



The
University
Of
Sheffield.

Access to Electronic Thesis

Author: Katharine Tidswell
Thesis title: Promoting positive behaviours towards people with mental illness: Using implementation intentions to overcome avoidance responses rooted in implicit associations.
Qualification: DClinPsy

This electronic thesis is protected by the Copyright, Designs and Patents Act 1988. No reproduction is permitted without consent of the author. It is also protected by the Creative Commons Licence allowing Attributions-Non-commercial-No derivatives.

This thesis was embargoed until September 2016.

If this electronic thesis has been edited by the author it will be indicated as such on the title page and in the text.

**Promoting positive behaviours
towards people with mental illness:
Using implementation intentions to
overcome avoidance responses rooted
in implicit associations**

By Katharine Tidswell

**Thesis submitted to the University of Sheffield for the degree of
Doctor of Clinical Psychology**

July 2011

The results, discussions and conclusions presented herein are identical to those in the printed version. This electronic version of the thesis has been edited solely to ensure conformance with copyright legislation and all exclusions are noted in the text. The final, awarded and examined version is available for consultation via the University Library.

Declaration

This work has not been submitted to any other institution or for any other qualification.

Thesis Abstract

This thesis looks at ways of overcoming the deleterious effect that societal stigma has on people with mental illness.

Section 1. A literature review looks at theoretical models of mental illness stigma and the mechanisms by which societal stigma becomes personally relevant to people with mental illnesses, resulting in self-stigma. The extant literature on interventions aimed at ameliorating the negative effects of self-stigma is systematically reviewed and discussed with reference to theoretical models of mental illness stigma and its effects. Implications for future development of self-stigma interventions and their evaluation are discussed.

Section 2. An empirical report looks at a novel anti-stigma approach which attempts to address one of the main stigma cues perceived and internalised by those with mental illness; rejection. The link between implicit attitudes about mental illness and physical proximity to an anticipated target with schizophrenia is investigated in a female, undergraduate sample. The effect of forming an “if-then” plan called an implementation intention on participants’ ability to overcome automatic avoidance motivations was tested objectively by measuring seating distance. By acting at the level of discrimination rather than the level of attitudes traditionally targeted by anti-stigma campaigns, this approach reduced seating distance and succeeded in disconnecting automatic social behaviours from negative implicit and explicit attitudes towards people with mental illness.

Acknowledgements

Huge thanks go to Professor Paschal Sheeran for his unwavering enthusiasm, support and guidance throughout thesis mark one and two. Thank you for setting me back on track and keeping me going. Thanks also to Dr Eleanor Miles. This study would not have been possible without your genius and generosity.

I am grateful to my placement supervisors, Claire Pearson and Alex Perry, for their flexibility and understanding throughout the challenges of third year.

Thanks as always to Mum, Mac & Rob for their consistent belief in me and for helping me to keep things in perspective. Nik, thank you for your patience and positivity. I hope I can support you through your training the way you have supported me. Thank you to all the friends who I haven't seen enough during this process for your consistent encouragement. I promise to be more available from now on! And Sunshine, who was a fabulous write-up companion, the last few thousand words were harder without you.

Big thanks to my course buddies for their solidarity in wading on through the treacle. Thank the gods of DClinPsy we had each other.

Structure

Both the literature review and the research report contained in this thesis have been prepared in accordance with the guidelines for the structure of articles specified by the *Journal of Social and Clinical Psychology* (Appendix 1), as approved by the Clinical Psychology Unit, University of Sheffield (Appendix 2).

Word Counts

1. Literature Review: *Addressing self-stigma in mental illness: A systematic review of interventions.*

Excluding references: 8, 246

Including references: 9, 996

2. Research Report: *Promoting positive behaviours towards people with mental illness: Using implementation intentions to overcome avoidance responses rooted in implicit associations.*

Excluding references: 10, 971

Including references: 13, 897

Total word count:

Excluding references and appendices: 19, 217

Including references and appendices: 27, 051

List of contents

Declaration	ii
Thesis Abstract	iii
Acknowledgements	iv
Structure & Word Counts	v
Section 1: Literature Review	1
<i>Addressing self-stigma in mental illness: A systematic review of interventions</i>	
Abstract	2
1. Introduction	2
1.1. Self-stigma	2
1.2. Theoretical Models of Self-stigma	4
1.3. Rationale for and Aims of the Present Review	7
1.4. Search Strategy	9
1.5. Inclusion and Exclusion Criteria	9
1.6. Quality Control	9
2. Systematic Review	11
2.1. Psychoeducational Interventions	11
2.2. Psychosocial Interventions	13
2.3. Cognitive Behaviour Therapy Approaches	16
2.4. Acceptance and Commitment Therapy (ACT)	20
2.5. Narrative Approaches	22
2.6. Beneficial Aspects of Group Interventions for Self-stigma	23
3. Summary of Evidence	26
4. Discussion	28
4.1. Theoretical Implications	31
4.2. Clinical Implications	32
4.3. Conclusions	34
5. References	39-46

Section 2: Research Report

46

Promoting positive behaviours towards people with mental illness: Using implementation intentions to overcome avoidance responses rooted in implicit associations

Abstract	47
1. Introduction	48
1.1. Mental Illness Stigma	48
1.2. Methodological Advances in Attitude Research	52
1.3. Studies of Implicit Attitudes towards Mental Illness	54
1.4. The Predictive Validity of Implicit and Explicit Attitude Measures	54
1.5. Behavioural Measures of Stigma	56
1.6. Interventions Directed at Reducing Public Stigma	57
1.7. Interventions Directed at Reducing Self-stigma	59
1.8. Reducing Self-stigma by Reducing Public Stigma	60
1.9. The Present Study	63
2. Method	64
2.1. Participants	64
2.2. Design	65
2.3. Procedure	65
2.4. Measures	69
3. Results	74
3.1. Data Screening	74
3.2. Rationale for Analyses	75
3.3. Randomisation Check	75
3.4. Effect of Implementation Intention on Seating Distance	77
3.5. Correlations	78
3.6. Moderation of Implicit Attitude-Seating Distance Relation by Implementation Intentions	79
3.7. Moderation of Explicit Attitude-Seating Distance Relation by Implementation Intentions	81
4. Discussion	83
4.1. Conclusions	90
5. References	92-105

Tables

1. Data Extraction Table	36-38
2. SC-IAT Trials	72
3. Means, Standard Deviations and F-ratios for the Implementation Intention and Control Condition Factors.	77
4. Intercorrelations for Familiarity, Intended Behaviour, Intergroup Anxiety, Implicit and Explicit Attitude and Seating Distance Variables.	79
5. Hierarchical Regression of Seating Distance on Intended Behaviour, Implicit Attitude, Implementation Intentions and their Interaction.	80
6. Hierarchical Regression of Seating Distance on Intended Behaviour, Explicit Attitude, Implementation Intentions and their Interaction.	82

Figures

1. A Conceptual Integration of Theoretical Models of Self-stigma and its Psychosocial Effects.	5
2. PRISMA Flow Diagram Representing Search, Screening and Inclusion Processes of the Systematic Review.	10
3. Mean Seating Distance in Control and Implementation Intention Conditions.	78
4. Interaction between Condition and Implicit Attitude on Seating Distance.	81
5. Interaction between Condition and Explicit Attitude on Seating Distance.	83

Appendices

1. Guidelines for Authors, Journal of Social and Clinical Psychology	ii
2. Journal Approval Letter	iii
3. Quantitative Quality Control Checklist	iv-v
4. Qualitative Quality Control Checklist	vi-ix
5. Extended Data Extraction Table	x-xiv
6. Recruitment Email	xv
7. Approval Letters	
a. Ethical Approval	xvi
b. Scientific Approval	xvii
8. Participant Information Sheet	xviii-xix

