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**EMPATHY'S EFFECT IN REDUCING STIGMA TOWARDS MENTAL ILLNESS:**

**AN INTERVENTION STUDY ON ATTITUDES TO SCHIZOPHRENIA USING  
MEDIA MODERATED CONTACT**

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## Abstract

Current research into stigma in mental health has looked into the effects of education and contact. Research has stated that direct contact has a better success rate in reducing stigma than that of education. Research has also shown that media-moderated contact (video contact with mental illness sufferers) can be just as successful in reducing stigma. Research has not however investigated why contact is so important in reducing stigma. Some literature suggests that it is the psychosocial components of contact which makes it a successful intervention strategy and that contact can elicit feelings of empathy, which in turn promotes prosocial behaviours and reduces stigma. This study looked into the effects of empathy, relating to a contact intervention type, on the mental illness schizophrenia. This study also investigated whether an intervention's effectiveness is moderated by initial levels of: pre-existing contact with mental illness, dispositional empathy, and emotional intelligence. This was conducted using a media moderated intervention involving three interventions of: 1. *Contact Empathy*, which consisted of video contact with a person who has schizophrenia. 2. *Non-Contact Empathy*, which consisted of an alternate contact type of a mental health professional talking about the experience of schizophrenia. 3. *Educational Control Intervention*, which consisted of a person speaking about mental illness from a factual and knowledge-based perspective. It was hypothesised that: 1. Eliciting empathy would influence the outcome variables (empathy towards mental illness, stigma towards mental illness, attitudes towards schizophrenia) and 2. Pre-existing levels of contact, dispositional empathy and emotional intelligence would moderate the effect on an intervention. Results of the ANCOVA showed no significant main effect of intervention type, nor interaction with the effect of intervention with any of the moderators. Limitations and implications are discussed.

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## **Empathy's Effect in Reducing Stigma towards Mental Illness:**

### **An Intervention Study on Attitudes to Schizophrenia, Using Media Moderated Contact.**

#### **Introduction**

##### **1.1 The importance of reducing stigma towards mental illness**

Although it is estimated that one in four individuals will probably experience a mental health problem over a given year, it is likely that 90% of these people will experience some form of stigma and discrimination relating to their illness (Gronholm, Henderson, & Thornicroft, 2017; Phelan, Link, & Dovidio, 2008; Time to Change, 2017a).

Mental health stigma is dangerous because it can affect the recovery and quality of life of a patient (Fokuo et al., 2017; Wahl, 1999). Stigma has been shown to prevent capable individuals with mental health difficulties from achieving basic life goals, such as independent living and attaining a satisfactory career (Brockington, Hall, Levings, & Murphy, 1993; Corrigan, 2004a; Fokuo et al., 2017). For example, public stigma has been shown to cause mental illness sufferers to be less likely to be rented to (Corrigan et al., 2003; Thornicroft, 2006), to be hired for jobs (Bailey, 1999; Corrigan & Penn, 1999; Marwaha & Johnson, 2004), to be less likely to find a life partner and marry, or have children (Rose, Thornicroft, Pinfold, & Kassam, 2007; Thornicroft, Brohan, Kassam, & Lewis-Holmes, 2008). As a consequence of stigma, mental health sufferers are more likely to suffer functional and emotional difficulties (Ilic et al., 2012), in addition to further mental health issues, such as general anxiety, social anxiety, phobias and depression (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Karp, 2002; Perry, 2014).

Furthermore, public stigma results in negative consequences for mental health sufferers by affecting their social wellbeing (Link & Phelan, 2006; Wood & Irons, 2017). Positive social

contact is a vital component in psychological and physiological health (Kurzban & Leary, 2001), however, mental illness has been likened to that of drug addiction, prostitution and criminality by suggesting that it is something to fear (Corrigan & Watson, 2002a), thus making it very difficult for individuals to be socially accepted (Schomerus et al., 2012; Sahu, Bhattacharjee, Sahu, & Mukherjee, 2017). Without this element of social interaction, individuals can sustain a multitude of physical, emotional and behavioural issues through feelings of social seclusion and rejection (Baumeister & Leary, 1995). For example, research has shown that 90% of actual and attempted suicides are associated with mental health and psychiatric disorders and that these attempts can be interconnected with feelings of depression. Mental health sufferers are also more likely to succeed in suicide compared to individuals who do not experience mental health difficulties (Hawton, Houston, Haw, Townsend, & Harriss, 2003; Mental Health Foundation, 2017).

As a result of public stigma, mental illness sufferers have additionally begun to self-stigmatise by placing blame on themselves for their illness (Crocker & Major, 1989; Crocker, Major, & Steel, 1998; Link, Yang, Phelan, & Collins, 2004; Pattyn, Verhaeghe, Sercu, & Bracke, 2014; Thornicroft et al., 2008). Self-stigma has been found to leave individuals feeling less capable to live independently, attain a secure career and seek medical help. This in turn has increased unemployment rates and lowered incomes for those who are mentally ill (Boyd, Basset, & Hoff, 2016; Brantschen et al., 2017; Corrigan, & Watson, 2002b; Holmes, & River, 1998; Link, 1987; Watson, Corrigan, Larson, & Sells, 2007; Wilkinson, & Pickett, 2017). Mental illness sufferers also feel less capable and confident in social situations as they fear being rejected by others (Bolton, 2003; Markowitz & Engelman, 2017). As a result, stigma sufferers' further distance themselves from social scenarios and attempt to isolate themselves even more so from the public (Blaine, 2000; Kelly, Zuroff, Leybman, & Gilbert, 2012; Link,

Mirotznik, & Cullen, 1991; Martin, Pescosolido, & Tuch, 2000). Each of these types of failures elicit feelings of lowered self-esteem and self-worth, as well as a lacking in self-confidence and self-efficacy (Corrigan, & Rao, 2012; Corrigan, Watson, & Barr, 2006; Major & O'Brien, 2005; Vogel, Wade, & Haake, 2006).

Although mental health can be managed and treated, stigma can stop those with mental health issues from seeking treatment and engaging in the mental health services provided by the government (Corrigan, 2004b; Vogel, Bitman, Hammer, & Wade, 2013). Many individuals who suffer with a mental illness either never pursue treatment or seek help at first and then fail to continue treatment (Andrews & Issakidis, 2001; Björkman & Angelman, 2008; Corrigan, 2004a). Research suggests that individuals with mental health difficulties fear telling others about their illness because they are concerned that they will be treated differently or in an unfair way (Moses, 2010).

## **1.2 The importance of reducing stigma towards Schizophrenia**

Reducing stigma is especially important for illnesses such as schizophrenia. Even compared to other mental health issues (depression and anxiety), schizophrenia is still heavily stigmatised (Angermeyer & Matschinger, 2003; Crisp, Gelder, Goddard, & Meltzer, 2005; Crisp et al., 2000) and is often presented more negatively by the media, especially in media fiction (Angermeyer & Schulze, 2001; Corrigan, 2005; Corrigan, Kerr, & Knudsen, 2005). For example, schizophrenia has often been presented in the media as an unpredictable and violent illness (Akram, O'Brien, O'Neill, & Latham, 2009). Some movies have even falsely suggested that schizophrenia is caused by the events of severe life traumas such as abusive parenting. Some examples of this are the films 'Suddenly Last Summer' and 'The Three Faces of Eve' (Owen, 2012).

Schizophrenia is a severe and chronic mental disorder that affects how a person thinks, behaves, and feels (American Psychiatric Association, 2013; National Institute of Mental Health, 2015). When symptoms are active, they can include a loss of touch with reality, troubles with thinking and concentration, delusions, mistaken beliefs, hallucinations and diminished motivation (American Psychiatric Association, 2017; Mental Health Foundation, 2016; Mind, 2017). Nonetheless, most individuals who suffer from schizophrenia, once treated, are able to improve greatly with time and can continue on to lead a regular life (McEvoy et al., 2006; Rethink Mental Illness, 2016; Young Minds, 2017).

Schizophrenia and stigma towards schizophrenia is important to study because it is an illness that can affect around one in one-hundred people at one point in their life (Rethink Mental Illness, 2017). It can appear at any time but is most likely to occur between the ages of 15 and 35 (American Psychiatric Association, 2017; Shrivastava, Johnston, & Bureau, 2012; Young Minds, 2017). The exact cause of schizophrenia is unknown; however, scientists believe it is a hereditary predisposition (Sane, 2017) that can be associated with chemical changes within the brain. These can be triggered through trauma, drug misuse and stressful experiences (American Psychiatric Association, 2017; Mental Health Foundation, 2017; NICE, 2017).

Acute symptoms of schizophrenia can be simple changes like issues with sleeping, along with irritability, a deterioration in studies and a change of friends (American Psychiatric Association, 2013; NAMI, 2017). More severe symptoms of schizophrenia can fall into two main symptomatic categories of positive and negative (NHS, 2017). Positive symptoms relate to issues with psychosis (Sane, 2017). Psychotic episodes can include confused thought patterns; simple everyday tasks can no longer make sense or be processed correctly (American Psychiatric Association; Rethink Mental Illness, 2016). Delusions and hallucinations; these can be as severe as unfathomable beliefs and seeing, hearing, feeling and smelling things that are

not actually present (Mental Health Foundation, 2017; Mind, 2017; NHS, 2017; Sane, 2017). Negative symptoms relate more to the emotional effects that the illness can have. This can include a lack of energy, loss of concentration and motivation, acting emotionless and disconnected, and showing little interest in life (Mental Health Foundation, 2017; NAMI, 2017). These symptoms can often be mistaken for clinical depression (NAMI, 2017). Schizophrenia can also affect a person's cognitive function, such as their working memory and ability to understand information in order to make a decision. These symptoms are less common (National Institute for Mental Health, 2017), however, cognitive issues can also elicit anosognosia which is where an individual is unable to grasp or denies the fact of being unwell. This makes treatment a difficult task (NAMI, 2017).

Up to 26 million people in the world are currently living with Schizophrenia (Mental Health Foundation, 2017). Out of these 26 million, one in four will recover completely from their symptoms, and three in five will get better with treatment and be able to live a healthy and consistent life, like any other (Royal College of Psychiatrists, 2017a). However, because suicide is often more common in schizophrenia compared to other mental illnesses (Hor & Taylor, 2010; Royal College of Psychiatrists, 2017b), it makes it a particularly important mental illness with which to reduce stigma in. Around one in ten sufferers will take their own life because of the effect the illness can have (Mental Health Foundation, 2017). This is particularly prominent in cases where symptoms have been untreated (Royal College of Psychiatrists, 2017b) and when fear, stigma and lack of public understanding appear alongside the illness (NICE, 2017).

### **1.3 Why is Schizophrenia so severely stigmatized?**

Due to the complexity of the illness (American Psychiatric Association, 2017), schizophrenia is one of the highest rated mental conditions for stigmatized attitudes (Angermeyer & Schulze, 2001; Schulze & Angermeyer, 2003). Schizophrenia is often confused with many other severe and chronic mental disorders and has been frequently misinterpreted for a different condition altogether (Ross & Goldner, 2009). In fact, there is more misrepresented information about schizophrenia than there is for any other mental health conditions (Mind, 2017). For example, research suggests that lay people believe schizophrenia involves multiple personalities, however, this is not the case – split personality disorder and schizophrenia are referred to in the DSM-V as separate mental health conditions (Mental Health Foundation, 2016). Although the behaviour of a schizophrenic can potentially fluctuate because of the symptoms they may be faced with, this does not mean that they have more than one personality (Lefley, 2016).

Another myth is that people who suffer with schizophrenia are extremely violent, especially unto others (Corrigan & Kleinlein, 2005; Graves, Casisi, & Penn, 2005); this is also incorrect. People with schizophrenia are much more likely to harm themselves than they are others and violence only typically occurs with a combination of substance abuse with the illness (National Institute of Mental Health, 2015). More truthfully, when a schizophrenic's symptoms worsen, they are likely hide themselves away and withdraw, rather than confront others (Lefley, 2016).

Lastly, many individuals believe that people who are diagnosed with schizophrenia are never able to get better (Time to Change, 2017b). However, one in four people with schizophrenia are likely to completely recover from their symptoms, and three out of five will

be helped by treatment, get better with treatment and follow on to lead healthy and ordinary lives (Royal College of Psychiatrists, 2016)

Misconceptions such as these may be why schizophrenic patients have such a difficult task in overcoming stigma (Ross & Goldner, 2009). For instance, two large-scale surveys focusing on attitudes towards schizophrenia found that schizophrenia is considered more dangerous and unpredictable than many other mental illnesses. For example, negative attitudes towards schizophrenia rated higher in comparison to other disorders evaluated, such as severe depression, eating disorders and alcohol abuse. These negative attitudes were especially high in regard to the question of whether individuals believed patients would be able to recover from their illness (Crisp et al., 2000; Crisp et al., 2005). A recent survey, which consisted of a nationally representative sample of 1725 individuals living in Great Britain, showed 66% of participants believed that individuals who suffered with the illness were dangerous (see table 1). Furthermore, over 70% deemed sufferers as unpredictable and over half of the sample believed they would struggle to hold a conversation with a schizophrenic (Crisp et al., 2005). Table 1, taken from Crisp et al., (2005), shows additional beliefs that participants thought about individuals who suffer from schizophrenia.

Table 1

*Public opinions of a large-scale follow-up survey about schizophrenia, stating the percentage of participant opinion ratings pre follow-up, and post follow-up.*

Opinion	Schizophrenia	
	1998	2003
Danger to others	71.3(68.9-73.6)	66
Unpredictable	77.3(75.0-79.6)	73
Hard to talk to	58.4(55.6-61.1)	52
Feel different	57.9(55.1-60.7)	37
Selves to blame	7.6 (6.2-8.9)	6
Pull self together	8.1 (6.9-9.3)	8
Not improved if treated	15.2(13.3-17.2)	12
Never recover	50.8(47.7-54.0)	42

(Data taken from Crisp et al., 2005)

Public attitude surveys also show that the majority of the population believe people with schizophrenia are of low intelligence, dangerous, frightening, aggressive, and lack self-control (e.g. Angermeyer & Matschinger, 1996).

Misconceptions like this are easily disseminated and inflated by the media (Corrigan, Markowitz, & Watson, 2004). For example, research has highlighted that in more than 40 films released between 1990 and 2010, 80% of characters portraying Schizophrenia were displayed as violent and homicidal (Owen, 2012). Content analysis studies also suggest that news reports are often dramatized to insinuate that people who are mentally ill commit violent attacks and murders intentionally (Hillert et al., 1999; Wahl, 2003). There has also been research to suggest

selective coverage by journalists in cases of violence related with schizophrenia (Stark, Paterson, & Devlin, 2004). This further leads the general population to believe that all schizophrenic sufferers are dangerous and unpredictable (Angermeyer & Matschinger, 1996; Philo, 1997; Wahl, 1995, 2004).

#### **1.4 What causes stigma in mental illness: The media and misconceptions**

Understanding the cause of stigma over mental illness cannot be pin pointed to one particular factor. In actuality, many eliciting elements can result in stigmatized attitudes (Link, 2011; Yeh, Jewell, & Thomas, 2017) and this is what makes stigma such a difficult obstacle to overcome (Coleman, Stevelink, Hatch, Denny, & Greenberg, 2017; Shih, 2004). Nevertheless, three fundamental components to highlight for potentially reducing stigmatised attitudes in mental health are: 1. Lack of awareness and knowledge of mental health, 2. Media, stereotypes and labelling, 3. Lack of emotional understanding for mental health.

##### *1.4.1 Lack of awareness and knowledge of mental health.*

Although  $\frac{1}{4}$  of the population is likely to suffer from mental health problems (Nordt, Rössler, & Lauber, 2006), public knowledge of mental health conditions and the effects of these conditions are limited (Gulliver, Griffiths, & Christensen, 2010; Jorm, 2000; Rickwood, Deane, & Wilson, 2007). This is not only detrimental for the public in relation to stigmatised attitudes, but also for mental health sufferers themselves. Lack of awareness and insight into an illness one may be faced with has been shown to increase illness relapse, refusal of treatment and repetition of risky behaviour to oneself (McEvoy, Appelbaum, Apperson, Geller, & Freter, 1989; McEvoy, Apperson et al., 1989; McEvoy et al., 1989).

Consequently, the public's lack of awareness around mental health instinctively causes society to be frightened and deviate away from the threat (Corrigan & Watson, 2002b; Martin

et al., 2000; Thornicroft, 2006). Ignorance relating to mental health elicits an inherent response of fear, as suggested by Feldman and Crandall (2007). Their study found three main components that were the likeliest to lead to social distancing: individuals who were more likely to believe that mental illness sufferers were dangerous, were more likely to be rejecting towards mental illness, and acted out of fear for their safety (Feldman & Crandall, 2007). This further brings about a chain reaction of prejudicial views, discrimination, stereotypes and labels (Collins, Wong, Cerully, Schultz, & Eberhart, 2012; Martin et al., 2000; Stuber, Meyer, & Link, 2008). This is moreover enhanced by the media which sustains and exaggerates the misconceived views held by the public (Ritterfeld & Jin, 2006). Through mental health education however, studies have shown the potential for tackling issues of public knowledge, thereby increasing individuals awareness of mental health and reducing stigmatised attitudes (Griffiths, Christensen, Jorm, Evans, & Groves, 2004; Pinfold et al., 2003; Thornicroft, Rose, Kassam, & Sartorius, 2007).

