



A quasi-experimental approach to measuring the impact of educational interventions on attitudes and social distance towards depression, in relation to authoritarian personality type

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## ABSTRACT

Individuals with depression repeatedly face negative attitudes and stigma. Numerous factors influence these harms; however, educational interventions are suggested to produce attitude change and reduce stigma towards those with depression. This research investigated whether those with authoritarian personality type display more negative attitudes and stigma towards those facing depression. This research also assessed the use of educational intervention on improving attitudes and reducing stigma towards depression, and measured whether having an authoritarian personality would positively influence the effect of intervention. Fifty six participants took part in the research (females,  $n=32$ , males,  $n=24$ ) with an age range of 18 to 57 years. A quasi-experimental design of non-equivalent control group pretest-posttest was used to allow for the assessment of intervention. The study used three independent variables; time, authoritarianism and intervention, and two dependent variables; stigma, with relation to social distance and attitudes, with relation to blame. Two 2x2x2 mixed ANOVA's were conducted to assess the effect of the independent variables on the two dependent variables. Authoritarianism was found to have a non-significant effect on attitudes and stigma. Educational intervention also had a non-significant effect on attitudes and stigma; authoritarianism similarly did not significantly impact the effect of intervention on attitudes and stigma.

Key Words:	Depression	Educational interventions	Authoritarian personality	Social Distance	Attitudes
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## **Introduction**

### **Depression**

More than one in five people have faced a mental illness in the UK in the last year; this statistic rises to more than one in four in America (Knifton and Quinn, 2013). Depression is a mental disorder that has been acknowledged for centuries, though its prevalence has increased significantly over previous years (Hidaka, 2012). Depression is suggested to disturb individual's capacity to 'think clearly' (Segal et al. 2012:11) and can be seen in mild or more severe forms (Thompson, 2007). Those suffering from major depression regularly feel exceptionally sad for the majority of each day; they may move slower than normal, sleep less or more than average and become indifferent towards activities or interests they would normally enjoy (Roy, 2005). Approximately two thirds of adults will face depression at some stage in their lives (BBC, 2013) this highlights the importance of research in this area.

### **Stigma**

Stigma may be affixed to a particular race, religion, physical deformity or sexuality (Goffman, 2009) in addition to various other elements, including mental illness (Sartorius, 2002).

Stigma is a term conveying a deep, shameful mark or flaw related to being a member of a group that is devalued by the societal mainstream (Hinshaw, 2006:xi).

Stigmatising attitudes towards those with mental health problems are widely prominent (Corrigan and Watson, 2002) and can be seen across various cultures, dating back into history (Todor, 2013). These often include the view that those with mental disorders are '...weak, dangerous and responsible for their own plight.' (Fink and Tasman, 1992:1). Undoubtedly, these attitudes cause harm (Hayward and Bright, 1997) and numerous difficulties, including finding a place to live and completing goals in relation to education and employment (Sajatovic, 2008). Docherty (1997) suggests stigma is a major obstacle to dealing with depression. It is suggested to lead to reluctance in seeking help (Schomerus and Angelmeyer, 2008), stop patients receiving the best treatment (Fink and Tasman, 1992) and influence maintenance of treatment once help is found (Barney et al. 2006). Depression is exceptionally pervasive; over 350 million people, of all ages, are suffering from the disorder around the world (World Health Organisation, 2012). Nevertheless, there is a lack of research exploring stigma towards depression as research has focused extensively on stigma towards schizophrenia (Thornicroft et al. 2007; Wang et al. 2007) thus, it is unquestionably an issue that must be addressed.

### **Social Distance**

Social distance is a fundamental component of stigma (Jorm and Oh, 2009) and is often associated with prejudice towards mental illness (Corrigan et al. 2001). Park (1924) first defined the term as the extent of intimacy and understanding people are willing to establish in social relations with others. The Social Distance Scale (SDS), initially developed by Emory Bogardus in 1925 to measure attitudes towards racial groups, is now used to assess stigma and prejudice towards any social group (Wark

and Galliher, 2007). The scale measures 'willingness...to participate in social relations...with other kinds of people' (Babbie, 2013:176), there are several modified, more recent versions of this scale that have been developed (Albrecht et al. 1982). Link et al. (1987) modified the original scale, specifically focusing on mental illness (Angermeyer and Matschinger, 2005). This measure has been used in copious research with relation to mental health stigma (Penn et al. 2000; Angermeyer and Matschinger, 2003) including schizophrenia (Lauber et al. 2004) and depression (Liekens et al. 2012). Accordingly, this version of the SDS will be used in this research to measure stigma towards depression, with relation to social distance.