9. Participant Consent Form	xx
10. Explicit Attitude Questionnaire	xxi-xxii
11. Experimental Manipulations	
a. Control Condition	xxiii
b. Goal Intention Condition	xxiv
c. Implementation Intention Condition	xxv
12. SC-IAT Screen Shots	
a. Instructions	xxvi
b. Example Target Word Stimuli and Error Notification	xxvii
13. Beliefs About the Nature of the Experiment Questions	xxviii
14. Certainty Rating	xxix
15. Information Sheet About Schizophrenia	xxx
16. Debrief Sheet	xxxi

Section 1

**Addressing self-stigma in mental
illness: A systematic review of
interventions**

Abstract

Self-stigma is a phenomenon whereby negative societal stereotypes about mental illness are internalised by people with mental illness. Self-stigma has detrimental effects on both psychosocial variables such as self-esteem and hope, and recovery outcomes such as treatment adherence and symptom severity. Self-stigma is experienced to different magnitudes by different people. This review begins by describing theoretical frameworks of self-stigma and stigma resistance within which to understand the mechanisms by which self-stigma impacts psychosocial and recovery outcomes. The extant literature on interventions designed to ameliorate the negative impacts of self-stigma is then reviewed. Implications for the future development of interventions and their evaluation are discussed.

1. Introduction

1.1. Self-stigma

Self-stigma is a phenomenon whereby individuals affected by mental illness endorse society's stereotypes about mental illness and consider them to be self-relevant, thereby assuming the position of a devalued member of society (Corrigan, Kerr & Knudsen, 2005). Closely related concepts include *internalised stigma*, *felt-stigma* and *perceived stigma*. However, self-stigma has been further delineated as a process in which an individual accepts society's negative evaluation of them and incorporates this into their personal value system and sense-of-self (Herek, 2007; Herek et al., 2009).

Much of the literature focuses on severe mental illnesses, such as schizophrenia, psychosis and bipolar disorder although mood disorders such as depression are

also considered. Livingston and Boyd (2010) define 'mental illness' as "an Axis I clinical disorder as specified by the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000)" (p. 2152). In a systematic review of 127 articles and meta-analysis of 45 studies, they extrapolated the correlates and adverse consequences of internalised mental illness stigma from the extant, empirical literature. Internalised stigma was defined as "a subjective process, embedded within a socio-cultural context, which may be characterized by negative feelings (about self), maladaptive behaviour, identity transformation, or stereotype endorsement resulting from an individual's experiences, perceptions, or anticipation of negative social reactions on the basis of their mental illness" (p. 2151). No sociodemographic variables were consistently or robustly associated with the experience of internalised stigma, indicating that susceptibility is broad. Robust negative associations (ranging from $r = -.28$ to $r = -.58$) were found between internalised stigma and a range of psychosocial variables, including hope, empowerment, self-esteem, self-efficacy, quality of life, and social support. Internalised stigma was associated positively with psychiatric symptom severity and negatively with treatment adherence. Owing to these adverse effects, internalised stigma clearly presents a significant challenge, both compounding suffering and impeding recovery for many individuals living with mental illness.

Corrigan and Wassel (2008) posit that social psychological models can inform ways to overcome the barriers that self-stigma presents to recovery. These explanatory models must account for the 'paradox' of self-stigma, whereby individuals with mental illness are affected differently by perceptions of societal stigma (Corrigan & Watson, 2002). Whereas some internalise societal stigma to the extent that their sense-of-self is harmed, others remain indifferent to stigma

whereas still others react forcefully against it. If we can understand the mechanisms underlying the variable impacts of self-stigma on psychosocial variables, we can develop interventions to overcome the obstacle that self-stigma poses to the recovery process.

1.2. Theoretical Models of Self-stigma

Pertinent theoretical models of self-stigma are summarised below. Although not an exhaustive review, the models included were identified during the systematic database search (detailed below) and subsequent reference searches. Eight models were identified; (Corrigan, Larson and Rüsch, 2009; Corrigan & Watson, 2002; Corrigan, Watson & Barr, 2006; Link et al., 1989; Rüsch et al., 2009a; Rüsch et al., 2009b, Thoits, 2011; Watson et al., 2007). A conceptual integration of these models is presented in Figure 1.

Corrigan and Watson (2002) presented a socio-cognitive model of stigma-related processes, where both public and self-stigma comprise three levels; stereotypes, prejudice and discrimination. In self-stigma, self-prejudicial affect is experienced in response to accepting stereotyped beliefs which then leads to behavioural self-discrimination. This model implies that a cognitive behavioural intervention would be helpful in targeting either the underlying cognitions or the behavioural consequences of self-stigma. Furthermore, Corrigan, Watson and Barr (2006) and Watson et al. (2007) proposed three inter-correlated levels of self-stigma; *stereotype agreement* whereby an individual internalises stigmatised attitudes, *self-concurrence* whereby the individual applies this stigma to him or herself, and the resultant *diminished self-esteem*. This suggests that both stereotype agreement and self-concurrence are possible targets for interventions intended to bolster self-

esteem, possibly via psychoeducational methods intended to replace myth with fact.