#### *1.4.2 Media, stereotypes and labelling.*

Due to the media's role in mental health misrepresentation, it is becoming increasingly more difficult to tackle issues relating to stigma (Ross & Goldner, 2009). In a research study by a media group at Glasgow University, it was found that over one month, 62% of the local and national media related to mental illness with the term "violence to others" and only 18% focused on sympathetic coverage of mental health issues (Philo, Henderson, & McLaughlin, 1993; see also Stuart, 2006a; Sheehan, Nieweglowski, & Corrigan, 2017). This highlights the importance of tackling stigma towards mental illness because of how prevalent the media currently is in society (Clement et al., 2013; Nairn & Coverdale, 2005). The entertainment industry endorses mental health stigma by supplying its audience with narrowly fixed story lines that base themselves around misconceptions and stereotypes (Biernat & Dovidio, 2000;

Byrne, 2000). For example, on February 21<sup>st</sup>, 2003, the Daily Mail paper placed their headline as '400 Care in the Community Patients Living by Murder Park'. It was highlighted that when investigating a murder in Victoria Park, London, police were surprised to discover how many psychiatric patients were living in the community. After this, police began an investigation theorising the murderer to be a 'deranged psychiatric patient' living in the community. This progressed into a newspaper article which presented Victoria Park as a dangerous community due to the volume of mental illness sufferers who lived around the area (Lalani & London, 2006).

This further sustains unknowledgeable ideations about mental illness, prevents stigma reduction and sources additional stereotypes (Deacon, 2006; Kimmerle & Cress, 2013; Reavley, Jorm, & Morgan, 2016). For example, in America in 2000, a television program named *Wonderland* was petitioned to be cancelled due to its misguided portrayal of the mentally ill as dangerous and unpredictable (Corrigan et al., 2005). Other media has also depicted mental illness sufferers to be homicidal maniacs, as having childlike perceptions and as responsible for their illness due to a weak character (Brockington et al., 1993; Corrigan et al., 2000; Wahl, 1995, 1997). Research states that fictional characters who are mentally ill are ten times more likely to be depicted as criminals; with one in four mentally ill characters killing someone and 50% portrayed as violent and purposefully hurting another character (Stuart, 2006a). Due to misconceptions by the media and the stereotypes that derive from this, research shows that the public believe mental illness sufferers to be violent, incapable, dangerous, lazy, unintelligent and frightening (Brown, 2008b; Hilton & Von Hippel, 1996; Pejović-Milovancević, Lecić-Tosevski, Tenjović, Popović-Deusić, & Draganić-Gajić, 2009; Sheehan et al., 2017). It is therefore important to understand the way in which information about mental health is presented to people through media-moderated formats.

#### *1.4.3 Lack of emotional understanding for mental health.*

As well as an educational understanding, an emotional understanding is also absent in the public's knowledge on mental health (Bentall, 2006; Thornicroft et al., 2008). Society's lack of awareness for mental health means that there can be a lack of understanding of the everyday emotional and physical difficulties a mental health sufferer can face. This can make it less likely to empathise with the difficulties that the mentally ill can encounter (Lipsedge & Calnan, 2016).

It has been proposed by some researchers that when humans are unable to identify or emotionally comprehend a particular topic or situation, they can exhibit an acute stress response, also known as the "fight or flight" response (Cannon, 1932; Taylor et al., 2000). This can make individuals feel threatened by the circumstance they are presented with which can either result in a fight like response, which in the case of stigma can be shown by a discriminatory and isolating reaction (Rüsch, Angermeyer, & Corrigan, 2005), or in a flight like response, which can be shown in the form of fearful or prejudicial views and social distancing (Reavley et al., 2012).

This lack of emotional understanding may leave stigma sufferers to internalize the stigma projected unto them (Boyd, Adler, Otilingam, & Peters, 2014; Corrigan & Watson, 2002b; Drapalski et al, 2013; Link, Cullen, Stuenkel, Shrout, & Dohrenwend, 1989; Livingston & Boyd, 2010) and these internalisations can manifest themselves into that of self-stigma, public stigma, and affiliate stigma (Corrigan et al., 2005; Corrigan, Larson, & Ruesch, 2009; Mak & Cheung, 2008; 2012; Vogel, Wade, & Hackler, 2007). *Public Stigma* is when an individual is aware of the stereotypes that are detained by the public about their illness (Corrigan, & Watson, 2002a; Link, 1987). This forces individuals to continually be overly aware of their actions and form insecurities about how others may perceive them (Pattyn,

Verhaeghe, Sercu, & Bracke, 2014). *Self-Stigma* is the term used when members of a particular social group internalize outer prejudicial attitudes and apply these opinions to themselves, further leading to negative emotional and behavioural repercussions (Corrigan, Morris, Michaels, Rafacz, & Rüsçh, 2012; Corrigan, & Watson, 2002b). *Affiliate Stigma* is the impairment of psychological wellbeing to those who are close to a stigmatised group (e.g. family, friends, and carers) (Mak, & Cheung, 2012). Due to their personal association with the stigma receiver, others can also internalize feelings of stigma attached to the recipient, and therefore experience the negatively endorsed feelings of stigma for themselves (Mak, Poon, Pun, & Cheung, 2007; Werner, & Shulman, 2013; Mikami, Chong, Saporito, & Na, 2015). This highlights how important emotional comprehension in stigma towards mental illness may be.

### **1.5 Reducing mental health stigma: Education and intervention approaches**

When first exploring mental health stigma, the majority of research focused on attitude surveys of the public's perceptions towards mental illness (Angermeyer & Matschinger, 2003; Read & Law, 1999; Sartorius & Schulze, 2005; Schulze & Angermeyer, 2003). For example, as discussed earlier, a repeated attitude survey conducted in 2003 (originally conducted in 1998 by the Office for National Statistics) by Crisp et al., (2005) focused on investigating the public's opinions of seven mental illnesses, one of those being schizophrenia. It can be seen from this study that the public hold high levels of negative attitudes, though, there is evidence for some change in these. The study established that stigmatised attitudes and opinions had significantly decreased over five years. Perceptions of schizophrenia significantly decreased in in all but one item statement '*schizophrenics can pull themselves together*'. The statements showing the biggest reductions for negative attitudes were: schizophrenics are a danger to others, schizophrenics are hard to talk to, schizophrenics feel different from us, and

schizophrenics never fully recover. Nonetheless, attitudes towards schizophrenia and other mental illness were still very negative with only 9% of participants reported in 2003 scoring positively in overall attitudes towards schizophrenia. This goes to indicate that more still needs to be done in order for prominent reductions in stigma towards mental illness.

Surveys such as the above present important analysis around the public's perceptions and opinions towards mental illness. However, research such as this tells us little about theory, mechanisms and intervention techniques in reducing stigma towards mental illness (Corrigan, 1998; Corrigan et al., 2001; Corrigan, & Penn, 1999; Lincoln, Arens, Berger, & Rief, 2008). In other words, they focus more on the identification and awareness of stigmas presence in mental health, rather than in reducing stigmatized attitudes (Link & Phelan, 2001; Thornicroft et al., 2007). This does not go to say that studies which have logged the public's attitudes towards mental illness are not of use. This research helped identify the emotions which the public feel towards mental illness (i.e. disgust, fear), as well as what the public believe are mentally ill sufferers' characteristics (for example, unintelligent and lazy) (Angermeyer & Matschinger, 2003). This research has facilitated a grounded understanding to what stigma towards mental health can mean and provoke in individuals (Crisp et al., 2005). However, what this research fails to explore are methods that will reduce the stigma towards mental illness (Thornicroft et al., 2007).

In the early 2000's research began to consider intervention techniques for the reduction of stigma towards mental illness (Brown, 2008a; Corrigan, Morris, Michaels, Rafacz, & Rüsçh, 2012; Pinfold et al., 2003). When reviewing empirical studies relating to intervention types that reduce stigma towards mental illness, two main hypotheses were evident. 1. Education's ability to reduce stigma 2. Contact's ability to reduce stigma.

### **1.6 Education interventions as a way to reduce stigma towards mental health**

Education interventions have been shown to successfully reduce mental health stigma. Intervention methods have varied from being implemented by text-based material, media-based stimuli, group and classroom intervention schemes, and online interactive approaches, with classroom and media-based interventions presenting as most effective reducing stigma (Boysen & Vogel, 2008; Ewers, Bradshaw, McGovern, & Ewers, 2002; Ritterfeld & Jin, 2006; McGinty, Goldman, Pescosolido, & Barry, 2015).

Video-based intervention treatments have been shown to be most effective in reducing stigma towards mental health particularly in terms of Pity, Dangerousness, and Fear, with one study showing positive changes in attitudes that were largely maintained 8-weeks after the pre-test and 6 weeks after the follow-up (Irvine et al., 2012). This study used a video-based training intervention on a sample size of 172 registered and licensed nurse practitioners. The video-based training intervention was designed to last 10-30 minutes and to embrace a 'person-centred' care philosophy. The video intervention provided information on common mental disorders of anxiety disorders, schizophrenia and psychotic disorders, mood disorders, cognitive disorders, and personality disorders. The study presented brief descriptions of each disorder using a narrator. Using a video-based intervention was greatly beneficial for the study as it allowed a larger sample size, from a variety of services which require nursing staff. The treatment method was compared against a control group and the attitudes measured were in relation to situational learning, knowledge, attitude, self-efficacy, stigmatization and program acceptance. This study additionally measured potential changes in empathy as previous research has indicated that healthcare professionals may benefit from training that attempts to alter negative attitudes and stereotypes around mental illness (Arvaniti et al., 2009; Glaister &

Blair, 2008; Hardy, White, Deane, & Gray, 2011; Heliker & Nguyen, 2010; Mason, Hall, Caulfield, & Melling., 2010; Schafer, Wood, & Williams, 2011).

Other research demonstrates that providing individuals with educational mental health training can be effective in promoting pro-social behaviours towards mental illness. Jensen, Morthorst, Vendsborg, Hjorthøj, and Nordentoft's (2016) study showed significant results in promoting "help-giving behaviour" to individuals suffering with a mental illness. Their study suggested that by using this type of educational intervention strategy, it allows individuals the ability to recognise mental illness as an important matter, and improve positive attitudes, rather than focusing on reducing negative attitudes (Hadlaczky, Hökby, Mkrtchian, Carli, & Wasserman, 2014). The results of Jensen et al's., (2016) study showed a significant difference at a 6-month follow-up between the intervention group (which were trained in mental health first aid) and the control group (which received no mental health training), with the intervention group displaying higher levels of confidence in making contact, talking to, and providing help to mental health sufferers. Additionally, the intervention group showed improved knowledge in mental illness and abilities in recognising schizophrenia. However, although this study was effective in some areas, results presented limited changes in overall attitudes towards mental illness. Furthermore, alongside Irvine et al., (2012) study, all participants were workplace employees undertaking first aid or medical training for a medical service. Given their previous medical experience, participants could have had more encounters with mental illness and may attain a better ability to empathise with those who have mental health problems. This could have influenced the study's findings, thus making it difficult to depend on the results. Additionally, as there was limited variation in the samples of these studies, the findings may not be generalised to the more everyday population.

In contrast, a recent study by Zvonkovic and Lucas-Thompson (2015) focused on using an educational intervention on 94 undergraduate students, which informed participants about low rates of violence in individuals with schizophrenia. This study found by informing participants of this factual information using descriptive writing, attitudes towards schizophrenia improved in regard to explicit behaviours (conscious actions and reactions). However, in implicit attitudes (unconscious actions and reactions) participants scores did not improve. This goes to indicate that although educational interventions can appear effective, they do not necessarily successfully modify and reduce the public's deeper perceptions and automatic reactions towards mental illness. This therefore highlights that there may be potential factors missing from a solely educational intervention.

### **1.6.1 Educational interventions: Limited effectiveness in reducing stigma towards mental illness**

Research has shown that educational methods appear less effective in treatment to the general public and can only reduce stigmatized attitudes with limited effect (Thornicroft et al., 2007; Yamaguchi, Mino, & Uddin, 2011). For example, in a very recent meta-analytic study of stigma interventions for mental health, the majority of education-based interventions were evidenced as globally weak in quality, which may suggest they lack validity, reliability and significance when analysed on a broad spectrum (Morgan, Reavley, Ross, San Too, & Jorm, 2018). Indeed, although education has been a generally accepted method for the reduction of stigma towards mental illness (Griffiths et al., 2004; Holmes, Corrigan, Williams, Canar, & Kubiak, 1999; Pinfold et al., 2003; Read & Law, 1999; Walker & Read, 2002; Watson et al., 2004), the studies which present significant results are often only of a minor percentage (Addison & Thorpe, 2004; Corrigan, 2016; Jensen et al., 2016; Mino, Yasuda, Tsuda, & Shimodera, 2001; Zvonkovic & Lucas-Thompson, 2015). For example, when Ke et al., (2015)

examined the effects of a one-hour classroom workshop on intercepting stigma, they found that education alone only decreased stigma by 23% and only 2% of participants maintained this reduction of stigma one month later. Likewise, a study by Pinfold et al., (2003) found similar modest effects on reducing stigma towards mental illness from short educational workshops on mental health. Although their study found a significant effect in stigma reduction, the effect size was weak between interventions.

Other research goes to suggest that education has limited successes because it only appears to modify a particular set of attitudes towards mental illness. For example, Schlier, Lange, Wiese, Wirth, and Lincoln (2016) used an online questionnaire study on 178 participants from the general public. The study distributed participants into one of three alternate psychoeducational interventions (Medication, Cognitive Behavioural Therapy and Psychodynamic Therapy) that focused on explaining the benefits of treatment for schizophrenia. This study found that when educating individuals about different methods of treatment for schizophrenia, perceptions of unpredictability, dangerousness and anxiety towards schizophrenia were the only attitudes to positively improved, while other attitudes measured, such as anger, sympathy and perceptions of poor prognosis were unaffected.

Earlier research by Addison and Thorpe (2004) is supportive of education having inconsistent effects on attitudes towards mental illness. The study started as an exploratory examination of 169 participants with a range of attitudes and knowledge on mental illness. The study found significant effects specifically for attitudes of fear, revulsion and anxiety, indicating that education can be more significantly effective relating to particular attitudes towards mental illness, rather than an overall compound of multiple attitudes which can be described as stigma. Indeed, educational interventions have been found to positively affect particular emotions which are elements that sustain stigma (Addison & Thorpe, 2004).

However, this is only able to rectify a minor number of features that incorporate the multifaceted emotional output stigma presents (Pinfold et al., 2003).

Overall, the research advocates that education alone has only limited sustainability in reducing mental illness stigma (Corrigan, 2016; Ke et al., 2015; Penn, Chamberlin, & Meuser, 2003; Pinfold et al., 2003; Thornicroft, et, al., 2007). It seems that educational interventions do not allow for a fully comprehensive effect of attitudes towards mental illness and are unable to attain a significantly large impact on stigma towards mental illness (Bentall, 2006; Boysen & Vogel, 2008). It is therefore important to explore alternative avenues and intervention methods for reducing stigma towards mental health.

### **1.6.2 Education interventions for mental health stigma reduction: The importance of considering pre-existing Emotional Intelligence and Dispositional Empathy**

Importantly, a study by Masuda et al., (2007) suggests that pre-existing individual differences could have an impact on how effective an intervention is. The study found that education methods were only successful in reducing stigma for those participants who were able to deal with emotions and emotionally difficult situations/thoughts well. This suggests that for an education intervention to be successful, a person's dispositional emotional intelligence and an individual's ability to empathise (dispositional empathy) has to be taken into account. Supportive of this is a study by Boysen and Vogel (2008) whose research highlighted the importance of individual differences in participants on a study's effectiveness. The study compared alternate educational intervention types with 232 college students and their results indicated that participants who initially have a more positive attitude towards mental illness are more likely be positively affected by an intervention strategy for mental illness stigma. Individuals with a negative predisposition towards mental illness were less likely to be affected by the intervention strategy. This goes to further indicate there may be additional influencing

factors, such as an individual's emotional capabilities, which can influence the effectiveness of an intervention. To address this, the current study included measures of individual differences in dispositional empathy (as measured by the Interpersonal Reactivity Index, David 1980) and emotional intelligence (as measured by Emotional Intelligence Scale, found in Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998).

