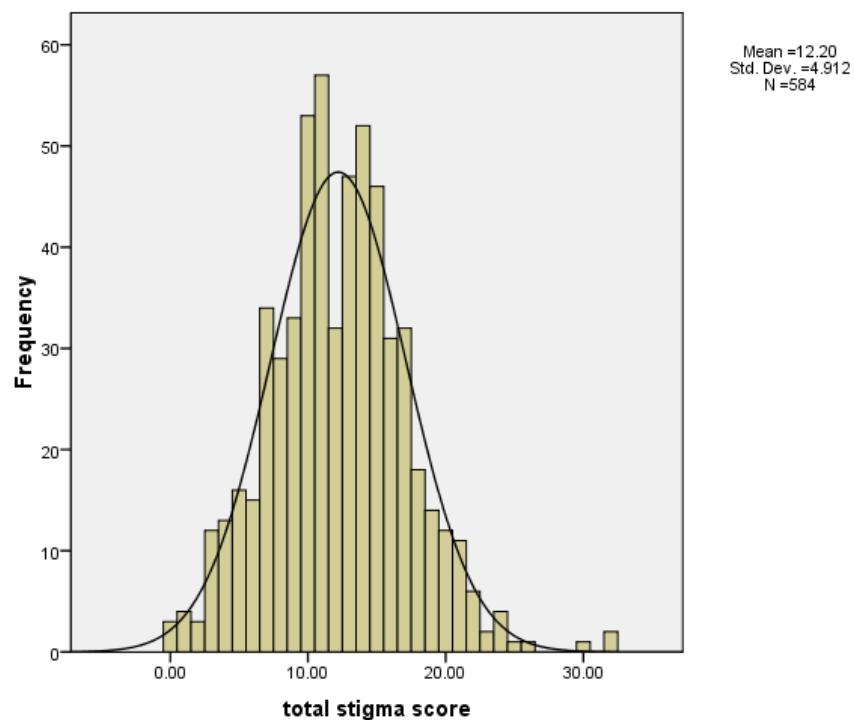


Dr. Jane Carter

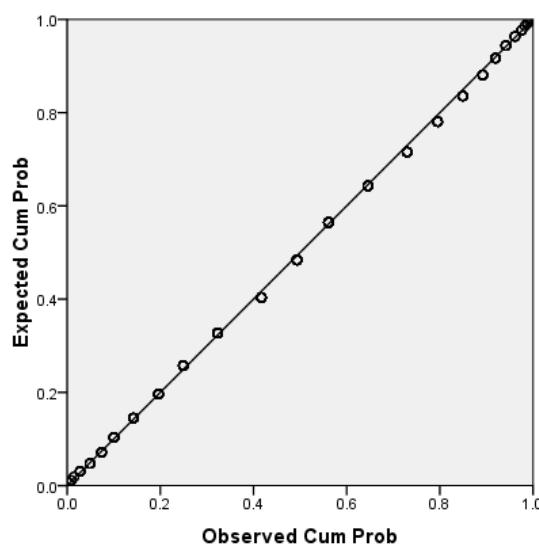
## Histograms and P-P Plots

### Personal Stigma Scale for the Whole Sample

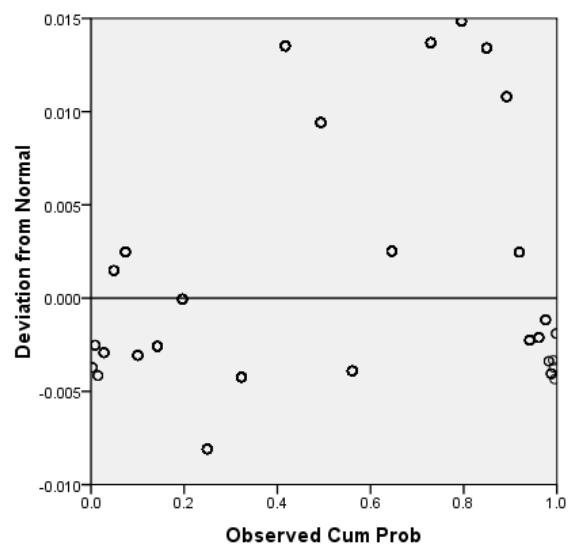
Stigma scores ( $N = 584$ )



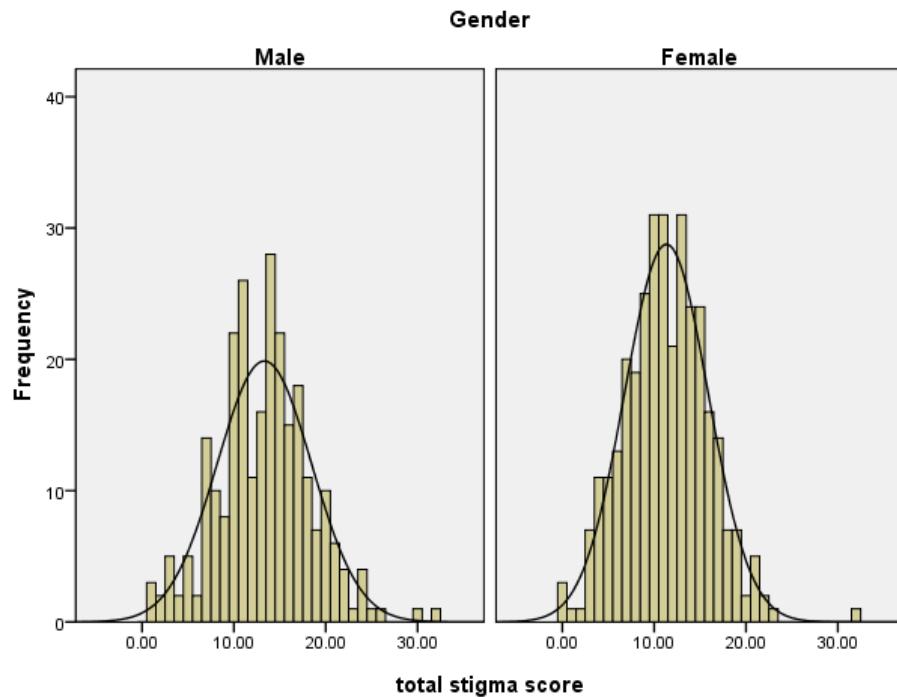
Normal P-P Plot of total stigma score



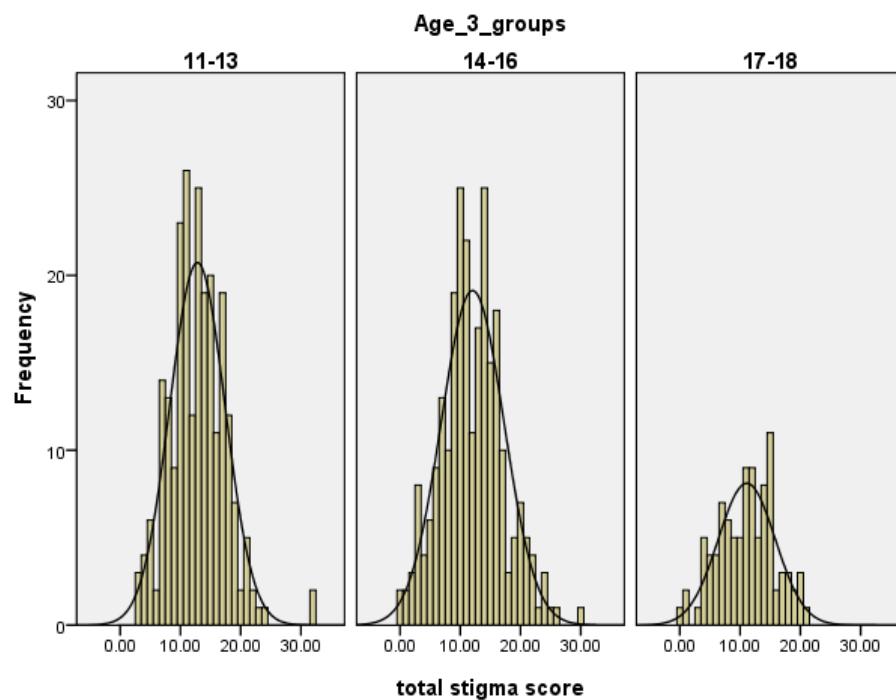
Detrended Normal P-P Plot of total stigma score

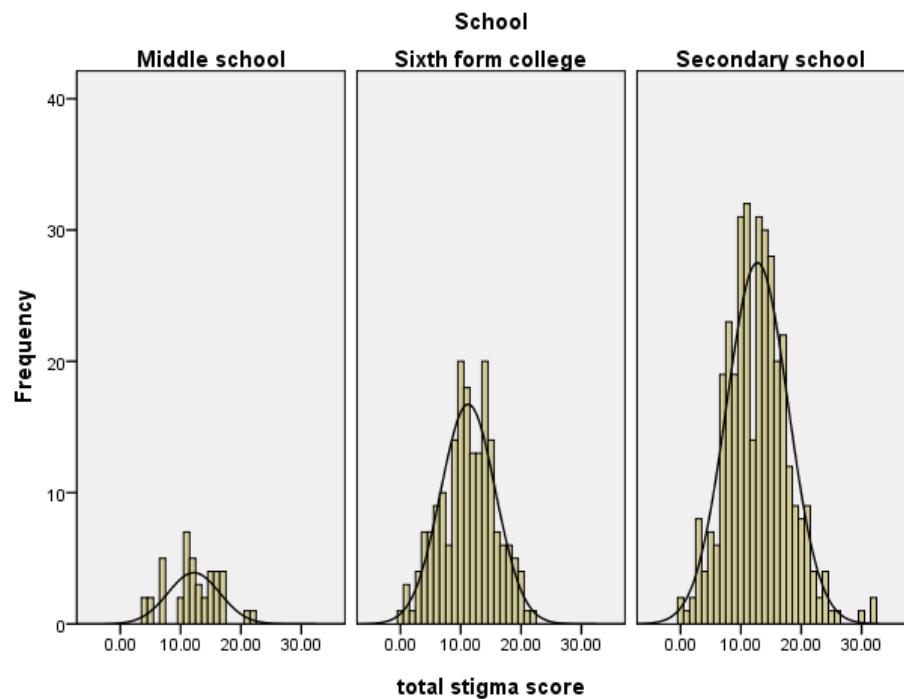
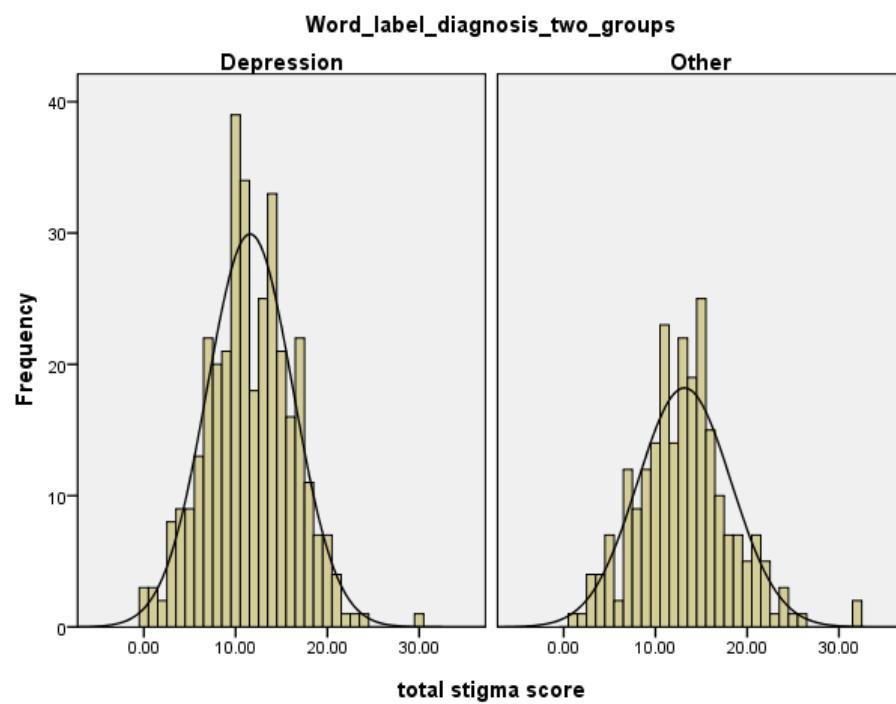