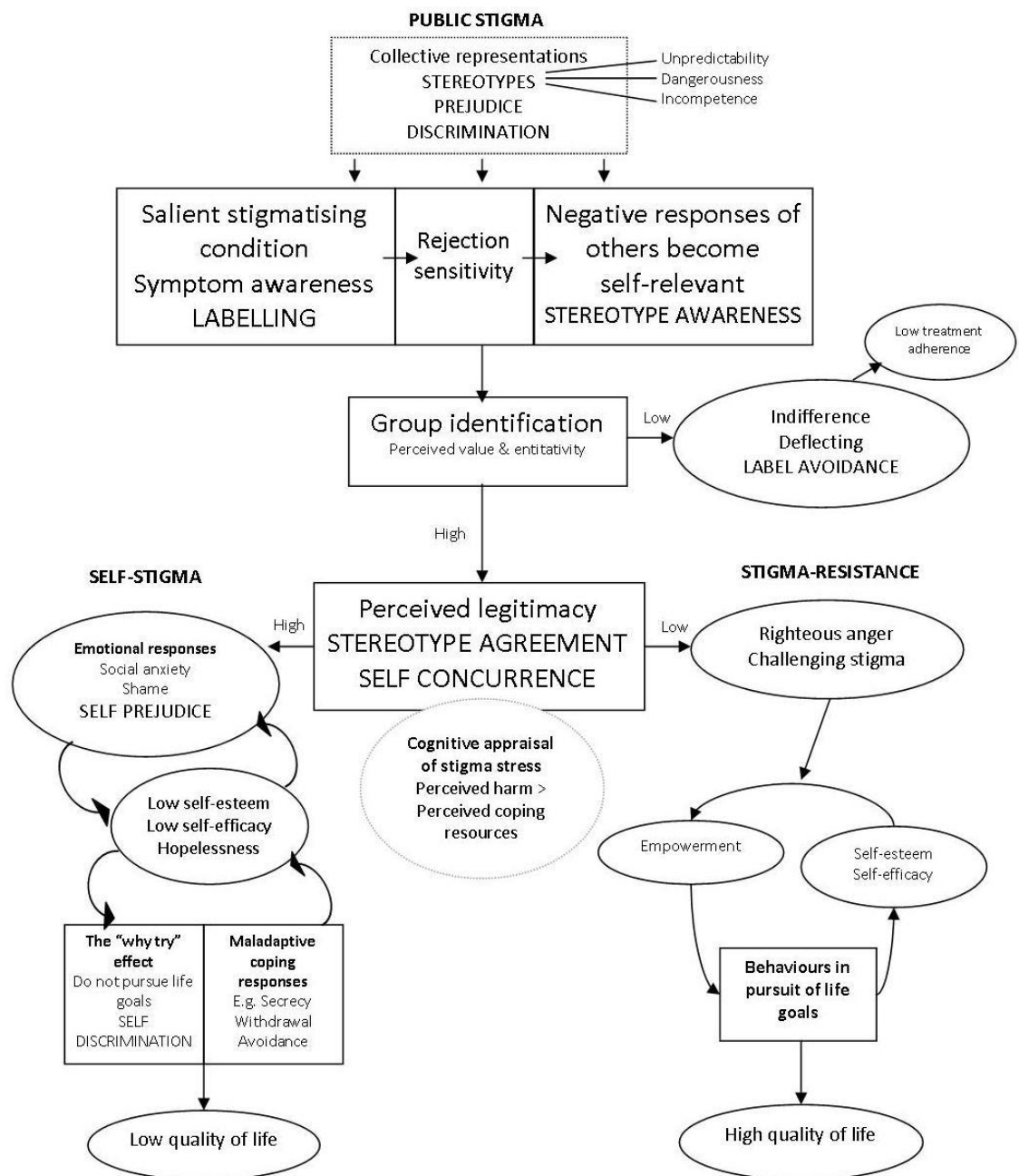


Figure 1: A Conceptual Integration of Theoretical Models of Self-stigma and its Psychosocial Effects.

Modified labelling theory (Link et al., 1989) asserts that the devaluation of people with mental illness internalised from societal conceptions gets translated into self-devaluation and discrimination when official labels denoting mental illness become personally applicable. Label avoidance is one way of warding off the threat

of a stigmatised status. However, individuals who adopt this behavioural response to the anticipation of discrimination do not receive appropriate services (Corrigan, 2004; Corrigan & Wassel, 2008). Alternatively, individuals may adopt coping strategies of secrecy (concealing labelled status), withdrawal (interacting only with those who know about or accept the condition) or educating others. Both the direct threat of stigma itself and the inadvertent utilisation of these self-protecting coping orientations can lead to negative consequences (e.g., limiting opportunities or increasing distress) which further perpetuate mental illness and related outcomes such as demoralisation and unemployment (Link et al., 1991).

In an attempt to account for the 'paradox' of self-stigma, whereby societal stigma does not affect members of a stigmatised group universally, Corrigan and Watson (2002) proposed a situational model of personal responses to stigma. Whether stigma results in low self-esteem and self-efficacy, indifference or righteous anger depends on the individual's perceptions of the legitimacy of discrimination and their identification with the stigmatised group. Rüsç et al. (2009a) consider the influence of both public factors and personal factors, including rejection sensitivity (Mendoza-Denton et al., 2002), on an individual's cognitive appraisal of stigma related stress. If perceived harm outweighs perceived resources to cope, various emotional stress responses then ensue (Rüsç et al., 2009b) which predict outcomes such as low self-esteem. Corrigan, Larson and Rüsç (2009) describe a "why try" effect, whereby internalised stereotypes coupled with low self-esteem and self-efficacy have behavioural consequences (e.g., social avoidance) which impede the pursuit of life goals. Empowerment is conceptualised as an opposite phenomenon to low self-esteem (Corrigan, 2002), mediating the relationship between self-stigma and behaviours related to goal attainment.

Thoits (2011) asserts that diminished self-esteem is not an inevitable outcome of stigma and expands the concept of 'stigma resistance' by distinguishing between two forms of resistance in response to self-relevant stereotypes; deflecting ("that stereotype is not me") which is more cognitive in nature, and challenging ("that stereotype is not me and it's wrong") which is more behavioural in nature and can involve collective action. Whereas both strategies may protect the self from devaluation to some extent, only challenge provides opportunity for empowerment. This positive explanation of the 'paradox' of self-stigma affords stigmatised individuals personal agency in opposing "the invasion of devaluation" (p. 23), as opposed to the passivity of modified labelling theory.

The integration of socio-cognitive models depicted in Figure 1 suggests that in order for self-esteem to remain intact and empowerment to prevail, the perceived legitimacy of discrimination must be challenged and opportunities for empowerment pursued. Fostering conditions of high group regard and low perceived legitimacy of discrimination enables the in-group to become a social resource for developing alternative coping strategies and provides a forum for righteous anger to develop. Where interventions directed at public stigma reduction have had small and inconsistent effects (Hinshaw, 2007; Corrigan et al., 2001), reducing self-stigma and offsetting its negative impacts on the individual represent alternative targets for intervention.

1.3. Rationale for and Aims of the Present Review

Several authors have summarised or discussed interventions intended to influence self-stigma (Corrigan & Wassel, 2008; Dickstein et al., 2010; Larson & Corrigan, 2010). Dickstein et al. (2010) presented a review stating that only three empirical studies have been conducted on interventions for self-stigma (Luoma et al., 2008;

MacInnes and Lewis, 2008; McCay et al., 2007). They conclude that perceptions of service use as a weakness, stereotypes about mental illness, self-blame and uncertainty regarding symptoms and the nature of treatment are important targets for increasing the utilisation of mental health services by military personnel. However, Dickstein et al. (2010) do not report their search strategy and many empirical studies are missed. We still do not have a comprehensive picture of the effectiveness of interventions directed at self-stigma. Given the implications of self-stigma for recovery, greater clarity is needed.

The current review aims to identify the extant empirical literature on interventions explicitly targeted at reducing mental illness self-stigma or its psychosocial consequences. As this is a new and disparate field, descriptive studies will also be discussed in order to draw together an inclusive picture of all relevant attempts to address self-stigma in mental illness samples. The theoretical rationales and components of the interventions identified will be considered within the integrated theoretical framework discussed above. Particular attention will be paid to the ways in which intervention outcomes are measured and the validity of these methods in reflecting the aims of the intervention. Therefore, outcome data relating to self-stigma or related constructs will be focused on whenever these data are available. Critical evaluation of the methodologies used to measure effectiveness will be integrated throughout the review and summarised with reference to quality control criteria such that conclusions about effectiveness can be weighted in favour of methodologically rigorous studies. Promising future avenues of intervention will be highlighted and implications for evaluating their effectiveness will be discussed.

1.4. Search Strategy

The systematic literature search was performed using Web of Knowledge which searches across the Science Citation Index, the Social Sciences Citation Index and MEDLINE. The search was therefore not repeated elsewhere. Search terms entered were "self-stigma*" OR "self stigma*" OR "felt stigma*" OR "internalised stigma*" OR "internalized stigma*" OR "perceived stigma*" OR "personal stigma*" AND "manage*" OR "coping" OR "strateg*" OR "therapy" OR "resistance" OR "group work" OR "experiment" OR "intervention" OR "treatment" OR "evaluation" OR "trial". This search, conducted on 3rd May 2011, yielded 495 results. After refining results to English language articles, reviews, editorials or case reports, 437 results remained.

1.5. Inclusion and Exclusion Criteria

The filtering process is detailed in Figure 2 (Moher et al., 2009). The titles and, if necessary, abstracts of the 437 records were screened for relevance. Studies were retained if they were conducted in adult populations and focused on interventions or management of self-stigma and its psychosocial consequences. As the focus is on mental illness self-stigma, literature related to physical illness, race or sexuality self-stigma was excluded. The resulting 21 articles were reduced to 9 after full-text review. Reference sections of these eligible studies were hand searched for other studies which met the above inclusion criteria, yielding an additional 5 results. A final total of 14 articles were included in the systematic review.