### **Attitudes**

Attributions form the foundations of attitudes (Fishman and García, 2010). Attribution theory (Heider, 1958) allows us to gain understanding into the blame displayed towards vulnerable individuals (Ford et al. 2001). Causal attributions influence opinions about a person's responsibility for instigating their current situation or condition (Corrigan, 2003), consequently leading to adverse effects such as negative attitudes and stigma (Corrigan, 2000). Attribution theory is often linked with responsibility (Martinko, 2004); a key concept accompanying mental illness (Arntz et al. 2007). There is not an agreed cause of depression, it is a multifactorial (Goldberg, 2006; Hansson et al. 2010), heterogeneous illness (Nestler et al. 2002). Nevertheless, those facing depression are often viewed as being personally accountable for their disorder (Corrigan and Watson, 2002) and '...could pull themselves together...' (Crisp, 2000:5).

Corrigan et al. (2005) identified blame as an important factor leading to discrimination towards those with mental health problems. Consequently, Corrigan developed a measure to assess attributions in relation to mental illness; the Attribution Questionnaire (AQ-27) (Corrigan, 2003). The questionnaire measures blame, in addition to numerous other factors including dangerousness, pity and anger (Corrigan, 2003). However, this research will focus solely on blame, as this appears to be a predominant factor with regards to depression attitudes. The AQ-27 has been used in numerous studies investigating attitudes surrounding mental illness (Brown, 2008; Muñoz et al. 2011). Attitudes are vital in relation to carer behaviour (Haddad et al. 2007) and are related to the under-recognition and misdiagnosis of depression (Schulberg and McClelland, 1987). This body of research highlights the importance of attitudes towards depression; thus, the blame aspect of the AQ-27 will be used to measure attitudes towards depression, with relation to blame.

### **Authoritarian personality**

Previous research investigating predictors of stigma towards depression have gathered inconsistent results, for instance, some research has reported higher levels of stigma exhibited from women in comparison to men (Lauber et al. 2004), whilst other research suggest the opposite (Barry et al. 2000). Attitudes have recurrently been found to affect levels of stigma (Corrigan, 2011), thus, this research will not focus on this relationship. Furthermore, personality type has been found to be a contributing factor to prejudice behaviours and attitudes (Heaven and Quintin, 2003; Hodson et al. 2009). Those with authoritarian personalities display little empathy, are dominating (Robertson, 2012), often hostile towards those of a lower status (White et al. 2010) and are said to believe that those suffering from mental disorders are

inferior (Hinshaw, 2006). Authoritarianism is repeatedly associated with prejudice (Ekehammar et al. 2004; Arvaniti et al. 2009; Dhont et al. 2013). In addition to abusive behaviour (Larsson et al. 2012), stigma (Holub et al. 2011) and social distance (Hinshaw, 2006). Authoritarian individuals are also said to be more obedient (Napier and Jost, 2008), submissive and likely to conform to authority (Chin, 2007), and often relish this, as well as exhibiting power over others (Staub, 2013).

Numerous scales have been developed to measure authoritarianism. The F-Scale was developed primarily from work carried out by Adorno, in rejoinder to the growth of fascism after the Second World War (Gul, 1989). Thus, the 'F' stands for fascism, although the scale is often referred to as an authoritarianism scale (Robinson et al. 1991). Adorno's work stemmed from the work of early theorists such as Maslow and Fromm who believed that personality is an underlying factor that predisposes individuals to exhibit prejudice (Dovidio et al. 2008). The scale has been used in numerous studies researching authoritarianism (Millon and Lerner, 2003; Firoozabadi, 2011). Thus, the F-Scale will be used in this research to measure authoritarian personality. Griffiths et al. (2008) stress it is important to identify factors that predict stigma in relation to depression, as this may be crucial to designing effective interventions. Personality type appears to be an important factor in relation to negative attitudes and stigma towards mental illness. Thus, gathering support for this in relation to depression could be an important factor in reducing these harms.

## **Intervention**

Research suggests that to improve mental health we must challenge stigma (Link et al. 2004). Abundant research indicates that interventions increasing awareness of mental disorders are effective in reducing stigma (Thornicroft et al. 2007). Numerous programmes may be used in order to change attitudes and diminish stigma towards mental illness, including education, media campaigns and training (Collins et al. 2012). Personal contact with individuals with mental disorders, talking about their life experiences, has also been found to improve attitudes (Pernice and Lys, 1996). Couture and Penn (2003) similarly support the concept of contact to reduce stigma towards mental illness. However, this would be difficult to conduct in this research due to ethical implications.

Moreover, educating individuals about mental disorders has a positive influence on stigma levels (Rüsch et al. 2005). Holmes et al. (1999) however, suggest that the effectiveness of educational programmes is arbitrated by the characteristics of participants, including age (Corrigan et al. 2012). Educational interventions may take different forms, including videos and books (Rüsch et al. 2005). They are often used in pre-post test studies (Mackay and Neill, 2010) allowing researchers to measure the impact of intervention (Pinfold et al. 2003). Information packs and leaflets have also been used in previous research (Brown et al. 2003; Pinfold et al. 2003), in addition to brochures providing more in depth information (Lincoln et al. 2008). Similarly, the Changing Minds Campaign used reading material and leaflets to educate individuals about mental disorders, including depression (Luty et al. 2007).