### **1.7 Other intervention approaches to reduce stigmatised attitudes towards mental illness: The Contact Hypothesis.**

What appears to be more effective in reducing stigma are methods of *contact* for the general public with mental health sufferers (Birtel & Crisp, 2012; Katz, 2014; Kerby, Calton, Dimambro, Flood, & Glazebrook, 2008; Kosyluk, 2014; Stathi, Tsantila, & Crisp, 2012; Thonon, Pletinx, Grandjean, Billieux, & Larøi, 2016; Turner, 2007). Indeed, *direct contact* with a person who has a mental illness has been shown to be successful (Corrigan et al., 2001; Giacobbe, Stukas, & Farhall, 2013; Patten et al., 2012; Reinke, Corrigan, Leonhard, Lundin, & Kubiak, 2004), especially in comparison to other intervention methods (Clement et al., 2013; Yamaguchi et al., 2011). For example, Corrigan et al's., (2001) study examined three different strategies for interventions to stigmatised attitudes: education about mental illness, direct contact with a person who has a mental illness and protest against stigma towards mental illness. One hundred and fifty-two participants from a community college completed a questionnaire attributed to six different group types: depression, psychosis, cocaine addiction, mental retardation, cancer, and AIDS. The study found that contact produced the most positive change in comparison to the two other interventions which yielded little (education) and no change (protest). The contact intervention reduced most in negative attitudes towards the groups relating to mental illness, i.e. psychosis and depression, indicating that contact can have a stronger effect in comparison to educational intervention methods. However, although

contact appears to be more effective than that of an educational intervention (Corrigan & O'Shaughnessy, 2007; Yamaguchi et al., 2011), it is important to note that more current research has shown that methods of contact with mental illness that do not use *direct contact* technique, can also be just as successful (Brown, 2008a; Chan et al., 2009; Chan, Mak, & Law, 2009; Corrigan & Shapiro, 2010; Corrigan, & Watson, 2002a; Couture & Penn, 2003; Faigin & Stein, 2008; Li et al., 2015).

Direct contact approaches typically involve having a personable face-to-face contact interaction with someone who has a mental illness. This approach has several disadvantages that prevent it from being a practical approach for large scale or more general interventions. Direct contact can be time consuming and limiting as it is not a method that can be easily distributed to the public, Data collection and recruitment can be more difficult and it can also be difficult to find an individual with a mental illness to agree to be a part of the intervention (Stuart, 2006b). Indirect contact using a media-moderated approach (contact with mental illness using video footage) however offers benefits in that it can be distributed to participants in many different ways, such as through an online server or system, through the workplace, or by schools. The reduced practical demands mean that such interventions can be disseminated to a very broad range of participants and in large scale formats. Additionally, stimuli for media-moderated contact is more easily obtained than that of organising an intervention which involves direct contact (Hackler, Cornish, & Vogel, 2016).

Penn, Chamberlin, and Mueser, (2003) examined the benefits of a media-moderated contact intervention with 163 undergraduate students. They examined changes in attitudes towards Schizophrenia between those who saw a documentary video intervention about schizophrenia, compared to those who watched either no documentary film, a documentary about polar bears, or a documentary about fears of being overweight. The study found that

stigmatised attitudes were significantly lower in the documentary film intervention, than those who viewed the two alternate documentaries or no documentary. These findings indicate not only the importance of contact, but that contact can be of any type and still present effective results for reducing stigma towards mental illness.

More recent research continues to support this approach of media moderated interventions to improve attitudes towards schizophrenia. A research study by Li et al., (2017) consisted of 91 participants who watched one of two videos: Video 1 Showed a person with schizophrenia discussed their recovery. Video 2 showed a person with schizophrenia who discussed the symptoms they experienced when acutely ill. Participants were asked to focus on similarities or difference between them and the individual in the video. These found in particular that the video describing recovery was more likely to increase positive impressions and reduce preference in social distancing to the individual in the video. Importantly, this study additionally found that perceived similarities potentially moderated the effect of the intervention, with higher levels of perceived similarities resulting in more positive outcomes. This again goes to indicate the importance of individual differences in experience or emotional connection playing a crucial role, which may moderate the effects.

Crucially, Hackler et al., (2016) highlight the practicality of using media-moderated contact as well and in particular the benefits of non-contact intervention methods which elicit empathy towards mental illness. Their study focused on comparing media-moderated contact (video contact with a person who has mental illness) with indirect media-moderated contact (indirect video means that contact is with a friend or family member of someone who has a mental illness). Both interventions resulted in reduced desire for social distancing and reduced scores in devaluation and discrimination. This study indicates that direct contact with mental illness may not be is not the main component for reducing stigma towards mental illness, rather

it may be something within the contact intervention type acts a catalyst in reducing stigma towards mental illness, in this particular case empathy. Indeed, Hacker et al's., (2016) results support the idea that electing empathy in an intervention has the potential to reduce stigmatized attitudes towards mental illness. However, no study has examined contact and empathy together. To address this, this study examines and compares two forms of media moderated contact, rather than direct empathy. Participants will see a person talking about the experience of schizophrenia (to elicit empathy; however, in one case the message was delivered by someone who has schizophrenia in the other the message was delivered by a clinician talking about the experience of someone else. As such both conditions may elicit empathy, but they differ in the degree of media moderated contact.

There are many benefits in using a media-moderated contact technique. By using a media-moderated intervention strategy, it allows the study to be applied to an online server, making it easier to implement. It allows for a potentially larger sample sizes, and variety in participants (Kraut et al., 2004). As such this potentially means there can be a better consensus in results reflecting the general population, rather than one particular subject group, age, or culture.

### **1.8 Current Study: Why Schizophrenia?**

Although research continues to progress in reduction methods for stigma, many studies have failed to focus specifically on severe mental illnesses (Clement et al., 2013; Corrigan 2016; Corrigan et al., 2012; Hanisch et al., 2016; Janoušková et al., 2017; Knaak, Modgill, & Pattern., 2014). Indeed, there is a debate of such methods being effective on a severe mental illness, like schizophrenia (Yang et al., 2012), especially in relation to a contact intervention. It is suggested that the reason a contact approach may be challenging in reducing stigma is because of how severe the stigmatization of schizophrenia is (West, Hewstone, & Holmes,

2010; West & Turner, 2014). However, some studies that have focused on schizophrenia show that intervention methods can be successful (Corrigan, Larson, Sells, Niessen, & Watson, 2007; Fung, Tsang, & Cheung, 2011; Kosyluk, 2014; Kosyluk et al., 2016; Schomerus et al., 2016) and sustained (Norman, Sorrentino, Hampson, & Ye, 2017). It may be more useful, rather than focus just on the question of whether interventions work but rather on understanding what methods are successful and why.

For example, when using a media moderated contact intervention of a person describing their recovery from schizophrenia, Norman et al., (2017) found that stigma was significantly reduced, and this was sustained for two weeks post intervention. It may be that an 'in person' direct contact method can be sometimes too abrupt in its approach and this can cause an adverse reaction in stigma reduction. A media-moderated approach can allow one to be empathic and understanding without feeling an innate threat for their own safety (Jolliffe & Farrington, 2011; Norman et al., 2017).

### **1.8.1 Current intervention study: Empathy or Contact?**

Whilst the literature tells us that education and indirect contact through media moderated video has been effective in reducing stigma towards mental health, and to some extent schizophrenia, it does not tell us why this is. In this study, it is proposed that media-moderated videos that elicit empathy towards schizophrenia are most likely to reduce stigma (in comparison to educational intervention). Additionally, this study proposes that a media-moderated video intervention is strengthened if the message that elicits empathy is being delivered by someone who they themselves has Schizophrenia (contact) compared a message that elicits empathy, delivered by someone without Schizophrenia (non-contact).

Previous research suggests that when people are faced with an actual person describing their personal experience of their mental health (contact) then an individual's perception towards that mental health illness can be improved (Alexander & Link, 2003; Chan et al., 2009; Norman et al., 2017; Yamaguchi et al., 2011). The aim of this study is therefore to test whether this type of contact is more likely to reduce stigma towards schizophrenia compared to when information is presented by someone without schizophrenia (non-contact).

Previous work has already established that *direct contact* is not the sole element that makes intervention methods successful (Brown, 2008a; Chan et al., 2009; Corrigan & Watson, 2002a; Hackler et al., 2016; Li et al., 2015). Therefore, the question remains as to what is the effective mechanism changing attitudes towards mental health? An indication as to why contact overall is found to be more successful in reducing negative attitudes to mental health may be that contact is able to elicit feelings of empathetic concern and thereby initiate prosocial behaviour (Batson, 1991; Batson, Eklund, Chermok, Hoyt, & Ortiz, 2007; Stephan & Finlay, 1999). By using empathy to elicit a prosocial attitude, this can increase the value for others welfare, increase positive attitudes towards an out group (such as the mentally ill), reduce prejudice and stereotyping and allow more positive and supportive interactions between others (Batson et al., 2007; Batson et al., 1997; Pettigrew & Tropp, 2006; Yang et al., 2007). This could potentially be the mechanism by which contact methods, direct or indirect, can be successful in stigma reduction and could also explain why education as an intervention technique is less successful.

Although the study of empathy has had an extensively rich past in social science (Johnson, 2012), to the researcher's knowledge, research into empathy has not been extensively explored through literature, nor research, in relation to mental health reduction using contact interventions and more still needs to be done to investigate the impact of contact, empathy and

stigma reduction for mental illness (Einolf, 2008; Johnson, 2012). Nonetheless, in a systematic review on interventions to mental health stigma, Schachter et al., (2008) strongly suggests that empathy may be the mechanism provoked by contact which allows for fundamental change (Rickwood, Cavanagh, Curtis, & Sakrouge, 2004). The aim of this study is to test this claim with a novel intervention study aimed to elicit differing degrees of empathy in a media-moderated contact intervention (in relation to education-based intervention) and to further test the effect of empathy by considering the role of empathic abilities of participants themselves in potentially moderating this effect.

As research has stated, educational interventions are less successful in reducing stigma towards mental illness, whereas contact interventions show better and more significant outcomes (Birtel & Crisp, 2012; Corrigan, 2016; Katz, 2014; Ke et al., 2015; Kerby et al., 2008; Penn, Chamberlin, & Meuser, 2003; Pinfold et al., 2003; Thonon et al., 2016; Thornicroft, et, al., 2007). However, intervention methods relating to contact have not always been consistent (Corrigan & Kleinlein, 2005; Mak, Poon, Pun, & Cheung, 2007) and research has shown contact does not have to be of a *direct-contact* approach in order to show significant results in reducing stigma towards mental illness. This has underpinned this study's approach into understanding why this may be the case and what alternative elements are provoked by contact which may affect an interventions success.

Research was found to suggest that it is the social and emotional component of contact (Batson 1991; Batson et al., 2007; Jolliffe & Farrington, 2011) which causes a change in attitude. This could indicate that empathy plays an important role in effecting a change in stigma towards mental illness (Santamaría-García et al., 2017). Furthermore, if empathy is an important factor, then so would be one's ability to empathise. This may indicate why results which follow the same intervention type are not always consistent.

In response to the questions highlighted through research reviewed, the current study aimed to examine the effect of empathy through two alternate intervention types, both of which potentially elicit empathic response (by both having a person describing the experience of living with schizophrenia) but differ in their degree of media moderated contact:

1, Contact Empathy –This involves a media-moderated method of contact with a person who has Schizophrenia to elicit empathy towards mental illness and reduce stigma towards mental illness.

2. Non-Contact Empathy –This involves a media-moderated intervention to elicit empathy towards Schizophrenia without the use of contact and reduce stigma towards mental illness.

By using two separate interventions which provoke empathy towards mental illness, but do not both involve contact with mental illness, this study has the potential to determine whether empathy is a key component in reducing stigma towards mental illness (in relation to an education intervention control) and also how important contact is in an intervention type.

Additionally, to address questions regarding the consistency of previous research and data, this study chose to take into consideration the moderating factors of an individual's dispositional empathy (the participants own existing level of empathy) and emotional intelligence (the participants existing emotion intelligence). Furthermore, as contact with mental illness is important in affecting stigma towards mental illness, this study chose to look into pre-existing levels of contact with mental illness as an additional moderator. By measuring these components at baseline, this study can further evaluate whether these particular factors affect participant's susceptibility in being affected by the intervention.

## **1.9 Summary of research design and questions**

Unlike previous research, this study plans to evaluate not only how to reduce stigma over mental illness but also why some intervention methods which use the same technique may work and others may not. The unique aspect of this study is its use of investigating and promoting emotional and empathetic understanding through video footage. Dissimilar to the control intervention (Educational Control), which will be used as a comparison method, the two other interventions (Contact Empathy and Non-Contact Empathy) will focus on attempting to understand the effect of empathy towards mental illness using a contact and non-contact method. The three different interventions are therefore as follows:

### **1. Contact Empathy**

This video-based intervention consists of an adult male discussing his real-life experience tackling his mental illness of schizophrenia and how he felt emotionally during this process. This intervention aims to induce an empathetic understanding for schizophrenia through a personal and media-moderated contact intervention type; thus, increasing levels of empathy and potentially reducing prejudicial attitudes and stigma.

### **2. Non-Contact Empathy -**

This video-based intervention included a psychiatrist explaining the mental illness of schizophrenia from her perspective. She discusses how individuals with schizophrenia feel emotionally during the process of their disorder. This intervention aims to provide an alternative contact type (i.e. no direct contact with mental illness), however, still inducing an empathetic understanding towards schizophrenia. This intervention will allow the study to analyse differences between contact type and whether this is a factor that can alter the effect of stigma reduction.

### **3. Educational Control Intervention**

This educational video intervention included an adult male explaining the mental illness of schizophrenia from an educational standpoint. This intervention will allow the study to compare results of induced empathy and contact, to that of methods of education.

#### **1.9.1 Moderating Factors**

Empathy in terms of individual characteristics may potentially moderate the effect of any intervention and may help explain why results on interventions may be inconsistent. Some theories state that individuals are less likely to be affected by emotionally based interactions if they have lower levels of empathy and emotional intelligence (Batson et al., 1997; Jolliffe & Farrington, 2011). This suggests that participants who have lower levels of emotional intelligence and dispositional empathy are less likely to be affected by intervention methods that rely on these strategies. This could therefore explain varying outcomes in interventions using contact methods. Therefore, this study will also look into the moderating effects of pre-existing levels of contact with mental illness, dispositional empathy and emotional intelligence to determine whether these differences have the potential to affect an intervention's success.

#### **1.9.2 General methodological considerations**

The length of video intervention was also a key concern. This study chose to use intervention videos that were relatively short (seven to nine minutes long). This was because research has shown that videos longer than nine minutes have a much lower engagement rate compared to shorter videos (Guo, Kim, & Rubin, 2014).

### 1.9.3 Aims and hypotheses

The research aims were to examine whether Eliciting Empathy will significantly improve the main three outcome variables (empathy towards mental illness, stigma towards mental illness, attitudes towards schizophrenia) and whether any effect is further moderated by pre-existing levels of contact, dispositional empathy, emotional intelligence.

*Hypothesis 1a* Eliciting Empathy will significantly improve empathy towards mental illness and levels of pre-existing mental health contact will moderate the effect.

*Hypothesis 1b* Eliciting Empathy will significantly improve empathy towards mental illness and levels of pre-existing dispositional empathy will moderate the effect.

*Hypothesis 1c* Eliciting Empathy will significantly improve empathy towards mental illness and levels of pre-existing emotional intelligence will moderate the effect.

*Hypothesis 2a* Eliciting Empathy will significantly improve stigma towards mental illness and levels of pre-existing mental health contact will moderate the effect.

*Hypothesis 2b* Eliciting Empathy will significantly improve stigma towards mental illness and levels of pre-existing dispositional empathy will moderate the effect.

*Hypothesis 2c* Eliciting Empathy will significantly improve stigma towards mental illness and levels of pre-existing emotional intelligence will moderate the effect.

*Hypothesis 3a* Eliciting Empathy will significantly improve attitudes towards schizophrenia and levels of pre-existing mental health contact will moderate the effect.

*Hypothesis 3b* Eliciting Empathy will significantly improve attitudes towards schizophrenia and levels of pre-existing dispositional empathy will moderate the effect.

*Hypothesis 3c* Eliciting Empathy will significantly improve attitudes towards schizophrenia and levels of pre-existing emotional intelligence will moderate the effect.

## Method

### 2.1 Participants

One hundred and twelve participants were recruited for this study via social media sites, internet chat forums, and through Canterbury Christ Church University's research participation scheme. Data collection was obtained with an online software system named Qualtrics, over a 3-month time span (March, 2017- May, 2017). Incomplete data sets were removed (48 participants), leaving 64 participants for data analysis; 22 males (34 %) and 42 females (66%). Through Qualtrics, participants were equally and randomly distributed across the three interventions: *Contact Empathy* - 21 participants. *Non-Contact Empathy* - 23 participants. *Educational Control Intervention* - 20 participants. Participants were aged 18 and over and ranged from 18 to 52 years with a mean age of 21.2 and most frequent age of 19 years. There were no exclusion criteria for taking part in the study, therefore no specific requirements were set to prevent members from participating.

### 2.2 Design

An experimental design tested whether the outcome variables a) Empathy towards mental illness, b) Stigma towards mental illness and c) Attitudes towards schizophrenia improved after viewing one of three video viewing interventions (also referred to as Media Moderated Interventions); 1, Contact Empathy, 2, Non-Contact Empathy, or 3, Educational Control. As such, the level of empathy was manipulated across the three interventions with contact empathy expecting to have the highest elicited empathy and education assumed to have lowest elicited empathy. Furthermore, because literature suggests pre-existing levels of contact, dispositional empathy and emotional intelligence can influence the strength of the intervention change; these were further tested as moderators.