1.6. Quality Control

Study designs ranged from descriptions of novel intervention strategies and composite case studies to randomised controlled trials. A quality control checklist

(Appendix 3) was adapted from Downs and Black (1998) and systematically applied to all quantitative trials. Higher scores (maximum 29) are awarded to more methodologically rigorous studies, (e.g., randomised controlled trials). An evaluation checklist (Appendix 4) with a maximum score of 34 was applied to the sole qualitative study (Critical Appraisal Skills Programme, 2006). The conclusions drawn will reflect these methodological quality weightings. Table 1 summarises the pertinent details extracted from each study reviewed along with quality ratings derived by the author (extended data extraction table available in Appendix 5).

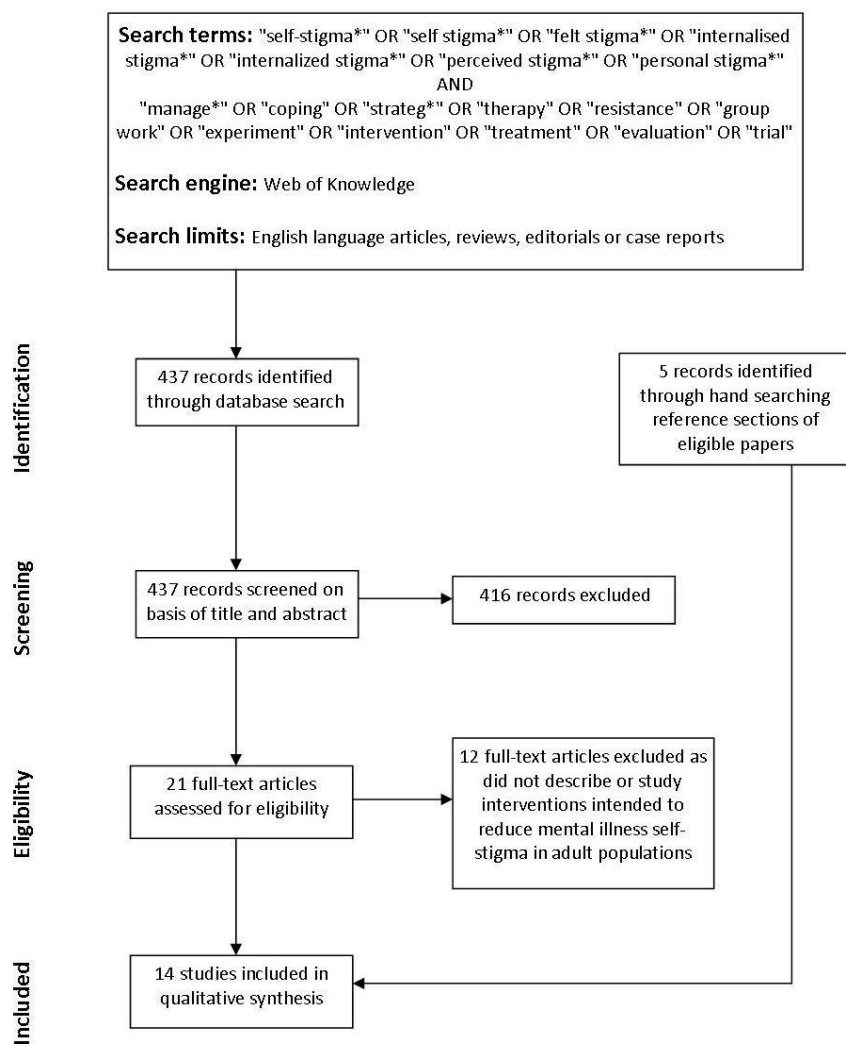


Figure 2: PRISMA Flow Diagram Representing Search, Screening and Inclusion Processes of the Systematic Review.

2. Systematic Review

The following review is structured according to the conceptual bases of the interventions employed. Five overarching approaches to addressing self-stigma were identified; psychoeducational, psychosocial, cognitive behavioural, acceptance and commitment therapy and narrative approaches. Finally, studies focusing on beneficial processes within group approaches are discussed.

2.1. Psychoeducational Interventions

Within the context of ethnic disparities in mental health service use, Alvidrez et al. (2009) and Shin and Lukens (2002) assess the effectiveness of culturally sensitive psychoeducation in reducing mental illness self-stigma using RCT methodology. Two different modes of intervention were employed. Shin and Lukens (2002) randomised 24 Korean-American outpatients diagnosed with schizophrenia to receive a 10-week, culturally sensitive psychoeducational group intervention plus weekly individual support sessions and 24 participants to receive weekly individual support sessions alone. All sessions were delivered in Korean. The group sessions were led by a psychiatric social worker and the support sessions were led by a graduate student. The group intervention employed a biopsychosocial framework, attempting to bridge disparities between traditional Korean mental illness concepts and Western concepts and service availabilities. A didactic format was chosen to place less emphasis on self-disclosure with sessions covering illness definitions, relapse prevention, stigma, communication and stress management skills, self-help and community resources. Pre-and post-intervention measures were analysed using analysis of covariance, controlling for disparities in gender and educational distribution across the conditions. Self-stigma and severity of both overall and positive symptoms decreased significantly over time for the

whole sample but to a greater degree for those in the intervention group. Coping dimensions of social support, mobilising family to acquire and accept help, and reframing stressful events to make them more manageable improved significantly over time for the intervention group only. The entire sample improved significantly on a passive appraisal coping domain which reflected greater acceptance of problematic issues, with a greater degree of improvement in the intervention group.

Alvidrez et al. (2009) randomised 43 consecutively referred Black outpatients with a variety of non-psychotic mental health problems to receive either an existing service leaflet or a psychoeducational booklet about stigma based on the experiences and advice of other Black mental health service users. This included strategies to overcome challenges to accessing services. The booklets were verbally presented at an intake interview to standardise delivery. Post-interview, participants were offered either individual, group or combined psychotherapy. Analyses at three months post-intake (i.e., first psychotherapy treatment session), which controlled for treatment disposition, found no significant differences in perceived helpfulness or relevance between the two booklets and no differential uptake of treatment or treatment attendance between the two groups. Changes in perceived stigma from baseline to three months post-intake did not differ between the groups. However, overall change for the entire sample is not reported.

Although Shin and Lukens' (2002) study demonstrated that greater understanding and knowledge about mental illness can modify perceptions of stigma, symptom severity, and relational coping strategies, Alvidrez et al. (2009) failed to demonstrate the benefit of a culturally-relevant psychoeducational booklet. This may be due to sampling differences, especially given the increased stigma

attributed to schizophrenia compared to other diagnoses, or differences in the length, intensity and mode of delivery of interventions. Interestingly, following interactional analyses, Alvidrez et al. (2009) found that those who reported greater treatment need or uncertainty about treatment content at baseline showed greater stigma reduction following the psychoeducational booklet whereas those who perceived less treatment need and were more certain about treatment content showed greater stigma reduction following the standard booklet. This may indicate a potential mismatch between the concerns of service users and the information provided in the psychoeducation booklet which reflected more severe mental illness and may therefore have presented a stigma threat. For those who felt they needed treatment but were uncertain about its content, however, the psychoeducational booklet may have provided a normalising function. This finding highlights the importance of tailoring intervention content to normalise treatment concerns whilst being sensitive to the individual's degree of identification with the diagnosed group. Both studies are limited in their scope to generalise findings to a potentially more stigmatised group who are entirely dislocated from services because they sample participants who have already set foot in mental health services. Additionally, lack of follow-up data precludes analysis of sustained effects.

2.2. Psychosocial Interventions

Based on labelling theory, which acknowledges the restrictive and unhelpful coping strategies individuals may adopt to avoid rejection when labelled as different, Link et al. (2002) developed a group intervention to interrupt the negative consequences of stigma by promoting successful coping. Similarly, McCay et al. (2007) proposed a psychosocial group intervention intended to promote the

development of healthy self-concepts and thereby minimise the deleterious impacts of self-stigma and 'illness engulfment' on young adults' development of self-concept, formation of social networks, and pursuit of career or educational opportunities during first episode schizophrenia. This study expands upon a pilot investigation (McCay et al., 2006) by measuring the efficacy of the intervention on a wider range of outcomes, including perceived stigma.