## **Aims of the present study**

This research will apply a pre-post intervention design; leaflets will be used to present reading material to educate participants about depression. This is common

method to convey information (Graham et al. 2000), providing essential information without overloading participants (Great Britain: National Audit Office, 2006). From reviewing the literature, the F-Scale (Adorno, 1950), the AQ-27 (Corrigan, 2003) and SDS (Link, 1987) all stand to be appropriate measures to be used in this research. The current study presents the following hypotheses;

- 1) Those with authoritarian personalities will display more negative attitudes and higher levels of stigma towards those with depression.
- 2) Educational interventions will have a positive impact on attitudes and levels of stigma displayed towards those with depression.
- 3) Those with authoritarian personalities will be more positively affected by educational intervention to improve attitudes and reduce stigma.

## Method

### Design

A quasi-experimental 2x2x2 mixed design was used in this research as there were three independent variables (IV's); time, intervention and authoritarianism. All IV's had two levels, with time being a within groups variable; pre/post, whereas intervention; experimental/control and authoritarianism; higher/lower were between groups variables. The dependent variables were stigma; as independently scored on the SDS (Link, 1987), and attitudes; as independently scored on the blame aspect of the AQ-27 (Corrigan, 2003). A quasi-experimental design of non-equivalent control group pretest-posttest allowed for the assessment of educational intervention in an experimental group, in comparison to a control group (Jackson, 2010). An equal number of participants were assigned to the experimental ( $n=28$ ) and control group ( $n=28$ ). This method was selected as it is ideal when aiming to assess the influence of a particular intervention (Stommel and Wills, 2004). Often termed pre-post intervention studies (Harris et al. 2006); they allow for before and after comparisons (Langbein and Felbinge, 2006). Quasi-experimental designs are also ideal when a randomised experimental design is not possible (Marczyk et al. 2010), as participants were allocated to conditions based on their authoritarian score, they were not randomly assigned.

### Participants

Fifty six participants took part in this research (females,  $n=32$ , males,  $n=24$ ); a minimum of 56 participants was calculated by G Power<sup>1</sup> (Faul et al. 2007). The age of participants ranged from 18 to 57 years ( $M=30.48$ ,  $SD=11.76$ ), (females  $M=31.47$ ,  $SD=12.80$ , males  $M=29.17$ ,  $SD=10.32$ ). A mixture of opportunity and snowball sampling methods were used to gather participants, from a general population of people aged over 18, in the Greater Manchester area. Opportunity sampling gathers those currently available to the researcher that fit the criteria, allowing participants to be gathered quickly and easily (Jarvis et al. 2004). Snowball sampling identifies participants through connections between social networks (Browne, 2005), thus

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<sup>1</sup> G power calculated the minimum sample size of 56 for this research, with an alpha level of .05, a medium effect size of .25 and a power of .80.

participants are identified through other participants (Atkinson and Flint, 2001). As a result, family members, acquaintances and associates of the researcher took part in the research.

To reduce extraneous variables of familiarity and knowledge of depression, in addition to avoiding psychological distress, an exclusion criterion was implemented. Individuals were asked not to take part if they have themselves, a close family member, close friend or partner who has been diagnosed with a psychological disorder in the last two years. Individuals were also asked not to take part if they are a Psychology student or have any formal training in this discipline. Participants were allocated to groups based on their score on the F-Scale after conducting a median split (median = 4.17). Those gaining a score lower than 4.17 were assigned to the lower authoritarian group ( $n=29$ ), while those gaining a score of 4.17 and above were assigned to the higher authoritarian group ( $n=27$ ). Participants were then randomly assigned into either the control or experimental intervention group within the higher authoritarian and lower authoritarian groups by means of a random number generator programme (Random.org, 2014); (lower authoritarian control  $n=15$ , lower authoritarian experimental  $n=14$ , higher authoritarian control  $n=13$ , higher authoritarian experimental  $n=14$ ).

## Materials

A questionnaire booklet was given to all participants at the first stage of the research (Appendix 1), this contained; an information sheet, consent form, standardised instructions for stage one, F-Scale, vignette, AQ-27, SDS and information about the second stage of the research.

At the second stage of the research participants received a second questionnaire booklet; the booklets differed with regards to which intervention group they were randomly assigned to; experimental (Appendix 2) or control (Appendix 3). This contained standardised instructions for stage two, reading material, manipulation check, vignette, AQ-27, SDS, a brief paragraph of information and the de-brief.

The information sheet was given to participants to inform them about the research, providing details about the study prior to giving consent (Fulcher, 2006). This informed participants of what the research was about, why it was being conducted, what would be required of them if they took part and outlined the exclusion criteria. This also informed participants of their right to withdraw, providing details concerning how and when by, they should do this if they wished to. Participants were also notified of their anonymity during the research and asked to create their unique anonymous identification code (date of month born/last two letters of postcode/last two digits of home telephone number). Participants were also informed here that they had one week to complete and return each stage of the research. Contact details of the researcher and research supervisor were provided, and participants were informed they could take the information sheet away with them if they wished.