*Stigma scores by gender (N= 584)*

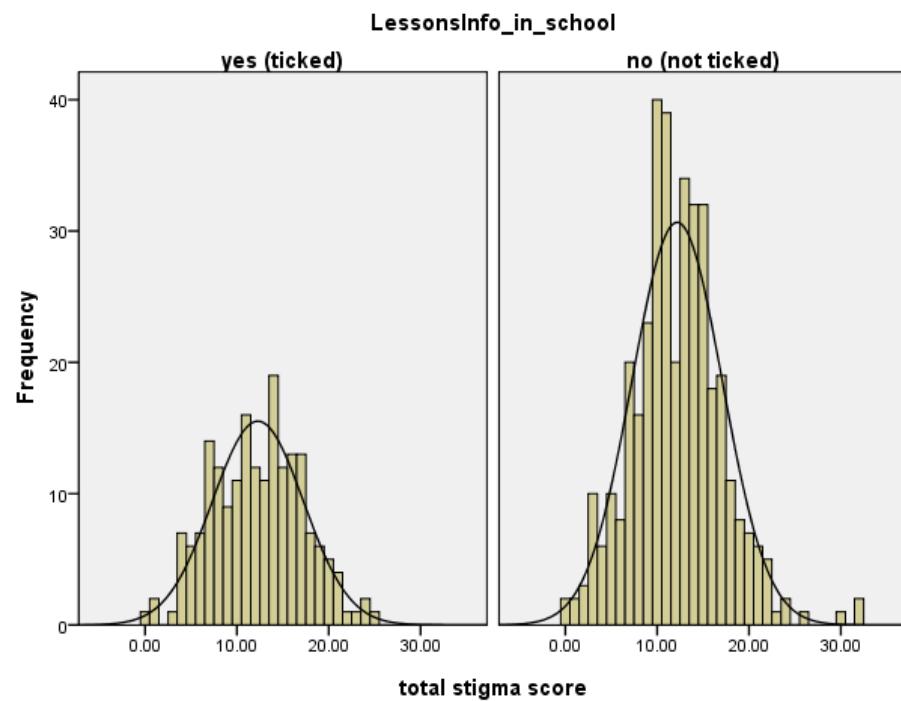


*Stigma scores by age-group (N = 584)*

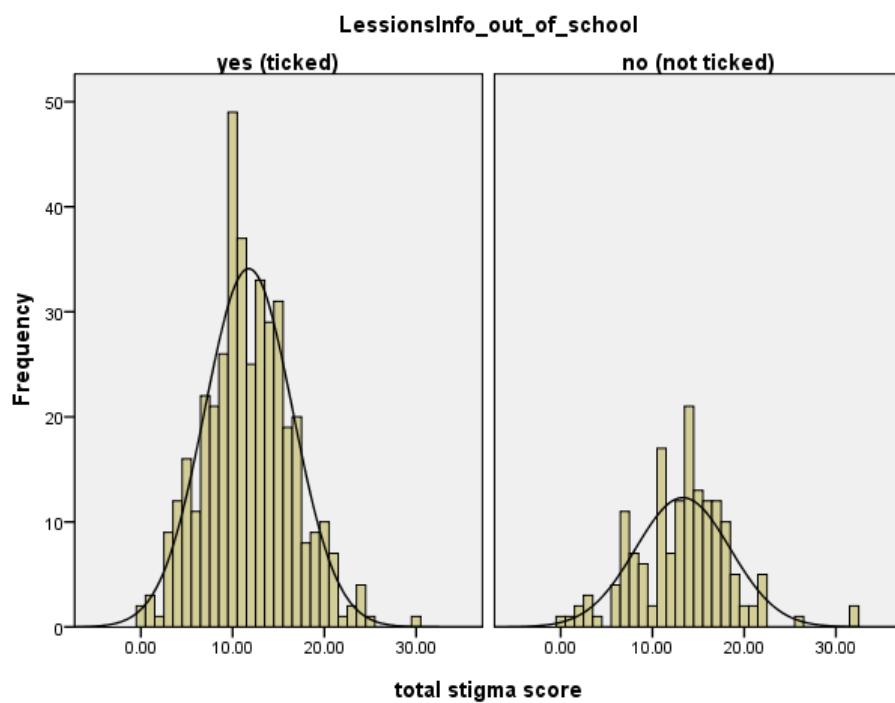


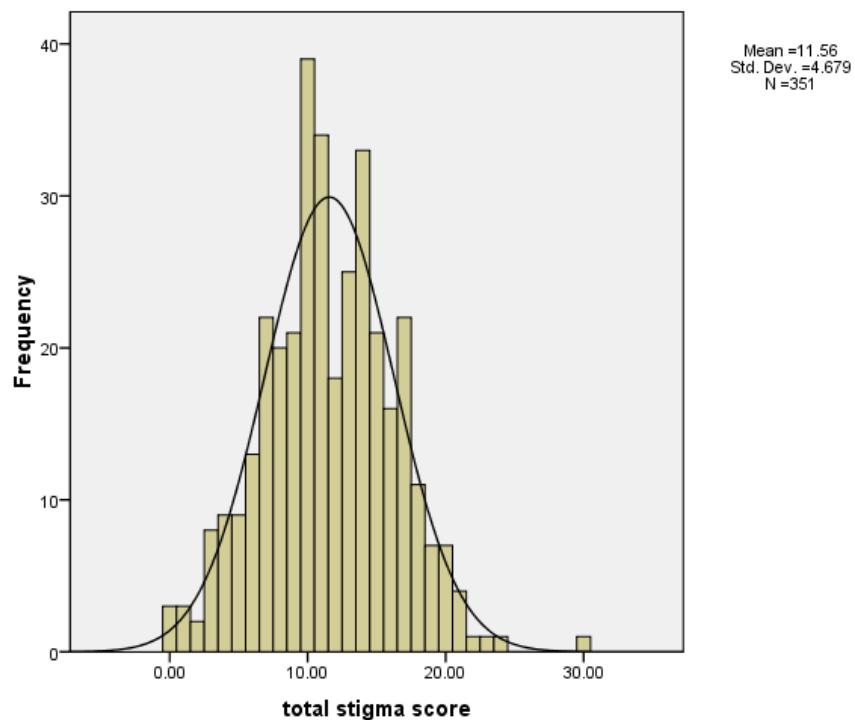
*Stigma scores by school (N = 584)**Stigma scores by correct recognition of depression and not (N = 584)*