Link et al. (2002) recruited 88 participants from a community-based clubhouse program providing rehabilitation opportunities to promote the self-worth and recovery of people with serious mental illnesses. Participants were randomly allocated to receive either a 16-session group intervention or TAU. The intervention entailed education about the potential for internalising social stigma, identifying stigma in social interactions and choosing strategies to cope with and combat stigma. Changes from baseline to 6 months were compared between the groups before controls were then offered the intervention. A further assessment at 24 months analysed changes from baseline to follow-up over the entire sample, thereby introducing a different post-intervention comparison point for the two groups. The numbers participating in each phase of the intervention and the points at which non-completers were lost to follow up are unreported. Multiple regression analyses found no significant changes on stigma, self-esteem or depression measures at 6 months post-baseline. At 24 months post-baseline, when all participants had received the intervention, an increase in endorsement of secrecy as a coping strategy together with an increase in feeling different and ashamed were found across the sample. As the entire sample had received the intervention by this point, this unintended effect cannot be isolated to the

intervention and may therefore reflect spontaneous deterioration in positive coping over time.

Post hoc analyses found that baseline correlations between feeling different and ashamed and both self-esteem ($r = -0.49$) and depression ($r = 0.57$) had diminished by 24 months (self esteem $r = -0.14$, depression $r = 0.27$) suggesting that although feelings of being different or set-apart may have increased, this feeling had become disconnected from negative self evaluation and depression. From these findings, the authors suggest that despite perceptions of stigma remaining unchanged, the relationship between perceived stigma and measures of psychological health had been diminished. Although derived from post hoc analyses, this theory raises the important question of whether the aim of self-stigma interventions should be to reduce perceptions of societal stigma or to change the bearing that these perceptions have on stigmatised individuals' sense of self-worth or wellbeing.

McCay et al. (2007) compared the impact of a 12-week, manualised psychosocial intervention combined with TAU against a solely TAU control group in an outpatient sample. The intervention involved developing a personally acceptable interpretation of the illness experience, minimising stigmatising attitudes, developing a sense of future and hope and developing and pursuing individually meaningful life goals. Although at baseline 41 participants were randomised to the intervention and 26 to the control group, the analysis was based on only 29 intervention and 18 control completers reflecting a high rate of attrition. Analyses showed that non-completers had significantly lower engulfment scores, and higher quality of life, self-efficacy and general functioning than completers at baseline. This suggests that the acceptability of interventions may depend on the client's perceived wellbeing which may influence the degree to which they identify with

the stigmatised group (e.g., Alvidrez et al., 2009). Among completers, significant improvements in engulfment, quality of life and hope were seen immediately post-treatment compared to controls, implying that improvements can be attributed to the intervention. Although these outcomes may represent catalysts of the recovery process, anticipated improvements in self-concept, self-esteem, self-efficacy, and stigma were not found.

These studies fail to employ intention-to-treat analyses to account for high rates of attrition, leaving average treatment gains susceptible to bias. Whilst McCay et al. studied a reasonably homogeneous sample, Link et al. recruited a sample with a diverse range of mental health presentations upon which stigma mechanisms may operate differently. Both studies are problematic because they introduce a dose effect by comparing an extra intervention in addition to TAU compared to TAU alone. Here, benefits could be attributed merely to the additional clinical contact time. For this reason, employing a non-equivalent, passive control group is not particularly informative about the effectiveness of an experimental intervention.

2.3. Cognitive Behaviour Therapy Approaches

Five of the studies reviewed integrated cognitive behaviour therapy (CBT) approaches into anti-stigma interventions. Studies of individually delivered stigma reduction approaches included Griffiths et al.'s (2001) web-based intervention targeting depression self-stigma which was evaluated using a wide-reaching postal response recruitment strategy and RCT design. A depression screening measure was administered to 27000 individuals on the Canberra electoral role. Of the 6130 (22.7%) responses, 525 adults with elevated depression scores who had internet access and were not receiving concurrent treatment were randomised to one of three conditions; either 5 weekly modules of a depression literacy website

(BluePages), 5 weekly sessions on a CBT for depression skills training website (MoodGYM), or a control condition with weekly telephone contact from a non-mental health professional who asked open questions about depression. Both website groups received weekly telephone contact with verbatim questions related to website access. The authors devised a new measure of both self-stigma and perceived stigma of depression. Intention-to-treat analysis of change scores from pre-to post-intervention postal surveys found small but significant reductions in personal stigma following both website interventions relative to controls. However, when randomisation disparities in education were controlled for, change scores following the MoodGYM intervention no longer reached significance. An unexpected increase in perceived stigma was found following the MoodGYM intervention. The authors hypothesise that this may have resulted from MoodGYM's emphasis on changing 'dysfunctional thoughts'. This may have implied controllability and thereby unintentionally inferred that people with mental illness are responsible for their disorder. This reinforces a commonly held stereotype conceptualised within Corrigan and Watson's (2002) three level definition of self-stigma. None of the observed changes were mediated by changes in depressive symptomatology or by CBT or depression literacy.

Larson and Corrigan (2010) present a case study of 25 sessions of individual psychotherapy for a 50 year old man with anxiety related to people discovering his diagnosis of depression within the interconnectedness of a rural community. Although change is not formally measured and the design is not experimental, the client reports a sustained reduction on ideographic measures of worthlessness and increased social and business contacts which had previously been hampered by self-stigma. Using transcripts, the study illustrates therapeutic processes which

map closely onto Corrigan, Watson and Barr's (2006) theory. Stereotype awareness, stereotype agreement, self-prejudice and self-discrimination were explored by capturing negative automatic thoughts about stigma. Key areas of focus were addressing feelings of worthlessness using cognitive challenges and a positive statement log, overcoming avoidance and weighing up the pros and cons of disclosure.

These diverse modes of intervention raise certain issues. Larson and Corrigan's (2010) intervention was relatively intensive and required engagement with services, whereas the low cost, convenience and anonymity of Griffiths et al.'s (2004) intervention may be beneficial for those who are label-avoidant and therefore shun engaging with services. As neither of the web-based interventions specifically targeted personal stigma, the observed effects on personal stigma are attributed to the interventions increasing participants' perceptions of depression as a treatable illness. An approach targeted at personal stigma may therefore yield larger effects. There were, however, low levels of baseline stigma in this voluntary sample which, according to Link et al.'s (1989) modified labelling theory, may be related to the absence of a diagnostic label. Not only does this potentially limit detection of improvement by introducing a floor effect, but also makes findings difficult to generalise to a potentially more depressed or stigmatised subgroup who declined to participate or met the exclusion criteria of receiving concurrent treatment.

The three group CBT interventions reviewed (Knight et al., 2006; MacInnes & Lewis, 2008; Lucksted et al. in press) comprised didactic psychoeducation about mental illness and stigma, challenging stigmatising thoughts and generating strategies to tackle the impact of stigma whilst building self-esteem, self-concept or

self-acceptance. These group paradigms also took advantage of opportunities for sharing helpful coping strategies and ways of responding to stigma and discrimination as well as normalising personal experiences and drawing on support within the group. MacInnes and Lewis (2008) recruited 20 male inpatients with severe and enduring mental illness into a pre-post design, finding significant reductions in perceived stigma following a 6-week CBT group program. Lucksted et al. (in press) found significant reductions in internalised stigma together with significant increases in recovery orientation and social support following 9 weeks of group CBT in an outpatient sample of 50 participants who self-reported schizophrenia or major mood disorder. Knight et al. (2006) studied a sample of 21 participants with schizophrenia (7 inpatient, 14 outpatient), finding significant improvements in self-esteem, depression, and psychopathology (positive and negative) over the 6-week group CBT treatment period compared to the waiting list control period. Improvements in psychopathology remained at 6-week follow-up.