A consent form was used to gather informed consent, this delivered an outline pertinent to participants involvement in the research; ensuring they understood exactly what they would be required to do if they gave consent to take part (Myers and Hansen, 2011). It also reiterated participant's right to withdraw, informed participants that there are no right or wrong answers in the research and that they

are free not to answer a question if they do not wish to. Again, contact details of the researchers were provided here. Participant's age, gender and signature was required, in addition to a completion date.

Standardised instructions for stage one were also provided to participants. Standardised instructions ensure all participants experience the same procedures during the research; treating participants in the same way, consequently controlling for experimental bias (Searle, 2002). The instructions reiterated information previously presented in the information sheet, in more depth. They informed participants of how many questions were in each questionnaire, that they should read through each question carefully and circle the response they felt best represents their opinions. The instructions also informed participants of when the second stage would commence.

The vignette used was taken from a recent study based on depression by Sai and Furnham (2013) this described an individual facing depression, without explicitly stating the disorder. The vignette was a short paragraph of information (166 words) that described typical feelings and behaviours a depressed individual would normally display. The vignette began with; 'Elaine (Ian) is 26 years old. For the past 2 weeks Elaine (Ian) has been feeling really down. She (He) wakes up in the morning with a flat heavy feeling that sticks with her (him) all day long.' It incorporated numerous phrases including; 'She (He) feels out of energy and out of steam.'

Three questionnaires were used in this research; all in the public domain and not copyrighted instruments, thus permission to use them was not required. The F-Scale, Form 40-45 (Adorno, 1950) was used to measure participants' personality in relation to authoritarianism. The F-Scale is a 30-item questionnaire, scored on a 7-point Likert scale ranging from 'disagree strongly' to 'agree strongly', on which participants indicate their response by circling how much they agree with each item. A higher score indicates a more authoritarian personality (Farnen, 2004). The scale has high reliability with an average Cronbach's alpha score of .90 (Adorno, 1950).

Responsibility and blame are often linked with depression (Corrigan and Watson, 2002), thus the blame aspect of the Attribution Questionnaire (AQ-27) (Corrigan, 2003) was used to measure attitudes towards depression with relation to blame. This comprised three questions, rated on a 9-point Likert scale (Muñoz et al. 2011), with higher scores indicating more negative attitudes. The AQ-27 demonstrates good internal consistency; with Cronbach's alpha scores ranging from .70 (Rao et al. 2009) to .76 (Muñoz et al. 2011); the blame aspect used also show good reliability; .70 (Corrigan, 2003). The scale has been used effectively in previous research, thus stood to be an appropriate measure to use to assess attitudes towards depression.

As previously mentioned, social distance is a key element of stigma (Jorm and Oh, 2009); the concept has frequently been used to assess stigma towards mental disorders (Adewuya and Makanjuola, 2005; Barke et al. 2011). As noted earlier, an adapted version of The Social Distance Scale (SDS) created by Link et al. (1987) has been used in copious studies to assess stigma surrounding mental illness, including depression (Angermeyer et al. 2004). As a result of its effective application, this measure was used to assess stigma towards depression. Scores are measured on a 4-point Likert scale ranging from 0 (definitely unwilling) to 3 (definitely willing) (Link et al.1987), with higher scores displaying more desire for social distance



(Corrigan et al. 2001). Internal consistency of the scale, (Cronbach's alpha) ranges from .75 (Penn et al. 1994) to .92 (Link et al. 1987).

Questionnaires were the primary data collection method in this research as they are able to gather attitudes and opinions of individuals (Carter and Thomas, 1997). In addition, questionnaires are largely accessible (Gratton and Jones, 2010) and quick and easy to administer (Athanasidou et al. 2010). Participants are also able to think about their answers, thus do not feel under pressure to answer in a particular way (Brace, 2013), reducing potential bias (Gratton and Jones, 2010). Corrigan and Shapiro (2010) suggest anonymity is an important factor when measuring stigma and attitudes, and explain questionnaires are advantageous concerning this. Questionnaires may also reduce social desirability, in comparison to alternative methods such as face to face interviews (Bradburn et al. 2004).

A brief paragraph of information was also provided about the second stage of the research at the end of the stage one questionnaire booklet. This information thanked participants for taking part in the first stage, informed them of when the second stage would commence and also provided opportunity to ask questions. Participants also provided their anonymous identification code again.

Standardised instructions for the second stage of the research were relevant to which intervention group participants were randomly assigned to (control or experimental). The instructions provided participants with information about the topic of the reading material and how many pages this consists of. In addition, participants were instructed that they should only answer the ten multiple choice questions (manipulation check) once they have read the reading material thoroughly. Participants were informed that they should read each question carefully and circle the answer they think is correct, and that this should take about ten minutes to complete. Instructions also informed participants that they must then complete the two smaller questionnaires they completed at stage one, again circling the option they feel best represents their opinions. Lastly, participants were informed that they had one week to complete this stage.