*Stigma scores by mental health lessons inside school (N = 584)*

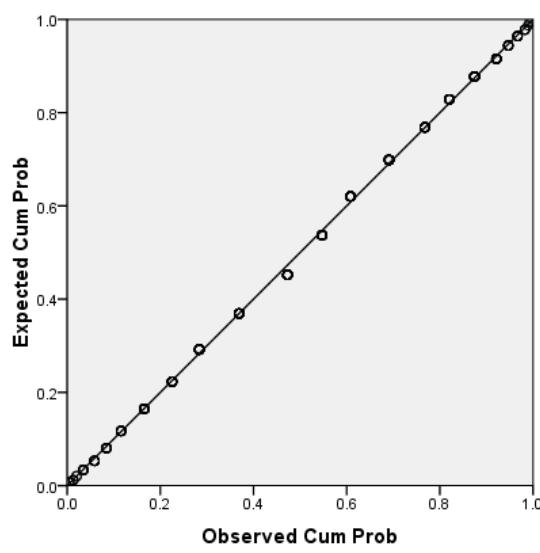


*Stigma scores by mental health lessons outside school (N = 584)*

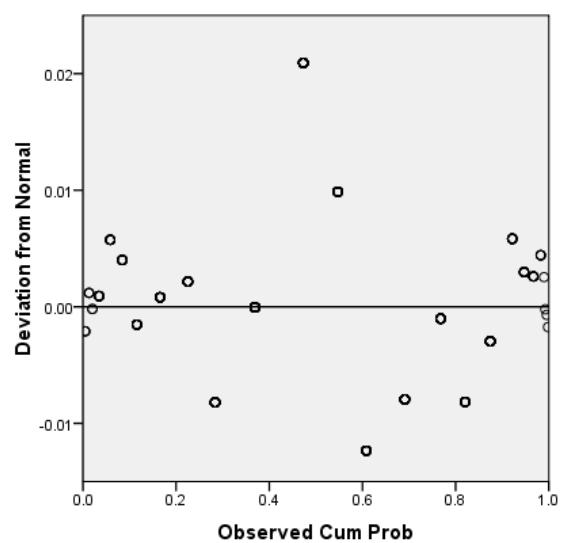


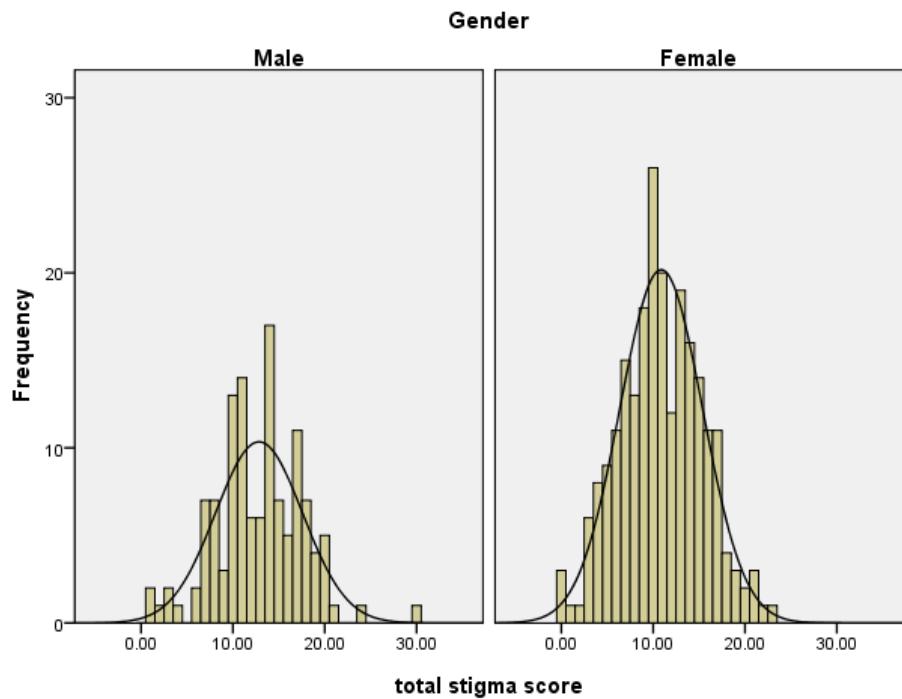
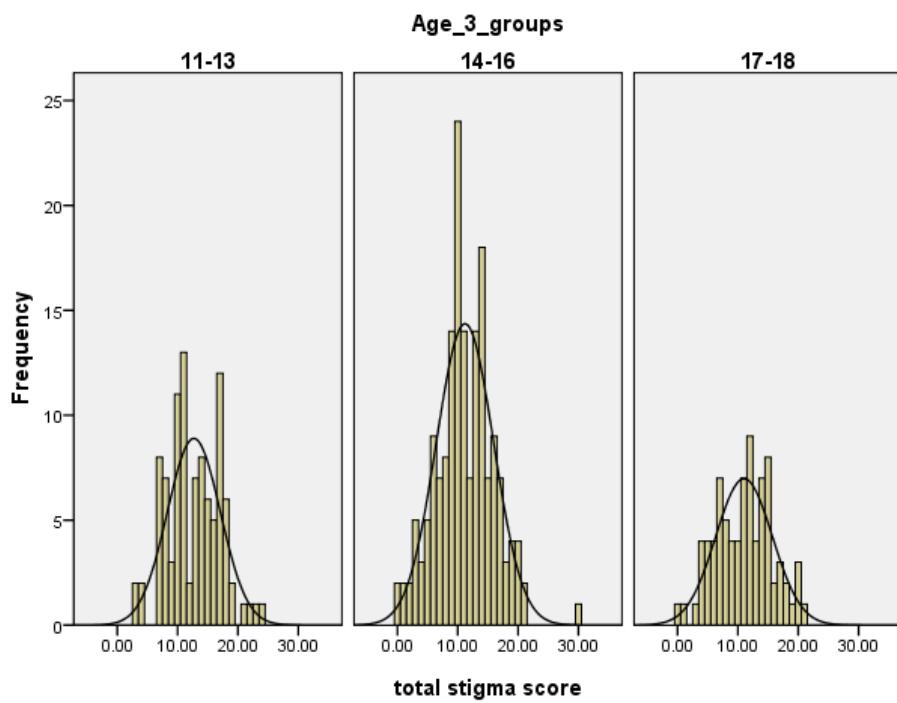
*Stigma Scores for the Subsample (N = 351)*

Normal P-P Plot of total stigma score

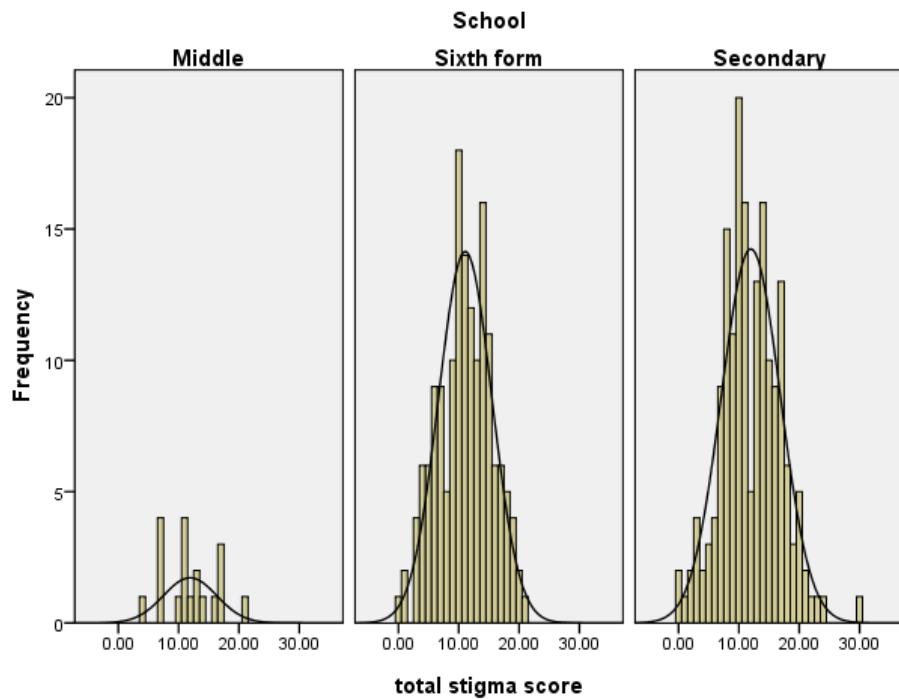


Detrended Normal P-P Plot of total stigma score



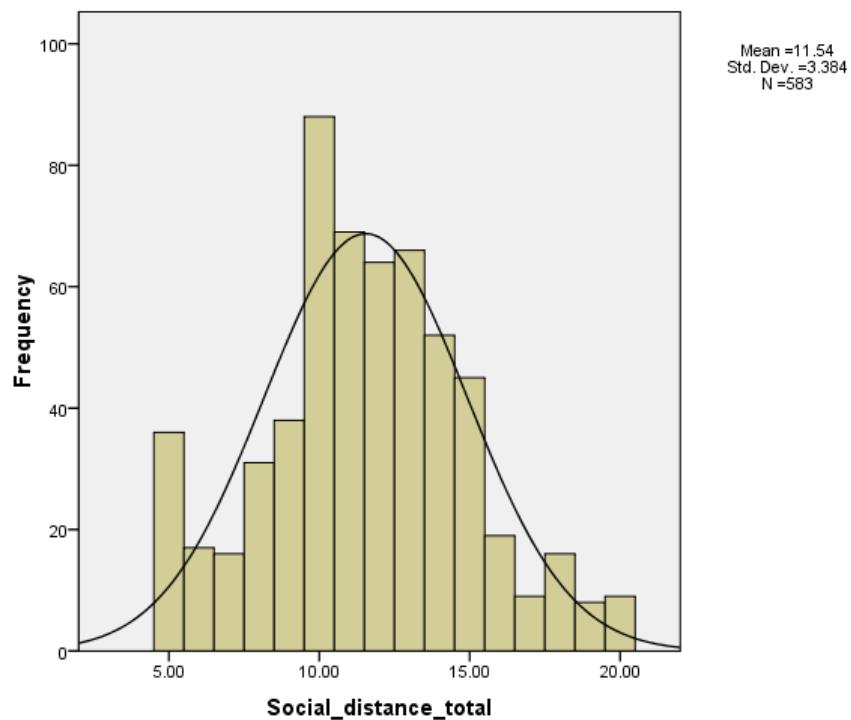
*Subsample stigma scores by gender (N = 351)**Subsample stigma scores by age-group (N = 351)*