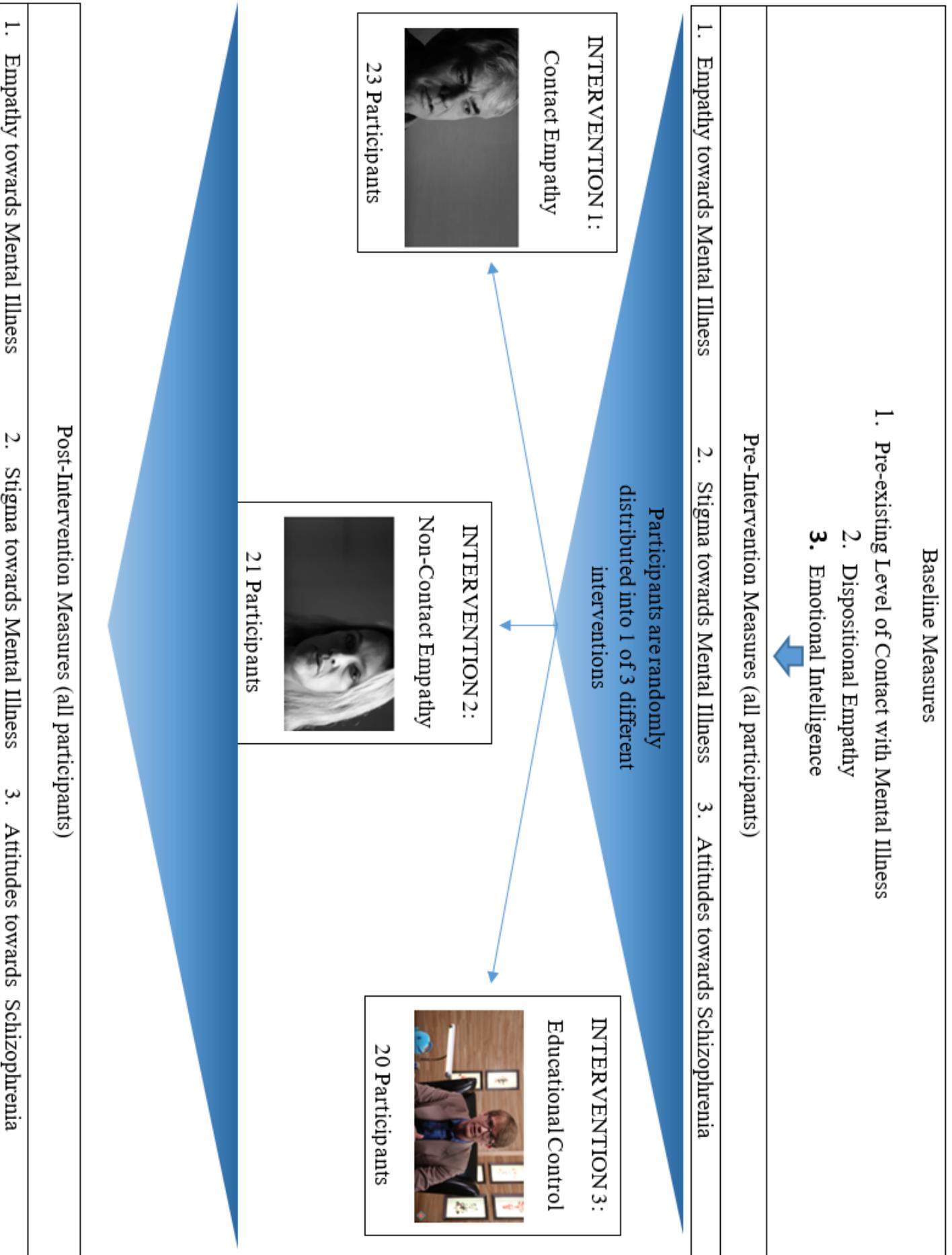


Figure 1: This figure displays a diagram example of the study design.

The experimental design for this study was a mixed between (intervention type: Contact Empathy, Non-contact Empathy and Educational Control) and within (time: pre-test and post-test) participants design. These meant that each participant was placed into one of the three interventions and completed this intervention only (between), however, all participants would complete all outcome measures at both timepoints (within).

This study measured the attitude ratings of participants using three separate dependent variables of empathy towards mental illness, evaluated using the Empathy Towards Mental Illness Scale by Turner (2007), stigma towards mental illness, evaluated using the Day's Mental Illness Stigma Scale by Day, Edgren, and Eshleman (2007), and attitudes towards schizophrenia, evaluated using the Schizophrenia, Knowledge, Attitudes, and Perceptions Scale by Reddy and Smith, (2006). These measurement scales were in the format of a online questionnaire and were completed by all participants' pre- and post- intervention.

Alongside the attitude questionnaires that participants completed, participants also completed three different questionnaires at the first time point (baseline measures) which were used as moderators in the study. These moderators were used for baseline measures of participants pre-existing levels of contact with mental illness, participants' dispositional empathy ratings, and participants' emotional intelligence ratings (see measures below for more information). These questionnaires were completed by all participants prior to intervention.

The analysis approach chosen was ANCOVA. ANCOVA allows testing the effect of intervention by examining the difference in the outcome measure (dependant variable) between the three intervention groups at post-test after for controlling for the level at pre-test. This measures whether there is an absolute difference between the three conditions (Field, 2009). It also allows testing for the effect of moderation by examining the interaction between the intervention variable (three intervention groups) and moderator (high vs low). As such, the

main analysis will be a series of 3 (intervention type: contact empathy, no contact empathy, education control) at post-test x 2 (moderator: high vs. Low) ANCOVA's with pre-test performance as covariate.

Note: this study also measured short-term effects of the intervention strategies (Contact Empathy, Non-Contact Empathy, and Educational Control) by conducting a one-week follow-up study to test for the short-term impacts of the experiment. However, there was a lack of participation for the one-week follow up. The follow-up of Contact Empathy contained only ten participants and both Non-Contact Empathy and the Educational Control follow-up studies contained only seven participants. It was therefore concluded that results would lack power and validity due to insufficient numbers and so are not reported here.

## **Materials**

### **2.3 Independent Variables: Video (Media-Moderated) Intervention Conditions**

The two videos used for *Contact Empathy* and *Non-Contact Empathy* were created by Otsuka and Lunbeck Pharmaceutical companies (Lunbeck, 2016; Otsuka, 2016). These can be found on YouTube under the subscription page of "Otsuka Europe". The video used for *Contact Empathy*, named "*Through My Eyes*" and for *Non-Contact Empathy*, named "*With Understanding*" come from a six-part documentary which explains the mental illness of schizophrenia from alternate perspectives.

### ***2.3.1 Intervention 1: Contact Empathy: Through my Eyes***



The video intervention of *Contact Empathy, 'Through my Eyes'*, is a 7-minute documentary of a man expressing his own personal journey through his illness of schizophrenia. This documentary depicted a mature well-dressed male, edited into black and white, with a blank background and the camera facially focused. As his opening statement to the documentary, Dr Clive Travis, a former psychiatric patient suffering for schizophrenia says, *"One thing I certainly am is a recovered psychiatric patient, who is able to take on board his diagnosis, but that didn't happen suddenly"*. In this documentary Clive explains his struggles with schizophrenia and the experiences he faced in relation to hearing voices and beliefs that weren't true. Clive also discusses his attempt to take his own life because of how the illness had made him feel, *"On one occasion I decided to kill myself and very nearly did"*. This video was recently re-published on June 26<sup>th</sup>, 2017 and can be found via this link, <https://www.youtube.com/watch?v=yEnx2IDwVr0> .

### 2.3.2 *Intervention 2: Non-Contact Empathy: With Understanding*



The video intervention of *Non-Contact Empathy, 'With Understanding'*, is a 7-minute documentary of a professional psychiatrist who explains the illness of schizophrenia from an alternate perspective. Dr Charlotte Emborg is a Danish psychiatrist who treats people with schizophrenia. This documentary depicts a mature female, edited into black and white, with a blank background and the camera facially focused. In this documentary, Charlotte attempts to explain a schizophrenic's state of mind from her own experiences in treating the illness, as well as the suffering that schizophrenia sufferers face because of the stigma. She states in the documentary, "*when they come to us, young people with schizophrenia, they have had so much suffering because they have not felt understood*". She progresses onto explain how the lack of understanding for the illness can make others feel frightened, "*psychotic symptoms are quite frightening and I think that's because people don't really understand what's going on, they don't understand what it is*". This video was recently re-published on July 10<sup>th</sup>, 2017 and can be found via this link, <https://www.youtube.com/watch?v=7v9HMOVdH0dg> .

The last video used for the *Educational Control Intervention*, was created by CrashCourse, a subscription page on YouTube where this video can also be found.

CrashCourse are well known for their uplifting and educational videos. This video describes schizophrenia from an interactive and educational perspective.

### ***2.3.3 Intervention 3: Educational Control: CrashCourse to Schizophrenia***



The video intervention of *Educational Control*, '*CrashCourse to Schizophrenia*' is a 9-minute video from a running series named CrashCourse Psychology. This series is narrated by an adult male called Hank Green, who explains schizophrenia from an educational perspective. This video is presented in colour, with an office like background and displays a smartly dressed Hank sitting upon an office chair, with his body towards the camera and the camera angle presenting Hank from the torso up. Hank explains in this video issues relating to schizophrenia, i.e., "*Its perhaps the most stigmatised and misunderstood psychological disorder of them all, even among psychologists*", as well as educational, statistical, and fact-based information about schizophrenia, "*schizophrenia is a chronic condition that usually surfaces for men in their early to mid-20s and for women in their late 20s*". This video was published on September 19<sup>th</sup>, 2014 and can be found via this link <https://www.youtube.com/watch?v=uxktavpRdzU>.

## 2.4 Outcome Measures (Dependent Variables): Measures of Attitude Questionnaires

Questionnaires were used to measure three attitudes to mental illness at pre and post test.

These were:

**2.4.1 Empathy towards Mental Illness.** Empathy towards mental illness was measured using the Empathy towards the Mentally Ill Scale ( $\alpha = .774$ ) (Turner, 2007). This questionnaire is a 16-item scale and provided participants with statements such as '*I get very angry when I see someone being ill-treated*' and '*the mentally ill deserve our sympathy*'. These were answered using a five-point Likert scale which, in this study are rated as follows: 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4= Agree, 5=Strongly Agree. Where required, items were reverse scored so that a higher score meant a more positive attitude in empathy towards mental illness. The complete questionnaire can be found in appendix A, which displays the questionnaires scoring system.

**2.4.2 Stigma towards Mental Illness.** Stigma towards mental illness was measured through the Day's Mental Illness Stigma Scale ( $\alpha = .915$ ) by Day, Edgren and Eshleman (2007) (found in Reddy & Smith, 2006). This measurement is a 28-item questionnaire that uses a seven-point Likert scale ranging from: 1 – *completely disagree*, to 7 – *completely agree*. This questionnaire provided participants with statements such as, '*I would find it difficult to trust someone with a mental illness*' and '*there are effective medications for mental illnesses that allow people to return to normal and productive lives*'. Where required, items were reverse scored so that a higher score meant a more positive attitude in stigma towards mental illness. The complete questionnaire can be found in appendix B and C, which displays the questionnaires scoring system.

**2.4.3 Attitudes towards Schizophrenia.** Attitudes towards schizophrenia was measured by the Schizophrenia Knowledge, Attitudes, and Perceptions Scale (found in Smith, Reddy, Foster, Asbury, & Brooks, 2011) ( $\alpha = .717$ ). This 13-item questionnaire uses a five-point Likert scale of 1=strongly agree 2=agree, 3=neutral, 4=disagree, 5=strongly disagree. This questionnaire provides participants with statements such as *'in general people with schizophrenia should be put into institutions'* and *'individuals with mental illnesses are victims of their disease and should be treated with sympathy'*. Where required, items were reverse scored so that a higher score meant a more positive attitude toward schizophrenia. The complete questionnaire can be found in appendix D, which displays the questionnaires scoring system.

The Schizophrenia Knowledge, Attitudes and Perceptions scale's original Cronbach's score had reduced reliability at a score of  $\alpha = .687$ . To address this and increase reliability, an examination of item performance was undertaken by removing the scale item of question eight "most people fear people with schizophrenia". By doing this, Cronbach's  $\alpha$  increased to .717. Thus, question eight was deleted from the study. Running the analysis with item eight deleted did not alter results.

## **2.5 Moderators.**

Individual differences in pre-existing levels of contact, dispositional empathy and emotional intelligence were also measured to examine the potential effect (moderation) on the interventions.

**2.5.1 Pre-existing Levels of Contact towards mental health.** This study measured previous contact levels with the mentally ill using the Level-of-Contact Report scale ( $\alpha = .746$ ), found in Corrigan, Lurie, Goldman, Slopen, Medasani, and Phelan, (2005). This 12-item scale

was measured using a Yes (1) or No (2) answering scale. Each item of this scale was scored from 1- lowest level of pre-existing contact, to 12 – highest level of pre-existing contact and the highest item number that participants scored yes for would be their overall score. This can be seen in appendix E, where the complete questionnaire can be found displaying the questionnaires scoring system.

**2.5.2 Dispositional Empathy.** Dispositional empathy was measured through, Davis's (1980) Interpersonal Reactivity Index ( $\alpha = .758$ ). This 28-item rating system which uses a five-point Likert scale which ranges from 1 – *does not describe me well*, to 5 – *describes me very well* and includes statements such as, '*In emergency situations I feel apprehensive and ill-at-ease*' and '*other people's misfortunes do not usually disturb me a great deal*'. Where required, items were reverse scored so that a higher score meant a higher level of dispositional empathy. The complete questionnaire can be found in appendix F and G, which displays the questionnaires scoring system.

**2.5.3 Emotional Intelligence.** Emotional intelligence was measured using the Emotional Intelligence Scale ( $\alpha = .905$ ) (Found in, Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998). This 33-item scale measures results using a five-point Likert scale of 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, 5 = strongly agree, and includes statements such as '*other people find it easy to confide in me*' and '*when I am faced with a challenge, I give up because I believe I will fail*'. Where required, items were reverse scored so that a higher score meant a higher level of emotional intelligence. The complete questionnaire can be found in appendix H and I, which displays the questionnaires scoring system.

## 2.6 Raw Correlations to confirm moderators are linked to outcome variables

Initially, it was important to establish whether the moderator questionnaires (pre-existing levels of contact, dispositional empathy, and emotional intelligence) correlated with the attitude questionnaires (i.e. stigma towards mental illness, empathy towards mental illness and attitudes to schizophrenia). Using Pearson's correlation, the moderator of dispositional empathy (Interpersonal Reactivity Index Scale, as measured by interpersonal reactivity) was found to significantly correlate with the Empathy to Mental Illness Scale at pre-test,  $r = .54, \rho < .001$  as well as the Schizophrenia Knowledge, Attitudes and Perceptions Scale pre-test score analysis  $r = .26, \rho < .05$ . The moderator of emotional intelligence (Emotional Intelligence Scale) was also found to significantly correlate with the Empathy towards Mental Illness Scale's pre-test score  $r = .32, \rho < .001$ . As the Level of Contact Report scale was not normally distributed, this data was analysed singularly using non-parametric methods (Spearman's Rho).. The moderator of level of pre-existing contact was found to significantly correlate with the Day's Mental Illness Stigma scale pre-test  $r = -.39, \rho < .05$ , as well as the Schizophrenia Knowledge, Attitudes, and Perceptions Scale pre-test score analysis  $r = -.35, \rho < .05$ . Broadly,, the moderators were associated with the main outcome variables overall.

## 2.7 Procedure

Participants were invited to take part in an online questionnaire study via online website forums and through a university research participate scheme. Prior to participation, participants were provided with an information sheet and were required to give informed consent. The information sheet explained what was be expected of them in the study (see Appendix J & K). Participants were aware that data collection would be confidential and stored confidentially on a password secure computer. Participants were allowed the opportunity to ask questions before proceeding and were informed that they could withdraw from the study during or after the

study by emailing the researcher. Participants were asked to provide basic demographic data such as their gender and age before proceeding to the questionnaires.

Before the experimental interventions, all participants were asked to complete three measurement scales relating to individual differences (which were to be treated as moderators in the analysis). Firstly, participants were asked to complete the pre-existing levels of contact towards mental health questionnaire (Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005) which asked participants about their current or previous pre-existing contact with people who have a mental illness. Secondly, participants completed the dispositional empathy questionnaire (Davis, 1980), where participants were asked to complete a scale that measured their empathic tendencies. Thirdly, participants completed the emotional intelligence questionnaire (Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998). After completing these questionnaires, participants were told they would not have to complete this part of the study again. Participants were then asked to complete three pre-measures towards mental health a) their empathy towards mental illness, then b) their stigma towards mental illness, and finally their c) attitudes towards schizophrenia.

Once this part of study had been completed, participants were greeted with the statement of *"Thank you, you have now completed the questionnaires. You will now be given a video to observe. Please follow the upcoming instructions"*. Once the participants clicked onto the next page, the computer system would automatically allocate them into one of the three videos interventions: 1) A personal message presented by someone diagnosed with Schizophrenia (Contact Empathy), 2) A personal message presented by someone who treats Schizophrenia (Non-Contact Empathy), or 3) A factual talk by someone knowledgeable about Schizophrenia (Educational Control Intervention). Before the video began, a statement would appear saying; *'It is asked of you that you pay close attention to the stimuli that you are about*

*to observe, at the end of this piece you will be asked a brief question in order to confirm that you have correctly engaged with the task at hand'.*

After viewing the video, to test if participants were attentive, they were asked to briefly describe the video and how they felt about it. Two text boxes were provided. One which asked *"Now that you have watched this video, to show that you have watched it, could you describe in a few words (less than 100 words) what you thought was the main message"* and the other which asked *"In less than 100 words could you describe how this video made you feel"*. Below the transcript was a text box for participants to write in. This was put in place to assure that the participants fully engaged with the stimuli provided and if not, were able to be removed from the study. Some example of what participants wrote were, *"it made me understand that schizophrenia can be overcome, no matter how bad"* and *"it made me more aware of how individuals with this disorder may feel"*. All participants showed engagement and therefore all were included in the study.