As mentioned, educational interventions may take numerous forms (Rüsch et al. 2005), this research used leaflets. The interventions used in the experimental group consisted of three pages of A4 reading material containing information about depression. This material was taken from NHS leaflets from the internet (NHS, 2013; North Essex Partnership NHS Foundation Trust, no date). Comprising information including; what depression is, the symptoms of depression, how a depressed person may appear and causes of depression. The control group received two and a half A4 pages of reading material about an unrelated topic; recent news stories on whiplash claims and car insurance, taken from Sky News (Sky News, 14<sup>th</sup> Feb 2013; Sky News, 23<sup>rd</sup> Oct 2013). This contained information including; how many whiplash claims occur on average per year, how much this costs the insurance industry and how much insurance has risen over recent years.

Manipulation checks are used in research to ensure participants followed the instructions given (Rosenfeld and Penrod, 2011), thus ensured all participants read the interventions fully. The manipulation checks in this research consisted of ten questions directly related to the reading material participants received. These were multiple-choice questions with four answers to choose from (A,B,C, and D),

participants were asked to circle the correct response. An example of the question wording was as follows; 'Someone who is depressed will often look...' then four options given; 'Sad, Happy, Unusual, Drowsy'.

A brief paragraph of information was again provided to participants thanking them for completing the second stage of the research. This also provided an opportunity to ask questions and requested participants' anonymous identification code for this stage.

A debriefing sheet was given to participants which thanked them for their participation and provided them with more detailed information about the research. This also provided details of how participants could receive the results of the questionnaires they completed or the overall results of the research, if they wished to. Further opportunity to ask questions was again provided here and contact emails of the researcher and research supervisor were provided again. Contact information for relevant support groups and helplines was also provided for participants if they felt they needed it, including; Depression Alliance - 08451232320; [information@depressionalliance.org](mailto:information@depressionalliance.org).

## **Procedure**

To ensure participants well-being, ethical issues were considered whilst this research was being designed and conducted. The main ethical issue in this research was the sensitive topic of the research, psychological ill health. Accordingly, as mentioned, an exclusion criterion was implemented for the selection of participants. Moreover, it was ensured that those who participated were conversant with the research topic. Participants may also be nervous to share their personal attitudes (Gravetter and Forzano, 2011), thus anonymity of each participant was also ensured. The Application for Ethics Approval From provides more details of ethical considerations for this research (Appendix 4) in accordance with the British Psychological Society's ethical guidelines. Ethical approval was gathered from the research supervisor at Manchester Metropolitan University prior to the research commencement.

The research took place in two stages, over a four week period; all participants were provided with questionnaire booklets comprising numerous documents at both stages. Participants were given a maximum of one week to complete each stage. Firstly, the questionnaire booklet for stage one was provided to all 56 participants, this presented them with the information sheet to read and retain. If they then decided to participate, they were asked to sign the consent form to give informed consent. Standardised instructions were then provided for stage one. Participants then completed the F-Scale to assess how they score on authoritarianism. Next, participants read the vignette and completed the blame aspect of the AQ-27, and the SDS. Finally, participants read the information provided about the second stage of the research and provided their unique identification code.

Once all participants had completed the first stage, they were divided into two groups by a median split using SPSS based on their F-Scale score (median = 4.17). Participants gaining a score lower than 4.17 were assigned to the lower authoritarian group ( $n=29$ ) while those gaining a score of 4.17 and above were assigned to the higher authoritarian group ( $n=27$ ). Participants were then randomly assigned to

either the control or experimental intervention group within these groups, by means of a random number generator programme (Random.org, 2014) (lower authoritarian control  $n=15$ , lower authoritarian experimental  $n=14$ , higher authoritarian control  $n=13$ , higher authoritarian experimental  $n=14$ ).

The second stage of the research commenced once all participants had completed stage one; three weeks after the first stage had begun. Again, participants were given a maximum of one week to complete stage two. Firstly, participants read the standardised instructions for stage two. Participants were then presented with the relevant interventions based on which group they were allocated to, either control or experimental reading materials. The relevant manipulation checks were then completed by all participants once they had read through the material fully. Next, participants were required to complete the blame aspect of the AQ-27 and the SDS again after reading the vignette, to assess the effects of intervention on attitudes and stigma. Lastly, participants read the information thanking them for their participation, provided their anonymous identification code again and were presented with the debrief.

## Results

Due to the quantitative nature of the research and the numerical data collected, statistical analyses must be conducted (Muijs, 2010). The data gathered was input into SPSS. During the preparation of data, F-Scale total scores were divided by 30, in accordance with the author's instructions (Adorno, 1950) to give a mean item score. Two 2x2x2 mixed factorial analysis of variance's (ANOVAs) with repeated measures on Time variable were conducted to assess the effect on each dependent variable; attitudes and stigma. Three-way ANOVA's were used as they investigate differences between numerous factors within a study (Kothari, 2004); using three independent variables (Larson-Hall, 2009); each comprising of two levels (Rosenthal, 2011). For full SPSS output of all analyses conducted please see Appendix 5.