*Subsample stigma scores by school (N = 351).*

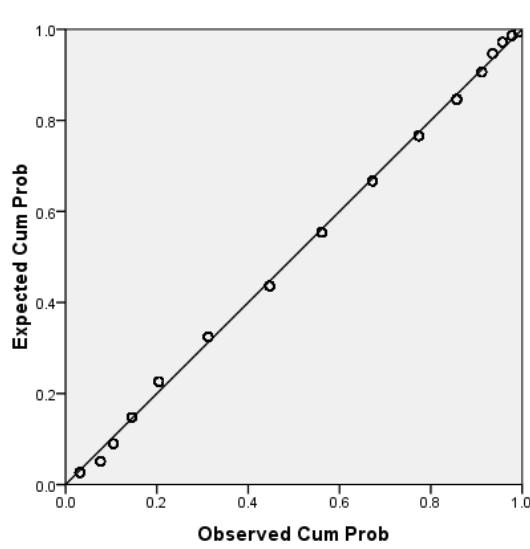


*Social Distance Scale for the Whole Sample*

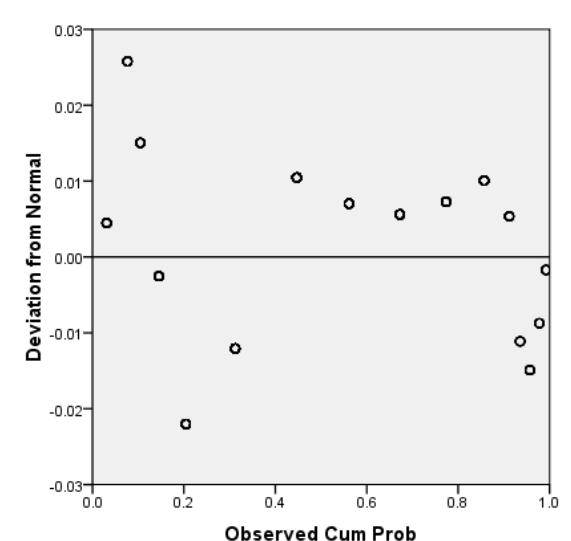
*Social distance scores (N = 583)*

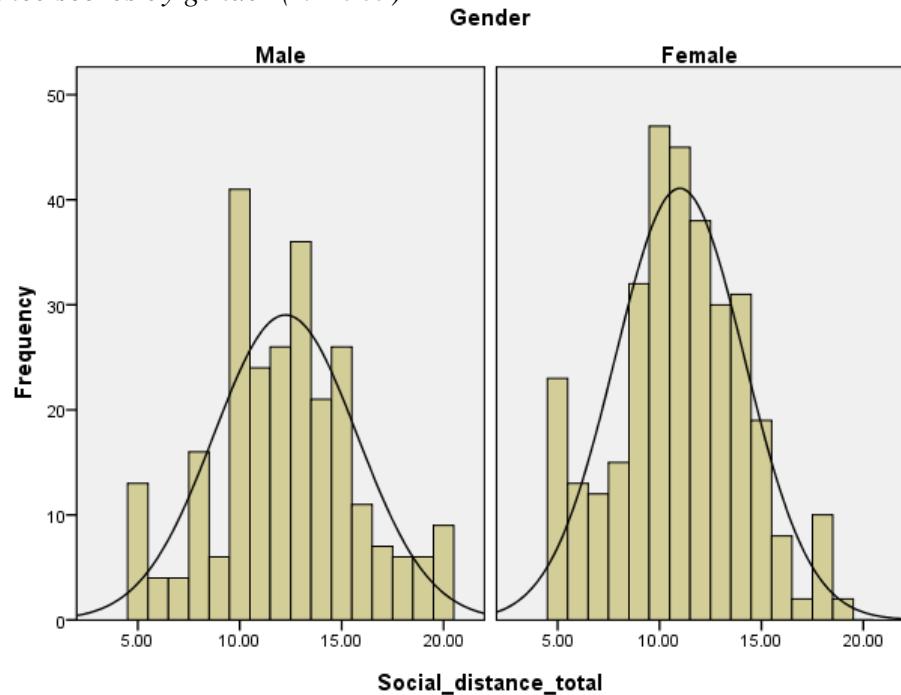
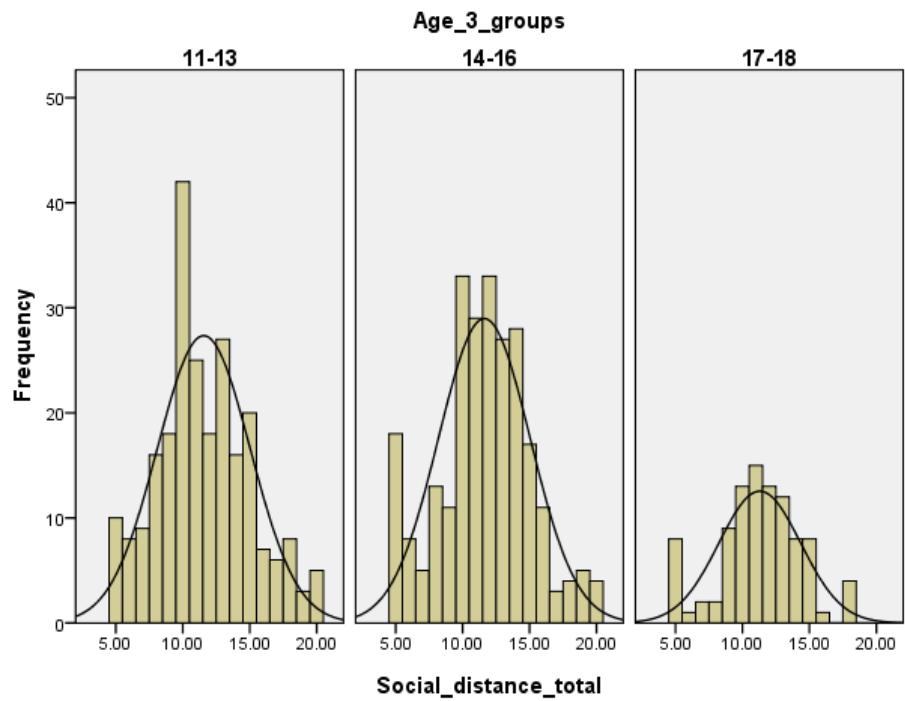


Normal P-P Plot of Social\_distance\_total

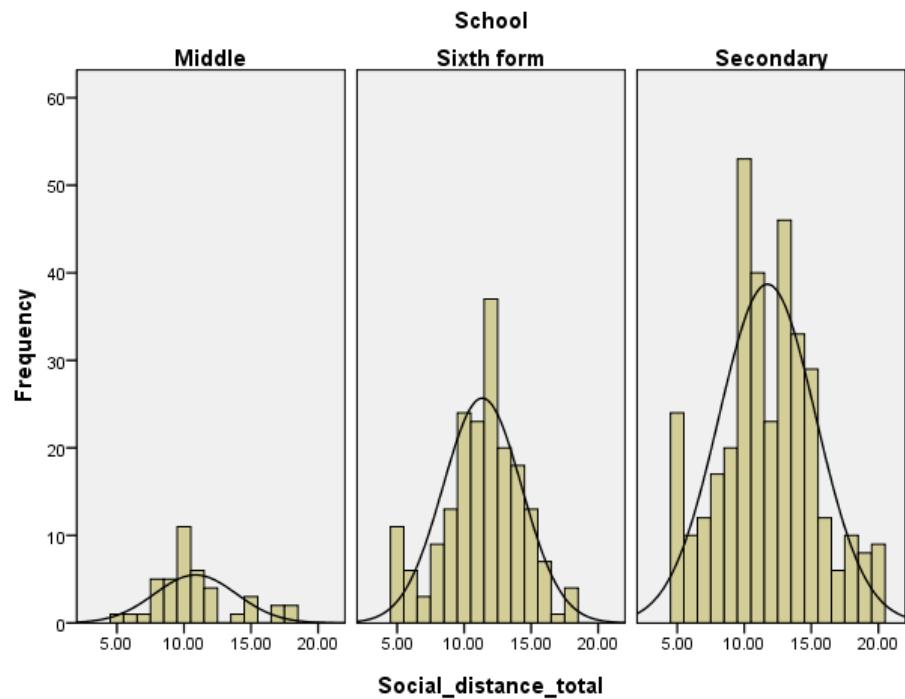


Detrended Normal P-P Plot of Social\_distance\_total

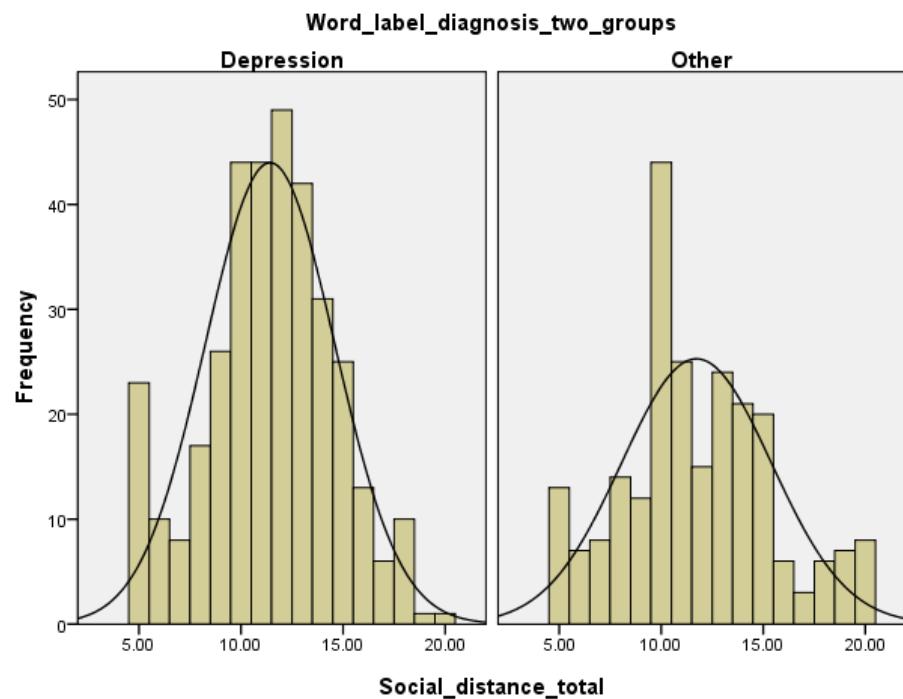


*Social distance scores by gender (N= 583)**Social distance scores by age-group (N = 583)*

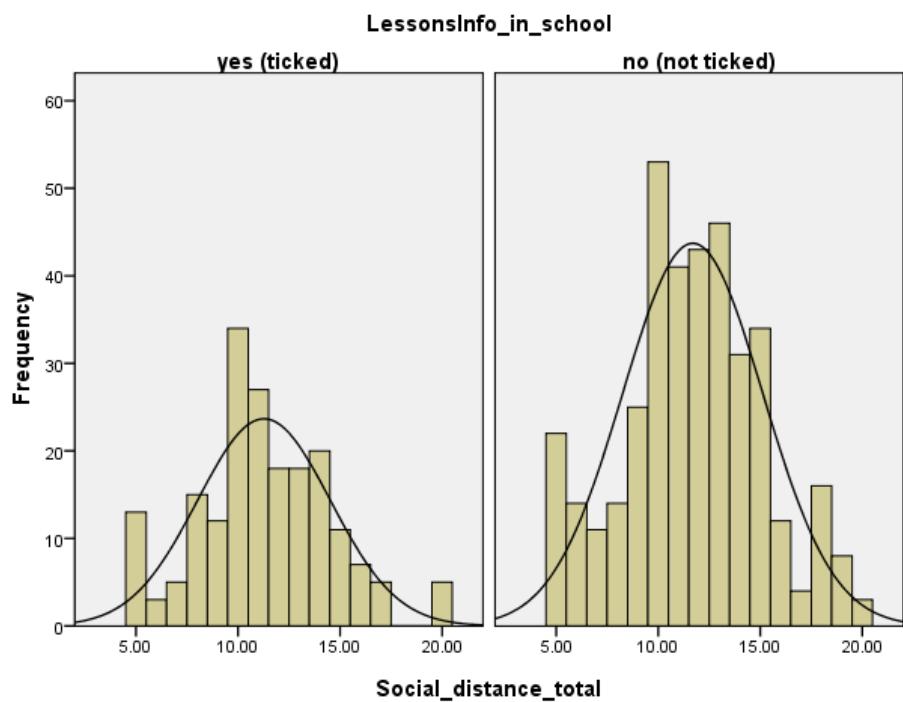
*Social distance scores by school (N = 583)*