Immediately after viewing the video, participants were asked to repeat the three questionnaires on a) empathy towards mental illness, b) stigma towards mental illness and c) attitudes towards schizophrenia. It was iterated to the participants how important this last piece of data was and the transcript read, *"Thank you for watching, now you have finished observing the video, we ask that you fill out a partial amount of the questionnaires that you had completed previously. This should take no longer than 10 minutes. It is very important for our study that this section is completed, and we appreciate your time"*. Once the questionnaires had been completed, participants were provided with a debrief sheet. This debrief sheet thanked them for their time and asked them for an email address in order to send over the follow-up questionnaire seven days later.

Seven days after the participant took part in the study, the last part of the questionnaire was sent to them electronically via automatic email to complete. This allowed the participants follow up questionnaires to remain anonymous. Upon completion of the study, participants were debriefed about the intentions of the study with a reminder that they were able to withdraw their data up until July 2017, a reminder of how the data would be used and who to contact should they have any questions (i.e. the researchers).

## **2.8 Ethics**

Firstly, this study was ethically approved by Canterbury Christ Church University's Board of Ethics prior to the study being conducted. Ethical precautions were taken by means of a participant information sheet preceding the study's completion and two participant debriefs post completion (see appendix J, K, L, M, N, & O). The information brief explained that the questionnaire would be related to mental health and would be asking for one's personal opinions around mental health. It emphasised that there was no right or wrong answers to the questions at hand, just honest thoughts to be expressed. The information sheet further pointed out that all answers were confidential, (i.e. all data and personal information will be stored securely within Canterbury Christ Church University premises in accordance with the Data Protection Act 1998 and the University's own data protection requirements), that data would only be seen by the researcher and researchers supervisors, and that participants did not have to answer any questions they did not feel comfortable in answering. Participants were also informed that they would be watching a short 7 to 9 minute video, that participation was voluntary and that they were able to withdraw at any point during the study without reason.

Participants were provided with two different debrief sheets post intervention and post follow-up intervention. The first debrief explained the intentions of the study, provided help and support information relating to mental illness and reiterated the participants' right to

withdraw (see appendix L). The follow up debrief gave further information in relation to the study's intervention strategies, which the first debrief did not provide as to not alter the effects of the follow-up results (see appendix M & N).

## Results

### 3.1 Descriptive Statistics

The aim of the study was to test whether level of contact and empathy would significantly improve the main three outcome variables (empathy towards mental illness, stigma towards mental illness, attitudes towards schizophrenia) and whether any effect is further moderated by pre-existing levels of contact, dispositional empathy and emotional intelligence.

The table below (Table 2) presents the mean and standard deviation scores for empathy towards mental illness, stigma towards mental illness and attitudes towards schizophrenia. It shows both pre and post timepoints for each attitude scale. This table includes the number of participants for each intervention.

**Table 2.** This table displays the mean and standard deviation for pre and post intervention scores in Empathy towards Mental Illness, Stigma towards Mental Illness & Attitudes towards Schizophrenia.

	Pre-Intervention Scores				Post-Intervention Scores			
	Contact Empathy	Non-Contact Empathy	Control	Control	Contact Empathy	Non-Contact Empathy	Control	Control
DV 1 Empathy Towards Mental Illness	Mean 35.67 Standard Deviation 7.63	Mean 36.83 Standard Deviation 6.87	Mean 36.95 Standard Deviation 7.74	Mean 33.47 Standard Deviation 6.59	Mean 35.61 Standard Deviation 7.48	Mean 36.15 Standard Deviation 6.9		
DV 2 Stigma Towards Mental Illness	Mean 82.29 Standard Deviation 21.43	Mean 81.96 Standard Deviation 21.23	Mean 81.45 Standard Deviation 20.7	Mean 82.05 Standard Deviation 24.14	Mean 79.61 Standard Deviation 21.75	Mean 81.95 Standard Deviation 22.49		
DV 3 Attitudes Towards Schizophrenia	Mean 25.76 Standard Deviation 5.9	Mean 27.82 Standard Deviation 5.71	Mean 27.4 Standard Deviation 4.06	Mean 24.62 Standard Deviation 4.76	Mean 24.87 Standard Deviation 4.52	Mean 24.85 Standard Deviation 5.82		
Number of Participants	N = 21	N = 23	N = 20	N = 21	N = 23	N = 20		

### 3.2 Test of Normality

The first step of analysis was to examine the normality of the data. This was conducted in order to assess whether statistical analysis methods would use parametric or non-parametric methods. Analysis looked at the Shapiro-Wilk test, rather than the Kolmogorov-Smirnov test, as the Shapiro-Wilk is known to be better for smaller sample sizes and has more sensitivity in detecting differences in normality (Field, 2009)

As can be seen by the Shapiro-Wilk's indices, all variables, apart from the Level of Contact Report questionnaire ( $W(64) = .87, \rho < .001$ ), were found to not significantly deviate from normal distribution. Interpersonal Reactivity Index scale  $W(64) = .97, \rho > .05$ . Emotional Intelligence Scale,  $W(64) = .97, \rho > .05$ . The Empathy to Mental Illness Scale, both pre,  $W(64) = .98, \rho > .05$  and post,  $W(64) = .97, \rho > .05$ . The Day's Mental Illness Stigma Scale, pre,  $W(64) = .98, \rho > .05$  and post,  $W(64) = .98, \rho > .05$ . The Schizophrenia Knowledge, Attitudes and Perceptions Scale, pre,  $W(64) = .97, \rho > .05$  and post,  $W(64) = .97, \rho > .05$ . As the Level of Contact Report questionnaire was not of normal distribution,  $W(64) = .81, \rho < .001$ , non-parametric methods were used for correlational tests.

### 3.3 Main Analyses: Was the Intervention effective and was it affected by Pre-existing Levels of Empathy, Emotional Intelligence and Pre-existing Levels of Contact.

The study first aimed to examine the main effect of intervention (Contact Empathy, Non-Contact Empathy, and the Education Control) on a) empathy towards mental illness, b) Stigma towards mental illness and c) attitudes towards schizophrenia Secondly, the study aimed to analyse whether the interventions were moderated by pre-existing levels of contact (high vs. low), dispositional empathy (high vs. low) and emotional intelligence (high vs. low).

For level of pre-existing contact, which was scored 0-12, the median score was 9, therefore participants who scored 8.9 and under were categorised as low-level contact, and participants who score from 9-12 were high level contact.

For dispositional empathy, which was scored from 0-140, the median score was 79.5. Participants who scored 79.4 and under were categorised as low-level dispositional empathy, and participants who score 79.5 and over were categorised as high level dispositional empathy.

For emotional intelligence which scored from 0-165 the, median was 76.5. Participants who scored 76.4 and under were considered as low emotional intelligence and participants who scored 76.5 and above were considered as high emotional intelligence.

### **3.3.1 Effect of Intervention on Empathy towards Mental Illness**

The effect of intervention (Contact Empathy, Non-contact Empathy and Educational control) on the first dependent variable (outcome) empathy towards mental illness and whether this was moderated by the three moderators (pre-existing mental health contact, pre-existing dispositional empathy and emotional intelligence) was examined with three 3x2 ANCOVA's.

First, the intervention and whether this was moderated by pre-existing contact (high vs low) was examined. It was hypothesised (Hypothesis 1a) that: Eliciting Empathy will significantly improve empathy towards mental illness and levels of pre-existing mental health contact will moderate the effect.

The homogeneity of variance showed to be non-significant  $F(5,58) = 1.66, \rho = .16$ , therefore this study was able to accept that the dependent variable was equal across groups.

After controlling for pre-test scores of empathy towards mental illness, the results of the ANCOVA found no significant main effect for post-test scores in empathy towards mental illness between the three interventions (Contact Empathy, Non-Contact Empathy, &

Educational Control Intervention)  $F(2, 57) = .72, \rho = .49$ . This meant there was no significant difference in levels of empathy towards mental illness for Contact Empathy ( $M = 33.48, SD = 6.59$ ) compared to Non-Contact Empathy ( $M = 35.6, SD = 7.48$ ) and Educational Control ( $M = 36.15, SD = 6.94$ ).

The results found no significant difference in empathy towards mental illness  $F(1, 57) = .29, \rho = .59$  for the high contact mean ( $M = 34.42, SD = 7.07$ ) compared to the low contact mean ( $M = 36.04, SD = 6.96$ ). Lastly, there was no interaction between the interventions and level of pre-existing contact  $F(2, 57) = .35, \rho = .71$ . There was no difference in empathy towards mental illness for the high contact group in Contact Empathy ( $M = 33.68, SD = 5.56$ ), Non-Contact Empathy ( $M = 34.78, SD = 7.94$ ) or the Educational Control ( $M = 36.07, SD = 7.09$ ), compared to the low contact group in Contact Empathy ( $M = 34.8, SD = 7.55$ ) Non-Contact Empathy ( $M = 36.07, SD = 7.1$ ) or the Educational Control ( $M = 35.37, SD = 7.01$ ). Therefore, levels of pre-existing contact did not affect (moderate) the effect of intervention on empathy towards mental illness.

Secondly, the intervention and whether this was moderated by pre-existing dispositional empathy (high vs low) was examined. It was hypothesised (Hypothesis 1b) that: Eliciting Empathy will significantly improve empathy towards mental illness and levels of pre-existing dispositional empathy will moderate the effect.

The homogeneity of variance showed to be non-significant  $F(5, 58) = 1.04, \rho = .403$ , therefore this study was able to accept that the dependent variable was equal across groups.

After controlling for pre-test scores of empathy towards mental illness, again the results of the ANCOVA found no significant main effect for post-test scores in empathy between the three interventions  $F(2, 57) = 0.7, \rho = 0.5$ . Results found no significant difference in empathy

towards mental illness  $F(1, 57) = 1.82, \rho = .18$  for the high dispositional empathy mean ( $M = 38.09, SD = 6.87$ ) compared to the low dispositional empathy mean ( $M = 32.06, SD = 5.83$ ). There was no interaction between the interventions and the level of dispositional empathy  $F(2, 57) = .41, \rho = .67$  for the high empathy group in Contact Empathy ( $M = 35.11, SD = 6.85$ ), Non-Contact Empathy ( $M = 36.48, SD = 7.45$ ), and The Educational Control ( $M = 36, SD = 6.77$ ), nor the low empathy group in Contact Empathy ( $M = 33.44, SD = 5.26$ ), Non-Contact Empathy ( $M = 33.91, SD = 5.44$ ), and The Educational Control ( $M = 35.63, SD = 7.03$ ). Therefore, levels dispositional empathy did not affect (moderate) the effect of intervention on empathy towards mental illness.

Thirdly, the intervention and whether this was moderated by emotional intelligence (high vs low) was examined. It was hypothesised (Hypothesis 1c) that: Eliciting Empathy will significantly improve empathy towards mental illness and levels of pre-existing emotional intelligence will moderate the effect.

The homogeneity of variance showed to be non-significant  $F(5,58) = 3.68, \rho = .01$ , therefore this study was unable to accept that the dependent variable was equal across groups. Therefore, caution is needed when interpreting these results.

After controlling for pre-test scores of empathy towards mental illness, the results of the ANCOVA also found no significant main effect for post-test scores in empathy between the three interventions  $F(2, 57) = .86, \rho = .43$ . Results found significant difference in empathy towards mental illness  $F(1, 57) = .24, \rho = .63$  for the high emotional intelligence mean ( $M = 36.53, SD = 6.9$ ) compared to the low emotional intelligence mean ( $M = 33.63, SD = 6.93$ ). There was no interaction between video intervention and level of emotional intelligence  $F(2, 57) = .111, \rho = .34$ , for the high emotional intelligence group in Contact Empathy ( $M = 33.47, SD = 5.77$ ), Non-Contact Empathy ( $M = 36.48, SD = 7.81$ ), and The Educational Control ( $M =$

36.26,  $SD = 6.86$ ), nor the low emotional intelligence group in Contact Empathy ( $M = 34.95$ ,  $SD = 7.87$ ), Non-Contact Empathy ( $M = 34.3$ ,  $SD = 6.75$ ), and The Educational Control ( $M = 35.41$ ,  $SD = 6.89$ ). Therefore, levels of emotional intelligence did not affect (moderate) the effect of intervention on empathy towards mental illness.

### 3.3.2 Effect of Intervention on Stigma towards Mental Illness

The effect of intervention (Contact Empathy, Non-contact Empathy and Educational control) on the second dependent variable (outcome) stigma towards mental illness and whether this was moderated by the three moderators (pre-existing mental health contact, pre-existing dispositional empathy and emotional intelligence) was examined with three 3x2 ANCOVA's.

First, the intervention and whether this was moderated by pre-existing contact (high vs low) was examined. It was hypothesised (Hypothesis 2a) that: Eliciting Empathy will significantly improve stigma towards mental illness and levels of pre-existing mental health contact will moderate the effect.

The homogeneity of variance showed to be non-significant  $F(5,58) = .81$ ,  $\rho = .55$ , therefore this study was able to accept the dependent variable was equal across groups.

After controlling for pre-scores of stigma towards mental illness, the results of the ANCOVA found no significant main effect for post-test scores in stigma between the three interventions  $F(2, 57) = .279$ ,  $\rho = .76$ . This meant there was no significant difference in levels of stigma towards mental illness in Contact Empathy ( $M = 82.04$ ,  $SD = 24.14$ ) compared to Non-Contact Empathy ( $M = 79.60$ ,  $SD = 21.75$ ), and The Educational Control ( $M = 81.95$ ,  $SD = 22.49$ ).

The results found no significant difference in stigma towards mental illness  $F(1, 57) = .246, \rho = .622$  for the high contact mean ( $M = 78.9, SD = 21.86$ ) compared to the low contact mean ( $M = 84.42, SD = 23.33$ ). Additionally, there was no interaction between interventions and level of pre-existing contact  $F(2, 57) = .84, \rho = .43$ , for the high contact group in Contact Empathy ( $M = 79.83, SD = 22.3$ ), Non-Contact Empathy ( $M = 81.88, SD = 23.07$ ), and The Educational Control ( $M = 84.47, SD = 21.82$ ), nor for the low contact group in Contact Empathy ( $M = 84.80, SD = 26.77$ ), Non-Contact Empathy ( $M = 76.55, SD = 20.98$ ) and The Educational Control ( $M = 79.14, SD = 24.91$ ). Therefore, levels of pre-existing contact did not affect (moderate) the effect of intervention on stigma towards mental illness.

Secondly, the intervention and whether this was moderated by pre-existing dispositional empathy (high vs low) was examined. It was hypothesised (Hypothesis 2b) that: Eliciting Empathy will significantly improve stigma towards mental illness and levels of pre-existing dispositional empathy will moderate the effect.

The homogeneity of variance showed to be non-significant  $F(5,58) = 1.49, \rho = .21$ , therefore this study was able to accept that the dependent variable was equal across groups.

After controlling for pre-test scores of stigma towards mental illness, again the results of the ANCOVA found no significant main effect for post-test scores in stigma between the three interventions  $F(2, 57) = .27, \rho = .76$ . The results found no significant difference in stigma towards mental illness  $F(1, 57) = 1.18, \rho = .28$  for the high dispositional empathy mean ( $M = 84.78, SD = 20.27$ ) compared to the low dispositional empathy mean ( $M = 84.781, SD = 24.21$ ). There was no interaction between the interventions and level of dispositional empathy  $F(2, 57) = .28, \rho = .76$ , and no significant difference in stigma towards mental illness  $F(1, 57) = 1.18, \rho = .28$  for the high dispositional empathy group in Contact Empathy ( $M = 86.17, SD = 22.65$ ), Non-Contact Empathy ( $M = 79.78, SD = 19.55$ ), and The Educational Control ( $M = 84.35, SD$

= 21.21), nor for the low dispositional empathy group in Contact Empathy ( $M = 78.1$ ,  $SD = 25.43$ ), Non-Contact Empathy ( $M = 79.29$ ,  $SD = 23.69$ ), and The Educational Control ( $M = 79.87$ ,  $SD = 25.15$ ). Therefore, levels of dispositional empathy did not affect (moderate) the effect of intervention on stigma towards mental illness.

Thirdly, the intervention and whether this was moderated by pre-existing emotional intelligence (high vs low) was examined. It was hypothesised (Hypothesis 2c) that: Eliciting Empathy will significantly improve stigma towards mental illness and levels of pre-existing Emotional Intelligence will moderate the effect.

The homogeneity of variance showed to be significant  $F(5,58) = 2.69$ ,  $\rho = .03$ , therefore this study was unable to accept that the dependent variable was equal across groups.