A median split (Median = 4.17) was conducted on the F-Scale scores. Participants with a score lower than 4.17 were assigned to the lower authoritarian group ( $n=29$ ,  $M=3.63$ ), participants with a score of 4.17 and above were assigned to the higher authoritarian group ( $n=27$ ,  $M=4.52$ ). The means and standard deviations can be found in Table 1 below.

**Table 1**  
**Means and standard deviations of F-Scale scores for higher and lower authoritarian groups**

	<i>M</i>	<i>SD</i>
<b>Lower authoritarian</b>	3.63	.51
<b>Higher authoritarian</b>	4.52	.28
<b>Total</b>	4.06	.61

A one sample T-test was conducted to compare the mean F-Scale scores of the sample used in this research with a previously established norm score of 3.90 (Adorno, 1950). The results showed that both lower and higher authoritarian groups were significantly below or above the norm score (lower  $p=.008$ , higher  $p<.001$ ).

After conducting a reliability analysis of internal consistency for each of the measures, it was found that the Cronbach's alpha scores for each measure were significantly above the recommended value of 0.7 (Nunnally, 1978), with the exception of the Pre AQ-27 which displayed a Cronbach's alpha of .79, 95% CI [.68, .87],  $p = .052$ . However, .79 is still considered an adequate reliability value (Biddle, 2005). The Cronbach's alpha scores for each measure can be found in Table 2 below.

**Table 2**  
**Cronbach's alpha for the measures used**

Variable	Number of items in variable score	Cronbach's alpha	95% Confidence Interval for alpha	
			Lower	Upper
<b>F-Scale</b>	30	.83***	.76	.89
<b>Pre AQ-27</b>	3	.79	.68	.87
<b>Pre SDS</b>	7	.82**	.74	.88
<b>Post AQ-27</b>	3	.83**	.73	.89
<b>Post SDS</b>	7	.83***	.76	.89

Note: *F* test with true value =0.7, \*  $p<.05$ . \*\* $p<.01$ . \*\*\* $p<.001$

A mixed factorial 2x2x2 ANOVA was conducted with the three independent variables; time, a within groups variable (pre/post), intervention (control/experimental) and authoritarianism (higher/lower) both between groups variables, to assess the effect on the dependent variable attitudes (AQ-27).

The ANOVA assessed whether authoritarianism affected attitudes, whether educational intervention affected attitudes and also whether authoritarianism affected the effect of intervention on attitudes. See Tables 3 and 4 for the means and standards deviations for all groups.

**Table 3**  
Means and Standard Deviations for Pre and Post AQ-27 total scores in Control and Experimental groups

	Control <sup>^</sup>		Experimental	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	(n=28)		(n=28)	
<b>Pre AQ-27</b>	10.61	5.03	10.54	4.42
<b>Post AQ-27</b>	10.54	5.04	9.82	4.03

<sup>^</sup>Intervention group.

**Table 4**  
Means and Standard Deviations for Pre and Post AQ-27 for all groups

	Lower Authoritarian			Higher Authoritarian			Overall totals							
	(n=29)			(n=27)			(n=56)							
	Control <sup>^</sup>	Experimental	Total	Control	Experimental	Total								
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>						
	(n=15)	(n=14)	(n=29)	(n=13)	(n=14)	(n=27)	(n=56)							
<b>Pre AQ-27</b>	10.07	5.52	10.57	4.12	10.31	4.81	11.23	4.53	10.50	4.86	10.85	4.63	10.57	4.69
<b>Post AQ-27</b>	9.40	4.79	8.71	3.43	9.07	4.13	11.85	5.18	10.93	4.39	11.37	4.72	10.18	4.53

<sup>^</sup>Intervention group.

Non-significant main effects were found for time,  $F(1,52) = .52$ ,  $p = .48$ , authoritarianism,  $F(1,52) = 1.61$ ,  $p = .21$  and intervention,  $F(1,52) = .16$ ,  $p = .69$  on AQ-27 scores. Non-significant interactions were found between time and intervention  $F(1,52) = .45$ ,  $p = .51$  and time and authoritarianism  $F(1,52) = 3.00$ ,  $p = .09$ . A non-significant interaction was also found between intervention and authoritarianism  $F(1,52) = .11$ ,  $p = .75$  and likewise between time, intervention and authoritarianism  $F(1,52) = .24$ ,  $p = .63$ .

Thus, authoritarianism did not have a significant effect on attitudes irrespective of intervention (higher  $M=11.13$ , lower  $M=9.69$ ). Intervention had a non-significant effect on attitudes (pre  $M=10.54$ , post  $M=9.82$ ). Lastly, authoritarianism did not have a significant effect on intervention in relation to attitudes at either pre (higher  $M=10.50$ , lower  $M=10.57$ ) or post intervention (higher  $M=10.93$ , lower  $M=8.71$ ).