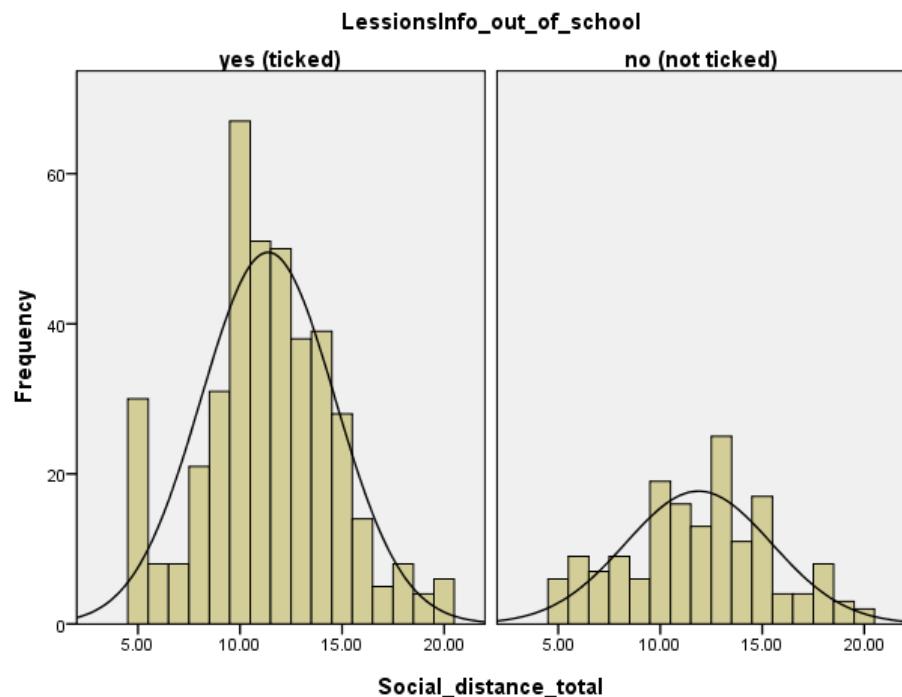
*Social distance scores by correct recognition of depression and not (N = 583)*

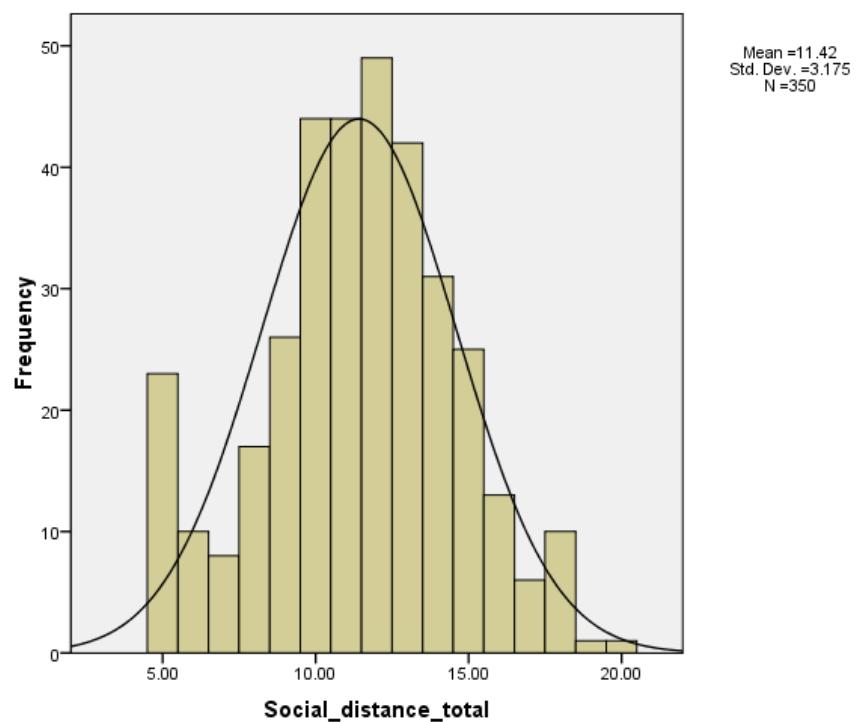


*Social distance scores by mental health lessons inside school (N = 583)*

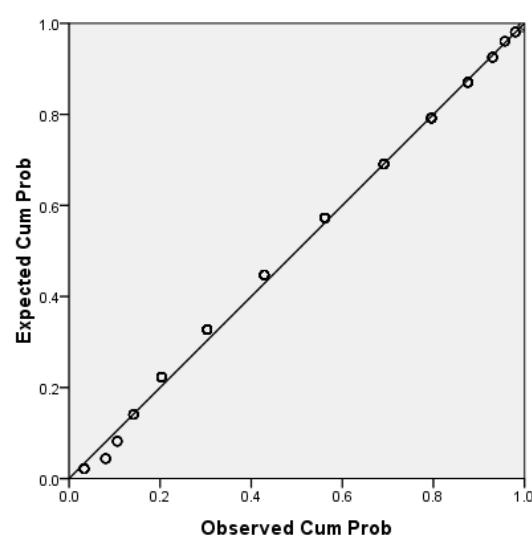


*Social distance scores by mental health lessons outside school (N = 583)*

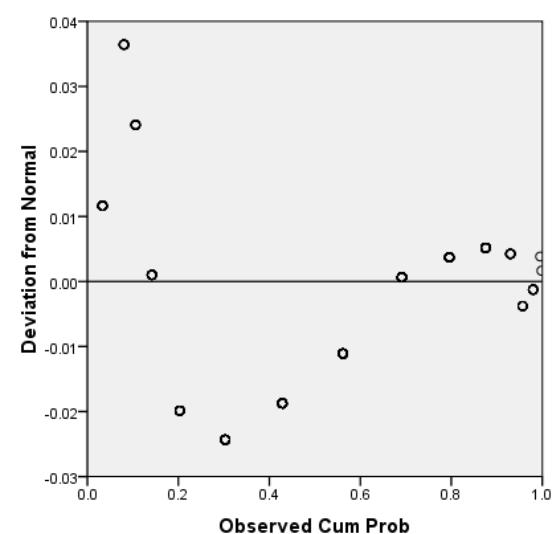


Subsample social distance scores ( $N = 350$ )

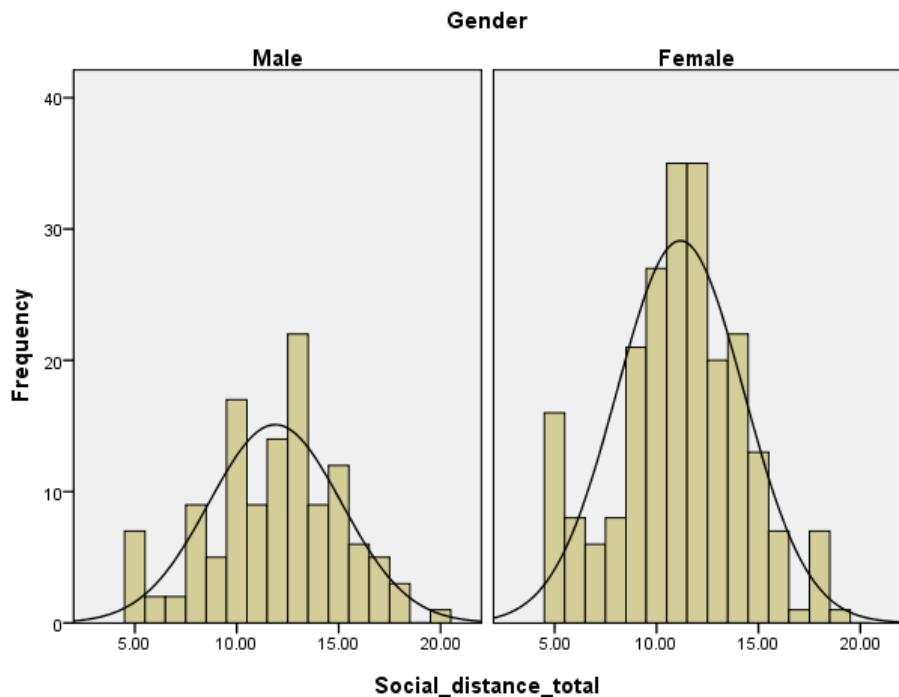
Normal P-P Plot of Social\_distance\_total



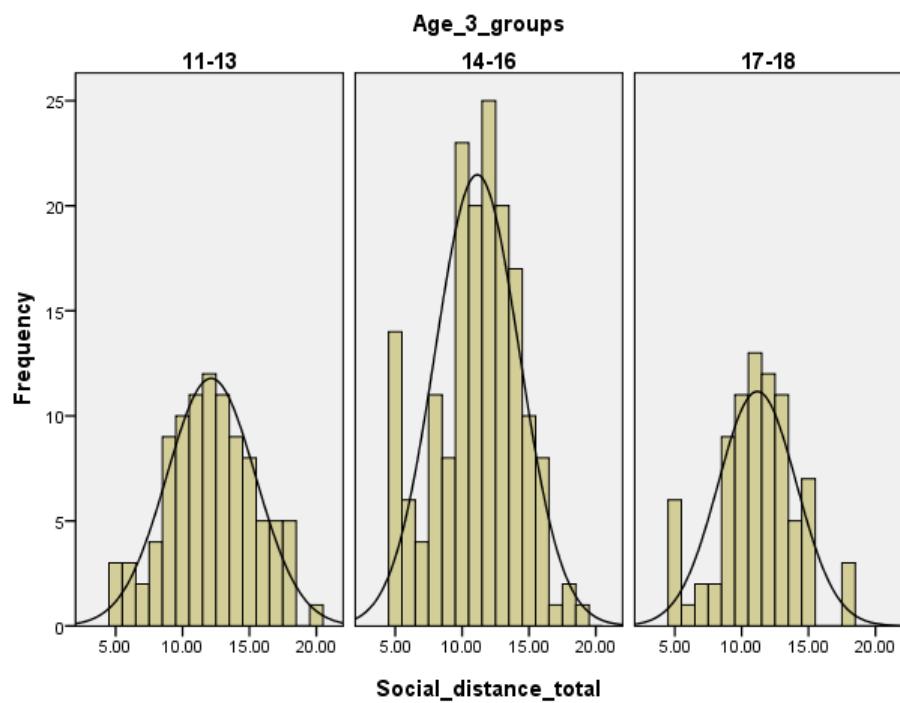
Detrended Normal P-P Plot of Social\_distance\_total