Only Knight et al.'s (2006) study benefits from using a waiting list control period which allows gains during the treatment phase to be attributed to the intervention, rather than spontaneous improvement over time which cannot be extrapolated from pre-post designs. Knight et al. also assess the sustainability of gains at follow-up. Although Lucksted et al.'s intervention included individualised, between session assignments and a final session guiding participants to implement 'next steps', the transferability and sustainability of benefits was not assessed. Knight et al. (2006) reported low attrition (N=2) and MacInnes and Lewis (2008) followed-up all 20 participants. However, Lucksted et al. (in press) lost 16 participants to

follow-up and do not employ an intent-to-treat analysis, thereby potentially overestimating the benefit of the intervention.

Both Griffiths et al. (2004) and Knight et al.'s (2006) studies raise an important question about whether reductions in perceived stigma should be the focus of interventions aimed at self-stigma. Although intervention mechanisms may be expected to improve stigma coping or reduce internalised stigma and its effects on psychosocial variables, there are no mechanisms within the interventions which can impact the existence of public stigma, meaning that perceptions of its presence are likely to remain unaltered. This implies that measures of perceived stigma may not be fit for purpose as primary outcome measures as they are unlikely to find effects. However, MacInnes and Lewis (2008) did find significant reductions in perceptions of stigma. This may be because their intervention took place in an inpatient environment, removing participants from incidences of public stigma whilst providing reassurance through the intervention that ward staff did not endorse stigmatisation.

2.4. Acceptance and Commitment Therapy (ACT)

Luoma et al. (2008) present the development of manualised ACT for self-stigma in a substance abuse sample. Unfortunately, the mental health diagnoses of the sample were not reported. However, the authors reported significant diagnostic overlap, common obstacles to recovery, and comparable levels of stigma between substance abuse and mental illness populations. The conceptual basis of ACT is consistent with the above query about the appropriateness of measuring perceived stigma and Link et al.'s (2002) conclusions that stigma interventions may augment the relationship between perceived stigma and measures of psychological health rather than reducing perceptions of stigma. By targeting the *function* of self-

stigmatising thoughts specifically, rather than their presence, ACT attempts to reduce the impact of perceptions of stigma on psychological health despite the pervasiveness and continued presence of negative societal attitudes. Eighty-eight participants attended three two-hour workshops in a single week. They were encouraged to be mindful of, and accept, stigmatised thoughts and feelings whilst disconnecting them from previously linked overt behaviours which obstructed recovery. This method was intended to facilitate new ways of responding to previously obstructive thoughts and feelings. For example, this approach addresses unhelpful coping orientations identified by Link et al. (1991), whereby self-stigmatising beliefs such as “I am dangerous and unpredictable” can lead the individual to avoid situations with friends and family where this thought is likely to arise. Here, individuals end up withdrawing from the very situations which could assist their recovery. ACT reasons that unwillingness to experience these thoughts fully can engender a detrimental avoidance of pursuing life goals.

A different set of pre-and post-measures were administered to the first 5 cohorts compared to the latter 4 with the intention of increasing the range of variables studied without overburdening clients. Analyses were carried out on only 48 treatment completers (55%) who attended at least 4 hours of the workshop and completed post-measures. Findings showed large treatment effects on self-esteem and experiential avoidance and medium treatment effects on internalised shame, internalised stigma, general mental health and social support from friends.

Unfortunately, without a control comparison condition within the context of a residential treatment program, these effects cannot be attributed to the intervention.

Although changes in internalised shame and stigma were found, no change in perceived stigma was observed, consistent with Link et al.'s (2002) assertion and the intervention's focus on augmenting participants' relationship to self-stigmatising thoughts and associated shame rather than the presence of stigma in society. Magnitude of change in experiential avoidance correlated with change in internalised shame ($r = 0.51$), suggesting the influence of this change process on outcomes. However, the absence of a control group precludes causal inferences. Despite high attrition rates, which the authors attribute mainly to conflicting medical appointments, completer satisfaction with the intervention was high (71% very or mostly satisfied). Of note, this pilot intervention was further developed throughout the study according to post-session focus groups with service users. The success of this responsiveness is reflected in increased magnitudes of change on internalised shame, general mental health, working alliance and client satisfaction measures over cohorts.

Unfortunately, methodological limitations precluded mediation analysis or assessment of the durability of gains over time or beyond the residential treatment setting. In addition, type one error rate is inflated by not adjusting for multiple comparisons. Most importantly, intention-to-treat analyses were not employed.

2.5. Narrative Approaches

Two papers reviewed described the integration of narrative approaches into novel self-stigma interventions without experimentally manipulating or measuring their effects. Kondrat and Teater (2009) describe an approach intended to be applied by any practitioner working with individuals with serious mental illness. They integrated principles of social constructivism, empowerment and narrative therapy to promote self-realisation and recovery in individuals trapped in the

stereotype-prejudice-discrimination cycle described by Corrigan and Watson (2002). The approach involves deconstructing and externalising societal stigma and discrimination, which is often assimilated into problem-saturated narratives, whilst working towards a new, self-constructed sense of identity. By interrupting the process through which the individual makes sense of the flow of stigmatising information from the social environment, narrative therapy enables service users to re-author their self-stories by integrating previously overlooked alternative narratives.

Although methods were not clearly reported, good attendance, engagement and positive feedback were reported following pilot implementation of Narrative Enhancement and Cognitive Therapy (NECT; Yanos, Roe & Lysaker, in press) - a 20-session, structured, group therapy integrating psychoeducation, cognitive restructuring and narrative approaches. These preliminary findings suggest the potential benefit of this new manualised approach which is due to be followed up using an RCT design.

2.6. Beneficial Aspects of Group Interventions for Self-stigma

Two studies reviewed looked specifically at predictors of change in group interventions targeting self-stigma. Wade et al. (2011) recruited 263 undergraduates who met the clinical cut-off on at least one of two psychological functioning subscales into a pre-post investigation of factors predicting change in self-stigma for help seeking following attendance at a single, 90-minute group counselling session. The group focused on connecting participants in the 'here and now' and reflecting on the process of coming together as a group. Controlling for pre-intervention self-stigma for help seeking, multilevel regression found a significant reduction in self-stigma for help seeking after just one group session

($ES = 0.51$). A multilevel model found that post-intervention ratings of greater working alliance with the therapist and greater session depth were associated with greater reductions in self-stigma for help seeking. The same two factors, together with being female and reporting more psychological problems pre-intervention, predicted intentions to seek help following the intervention. Unfortunately, as intentions to seek help were not measured pre-intervention, the intervention's effect on this variable cannot be assessed. Lower self-stigma for seeking help and increased ratings of session depth predicted post-intervention interest in continuing with counselling, reported by 33% of participants. As this was self-reported interest assessed immediately post-session and there was no follow-up, there is no objective evidence of whether the intervention influenced subsequent use of counselling. Link et al.'s (1989) modified labelling theory argues that non-clinical samples without diagnostic labels would not have internalised societal stigma, implying lower levels of self-stigma and treatment investment in this sample compared with diagnosed samples which limits generalisability of findings. Nonetheless, Wade et al.'s (2011) findings emphasise how crucial creating a good working alliance and covering sufficient depth are for engaging and retaining clients early in the treatment process. Paradoxically, those who are avoidant of accessing services for fear of stigmatisation are unrepresented in this sample and remain unreached by these beneficial processes. There is clearly a need for stigma-reduction interventions prior to the point of service access.