After controlling for pre-test scores of stigma towards mental illness, the results of the ANCOVA also found no significant main effect for post-test scores in stigma between the three interventions  $F(2, 57) = .28$ ,  $\rho = .76$ . There was no significant difference in stigma towards mental illness  $F(1, 57) = .021$ ,  $\rho = .89$  for the high emotional intelligence mean ( $M = 83.31$ ,  $SD = 20.99$ ) compared to the low emotional intelligence mean ( $M = 78.97$ ,  $SD = 23.96$ ). There was also no interaction between video intervention and level of emotional intelligence  $F(2, 57) = .146$ ,  $\rho = .24$  for the high emotional intelligence group in Contact Empathy ( $M = 78.17$ ,  $SD = 20.46$ ), Non-Contact Empathy ( $M = 81.72$ ,  $SD = 25.5$ ), and The Educational Control ( $M = 85.5$ ,  $SD = 16.75$ ), nor the low emotional intelligence group in Contact Empathy ( $M = 86.47$ ,  $SD = 29.52$ ), Non-Contact Empathy ( $M = 77.59$ ,  $SD = 18.37$ ), and The Educational Control ( $M = 79.74$ ,  $SD = 26.01$ ). Therefore, levels of emotional intelligence did not affect (moderate) the effect of intervention on stigma towards mental illness.

### 3.3.3 Effect of Intervention on Attitudes towards Schizophrenia

The effect of intervention (Contact Empathy, Non-contact Empathy and Educational control) on the third dependent variable (outcome) attitudes towards schizophrenia and whether this was moderated by the three moderators (pre-existing mental health contact, pre-existing dispositional empathy and emotional intelligence) was examined with three 3x2 ANCOVA's.

First, the intervention and whether this was moderated by pre-existing contact (high vs low) was examined. It was hypothesised (Hypothesis 3a) that: Eliciting Empathy will significantly improve attitudes towards schizophrenia and levels of pre-existing mental health contact will moderate the effect.

The homogeneity of variance showed to be not significant  $F(5,58) = .37, \rho = .86$ , therefore this study was able to accept that the dependent variable was equal across groups.

After controlling for pre-test scores of attitudes towards schizophrenia, the results of the ANCOVA found no significant main effect for post-test scores in attitudes between the three interventions  $F(2, 57) = 1.42, \rho = .25$ . This meant there was no significant difference in attitudes to schizophrenia in Contact Empathy ( $M = 24.62, SD = 4.76$ ) compared to Non-Contact Empathy ( $M = 24.87, SD = 4.52$ ) and The Educational Control ( $M = 24.85, SD = 5.82$ ).

Results found a significant difference in attitudes to schizophrenia  $F(1, 57) = 6, \rho = .02$  for the high contact mean ( $M = 24.58, SD = 4.38$ ) compared to the low contact mean ( $M = 25.08, SD = 5.78$ ). However, results found no significant interaction between video intervention and level of pre-existing contact  $F(2, 57) = 1.02, \rho = .37$ . It was found that participants in the high contact group for Contact Empathy ( $M = 26.07, SD = 3.77$ ), Non-Contact Empathy ( $M = 25.7, SD = 4.26$ ) and The Educational Control ( $M = 25.04, SD = 5.11$ ), rated more negatively in attitudes towards schizophrenia, compared to those participants in the

low contact group for Contact Empathy ( $M = 24.94$ ,  $SD = 5.65$ ), Non-Contact Empathy ( $M = 22.28$ ,  $SD = 5.06$ ), and The Educational Control ( $M = 23.79$ ,  $SD = 7.02$ ). Therefore, levels of pre-existing contact did not affect (moderate) the effect of intervention on attitudes towards schizophrenia.

Secondly, the intervention and whether this was moderated by pre-existing dispositional empathy (high vs low) was examined. It was hypothesised (Hypothesis 3b) that: Eliciting Empathy will significantly improve attitudes towards schizophrenia and levels of pre-existing dispositional empathy will moderate the effect.

The homogeneity of variance showed to be significant  $F(5,58) = 2.79$ ,  $\rho = .03$ , therefore this study was unable to accept that the dependent variable was equal across groups.

After controlling for pre-test scores of attitudes towards schizophrenia, the results of the ANCOVA found no significant main effect for post-test scores in attitudes between the three interventions  $F(2, 57) = .82$ ,  $\rho = .45$ . No significant difference in attitudes towards schizophrenia  $F(1, 57) = .47$ ,  $\rho = .49$  was found for the high dispositional empathy mean ( $M = 25.72$ ,  $SD = 4.45$ ) compared to the low dispositional empathy mean ( $M = 23.844$ ,  $SD = 5.32$ ). There was no interaction between the interventions and level of dispositional empathy was found  $F(2, 57) = .08$ ,  $\rho = .92$ , for the high dispositional empathy group in Contact Empathy, ( $M = 25.04$ ,  $SD = 4.72$ ), Non-Contact Empathy ( $M = 24.18$ ,  $SD = 4.67$ ), and The Educational Control ( $M = 24.22$ ,  $SD = 4.3$ ), nor for the low dispositional empathy group in Contact Empathy ( $M = 25.91$ ,  $SD = 4.63$ ), Non-Contact Empathy ( $M = 24.33$ ,  $SD = 4.06$ ), and The Educational Control ( $M = 24.96$ ,  $SD = 7.58$ ). Therefore, levels of dispositional empathy did not affect (moderate) the effect of intervention on attitudes towards schizophrenia.

Thirdly, the intervention and whether this was moderated by pre-existing emotional intelligence (high vs low) was examined. It was hypothesised (Hypothesis 3b) that: Eliciting Empathy will significantly improve attitudes towards schizophrenia and levels of pre-existing emotional intelligence will moderate the effect.

The homogeneity of variance showed to be not significant  $F(5,58) = 1.21$   $\rho = .32$ , therefore this study was able to accept that the dependent variable was equal across groups.

After controlling for pre-test scores of attitudes towards schizophrenia, the results of the ANCOVA also found no significant main effect for post-test scores in attitudes between the three interventions  $F(2, 57) = .96$ ,  $\rho = .39$ . There was no significant difference in attitudes to schizophrenia  $F(1, 57) = 2.45$ ,  $\rho = .12$  for the high emotional intelligence mean ( $M = 25.81$ ,  $SD = 4.92$ ) compared to the low emotional intelligence mean ( $M = 23.75$ ,  $SD = 4.85$ ). Additionally, there was no interaction between video intervention and level of emotional intelligence  $F(2, 57) = 1.51$ ,  $\rho = .22$  for the high emotional intelligence group in Contact Empathy ( $M = 25.24$ ,  $SD = 3.55$ ), Non-Contact Empathy ( $M = 25.35$ ,  $SD = 5.46$ ), and The Educational Control ( $M = 25.79$ ,  $SD = 5.87$ ), nor for the low emotional intelligence group for Contact Empathy ( $M = 25.93$ ,  $SD = 6.26$ ), Non-Contact Empathy ( $M = 23.29$ ,  $SD = 3.15$ ), and The Educational Control ( $M = 23.57$ ,  $SD = 5.41$ ). Therefore, levels of emotional intelligence did not affect (moderate) the effect of intervention on attitudes towards schizophrenia.

### **3.4 Effects Size**

As the results were found to be non-significant, an analysis into the study's effect size was conducted. Effect size focuses on the size of the difference between two factors, rather than relating the results to the sample size (Rosenthal, 1994). This was pursued in order to

determine whether the effects of the study would have been different if the sample size was to have been larger.

**3.4.1 T-test and Cohen's d.**<sup>1</sup> An independent samples T-test was conducted for each comparison of the intervention variables. This was executed to evaluate any significant differences between interventions, as well as for the calculation of Cohen's *d*.

For the dependent variable of "empathy towards mental illness", results showed no significant differences across all three variable comparisons. Those being 1. Educational Control Intervention ( $M = 36.15, SD = 6.93$ ) and Non-Contact Empathy ( $M = 35.61, SD = 7.48$ )  $t(41) = .25, \rho > .05, d = .08.$ , 2. Educational Control Intervention and Contact Empathy ( $M = 33.47, SD = 6.59$ )  $t(39) = 1.27, \rho > .05, d = .4.$ , 3. Non-Contact Empathy and Contact Empathy  $t(42) = 1, \rho > .05, d = .3.$

For the dependent variable of "stigma over mental illness", results also showed no significant differences across all three variable comparisons. 1. Educational Control Intervention ( $M = 81.95, SD = 22.49$ ) and Non-Contact Empathy ( $M = 79.61, SD = 21.75$ )  $t(41) = -.35, \rho > .05, d = .11$ , 2. Educational Control Intervention and Contact Empathy ( $M = 82.05, SD = 24.14$ )  $t(39) = -.01, \rho > .05, d = -.004.$ , 3. Non-Contact Empathy and Contact Empathy  $t(42) = -.35, \rho > .05, d = -.11.$

For the dependent variable of "attitudes towards schizophrenia", results again showed no significant differences across all three variable comparisons. 1. Educational Control Intervention ( $M = 24.85, SD = 5.82$ ) and Non-Contact Empathy ( $M = 24.87, SD = 4.52$ )  $t(41) = -.01, \rho > .05, d = -.004.$ , 2. Educational Control Intervention and Contact Empathy ( $M = 24.62, SD = 4.76$ )  $t(39) = .14, \rho > .05, d = .04.$ , 3. Non-Contact Empathy and Contact Empathy  $t(42) = .18, \rho > .05, d = .05.$

**3.4.2 Effect Size and Partial Eta Squared.** <sup>1</sup> For the dependent variable of “empathy towards mental illness”, the effect size was not significant across interventions  $F(2,61) = .84$ ,  $\rho = .84$ , with a partial Eta Squared of  $\eta^2 = .03$ . By two-way comparison, the effect sizes were as follows, 1. Educational Control Intervention and Non-Contact Empathy,  $r = .04$  2, Educational Control Intervention and Contact Empathy  $r = .19$ , 3, Non-Contact Empathy and Contact Empathy  $r = .15$ .

For the dependent variable of “stigma over mental illness”, results also showed no significant differences across interventions  $F(2,61) = .081$ ,  $\rho = .92$ , with a partial Eta Squared of  $\eta^2 = .003$ . By two-way comparison, the effect sizes were as follows, 1. Educational Control Intervention and Non-Contact Empathy,  $r = .05$ , 2. Educational Control Intervention and Contact Empathy  $r = -.002$ , 3. Non-Contact Empathy and Contact Empathy  $r = -.05$ .

For the dependent variable of “attitudes towards schizophrenia”, results again showed no significant differences across interventions  $F(2,61) = .02$ ,  $\rho = .98$ , with a partial Eta Squared of  $\eta^2 = .001$ . By two-way comparison, the effect sizes were as follows, 1. Educational Control Intervention and Non-Contact Empathy,  $r = -.002$ , 2. Educational Control Intervention and Contact Empathy  $r = .02$ , 3. Non-Contact Empathy and Contact Empathy  $r = .03$ .

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<sup>1</sup> Both the Cohen's  $d$  and two-way comparison effect-size were computed through an effect size calculator. This can be found through the hyperlink of <http://www.uccs.edu/~lbecker/>.

## Discussion

### 4.1 Introduction for Discussion

The purpose of this study was to investigate whether the effects of empathy in reducing stigma towards mental illness, using a media-moderated contact intervention (Contact Empathy – presented as a video of man describing his personal experience of Schizophrenia) and a media-moderated non-contact intervention (Non-Contact Empathy – presented as a psychologist emphatically explaining the condition of Schizophrenia), a) increased empathy towards mental illness, b) reduced stigma towards mental illness and c) reduced negative attitudes towards schizophrenia, in comparison to an education intervention control. Past research has shown that media-moderated contact can be an effective way of reducing stigma (Li et al., 2017; Norman et al., 2017). Media moderated contact through video messaging (rather than direct face to face contact) is faster, more cost effective and a better way of distributing information to a larger population (Stuart, 2006a); hence it is important to evaluate its effectiveness in this area. However, research has not yet begun to question *why* methods that do not use a direct contact approach can be as successful in reducing stigma towards mental illness. Theory has suggested that empathy could be of high importance in helping to reduce stigma towards mental illness (Rickwood et al., 2004; Santamaría-García et al., 2017; Schachter et al., 2008) and yet specifically, to date, there has been a lack of empirical work testing the impact of empathy in media moderated contact. This study therefore sought to investigate the effect of empathy towards mental illness in reducing stigma towards mental illness, specifically on schizophrenia. Schizophrenia was explicitly chosen because it tends to be one of the most stigmatised of mental illnesses and therefore of significant impact (Angermeyer & Matschinger, 2003; Crisp et al., 2005).

#### **4.2 Effects of media moderated contact and empathy interventions**

The current study's results found that empathy towards mental illness, stigma towards mental illness and attitudes towards schizophrenia were not significantly affected by a Contact Empathy intervention or Non-Contact Empathy intervention, in relation to an educational control intervention. This could suggest that eliciting empathy may not be a key factor in helping to reduce stigma towards mental illness; specifically, in a media moderation context. These findings appear initially contradictory as they go against existing research which argues that empathy is the mechanism which allows for fundamental change and that this can be provoked best through contact (Schachter et al., 2008). Additionally, because this study did not find a significant change in levels of contact (contact vs no contact), it also goes against research which shows that media-moderated contact interventions are effective in reducing stigma towards mental illness. These findings advocate for the need to delve deeper into the reasons of why the current intervention presented as ineffective.

Initial thoughts question the role of empathy in reducing stigma towards mental illness. It may be that empathy is an important element in reducing stigma towards mental illness, but, like education, an empathy induced intervention has limited ability to cause significant effects on stigma on its own. This is especially pertinent to consider regarding the current interventions' use of media-moderated contact. It could also be possible that the use of a media-moderated contact intervention was not effective in eliciting empathy and that the issue is not the role of empathy itself but how empathy is provoked through this intervention strategy that is important. Literature has indicated that there are many emotional factors that contribute to stigma towards mental illness (Yeh et al., 2017), therefore, it may be that research needs to target other emotional elements when addressing stigma towards mental illness or do so in different ways. If so, this would have to be carefully considered and incorporated into an

intervention for it to be effective in reducing stigma towards mental illness (Link, 2011). This could be affected by the type of strategy used for an intervention due to the effect this could have in provoking particular emotions, i.e. fear, rejection, anxiety etc. This could go to explain why the current study's intervention, which uses a media-moderated contact method (Contact Empathy), was not significantly different to the other interventions. Despite the previous research, which suggests that a media moderated contact intervention is effective in reducing stigma towards mental illness (Brown, 2008a; Chan et al., 2009; Norman et al., 2017), other research shows inconsistencies in this particular intervention type (Faigin & Stein, 2008; Schulze & Angermeyer, 2003; Stuart, 2006b). For example, Faigin and Stein (2008) study displayed a significantly greater decrease in stigma towards mental illness when using a live presentation group than when using a media-moderated presentation group to speak about stigmatization of mental illness. This could be indicative of crucial missing factors within an intervention's strategy which are needed to provoke a reduction in stigma towards mental illness.

If empathy is not a significantly effective tool in reducing mental health stigma using media moderated contact, future research should look at other possible solutions. It could be that people already feel empathy towards Schizophrenia and therefore it does not matter the mode in which media moderated contact is presented (Hackler et al., 2016; Penn et al., 2003). It could also be affected by the way in which empathy is elicited. For example, Li et al., (2017) found more positive attitudes towards mental health when people were presented with a video of an individual describing their recovery from schizophrenia, rather than describing their symptoms when acutely ill. The study also found that by asking participants to seek similarities between themselves and the person on the video, that this had a moderating effect, with more perceived similarities resulting in a more positive outcome and a higher level of reduction in stigma towards mental illness. Likewise, Norman et al., (2017) found significantly reduced

stigma towards mental illness two weeks post intervention when using the same intervention method as Li et al., (2017). Their research found that the recovery-focused material was more effective in improving positive impressions and reducing social distancing. This in turn reduced perceived anxiety in direct contact with a person who has a mental illness. Alternatively, the symptom focused media-moderated intervention showed greater effects in sympathy but did not improve impressions or social distancing and did not assist in reducing perceived anxiety in direct contact with a person who has a mental illness (Li et al., 2017). This suggests that videos describing recovery may be more effective at reducing mental health stigma rather than necessarily eliciting empathy (Hackler et al., 2016; Norman et al., 2017). Perhaps participants in the current study did not feel connected with the speaker or associate themselves as similar with the schizophrenic speaker in the Contact Empathy intervention. This could clarify as to why the current study's interventions appeared as ineffective. It may be that, although empathy was provoked, it was not provoked through positive relation and therefore did not have the desired effect on stigma towards mental illness.

Alternatively, it could be that although the current study was attempting to elicit empathy, it actually elicited feelings of sympathy through the video messages used. Though sympathy and empathy are used interchangeably, there is a prominent difference in what they elicit within an individual. In other words, to empathise is to emotionally connect with another and respond to their perceived state through an emotional understanding of their experience or feelings. However, to sympathise provokes individuals to feel concerned for another but does not entail the same emotional connection between one another (Clark, 2010). This could be something to test in future studies.