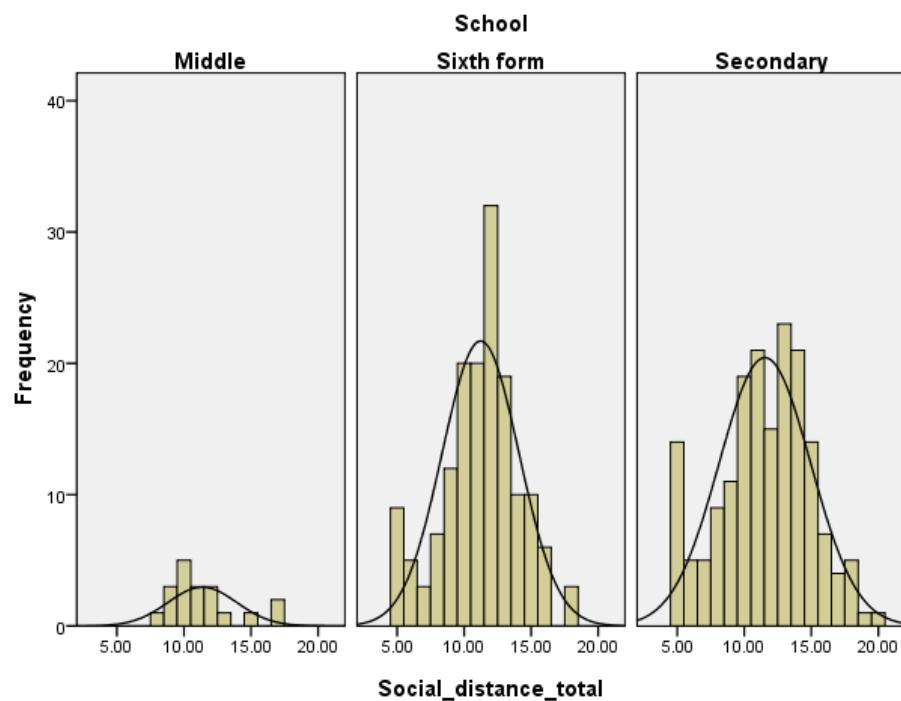


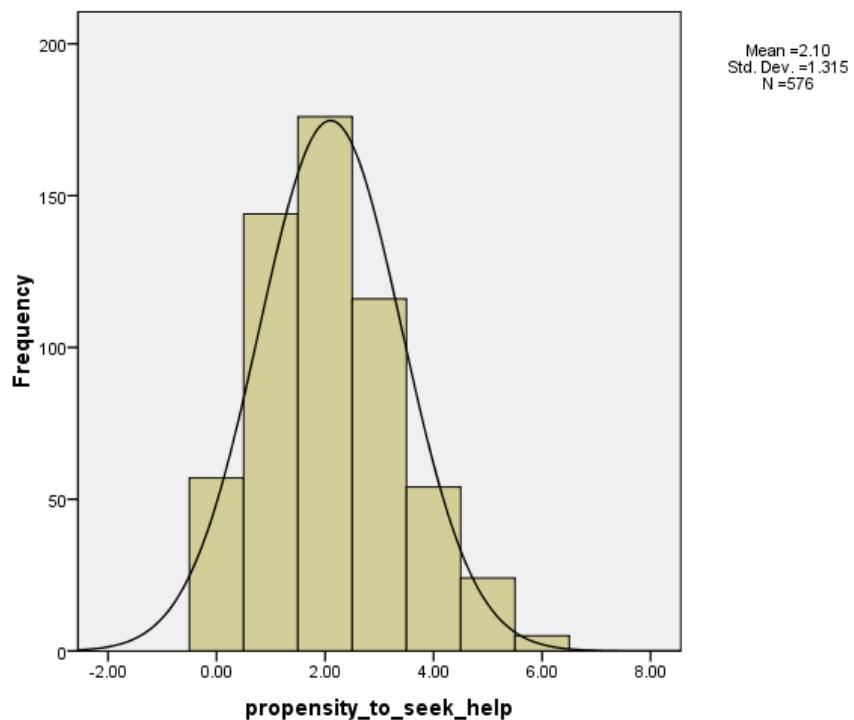
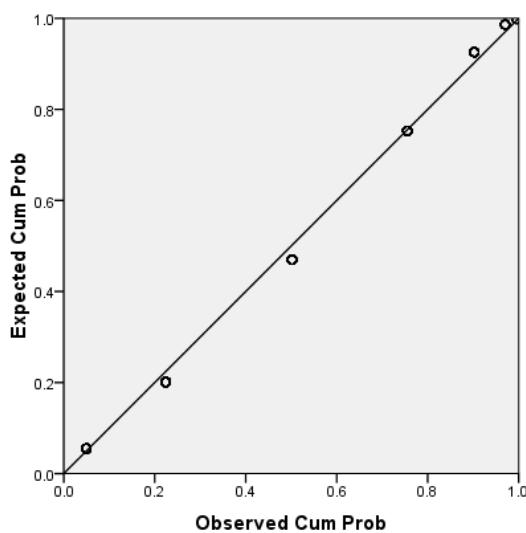
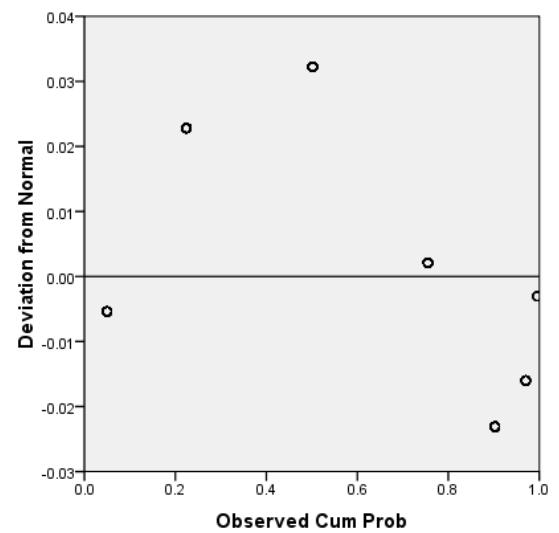
*Subsample social distance scores by gender (N = 350)*

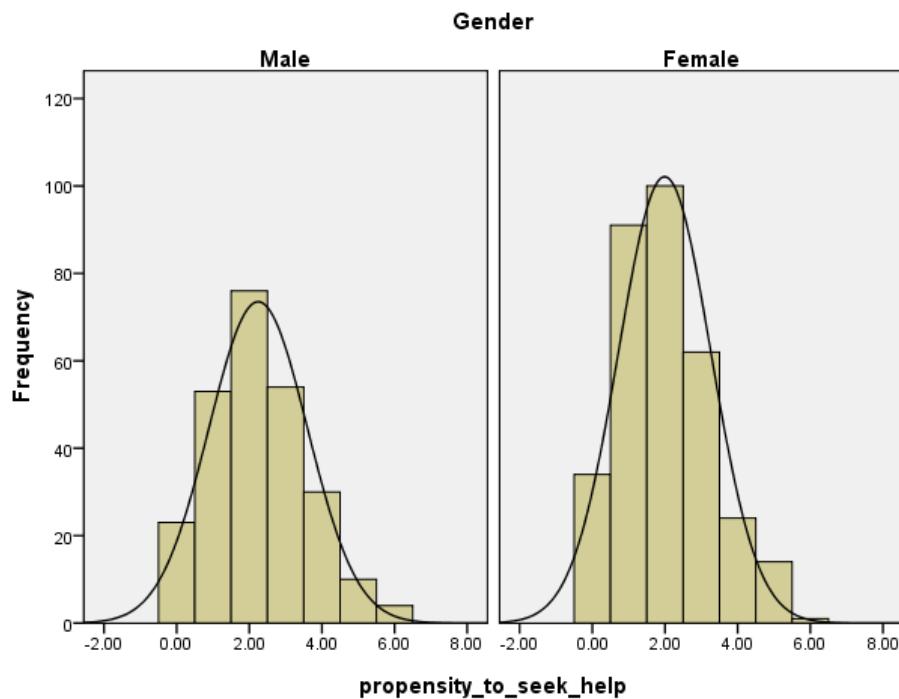
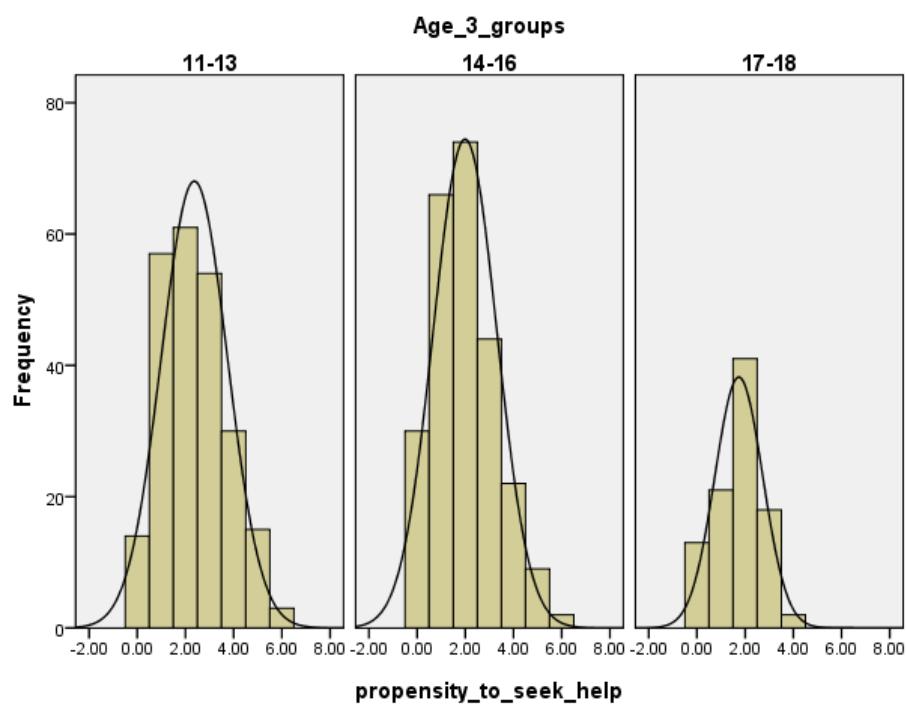