Using a qualitative design, Roe et al. (2010) explore the therapeutic elements of Narrative Enhancement and Cognitive Therapy (NECT; Yanos et al., in press) by administering the Narrative Evaluation of Intervention Interview to 18 of the 21 participants from the Israeli pilot of NECT. Three judges rated the degree of

perceived helpfulness of NECT expressed by participants, rating 67% high, 22% medium and 11% low (Pearson's correlation of inter-rater reliability = 0.87). Six domains of improvement attributed to the intervention were extracted from interview transcripts and prevalence of these themes was then independently reviewed by two judges; Ninety-four percent of respondents reported experiential learning, 83% positive changes in experience of self, 83% acquiring new cognitive skills, 72% enhanced hope, 67% coping and 61% emotional change (inter-rater reliability kappa coefficients ranged from 0.64 to 1.00). Attention to *how* NECT exerted these improvements identified the therapeutic alliance, taking an active role in sharing, providing and receiving support and authoring alternative stories as key beneficial processes.

The themes extracted map closely onto the intended change mechanisms of the therapeutic approach. As the interview structure was designed specifically to not refer to anticipated change processes or outcomes, the findings may serve to validate intended change processes. However, judges' preconceived notions must be taken into account and alternative thematic extrapolations are always possible. In reading the qualitative extracts, alternative themes which map onto broader therapeutic frameworks are also apparent, such as; normalising experiences of mental illness and feeling less alone, having a safe and supportive opportunity to share previously hidden thoughts and experiences and distancing or detaching from societal attitudes to pursue goals despite the presence of stigma.

The authors argue that NECT goes beyond other approaches by not simply replacing one belief with another, but making sense of life experiences and reshaping a sense-of-self. The identified mechanisms emphasise the importance of a group process, where relationships with mental illness shift through

relationships with others and empowerment can be gained from active group involvement.

3. Summary of Evidence

Of the 14 papers reviewed, seven randomly assigned participants to experimental and comparison groups and therefore received the highest quality ratings, ranging from 69% to 86% (Wade et al., 2011; Alvidrez et al., 2009; McCay et al., 2007; Knight et al., 2006; Griffiths et al., 2004; Link et al., 2002; Shin & Lukens, 2002). In four of these studies, the experimental intervention had significant effects on stigma variables or theoretically related psychosocial constructs compared to controls (McCay et al., 2007; Knight et al., 2006; Griffiths et al., 2004; Shin & Lukens, 2002). Although Wade et al. (2011) found no significant difference between therapist disclosure and non-disclosure conditions in the randomised aspect of their trial, they did find post-treatment reductions in self-stigma for help seeking across the sample.

The sole qualitative study reviewed (Roe et al., 2010), achieved a quality rating of 68%, providing important insight into domains of improvement and mechanisms of change valued by participants engaged with the NECT intervention. Three studies employed pre-post designs without comparison groups, obtaining methodological quality ratings ranging from 41% to 62% (Lucksted et al., in press; Luoma et al., 2008; MacInnes & Lewis, 2008). All three interventions found significant reductions in perceived or internalised stigma and related psychosocial variables following group CBT or ACT formats ranging from 6 to 13.5 hours of input.

Four studies were purely descriptive in nature, presenting novel interventions illustrated by individual or composite case reports (Larson & Corrigan, 2010; Kondrat & Teater, 2009; Yanos, Roe and Lysaker, in press). The latter research team reported some subjective outcomes but the methods were unclear and the study achieved only a 17% quality rating. Although these studies cannot reliably inform assessment of intervention effectiveness, they reflect the development of creative approaches to stigma reduction which integrate a range of theoretical angles.

What is striking about the collection of studies which found effects on self-stigma or related psychosocial variables is the variability of their intervention modalities. The three group formats ranged from didactic, culturally sensitive psychoeducation, through to CBT or psychosocial problem-solving approaches. The most methodologically rigorous study (86%) employed a vastly different intervention, providing an individual, 5-session web-based approach.

Successful interventions do not appear to follow any common format, although all include some aspect of psychoeducation about stigma and mental illness, intended either to replace myth with fact, or to develop a personally acceptable explanation of mental illness. Whereas some cognitive approaches have explicitly challenged stigma, CBT, ACT and psychosocial interventions each created a forum for problem solving in which to generate alternative ways of responding to stigma. Exceptions to these approaches include the single session of group counselling which focused on the 'here and now' process of coming together as a group and Narrative approaches which focused on re-authoring alternative, more empowering self-stories where mental illness stigma was less dominant.

4. Discussion

Given the known implications of self-stigma for recovery and treatment adherence (see Livingston & Boyd, 2010 for a review), there is a paucity of methodologically rigorous studies evaluating the effectiveness of self-stigma interventions.

Although this systematic review has uncovered a body of interventions directed at addressing self-stigma, no single approach was found consistently effective on the same variables. This may be due to lack of comparability between studies on the basis of sampling individuals with heterogeneous presentations upon which stigma mechanisms may operate differentially, or differences in measurement.

Livingston and Boyd (2010) assert that it is difficult to evaluate the effectiveness of stigma reduction strategies without a solid empirical understanding of the longitudinal effect of self-stigma. Many of the psychosocial outcome variables integrated into self-stigma theories intersect conceptually and are experientially intertwined. This leads to methodological variability in the outcome constructs measured across interventions, thereby reducing the comparability of their effectiveness.

Self-stigma, the primary outcome of interest throughout this review, was measured in different ways across studies. Brohan et al. (2010) distinguish between measures of *perceived stigma*, *experienced stigma* and *self-stigma*. Measures of *perceived stigma* capture what an individual with mental illness fears or thinks most people believe about the stigmatised group or how he/she is viewed personally. Measures of *experienced stigma* capture actual instances of discrimination and measures of *self-stigma* capture processes whereby the individual accepts diminished expectations for him or herself in reaction to public stigma. Despite making explicit their intentions to address self- or internalised

stigma, seven of the studies reviewed employed the Perceived Devaluation and Discrimination Scale (PDD, Link, 1987; Link, Mirotznik & Cullen, 1991). Two measures of *experienced stigma* were used; Self-reported Experiences of Rejection (Link et al., 1997) and an adapted version of the Consumer Experiences of Stigma Questionnaire (Wahl, 1999). Individual studies employed the Self-stigma of Seeking Help Scale (Vogel, Wade & Haake, 2006), Stigmatising Attitudes – Believability (Hayes et al., 2004), and Stigma-related Feelings (Link et al., 2002) scales. Only three studies explicitly measured *self-stigma*. The Internalised Stigma of Mental Illness Scale (Ritcher et al., 2003) was employed by Lucksted et al. (in press) and adapted for use with a substance misuse population by Luoma et al. (2008) whilst Griffiths et al. (2004) developed a scale which measured both perceived and self-stigma of depression.

Although self-stigma could theoretically be considered the internalised mirror opposite of perceived stigma, authors such as Knight et al. (2006), Griffiths et al. (2004) and Luoma et al. (2008) raise important questions about whether this should be so. They argue that interventions targeting self-stigma cannot reduce societal stigma, meaning that these stigma perceptions should be expected to remain the same. The aim is not to deny the existence of stigma in society but for the individual's relationship with stigma to be altered such that it no longer compounds suffering by impeding recovery-oriented behaviours. This perspective is in keeping with more recent moves towards 'third wave' interventions, such as ACT, mindfulness and narrative approaches which move beyond a cognitive challenging approach towards an approach which changes the individual's relationship to thoughts and feelings which previously impeded the attainment of life goals. This conceptual angle strongly questions whether measures of perceived

stigma are fit for purpose in quantifying the benefit of self-stigma interventions.