A second mixed factorial 2x2x2 ANOVA was conducted with the three independent variables; time, a within groups variable (pre/post), intervention (control/experimental) and authoritarianism (higher/lower) both between groups variables, to assess the effect on the dependent variable stigma (SDS).

The ANOVA assessed whether authoritarianism affected stigma, whether educational intervention affected stigma and also whether authoritarianism affected the effect of intervention on stigma. See Tables 5 and 6 for the means and standard deviations for all groups.

**Table 5**  
**Means and Standard Deviations for Pre and Post AQ-27 total scores in Control and Experimental groups**

	Control <sup>^</sup>		Experimental	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	(n=28)		(n=28)	
<b>Pre SDS</b>	10.11	3.15	12.21	3.10
<b>Post SDS</b>	10.25	2.88	12.07	3.76

<sup>^</sup>Intervention group.

**Table 6**  
**Means and Standard Deviations for Pre and Post SDS for all groups**

	Lower_Authoritarian					Higher Authoritarian					Overall totals			
	Control <sup>^</sup>		Experimental		Total	Control		Experimental		Total	(n=56)			
	(n=15)		(n=14)		(n=29)	(n=13)		(n=14)		(n=27)	(n=56)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<b>Pre SDS</b>	9.87	3.14	10.86	3.23	10.34	3.17	10.38	3.28	13.57	2.34	12.04	3.22	11.16	3.27
<b>Post SDS</b>	10.53	4.79	10.64	3.77	10.59	3.39	9.92	2.66	13.50	3.28	11.78	3.36	11.16	3.44

<sup>^</sup> Intervention group.

Non-significant main effects of time,  $F(1,52) = .00$ ,  $p = .96$ , authoritarianism  $F(1,52) = 3.57$ ,  $p = .06$  and intervention,  $F(1,52) = 7.36$ ,  $p = .01$  were found on SDS scores. Non-significant interactions were found between time and intervention  $F(1,52) = .09$ ,  $p = .77$  and time and authoritarianism  $F(1,52) = .34$ ,  $p = .56$ . A non-significant interaction was also found between intervention and authoritarianism  $F(1,52) = 3.82$ ,

$p = .06$ , in addition to a non-significant interaction between time, intervention and authoritarianism  $F(1,52) = .57, p = .45$ .

Thus, authoritarianism did not have a significant effect on stigma irrespective of intervention (higher  $M=11.85$ , lower  $M=10.48$ ). Intervention similarly had a non-significant effect on stigma (pre  $M=12.21$ , post  $M=12.07$ ). Furthermore, authoritarianism did not have a significant effect on intervention in relation to stigma at either pre (higher  $M=13.57$ , lower  $M=10.86$ ) or post intervention (higher  $M=13.50$ , lower  $M=10.64$ ).

## **Discussion**

### **Main findings**

The results of this research suggest that authoritarianism does not significantly affect attitudes, with relation to blame and stigma, with relation to social distance, towards those with depression. Educational interventions also showed non-significant effects on both attitudes and stigma towards depression. Moreover, those with authoritarian personalities were not significantly more positively affected by educational intervention. Nevertheless, the results displayed numerous trends that correspond with the presented hypotheses.

### **Authoritarianism, attitudes and stigma**

Depression is exceptionally pervasive (World Health Organisation, 2012). Stigmatising attitudes towards those with mental health problems are widely prominent (Corrigan and Watson, 2002) and present major difficulties for those with depression (Docherty, 1997). Individuals facing depression are often seen as being personally responsible for their disorder (Corrigan and Watson, 2002) and blamed for their symptom existence (Reinecke and Davison, 2007). Furthermore, authoritarianism is recurrently linked with prejudice (Dhont et al. 2013) and stigma (Holub et al. 2011). In addition, authoritarian individuals also often view those with mental disorders as inferior (Hinshaw, 2006). Although no significant results were observed, a trend in the findings supports the hypothesis that those with authoritarian personalities display more negative attitudes and more stigma, towards those with depression. Moreover, although the means were significantly above/below a previously established norm score of the F-Scale presented by Adorno (1950), there may have only been a certain number of participants that gained significant scores at each end of the higher/lower authoritarian groups. Thus, to investigate the role of authoritarianism further in future research, participants could be recruited from typical authoritarian areas or jobs, such as the police (Colman and Gorman, 1982 cited in Brewer and Wilson, 2013), teachers (Hunt et al. 2009) or military roles (Wertsch, 2006).