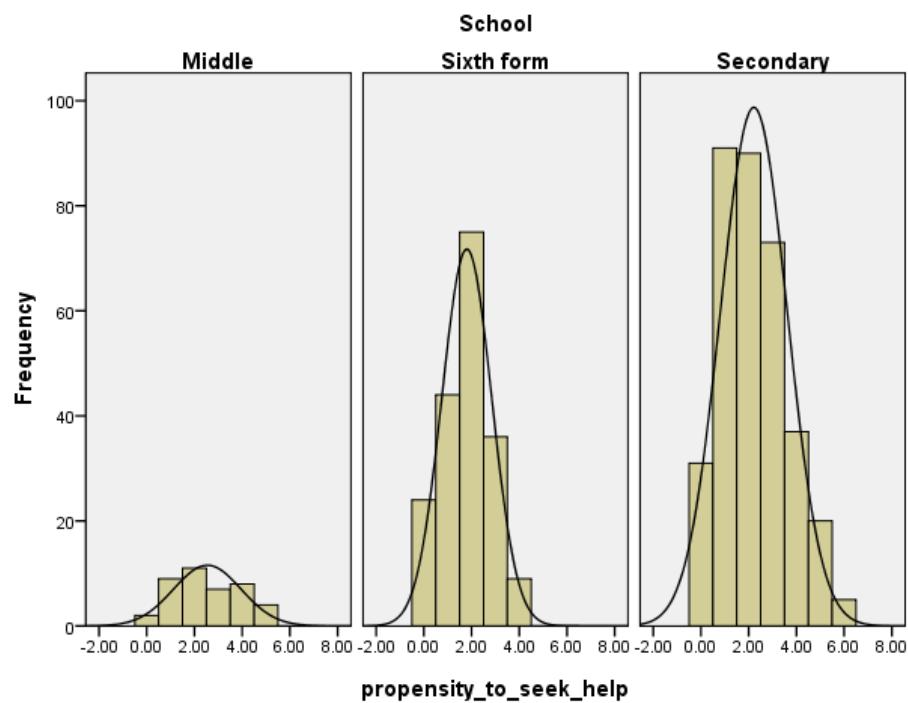
*Subsample social distance scores by age-group (N = 350)*



*Subsample social distance scores by school (N = 350)*

*Help-seeking (N = 576)*Normal P-P Plot of *propensity\_to\_seek\_help*Detrended Normal P-P Plot of *propensity\_to\_seek\_help*

*Help-seeking by gender (N = 584)**Help-seeking by age-group (N = 584)*

*Help-seeking by school (N = 584)*

*Participants' Responses on Individual Items from the Personal Stigma Scale: Frequencies (N) and Percentages (%).*

*Percentages Refer to % of Total (N = 584)*

Individual Responses from the Personal Stigma Scale <i>"Please tell us how strongly you personally agree or disagree with each statement:"</i>	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. People with a problem like Alex's could snap out of it if they wanted	22 (3.8)	67 (11.5)	162 (27.7)	235 (40.2)	98 (16.8)
2. A problem like Alex's is a sign of personal weakness	19 (3.3)	139 (23.8)	120 (20.5)	187 (32.0)	119 (20.4)
3. Alex's problem is not a real medical illness	18 (3.1)	68 (11.6)	162 (27.7)	221 (37.8)	115 (19.7)
4. People with a problem like Alex's are dangerous	22 (3.8)	81 (13.9)	138 (23.6)	204 (34.9)	139 (23.8)
5. It is best to avoid people with a problem like Alex's so you don't develop this problem	9 (1.5)	28 (4.8)	66 (11.3)	249 (42.6)	232 (39.7)
6. People with a problem like Alex's are unpredictable	21 (3.6)	150 (25.7)	261 (44.7)	113 (19.3)	39 (6.7)
7. If I had a problem like Alex's I would not tell anyone*	35 (6.0)	98 (16.8)	129 (22.1)	209 (35.8)	113 (19.3)
8. If I owned a company, I would not employ someone if I knew they had a problem like Alex's	28 (4.8)	124 (21.2)	196 (33.6)	166 (28.4)	70 (12.0)
9. When I am allowed to vote, I would not vote for a politician if I knew they suffered from a problem like Alex's.	29 (5.0)	124 (21.2)	185 (31.7)	155 (26.5)	91 (15.6)

\* Item 7 was removed for the purpose of the analysis. See Table 3, page 56.

*Numbers and Percentages of Participants 'Strongly Agreeing' or 'Agreeing' to Each Item on the Personal Stigma Scale. Total and Broken Down by Gender and Age. Percentages Refer to % of Total with Each Category.*

Individual Items from the Personal Stigma Scale	Gender N (%)		Age N (%)			Totals
	Males	Females	11-13	14-16	17-18	
1. People with a problem like Alex's could snap out of it if they wanted	50 (19.5)	39 (11.9)	47 (19.8)	34 (13.6)	8 (8.3)	89 (15.3)
2. A problem like Alex's is a sign of personal weakness	84 (32.8)	74 (22.5)	81 (34.0)	63 (25.2)	14 (14.6)	158 (27.1)
3. Alex's problem is not a real medical illness	51 (19.9)	35 (10.6)	46 (19.3)	34 (13.6)	6 (6.2)	86 (15.7)
4. People with a problem like Alex's are dangerous	53 (20.7)	50 (15.2)	40 (16.8)	49 (19.6)	14 (14.6)	103 (17.7)
5. It is best to avoid people with a problem like Alex's so you don't develop this problem	24 (9.3)	13 (3.9)	20 (8.4)	16 (6.4)	8 (8.3)	37 (6.3)
6. People with a problem like Alex's are unpredictable	90 (35.1)	81 (24.7)	57 (23.9)	87 (34.8)	27 (28.1)	171 (29.3)
7. If I had a problem like Alex's I would not tell anyone*	58 (22.7)	75 (22.9)	48 (20.1)	53 (21.2)	32 (33.4)	133 (22.8)
8. If I owned a company, I would not employ someone if I knew they had a problem like Alex's	76 (29.7)	76 (23.1)	45 (18.9)	71 (28.4)	36 (37.5)	152 (26.0)
9. When I am allowed to vote, I would not vote for a politician if I knew they suffered from a problem like Alex's.	72 (23.1)	81 (24.7)	49 (20.5)	68 (27.2)	36 (37.4)	150 (26.2)

\* Item 7 was removed for the purpose of the analysis. See Table 3, page 56.

## Appendix M: Participants' Responses to the Social Distance Items

*Participants' Responses on Individual Items from the Social Distance Scale:*

*Frequencies (N) and Percentages (%). Percentages Refer to % of Total (N = 584)*

Items from Social Distance Scale	Yes, definitely	Yes, probably	Probably not	Definitely not
<i>"Please tell us how happy you would be to:"</i>				
1. Live next door to Alex	89 (15.3)	276 (47.3)	180 (30.8)	38 (6.5)
2. Spend an evening socializing with Alex	95 (16.3)	269 (46.1)	176 (30.1)	44 (7.5)
3. Make friends with Alex	119 (20.4)	306 (52.4)	135 (23.1)	24 (4.1)
4. Work closely at school with Alex	87 (14.9)	261 (44.7)	201 (34.4)	35 (6.0)
5. Invite Alex round to your house	74 (12.7)	217 (37.2)	229 (39.2)	64 (11.0)

*Numbers and Percentages of Participants Ticking 'Probably Not or 'Definitely Not' to Each Item on the Social Distance Scale.*

*Percentages Refer to % of Total Within Each Category*

Items from Social Distance Scale	Gender N (%)		Age N (%)			Totals
	Males	Females	11-13	14-16	17-18	
1. Live next door to Alex	122 (47.6)	96 (29.2)	93 (39.1)	95 (38.0)	30 (32.2)	218 (37.3)
2. Spend an evening socializing with Alex	105 (41.0)	115 (35.1)	86 (36.2)	94 (37.6)	40 (41.7)	220 (37.6)
3. Make friends with Alex	84 (32.8)	75 (22.8)	65 (27.3)	70 (28.0)	24 (25.0)	159 (27.2)
4. Work closely at school with Alex	119 (46.5)	117 (35.7)	95 (40.0)	107 (42.8)	34 (35.4)	236 (40.4)
5. Invite Alex round to your house	144 (56.2)	149 (45.5)	107 (45.0)	135 (54.0)	51 (53.2)	293(50.2)

Regression analyses for the whole sample: Personal Stigma as the dependent variable.

Predictor variables: Gender, age, recognition of depression, level of contact, exposure to lessons or educational material inside and outside school

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.286 <sup>a</sup>	.082	.072	4.73259

a. Predictors: (Constant), LessonsInfo\_out\_of\_school,  
Level\_of\_contact\_total, Gender, LessonsInfo\_in\_school,  
Age\_in\_years, Word\_label\_diagnosis\_two\_groups

b. Dependent Variable: total stigma score

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	16.337	2.229		7.331	.000	11.959	20.715				.934	1.071
Gender	-1.500	.420	-.152	-3.568	.000	-2.326	-.674	-.200	-.151	-.147	.834	1.199
Age_in_years	-.170	.107	-.072	-1.591	.112	-.380	.040	-.146	-.068	-.065	.810	1.234
Word_label_diagnosis_two_groups	.609	.457	.061	1.332	.184	-.289	1.508	.159	.057	.055	.952	1.050
Level_of_contact_total	-.201	.079	-.107	-2.535	.012	-.357	-.045	-.151	-.108	-.104	.951	1.052
LessonsInfo_in_school	-.339	.437	-.033	-.775	.439	-1.197	.520	-.010	-.033	-.032	.903	1.107
LessonsInfo_out_of_school	1.131	.473	.103	2.394	.017	.203	2.060	.143	.102	.098		

a. Dependent Variable: total stigma score

Regression analyses for the whole sample: Social distance as the dependent variable.