Despite some of the theories explored in this discussion, the results of this study demonstrate is that media-moderated contact *does not* seem to be as effective in comparison

education. As such this is consistent with the work of Brown, Evans, Espenshade and O'Connor, (2010) and Corrigan et al., (2012) whose research shows that a direct contact approach is more successful in reducing stigma towards mental illness when compared with a media-moderated contact approach. This could indicate that studies have not yet determined what exactly is elicited in an individual when they experience direct contact with a person who has a mental illness. Until research is able to determine this, it is unlikely that studies will be able to wholly develop the effect of direct contact into a media-moderated contact intervention.

Since the results of this study have found that indirect contact has not been effective in increasing empathy and reducing stigma towards mental health, it could be because direct contact allows a greater opportunity for empathy through positive relation and social interaction. This theory would be supportive of research by Batson (1991), Batson et al., (2007) and Jolliffe and Farrington, (2011) who report that direct contact allows for greater social and emotional engagement which elicits a change in attitude. It is possible that the social component of direct contact is able to provoke more positive relational empathy through positive social interaction. Another factor to consider is how embedded stigma towards mental illness may be inhuman psychology. Research goes to state that it is a deep seated response in human nature to feel fearful of things labelled with the term "illness" (Chin & Abraham, 2016; Corrigan, 2004b; 2016; Corrigan, & Watson, 2004; Thoits, 1985) and rejecting towards thing's individuals fear or have little understanding over (Martin et al., 2000; Thornicroft, 2006). Maybe direct contact presents as stronger because it is able to counteract these predispositions, again, through positive social interaction.

### **4.3 The effect of pre-existing contact with mental illness, dispositional empathy and emotional intelligence on the intervention: The effect of moderation**

This study additionally sought to examine whether pre-existing levels of contact with mental illness, dispositional empathy, and emotional intelligence would have moderating effects on an intervention's effectiveness. Research has shown that successful interventions can sometimes present with inconsistent results regarding the same intervention type (Faigin, & Stein, 2008; Schulze & Angermeyer, 2003; Stuart, 2006b). Therefore, this study further sought to understand these inconsistencies by exploring pre-existing psychological factors which may affect the effect of an intervention. Existing research suggests that individuals who are less empathetic are less likely to be affected by empathy induced stimuli (Batson et al., 1997; Jolliffe & Farrington, 2011). Therefore, this study examined the potential moderating effect of one's dispositional empathy (ability to empathise) and emotional intelligence (emotional capacity) on an intervention. This study furthermore explored the effect of pre-existing levels of contact due to contact's prominence in research interventions that aim to reduce stigma towards mental illness.

The results of the current study showed no effect of moderation for pre-existing levels of contact, dispositional empathy, or emotional intelligence. This could suggest that individual differences do not have the potential to moderate the effectiveness of an intervention strategy on stigma towards mental illness. However, again, this would be contradictory to previous theory which suggests that individuals who are less emotionally driven are less likely to be affected by emotionally driven stimuli (Batson et al., 1997; Jolliffe & Farrington, 2011). This would also be contradictory of previous research interventions which show the effectiveness of contact in reducing stigma towards mental illness (Birtel & Crisp, 2012; Kerby et al., 2008; Kosyluk, 2014; Stathi et al., 2012; Thonon et al., 2016). These results are especially thought

provoking when looked at beside the results of the main effect of intervention. One of the possible reasons for this is maybe that participants in this sample already had existing high empathy and emotional intelligence. Furthermore, because the main effect of intervention showed no significant difference in empathy towards mental illness post intervention, this could indicate that empathy was not elicited in any of the intervention strategies (Contact Empathy, Non-Contact Empathy, Educational Control). Therefore, it could be possible that dispositional empathy and emotional intelligence do have the potential to be moderating factors for interventions that elicit empathy, but that empathy was not elicited during the intervention strategies of Contact Empathy and Non-Contact Empathy. This could further support the discussions earlier suggestion about the type of empathy used within an intervention and the effect of positive relational empathy; as the right type of empathy was not elicited, this did not allow for improvements in empathy and stigma towards mental illness.

In regard to the finding of no moderating effect of pre-existing levels of contact, this is substantially contradictory to previous theory and research, as studies have indicated that any kind of contact is significantly effective in stigma reduction for mental illness (Birtel & Crisp, 2012; Katz, 2014; Kerby, Calton, Dimambro, Flood, & Glazebrook, 2008; Kosyluk, 2014; Stathi, Tsantila, & Crisp, 2012; Thonon, Pletinx, Grandjean, Billieux, & Larøi, 2016; Turner, 2007). This is consistent with research which shows that direct contact is a more effective intervention than that of media-moderated contact (Alexander & Link, 2003; Corrigan et al., 2012) and that even with pre-existing levels of contact, a media-moderated intervention does not yield the same efficacy. This suggestion can be supported by the current study's correlational analysis which showed that higher levels of pre-existing contact significantly correlated with lower levels of stigma to schizophrenia prior to the intervention. As such is could be that this contact may have a moderating effect on stigmatized attitudes, but that this

can only be seen through a direct contact approach because a media-moderated intervention does not have a large enough effect on stigma towards mental illness. Therefore, future studies should focus on direct contact interventions (to test the specific effects of empathy) as the research indicates that direct contact may be a key factor for reducing stigma towards mental illness.

More speculatively, because pre-existing levels of contact did not have a moderating effect on empathy towards mental illness, stigma towards mental illness, or attitudes towards schizophrenia, this could also be supportive of contact not being the key component in reducing stigma towards mental illness. This would again lead onto the assumption that it is something within contact that provokes a significant reduction of stigma towards mental illness (Batson et al., 2007; Jolliffe & Farrington, 2011). Further research would need to be pursued in order to determine the validity of this assumption.

Alternatively, as the study did not account for whether previous contact interactions with mental illness were positive or negative; this could have skewed the results. If the current study took interaction experience into consideration, this could have showed a difference in outcome as research has shown that negative interactions with individuals who have a mental illness can cause people to become more prejudice (Read, Haslam, & Sayce, 2006).

#### **4.4 Limitations of Study**

A number of general limitations have to be acknowledged.

##### **4.4.1 Use of an Online Study**

One limitation of the study related to the use of an online methodology. Although this method allowed for easy distribution and enabled variety in participants (i.e. age, gender, race, culture), it restricted the study from being able to conclusively know whether participants

engaged with the intervention material provided. As the intervention strategy was solely based on participants' engagement with the video in question, it is very important to be able to make certain that participants fully engage with the stimuli presented. With an online methodology, this is something the study cannot be fully certain of without the presence of the participant. Nonetheless, this study did take precautions to prevent participants who did not engage with the video intervention from being included in the data. This was done by asking participants to write about what they thought of the stimuli presented and how it made them feel; this can indicate whether participants watched the video or not. It should be noted that all participants included in the study did show engagement in the task by responding to the questions about the video (i.e. they described the video correctly). This cannot however determine whether participants were fully engaged with the intervention for the duration of the video. Therefore, it would be wise to have conducted this study under a *participant present* type intervention in order to watch over participants' video engagement.

#### **4.4.2 Overall Length of Study**

A general limitation of the study was its length of time for participants to complete the measures. The current study used six different measurement scores to determine empathy towards mental illness, stigma towards mental illness and attitudes towards schizophrenia, and pre-existing levels of contact, dispositional empathy and emotional intelligence. This meant that participants had to complete six questionnaires prior to the intervention and three repeated questionnaires once they had taken part in the intervention they were assigned. The length of the intervention could have contributed to participant dropout rates, diminished participants' attention in the video section of the intervention and led to participants filling out the questionnaires improperly. If this study were to be repeated, it would be worth considering focusing on one attitude measurement, for example, attitudes towards schizophrenia, and

possibly look into two moderating factors instead of three, such as pre-existing levels of contact and dispositional empathy.

A more specific limitation was potentially the length of time participants were exposed to the intervention (i.e. videos). Research stated that video's longer than nine minutes long present with a much lower engagement rate (Guo et al., 2014), however, it is possible that longer or more repeated exposures would have been more effective. More research could have been done to investigate the effect of video engagement in relation to video length.

#### **4.5 Implications, Future Research and Conclusions**

This study has found that empathic videos presented by a speaker who has schizophrenia is not effective in reducing stigma towards mental health in media-moderated interventions, in comparison to education interventions. It could be because the video message selected in this study did not elicit feelings of similarity/positive relational empathy for the participants. Alternatively, it could be that a video message is not interactive, and therefore participants did not feel any social closeness to the video messenger (Jolliffe & Farrington, 2011; Norman et al., 2017). This study suggests more needs to be done to test different types of elicited empathy in reducing stigma towards mental illness, particularly with regards to positive relational empathy; focusing on messages of mental health recovery, rather than descriptions of mental health suffering.

Furthermore, although previous research into media-moderated contact has presented itself as more effective than education (Birtel & Crisp, 2012; Katz, 2014; Kerby, Calton, Dimambro, Flood, & Glazebrook, 2008), the current study evidences that this is not always the case. This suggests that research has not yet begun to fully comprehend the particular effect that media moderated contact has and how exactly contact or indirect provokes the reduction

of stigmatised attitudes in mental illness. This study would instead suggest that research would be better focused on a direct contact approach as this shows more consistency in reducing stigma towards mental illness. In future research, it would be interesting to compare 'empathy direct contact' against 'empathy indirect contact' to explore whether there are any significant differences and what these differences might be.

Although there was no significant change across the three interventions (empathy contact, empathy no contact and control) this research has been able to evaluate and discuss some key issues and components in reducing stigma towards mental illness. This can assist in evaluating why contact methods may be effective, which has the potential to help further progress in developing effective and sustainable interventions in reducing stigma towards mental illness. If the current study were to be taken further, it would focus on looking into the effects of positive relational empathy on stigma towards mental illness when using a direct contact approach. The study would concentrate more specifically on determining what particular characteristics and emotions are affected by the use of contact and positive relational empathy by comparing two different intervention types which manipulate the type of empathy elicited. Both interventions would use direct contact as the dependant variable and the independent variable would be the type of empathy, i.e. positive relational empathy, vs. negative relational empathy. These interventions would be compared against a control condition to determine their effectiveness. This research could help further understand more specifically the effect of empathy in reducing stigma towards mental illness and how direct contact plays a role in this interaction.

#### **4.5.1 Conclusion**

The results of the current study found that eliciting empathy using a media-moderated contact intervention and media-moderation non-contact intervention did not affect empathy

towards mental illness, stigma towards mental illness, or attitudes towards schizophrenia in comparison to an education intervention control. Nor did pre-existing levels of contact, dispositional empathy, or emotional intelligence moderate the effect of the intervention. This study therefore rejects the hypotheses: *1a, 1b, 1c* that Eliciting Empathy will significantly improve empathy towards mental illness and levels of pre-existing mental health contact, dispositional empathy and emotional intelligence will moderate the effect. It rejects the hypotheses *2a, 2b, 2c* that Eliciting Empathy will significantly improve empathy towards mental illness and levels of pre-existing mental health contact, dispositional empathy and emotional intelligence will moderate the effect. And it also rejects the hypothesis *3a, 3b, 3c* that Eliciting Empathy will significantly improve attitudes towards schizophrenia and levels of pre-existing mental health contact, dispositional empathy and emotional intelligence will moderate the effect. The effect and possible reduction of stigma towards mental illness still presents itself as a complex issue in need of further exploration. Indeed, there are many factors that are unresolved and need additional investigation. However, the current study has been able to highlight some important information for future research progression in reducing stigma towards mental illness. This study has been able to conclude that interventions which use an empathy induced media-moderated contact method are not always affective, specifically in schizophrenia.

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### Appendix A: Empathy toward the Mentally Ill Scale

Read each statement carefully then decide to what extent you agree or disagree with the statement. Then, write the number that corresponds with the extent to which you agree or disagree with the statement in the blank preceding each statement. There are 5 different levels of agreement/disagreement from which to choose, they are:

1= Strongly Disagree 2=Disagree 3=Neutral 4= Agree 5=Strongly Agree

- \_\_\_\_\_ 1. I get very angry when I see someone being ill-treated.
- \_\_\_\_\_ 2. I rarely let the feelings of others affect me. (-)
- \_\_\_\_\_ 3. The mentally ill sometimes act out for no apparent reason. (-)
- \_\_\_\_\_ 4. I cannot continue to feel OK if people around me are depressed.
- \_\_\_\_\_ 5. It makes me sad to hear stories about the severely mentally ill.
- \_\_\_\_\_ 6. The mentally ill deserve our sympathy.
- \_\_\_\_\_ 7. The severely mentally ill are probably unfriendly. (-)
- \_\_\_\_\_ 8. I am very upset when I see people feeling psychological discomfort.
- \_\_\_\_\_ 9. I would rather work in a computer lab than be a therapist. (-)
- \_\_\_\_\_ 10. There is no reason for the severely mentally ill to be feared.
- \_\_\_\_\_ 11. People make too much of the feelings and sensitivity of the mentally ill. (-)
- \_\_\_\_\_ 12. Seeing people in distress doesn't bother me. (-)
- \_\_\_\_\_ 13. I would rather be a social worker than work in a job training center.
- \_\_\_\_\_ 14. The misfortunes of others don't bother me. (-)
- \_\_\_\_\_ 15. In many ways, the mentally ill are just like the rest of us.
- \_\_\_\_\_ 16. I am annoyed by mentally unstable people who are just sorry for themselves. (-)

\* (-)items reverse scored.

### Appendix B: Day's Mental Illness Stigma Scale

Brackets indicate where illness names can be interchanged to present various mental illness conditions.

Please indicate the extent to which you agree or disagree with the statements listed below using the following scale:

1      2      3      4      5      6      7  
completely disagree                      completely agree

\_\_\_ 1. There are effective medications for [mental illnesses] that allow people to return to normal and productive lives.

\_\_\_ 2. I don't think that it is possible to have a normal relationship with someone with [a mental illness]. (reverse-scored)

\_\_\_ 3. I would find it difficult to trust someone with [a mental illness]. (reversed-scored)

\_\_\_ 4. People with [mental illnesses] tend to neglect their appearance. (reversed-scored)

\_\_\_ 5. It would be difficult to have a close meaningful relationship with someone with [a mental illness]. (reverse-scored)

\_\_\_ 6. I feel anxious and uncomfortable when I'm around someone with [a mental illness]. (reverse-scored)

\_\_\_ 7. It is easy for me to recognize the symptoms of [mental illnesses]. (reverse-scored)

\_\_\_ 8. There are no effective treatments for [mental illnesses]. (reverse-scored)

\_\_\_ 9. I probably wouldn't know that someone has [a mental illness] unless I was told.

\_\_\_ 10. A close relationship with someone with [a mental illness] would be like living on an emotional roller coaster. (reverse-scored)

\_\_\_ 11. There is little that can be done to control the symptoms of [mental illness]. (reverse-scored)

\_\_\_ 12. I think that a personal relationship with someone with [a mental illness] would be too demanding. (reverse-scored)

\_\_\_ 13. Once someone develops [a mental illness], he or she will never be able to fully recover from it. (reverse-scored)

\_\_\_ 14. People with [mental illnesses] ignore their hygiene, such as bathing and using deodorant. (reverse-scored)

**Appendix C: Day's Mental Illness Stigma Scale – Continued.**

\_\_\_15. [Mental illnesses] prevent people from having normal relationships with others. (reverse-scored)

\_\_\_16. I tend to feel anxious and nervous when I am around someone with [a mental illness]. (reverse-scored)

\_\_\_17. When talking with someone with [a mental illness], I worry that I might say something that will upset him or her. (reverse-scored)

\_\_\_18. I can tell that someone has [a mental illness] by the way he or she acts. (reverse-scored)

\_\_\_19. People with [mental illnesses] do not groom themselves properly. (reverse-scored)

\_\_\_20. People with [mental illnesses] will remain ill for the rest of their lives. (reverse-scored)

\_\_\_21. I don't think that I can really relax and be myself when I'm around someone with [a mental illness]. (reverse-scored)

\_\_\_22. When I am around someone with [a mental illness] I worry that he or she might harm me physically. (reverse-scored)

\_\_\_23. Psychiatrists and psychologists have the knowledge and skills needed to effectively treat [mental illnesses].

\_\_\_24. I would feel unsure about what to say or do if I were around someone with [a mental illness]. (reverse-scored)

\_\_\_25. I feel nervous and uneasy when I'm near someone with [a mental illness]. (reverse-scored)

\_\_\_26. I can tell that someone has [a mental illness] by the way he or she talks. (reverse-scored)

\_\_\_27. People with [mental illnesses] need to take better care of their grooming (bathe, clean teeth, use deodorant). (reverse-scored)

\_\_\_28. Mental health professionals, such as psychiatrists and psychologists, can provide effective treatments for [mental illnesses]. (Professional Efficacy)

**Appendix D:** Schizophrenia knowledge, attitudes and perceptions scale

Please indicate your degree of agreement with each item according to the following scale: A= strongly agree, A=agree, N=neutral, D=disagree, SD=strongly disagree:

13. In general, people with schizophrenia should be put into institutions. (-)
14. Most mental illnesses are caused by substance abuse. (-)
15. Individuals with mental illness are simply weak-willed, unmotivated people. (-)
16. If treated and medicated, people with schizophrenia can function fairly typically in society.
17. People with schizophrenia are dangerous. (-)
18. A person with schizophrenia's social problems are their own fault because they isolate themselves from others. (-)
19. Genetics are the primary factor in the development of schizophrenia. (-)
20. Most people fear people with schizophrenia. (-)
21. Most people with mental illnesses are poor. (-)
22. Individuals with mental illnesses do not need medication; they just need to change their thought processes and behaviours. (-)
23. Individuals with mental illnesses are victims of their disease and should be treated with sympathy.
24. People with schizophrenia have behavioural patterns that are abnormal. (-)
25. People with schizophrenia should have the same educational, occupational, and social opportunities as "normal" individuals.