### **Educational Intervention impact**

Attribution theory (Heider, 1958) allows us to understand blame exhibited towards vulnerable individuals (Ford et al. 2001). Causal attributions focus on the concept that an individual is responsible for their current situation (Martinko, 2004). This belief frequently contributes to negative attitudes towards those facing mental health problems (Corrigan, 2000), including those facing depression being viewed as

personally accountable for their disorder (Corrigan and Watson, 2002). Nevertheless, using educational intervention concerning mental illness often has a positive impact on attitudes (Collins et al. 2012). Although no significant results were observed, a trend in the findings supports the hypothesis that educational intervention has a positive impact on attitudes towards depression. Thus, negative attitudes reduced slightly following intervention in the experimental group, in comparison to the control group. Furthermore, stigmatising attitudes surrounding mental illness are extremely widespread (Corrigan and Watson, 2002), with social distance being a central constituent of stigma (Jorm and Oh, 2009). However, once more, educating individuals about mental illness is suggested to have a positive impact on stigma levels (Rüsch et al. 2005; Collins et al. 2012). Again, although no significant results were observed, a trend in the findings supports the hypothesis that educational intervention reduces stigma towards depression. Hence, a reduction in social distance was observed post intervention in the experimental group in comparison to the control group.

### **Future intervention**

There are numerous alternative intervention approaches which may be used in future research which could possibly lead to significant reductions in stigma and improved attitudes towards depression. Couture and Penn (2003) support the notion of contact to reduce stigma towards mental illness. Furthermore, personal contact talking to individuals about their life experiences may also be successful in attitude change (Pernice and Lys, 1996). Clement et al. (2012) suggests filmed social contact interventions are successful at reducing stigma towards mental illness, they are also more cost effective than live contact. Gustafsson and Borglin (2013) also support this notion, suggesting that more interactive education based interventions are effective in attitude change. Thus, interventions that provide individuals with observable material about mental illness may be more effective at reducing stigma and negative attitudes than reading material. Long-lasting stigma reduction and attitude change is said to transpire from both contact based and educational strategies (Dalky, 2012); as well as culturally relevant interventions. Thus, these are factors that could be considered in future intervention research with relation to depression.

### **Authoritarianism and intervention**

Those with authoritarian personalities are believed to be more obedient (Napier and Jost, 2008) and submissive to authority (Chin, 2007). Thus, it was hypothesised that educational intervention would have a more positive impact on those with authoritarian personalities; however, this was not supported in the findings. Trends in the findings indicate that those with higher authoritarian personalities were less affected by educational interventions to reduce stigma in relation to social distance, in comparison to the lower authoritarian group. Furthermore, negative attitudes towards depression increased in the higher authoritarian group post intervention, whereas negative attitudes decreased slightly in the lower authoritarian group. Thus, lower authoritarian individuals appeared to be more positively affected by educational intervention.

However, authoritarian individuals are said to hold rigid attitudes (Brown, 2011) and strong attitudes are difficult to change (Petty and Krosnick, 2014). Katz (1960)



suggests that persuasive techniques are often needed for attitude change; these techniques are also commonly used in educational settings (Giordano, 2011). This may be a method that could be used in future research in relation to stigma reduction and attitude change. Campaigns such as the Montana Meth Project (Generations United, 2006 cited in Barlow and Durand, 2011) use shocking and dramatic images and videos in order to produce attitude change. However, this technique is somewhat unethical and would not have been granted ethical approval for this research. Nevertheless it is a method that could be considered for future intervention research.

### **Strengths**

A quasi-experimental pretest-posttest design was used; comparing measurement of the dependent variables pre and post intervention (Taylor et al. 2006), thus, allowing for the assessment for educational intervention. Moreover, a control group was also used which allowed for the control of extraneous variables (Taylor et al. 2006), additionally allowing for further evaluation of intervention by means of comparison (Weiner et al. 2012).

### **Weaknesses**

Due to time limitations, a short-term intervention was used in this research. However long-term, more intensive intervention may have more effect on attitudes and stigma levels (Evans-Lacko et al. 2010). Furthermore, due to ethical restraints, a relatively weak intervention was used in comparison to more persuasive or shocking methods. Thus, these are factors that could be considered in future research.

### **Generalisability**

The sample used in this research was relatively representative of the general population. However, Silke (2001) suggests results from opportunity sampling methods may not be generalised to the general population. Consequently, in future research, alternative sampling methods such as random sampling could be used, in different locations. This desirable method (Polgar and Thomas, 2013) reduces bias, consequently producing a more representative sample (Gravetter and Forzano, 2011).

### **Practical implications**

If support is gathered in future research that determines authoritarian individuals display more negative attitudes and higher levels of stigma towards those with depression, this may present plights for numerous areas. For example, selection and assessment methods for particular careers or job roles, including health and social care settings, such as mental health nurses, may be affected. Furthermore, although no significant results were observed, this research provides evidence to suggest that educational intervention positively affects attitudes and stigma levels towards depression, however this must be investigated further in future research.

## Conclusion

In conclusion, this research found that authoritarianism does not significantly impact on the levels of stigma and negative attitudes displayed towards those with depression. The educational interventions used were also found to have non-significant effects on attitudes and stigma levels. Authoritarian personality also did not significantly affect the impact of educational intervention on stigma and attitudes. Nevertheless, several possible future developments have been discussed that could be implemented in upcoming research.

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