Predictor variables: Gender, age, recognition of depression, level of contact, exposure to lessons or educational material inside and outside school

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.223 <sup>a</sup>	.050	.039	3.31724

a. Predictors: (Constant), LessonsInfo\_out\_of\_school,  
Level\_of\_contact\_total, Gender, LessonsInfo\_in\_school,  
Age\_in\_years, Word\_label\_diagnosis\_two\_groups

b. Dependent Variable: Social\_distance\_total

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	11.948	1.562		7.649	.000	8.880	15.017					
Gender	-1.193	.295	-.175	-4.047	.000	-1.772	-.614	-.183	-.171	-.169	.934	1.071
Age_in_years	.073	.075	.045	.974	.331	-.074	.220	-.007	.042	.041	.834	1.199
Word_label_diagnosis_two_groups	-.025	.321	-.004	-.079	.937	-.655	.604	.044	-.003	-.003	.810	1.234
Level_of_contact_total	-.127	.056	-.098	-2.289	.022	-.236	-.018	-.116	-.098	-.096	.952	1.050
LessonsInfo_in_school	.446	.306	.062	1.455	.146	-.156	1.048	.059	.062	.061	.951	1.052
LessonsInfo_out_of_school	.326	.331	.043	.986	.325	-.324	.977	.066	.042	.041	.903	1.107

a. Dependent Variable:

Social\_distance\_total

Regression analyses for the whole sample (to test the social psychological model): Social distance as the dependent variable. Predictor variables: Stigma scores, gender, age, recognition of depression, level of contact, exposure to lessons or educational material inside and outside school

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.395 <sup>a</sup>	.156	.145	3.12826

a. Predictors: (Constant), LessonsInfo\_out\_of\_school, Level\_of\_contact\_total, Gender, LessonsInfo\_in\_school, total stigma score, Age\_in\_years, Word\_label\_diagnosis\_two\_groups

b. Dependent Variable: Social\_distance\_total

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	8.110	1.544		5.252	.000	5.077	11.143					
total stigma score	.235	.028	.341	8.289	.000	.179	.291	.361	.335	.327	.918	1.089
Gender	-.840	.281	-.123	-2.989	.003	-1.393	-.288	-.183	-.127	-.118	.913	1.096
Age_in_years	.113	.071	.069	1.594	.111	-.026	.252	-.007	.068	.063	.830	1.204
Word_label_diagnosis_two_groups	-.168	.303	-.024	-.556	.578	-.763	.426	.044	-.024	-.022	.808	1.238
Level_of_contact_total	-.080	.053	-.062	-1.517	.130	-.183	.024	-.116	-.065	-.060	.941	1.063
LessonsInfo_in_school	.525	.289	.074	1.818	.070	-.042	1.093	.059	.078	.072	.950	1.053
LessonsInfo_out_of_school	.061	.314	.008	.193	.847	-.556	.677	.066	.008	.008	.894	1.119

a. Dependent Variable: Social\_distance\_total

Regression analyses for the subsample who correctly recognised depression: Stigma scores as the dependent variable.  
 Predictor variables: gender, age, level of contact, exposure to lessons or educational material inside and outside school

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R	Std. Error of the
			Square	Estimate
1	.293 <sup>a</sup>	.086	.072	4.50749

a. Predictors: (Constant), LessonsInfo\_out\_of\_school,  
 Level\_of\_contact\_total, LessonsInfo\_in\_school, Gender,  
 Age\_in\_years

b. Dependent Variable: total stigma score

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	18.292	2.382		7.679	.000	13.606	22.978					
Gender	-1.461	.530	-.149	-2.759	.006	-2.503	-.419	-.200	-.150	-.145	.944	1.059
Age_in_years	-.218	.128	-.094	-1.705	.089	-.470	.034	-.156	-.093	-.090	.910	1.099
Level_of_contact_total	-.290	.100	-.158	-2.888	.004	-.487	-.092	-.207	-.157	-.152	.924	1.082
LessonsInfo_in_school	-.308	.526	-.031	-.585	.559	-1.344	.727	-.023	-.032	-.031	.967	1.034
LessonsInfo_out_of_school	.940	.620	.081	1.515	.131	-.280	2.160	.098	.083	.080	.970	1.031

a. Dependent Variable: total stigma score

Regression analyses for the subsample who correctly recognised depression: Social distance scores as the dependent variable.  
 Predictor variables: gender, age, level of contact, exposure to lessons or educational material inside and outside school

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.202 <sup>a</sup>	.041	.026	3.13237

a. Predictors: (Constant), LessonsInfo\_out\_of\_school,  
 Level\_of\_contact\_total, LessonsInfo\_in\_school, Gender,  
 Age\_in\_years

b. Dependent Variable: Social\_distance\_total

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	13.199	1.655		7.974	.000	9.943	16.455					
Gender	-.504	.368	-.076	-1.370	.172	-1.228	.220	-.108	-.075	-.074	.944	1.059
Age_in_years	-.081	.089	-.052	-.916	.360	-.256	.093	-.105	-.050	-.049	.910	1.099
Level_of_contact_total	-.160	.070	-.128	-2.292	.023	-.297	-.023	-.151	-.125	-.123	.924	1.082
LessonsInfo_in_school	.450	.366	.067	1.230	.219	-.270	1.170	.071	.067	.066	.967	1.034
LessonsInfo_out_of_school	.377	.431	.048	.875	.382	-.471	1.225	.065	.048	.047	.970	1.031

a. Dependent Variable:  
 Social\_distance\_total

Regression analyses for the subsample who correctly recognised depression (to test the social psychological model): Social distance as the dependent variable. Predictor variables: Stigma scores, gender, age, recognition of depression, level of contact, exposure to lessons or educational material inside and outside school

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.376 <sup>a</sup>	.141	.126	2.96852

a. Predictors: (Constant), LessonsInfo\_out\_of\_school, Level\_of\_contact\_total, LessonsInfo\_in\_school, Gender, total stigma score, Age\_in\_years

b. Dependent Variable: Social\_distance\_total

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	9.088	1.703		5.337	.000	5.738	12.437					
total stigma score	.225	.036	.331	6.209	.000	.154	.296	.356	.323	.317	.914	1.094
Gender	-.176	.353	-.026	-.498	.618	-.870	.518	-.108	-.027	-.025	.923	1.083
Age_in_years	-.032	.085	-.021	-.383	.702	-.199	.134	-.105	-.021	-.020	.902	1.109
Level_of_contact_total	-.095	.067	-.076	-1.416	.158	-.226	.037	-.151	-.078	-.072	.901	1.109
LessonsInfo_in_school	.519	.347	.078	1.497	.135	-.163	1.202	.071	.082	.076	.966	1.035
LessonsInfo_out_of_school	.166	.410	.021	.405	.686	-.640	.972	.065	.022	.021	.963	1.039

a. Dependent Variable:  
Social\_distance\_total

## Unedited Comments by Participants

*“It was weird but yet interesting to actually sit and think about something like this”* (13-year-old girl).

*“I think it is sad that people suffer from this illness and we should not treat them differently”* (12-year-old boy).

*“I was happy to fill in this questionnaire, it was very clearly worded and easy to understand”* (16-year-old girl).

*“I think that children should learn about depression and other mental health issues”* (16-year-old girl).

*“Quite a nice simple questionnaire. Doesn't make me feel uncomfortable going through the questionnaire”* (16-year-old girl).

*“I think it's harsh if someone like Alex wasn't employed because of her depression, it makes me a little uneasy if that happened”* (17-year-old girl).

*“One school friend is now in a hospital because she didn't seek any help, but people who have talked openly seem to get better rather than worse”* (16-year-old girl).

*“Spotting someone with a problem like Alex may be hard because they might be good at hiding it”* (16-year-old boy).

*“Opened my mind”* (17-year-old boy).

*“Would have been better to have a maybe option for question 4”* (14-year-old boy).

*“Depression is all around and a lot of people have a negative attitude towards those who suffer. Although it can be frustrating, when someone finally believes they can get better it's certainly worth standing by them - as a human being should” (16-year-old girl).*

*“Although some people can get genuinely depressed and they should seek counselling, a lot of people bluff and should not be so selfish” (16-year-old boy).*

*“I have an emo friend, he is always depressed” (13-year-old boy).*

*“It was ok. A bit boring but I got out of lesson” (14-year-old boy).*

*“It reminded me of how my best friend used to act around the time of her GCSE exams” (16-year-old girl).*

*“I have not heard any people I know with this problem” (11-year-old boy).*

*“I try to help people that feel sad about themselves as I've seen documentaries about depression on TV. However we do not get enough education about it in school” (17-year-old girl).*

*“I used to have it, but i can't remember hearing about it at school, but my family told me about it” (16-year-old girl).*

*“There were one or two confusing questions but I understood most of the questions” (13-year-old boy).*

*“My girlfriend had depression but with help of family and friends she was okay” (17-year-old boy).*

*"At the end of question 5 - I don't think a person like Alex would become a politician due to lack of self-confidence and if they did they would get there by not disclosing any information about his condition" (15-year-old boy).*

*"It was a simple questionnaire and that's great" (15-year-old boy).*

*"I had a friend who had a problem very similar to this and I feel we should have learnt more about this at school to help understand the issue and avoid discrimination" (16-year-old girl).*

*"I would like to be taught more about depression" (16-year-old girl).*

*"I think a lot of it is attention seeking" (15-year-old boy).*

*"I perhaps could of answered the questions easier if I knew what was wrong with her" (13-year-old girl).*

*"I think people need to learn more about depression. People thought my mum was crazy but she had post-natal depression. No one understood" (16-year-old girl).*

*"I thought this was a good questionnaire and it really opened my eyes to the problem" (14-year-old girl).*

*"I think it is a very unusual topic to do a questionnaire about, but it was interesting and I knew exactly what to put" (14-year-old girl).*

*"It was like I knew her and I wanted to help" (11 year-old girl).*

*“If she’s suffering depression then she should just go to a doctor instead of lazing around all day”* (14-year-old girl).

*“It would be sad and not nice at all”* (11-year-old girl).

*“Didn’t fully understand the phrasing of some of the questions”* (14-year-old girl).

*“I think that it makes you more aware of how people feel and your opinions of them”* (15-year-old girl).

*“It made me think a bit more about mental health problems. I’d like to know more”* (12-year-old girl).

*“Sometimes I feel like alex. I get very down and won’t speak much, it’s hard”* (14-year-old girl).

*“We have watched bullying dvd’s about a group of people ganging up on someone like Alex”* (12-year-old boy).

*“I think they should not be treated like “oh your a freak and I don’t want to talk to you” because it may mentally make them more ill and depressed because of your comments”* (12-year-old girl).

*“I think this is a good idea to do in school. It means that parents can not influence your answers”* (11-year-old girl).

*“I have learnt that we can do things to help ourselves and others”* (13-year-old boy).

*“I think schools should give more help to people like Alex because she may not want to approach a teacher or older pupil”* (11-year-old girl).

*“Filling this in made me think about those people who are under depression and I wish I could help!”* (13-year-old girl).

*“I enjoyed filling in this questionnaire and think that this is an important thing”* (14-year-old boy).