\* (-) means that items should be reverse scored.

**Appendix E:** Level-of-contact report

Please read each of the following statements carefully. After you have read all the statements below, place a check by the statements that best depict your exposure to persons with a severe mental illness.

\_3\_ I have watched a movie or television show in which a character depicted a person with mental illness.

\_8\_ My job involves providing services/treatment for persons with a severe mental illness.

\_2\_ I have observed, in passing, a person I believe may have had a severe mental illness.

\_5\_ I have observed persons with a severe mental illness on a frequent basis.

12 I have a severe mental illness.

\_6\_ I have worked with a person who had a severe mental illness at my place of employment.

\_1\_ I have never observed a person that I was aware had a severe mental illness.

\_7\_ My job includes providing services to persons with a severe mental illness.

\_9\_ A friend of the family has a severe mental illness.

\_10\_ I have a relative who has a severe mental illness.

\_4\_ I have watched a documentary on the television about severe mental illness.

\_11\_ I live with a person who has a severe mental illness.

*Note.—Rankings made by the panel of experts are included for each item (number next to item). Participants were rated for levels of contact from 1- 12 by means of yes and no. The highest item number that participants scored yes for, would be their overall score.*

### Appendix F: Interpersonal Reactivity Index

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate answer, please circle the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

#### ANSWER SCALE:

Does not describe me well    1        2        3        4        5        Describes very well

1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I often have tender, concerned feelings for people less fortunate than me.
3. I sometimes find it difficult to see things from the "other guy's" point of view. (-)
4. Sometimes I don't feel very sorry for other people when they are having problems. (-)
5. I really get involved with the feelings of the characters in a novel.
6. In emergency situations, I feel apprehensive and ill-at-ease.
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it. (-)
8. I try to look at everybody's side of a disagreement before I make a decision.
9. When I see someone being taken advantage of, I feel kind of protective towards them.
10. I sometimes feel helpless when I am in the middle of a very emotional situation.
11. I sometimes try to understand my friends better by imagining how things look from their perspective.
12. Becoming extremely involved in a good book or movie is somewhat rare for me. (-)
13. When I see someone get hurt, I tend to remain calm. (-)
14. Other people's misfortunes do not usually disturb me a great deal. (-)
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (-)
16. After seeing a play or movie, I have felt as though I were one of the characters.
17. Being in a tense emotional situation scares me.

**Appendix G:** Interpersonal Reactivity Index – Continued.

18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (-)
19. I am usually pretty effective in dealing with emergencies. (-)
20. I am often quite touched by things that I see happen.
21. I believe that there are two sides to every question and try to look at them both.
22. I would describe myself as a pretty soft-hearted person.
23. When I watch a good movie, I can very easily put myself in the place of a leading character.
24. I tend to lose control during emergencies.
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
27. When I see someone who badly needs help in an emergency, I go to pieces.
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

\* (-) means that items should be reverse scored.

### Appendix H: Emotional Intelligence Scale

Instructions: Indicate the extent to which each item applies to you using the following scale:

1 = strongly disagree

2 = disagree

3 = neither disagree nor agree

4 = agree

5 = strongly agree

- \_\_\_\_\_ 1. I know when to speak about my personal problems to others.
- \_\_\_\_\_ 2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.
- \_\_\_\_\_ 3. I expect that I will do well on most things I try.
- \_\_\_\_\_ 4. Other people find it easy to confide in me.
- \_\_\_\_\_ 5. I find it hard to understand the nonverbal messages of other people. (-)
- \_\_\_\_\_ 6. Some of the major events of my life have led me to re-evaluate what is important and not important.
- \_\_\_\_\_ 7. When my mood changes, I see new possibilities.
- \_\_\_\_\_ 8. Emotions are some of the things that make my life worth living.
- \_\_\_\_\_ 9. I am aware of my emotions as I experience them.
- \_\_\_\_\_ 10. I expect good things to happen.
- \_\_\_\_\_ 11. I like to share my emotions with others.
- \_\_\_\_\_ 12. When I experience a positive emotion, I know how to make it last.
- \_\_\_\_\_ 13. I arrange events others enjoy.
- \_\_\_\_\_ 14. I seek out activities that make me happy.
- \_\_\_\_\_ 15. I am aware of the nonverbal messages I send to others.
- \_\_\_\_\_ 16. I present myself in a way that makes a good impression on others.
- \_\_\_\_\_ 17. When I am in a positive mood, solving problems is easy for me.

**Appendix I: Emotional Intelligence Scale – Continued.**

18. By looking at their facial expressions, I recognize the emotions people are experiencing.
- \_\_\_\_\_ 19. I know why my emotions change.
- \_\_\_\_\_ 20. When I am in a positive mood, I am able to come up with new ideas.
- \_\_\_\_\_ 21. I have control over my emotions.
- \_\_\_\_\_ 22. I easily recognize my emotions as I experience them.
- \_\_\_\_\_ 23. I motivate myself by imagining a good outcome to tasks I take on.
- \_\_\_\_\_ 24. I compliment others when they have done something well.
- \_\_\_\_\_ 25. I am aware of the nonverbal messages other people send.
- \_\_\_\_\_ 26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.
- \_\_\_\_\_ 27. When I feel a change in emotions, I tend to come up with new ideas.
- \_\_\_\_\_ 28. When I am faced with a challenge, I give up because I believe I will fail. (-)
- \_\_\_\_\_ 29. I know what other people are feeling just by looking at them.
- \_\_\_\_\_ 30. I help other people feel better when they are down.
- \_\_\_\_\_ 31. I use good moods to help myself keep trying in the face of obstacles.
- \_\_\_\_\_ 32. I can tell how people are feeling by listening to the tone of their voice.
- \_\_\_\_\_ 33. It is difficult for me to understand why people feel the way they do. (-)

\* (-) means that items should be reverse scored.

**Appendix J: Participant Information Sheet provided before taking part in the study.**

**PARTICIPANT INFORMATION SHEET - Exploring attitudes towards mental health**

To all that are interested in taking part, my name is Christina Michael; I am conducting a study exploring attitudes towards mental health as part of my Psychology MSc at Canterbury Christchurch University (CCCU). This research is being supervised by Dr Wendy Iredale.

**What will you be required to do?**

You are invited to participate in a study exploring attitudes towards mental health. This study consists of an online questionnaire that you will be required to complete. This questionnaire asks your opinions and understandings around mental health. Please be mindful that there are no right or wrong answers; we are looking for your honest thoughts and opinions.

All answers are confidential and you do not have to answer any questions you are not comfortable in answering, nor do you have to give a reason behind your decision not to answer. The questionnaire should take roughly 30 minutes. After completing the questionnaire, this study requires you to observe a short 7-11 minute video. Following on from the video, it will be asked of you to again fill out a shorter version of the previous questionnaire. This will therefore conclude your participation in the study.

Lastly this study also aims to execute a follow up questionnaire 1 week after participation. This will take approximately 5-10 minutes and asks for your email address in order to implement the questionnaire

**To participate in this research, you must:**

Aspects of the questionnaire will involve oral information so please do ensure that the device that you are completing the questionnaire on has sound.

If you are aware that you or a close family member has been diagnosed with a severe mental illness you are not eligible for the study, therefore we ask that you please remove yourself from the study immediately.

**Confidentiality and Anonymity**

*All data and personal information will be stored securely within CCCU premises in accordance with the Data Protection Act 1998 and the University's own data protection requirements. Data can only be accessed by myself and my supervisor Dr Wendy Iredale. We will not ask for any personal information from you (for example name), other than your email address for the follow up questionnaire; all data collection is confidential and only be seen by myself and my supervisor Wendy Iredale.*

**Appendix K: Participant Information Sheet – Continued.**

**Dissemination of results**

The results of the study will be presented as part of my masters by research dissertation, to be submitted in September 2017. Should you wish for details about the outcome of this study please email either my supervisor or myself after September 2017.

**Deciding whether to participate**

As you should be aware, this study is entirely voluntary and you have the opportunity to withdraw yourself from the study anytime you wish, without reason and even once the study is complete. If you have any questions or concerns about the nature, procedures, or requirements for participation do not hesitate to contact me. Should you decide to participate, you will be provided with a unique ID code at the start of the questionnaire. Should you wish to withdraw from the study after completing the questionnaire please anonymously contact either myself or my supervisor and quote your unique ID and we shall remove your data.

**Any questions?**

Please contact myself on [REDACTED] or my supervisor Dr Wendy Iredale at [REDACTED] 01227 767700 ext 3894 School of Psychology, Canterbury Christ Church University. Canterbury CT1 1QU.

Many thanks for taking your time to read this information sheet and for taking part in the questionnaire

**Christina Michael**

**Appendix L: Participants Initial Debrief Sheet post intervention, but prior to follow-up.**

**PARTICIPANT DEBRIEF SHEET –Understanding Empathy's Effect on the Stigma of**

**Mental Illness: An Intervention Study Using Contact by Video Footage.**

Thank you for taking part in this study. The aim of this study was to determine whether inducing feelings of empathy could influence a person's emotional understanding of mental illness and therefore reduce stigmatized attitudes. Much research has found stigma to be a prevalent concern, negatively affecting many members of the public who suffer from mental health difficulties, and preventing these individuals from pursuing help and/or treatment. As schizophrenia is seen to have the highest stigmatization when looking into mental health, the study used this particular mental illness as its focus. Research has evaluated different intervention strategies in the goal of reducing stigma, however few studies have explored the use of Indirect Empathy to influence one's emotional understanding in mental health. Not only did this study want to understand whether empathy could effect one's attitudes towards mental health, it also wanted to acknowledge whether different interactive strategy types would alter the study's effectiveness.

More information regarding the three different conditions, the footage used and help and support regarding this study on mental health and wellbeing will be provided after the follow up questionnaire. You can also contact myself or Wendy Iredale for more information or a more extensive debriefing.

If there are any other questions you wish to ask, or if you would like to find out the future outcome of the study, you can contact me with the information below.

**HELP AND SUPPORT**

If you feel this study has affected you in anyway please to not hesitate to contact me or alternatively for CCCU students the University's Counselling Support System, you can find information on this at the link below  
<http://www.canterbury.ac.uk/student-support-health-and-wellbeing/counselling/making-an-appointment.aspx>

If you would like to book a counselling appointment you can ring the i-zone helpdesk on 01227 782222, or email [i-zone@canterbury.ac.uk](mailto:i-zone@canterbury.ac.uk) and they will direct your call or email to the correct department.

If you would not like to go through Canterbury Christ Church University for help, or are worried for another person close to you, there are many helplines that you can ring to help assist your situation. These can all be found on the link bellow:  
<http://www.nhs.uk/conditions/stress-anxiety-depression/pages/mental-health-helplines.aspx>

If there are any other questions you wish to ask, or if you would like to find out the future outcome of the study, you can contact me with the information bellow.

**Christina Michael**

**or Dr Wendy Iredale**

**Appendix M:** Participant Debrief Sheet post follow-up study.

**PARTICIPANT DEBRIEF SHEET –**  
**Understanding Empathy's Effect on the Stigma of Mental Illness: An Intervention**  
**Study Using Contact by Video Footage.**

Thank you for taking part in this study. The aim of this study was to determine whether inducing feelings of empathy could influence a person's emotional understanding towards mental illness and therefore reduce stigmatized attitudes. Much research has found stigma to be a prevalent concern, negatively affecting many members of the public who suffer from mental health difficulties, and preventing these individuals from pursuing help and/or treatment. As schizophrenia is seen to have the highest stigmatization when looking into mental health, the study used this particular mental illness as its focus. Research has evaluated different intervention strategies in the goal of reducing stigma, however few studies have explored the use of Indirect Empathy to influence one's emotional understanding of mental health. Not only did this study want to understand whether empathy could affect one's attitudes towards mental health, it also wanted to acknowledge whether different interactive strategy types would alter the study's effectiveness. This was executed by implementing three conditions:

**Condition 1:** Contact Empathy. This form of contact was completed using a video-based intervention strategy, using real life footage of a man talking about his experiences with suffering from schizophrenia.

**Condition 2:** Non-Contact Empathy. This was completed by using a video-based intervention of a psychiatrist explaining the emotional aspects of suffering with the illness of schizophrenia from her point of view as a professional.

**Condition 3:** Educational Control Condition. This was completed using a video-based intervention explaining schizophrenia from an educational standpoint.

You were randomly placed into one of these three conditions.  
All participants filled out the same questionnaire in the same order.

The only part of the study that altered were the conditions each participant could have been placed into. The footage presented in conditions 1 & 2 were real life documentaries and were not fictionalised for the purpose of the study.

**INFORMATION SURROUNDING SCHIZOPHRENIA AND THE FOOTAGE USED**

For conditions 1 & 2, stimuli was obtained from Otsuka Pharmaceutical Europe Ltd. ( <https://www.otsuka-europe.com/eu/products#> ) and was a short 6 part documentary prepared with the help of Lundbeck Ltd. (a pharmaceutical company focused on the treatment of psychotic diseases, <http://www.lundbeck.com/uk/about-us/lundbeck-uk> ) and Nic Askew who filmed all six episodes. This study only used two of the 6 part series and the rest can be found through the link bellow if you are interested in watching any of the videos featured, or the ones that were not.

[https://www.youtube.com/playlist?list=PLIDXejfEks1\\_actXIDB6lcKtz\\_43wGaX9](https://www.youtube.com/playlist?list=PLIDXejfEks1_actXIDB6lcKtz_43wGaX9)

**Appendix N:** Participant Debrief Sheet post follow-up study- Continued.

The stimuli used for condition 3, was recruited from the YouTube subscription channel, "CrashCourse" explaining statistical and factual information around schizophrenia and can be found through the link below:

<https://www.youtube.com/watch?v=uxktavpRdzU>

If you are interested in learning more about schizophrenia, you can read up on this condition at the National Health System website by following this link:

<http://www.nhs.uk/Conditions/schizophrenia/Pages/Introduction.aspx>

Alternatively, this YouTube video explaining the illness:

<https://www.youtube.com/watch?v=ElsYqJ6Dr7g>

If you would like to see more from individuals who have suffered with the illness follow this link below by the Charity and support group Mind aiming to help people understand better the experiences people with schizophrenia go through:

<http://www.mind.org.uk/information-support/types-of-mental-health-problems/schizophrenia/#.WG6Fe7uLSUk>

**HELP AND SUPPORT**

If you feel this study has affected you in anyway please to not hesitate to contact me or alternatively for CCCU students the University's Counselling Support System, you can find information on this at the link below:

<http://www.canterbury.ac.uk/student-support-health-and-wellbeing/counselling/making-an-appointment.aspx>

If you would like to book a counselling appointment you can ring the i-zone helpdesk on 01227 782222, or email [i-zone@canterbury.ac.uk](mailto:i-zone@canterbury.ac.uk) and they will direct your call or email to the correct department.

If you would not like to go through Canterbury Christ Church University for help, or are worried for another person close to you, there are many helplines that you can ring to help assist your situation. These can all be found on the link below:

<http://www.nhs.uk/conditions/stress-anxiety-depression/pages/mental-health-helplines.aspx>

If there are any other questions you wish to ask, or if you would like to find out the future outcome of the study, you can contact me with the information below.

**Christina Michael**



**Appendix O: Item Total Statistics for Attitudes Towards Schizophrenia.**

**Table 3.** *This table displays the item-Total Statistics for attitudes towards schizophrenia. It shows the numerical changes if questionnaire items are deleted.*

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
In general, people with schizophrenia should be put into institutions.	28.52	22.730	.550	.453	.633
Most mental illnesses are caused by substance abuse.	28.38	21.540	.595	.599	.620
Individuals with mental illness are simply weak-willed, unmotivated people.	29.02	23.698	.559	.573	.639
If treated and medicated, people with schizophrenia can function fairly typically in society.	28.36	24.393	.368	.375	.661
People with schizophrenia are dangerous.	28.17	23.192	.552	.588	.635
A person with schizophrenia's social problems are their own fault because they isolate themselves from others.	28.83	23.859	.541	.551	.641
Genetics are the primary factor in the development of schizophrenia.	27.44	25.266	.237	.188	.680
Most people fear people with schizophrenia.	27.02	28.206	-.061	.352	.717
Most people with mental illnesses are poor.	28.75	23.524	.556	.454	.638
Individuals with mental illnesses do not need medication; they just need to change their thought processes and behaviours	28.20	26.736	.087	.172	.701
Individuals with mental illnesses are victims of their disease and should be treated with sympathy.	28.08	26.676	.058	.177	.710
People with schizophrenia have behavioural patterns that are abnormal.	27.03	29.015	-.149	.413	.716
People with schizophrenia should have the same educational, occupational, and social opportunities as "normal" individuals.	28.59	23.737	.410	.556	.654