As Brohan et al. (2010) comment, if self-stigma is a reaction to public stigma it may be relevant to measure reactions such as righteous anger as a marker of stigma resistance.

The methodological quality of the extant literature was very variable. Pre-post designs were common meaning that without randomising participants to attention control conditions, it was impossible to attribute benefits to the intervention. This was especially the case where concurrent treatments had been provided, for example, on residential treatment programs. Additionally, extended follow-up periods were rare, meaning that sustainability of effects once the intervention had finished could not be determined.

Interventions often had multiple facets, rendering it impossible to extrapolate specific mechanisms of benefit. Although some of the studies reviewed were explicit about the qualifications and characteristics of therapists delivering the interventions and processes by which treatment fidelity was monitored, consideration of the impact that these factors may have on outcomes was consistently neglected. As each group or individual intervention delivered is nested within a therapist, it is possible that outcomes are attributable to therapist effects over and above the intervention itself.

There is clearly a need for methodologically sound randomised trials which use validated measures of self-stigma and longitudinal repeated measures designs yet in practice, this has to be balanced with pragmatics. Pragmatic RCTs sample across a broad range of service settings and minimise exclusion criteria (Rawlins, 2008).

The potential for results to be systematically distorted by ascertainment biases, whereby the individual assessing outcome knows about group assignment, must

also be acknowledged given that blinding is not always possible (Schulz et al., 2010).

4.1. Theoretical Implications

Many of the studies reviewed provided a sound rationale for their interventions that was grounded in stigma theory. With reference to Figure 1, all the studies reviewed involved elements of psychoeducation, seeking to replace negative societal stereotypes with fact, thereby challenging stereotype agreement and self-concurrence. By reducing the perceived legitimacy of stigma, these interventions may have moved participants towards a more stigma-resistant, righteously angry stance. Many interventions reduced appraisals of stigma stress by boosting coping resources or decoupling stigmatising thoughts from self concept. Both behaviourally-oriented problem-solving approaches and ACT approaches provided ways and means of overcoming self-discrimination and the “why try” effect by encouraging the pursuit of life goals despite the continued presence of stigma. Wade et al.’s (2011) single counselling session appears to have impacted the stigma pathway at an earlier stage, reducing self-stigma associated with help seeking (likely related to label avoidance and indifference) by fostering group value and entitativity. Both McCay et al. (2007) and Alvidrez et al.’s (2009) studies suggested that acceptability of certain interventions is dependent on an individual’s degree of identification with the stigmatised group as well as perceptions of wellbeing and treatment need.

It would appear that there are two routes to addressing self-stigma; challenging stigma in order to reduce its deleterious impact, or building life satisfaction and self-efficacy whilst detaching stigma from self-concept to sidestep its negative effects. Corrigan (2002) posits empowerment as a theoretical opposite to self-

stigma. Building these opposite constructs of stigma resistance whilst decoupling stigma from self-discrimination represents a viable path towards stigma resistance. Corrigan and Watson (2002) propose that both self- and public stigma comprise the same three socio-cognitive levels of; stereotypes, prejudice and discrimination. If persons with mental illness are able to resist the tendency to self-discriminate despite continued awareness of pervasive societal stereotypes, this decoupling should feasibly be achievable at a public level also. Interventions targeted at reducing discriminatory societal cues would enable persons with mental illness to achieve life goals and personal wellbeing despite the continued existence of stigmatised societal attitudes which have proven difficult to change.

4.2. Clinical Implications

This review has integrated both quantitative and qualitative studies of intervention effectiveness to open up consideration of the change processes and mechanisms perceived as salient by participants. Roe et al. (2010) found that taking an active role in sharing, providing and receiving support were important mechanisms of improvement for participants which implies the necessity of group formats for fostering empowerment. This is both an efficient model of service delivery, and has further empowerment potential should service users become group leaders. This level of ownership and active involvement with stigma-reduction could foster empowerment for self and others in a way which has not yet been investigated.

This review has illuminated a paradox as to *when* in the stigma pathway anti-stigma interventions are needed. If self-stigma and anticipated stigma are consistent obstacles to help-seeking (Vogel, Wade & Haake, 2006) how can we reach the people who don't access services? If identifiable, these individuals may

benefit from earlier, more anonymous interventions to overcome this initial ambivalence, such as the web-based design employed by Griffiths et al. (2004). However, it would seem more feasible that public-level interventions have a role here.

As Livingston and Boyd (2010) note, studies of internalised stigma often take a reductionist approach to identity by focusing on how a single factor of difference affects an individual's lived experience when, in reality, individuals exist along multiple, intersecting axes of difference and may belong to more than one stigmatised group. Interventions targeted at mental illness self-stigma must therefore address multiple, coexisting stigmatised statuses and related experiences.

Interestingly, none of the stigma literature reviewed mentions personality disorder diagnoses. Indeed, Axis II presentations are excluded from Livingston and Boyd's (2010) working definition of mental illness. Given the potential ramifications of being labelled with a 'disordered' personality for an individual's sense-of-self and the negative attitudes held by services towards the treatability of personality disorders (e.g., the notion of "heart sink" clients), it is reasonable to anticipate that this group of people are on the receiving end of significant discrimination from both the public and mental health professionals. Researching the lived experience of stigma and related interventions for this population would be a valuable clinical extension to the literature.

Evidence suggests that the nature, intensity and consequences of stigma vary by diagnosis, especially with regard to psychotic and non-psychotic disorders (Dinos et al., 2004). The effect of illness characteristics on the lived experience of stigma presents an additional layer of complexity which has not yet been investigated.

Mental illness stigma is undoubtedly a reality and not merely a function of psychopathology. However, presentations where social anxiety, paranoia or persecutory delusions are a feature could feasibly exacerbate an individual's rejection sensitivity and readiness to perceive stigma (Birchwood et al., 2006; Garety et al., 2001; Lysaker et al., 2007). If it is the case that symptoms of mental illness differentially influence the ways in which stigmatising behaviours are perceived and experienced, these cases may require qualitatively different types of intervention.

Difficulty identifying the psychosocial correlates and impacts of self-stigma possibly reflects the complexity of a stigmatised lived experience, suggesting that to be successful, self-stigma interventions need to take an individualised and person-centred approach. At a service level, benefit could be gained from developing stigma awareness, considering stigma as a maintaining factor within formulations of distress and integrating anti-stigma approaches into anti-oppressive practices. The danger of reliance on interventions for self-stigma is that it detracts from society's responsibility to act in a non-discriminatory way towards individuals already burdened by mental illness.

4.3. Conclusions

This review concludes that there is some evidence of the effectiveness of interventions directed at self-stigma. These interventions help people with mental illness to understand the impact of stigma on their recovery and signpost an alternative path by which individuals can navigate societal stigma to improve their quality of life. Such interventions incorporate mechanisms consistent with various theoretical understandings of self-stigma and the ways in which it exerts its influence on psychosocial outcomes associated with recovery. It is essential that

consensus is reached about valid measurement of self-stigma as a construct which is related to, yet independent from, perceptions of public stigma. Only then can interventions be effectively evaluated against their aims. Further randomised controlled trials and qualitative process explorations are necessary to isolate the mechanisms of benefit in interventions for self-stigma across a range of client groups and settings.

Table 1: Data Extraction Table

Authors	Sample	Design	Intervention(s)	Measures	Findings	Score
Randomised / controlled trials						
Alvidrez et al., 2009	42 Black outpatients non-psychotic diagnoses.	RCT & pre-post measures.	Psychoeducational booklet versus existing service leaflet.	PDD , Brief Symptom Inventory, Patient's Experience of Hospitalisation Scale, Treatment Concerns, Helpfulness of Information, Treatment Entry, Treatment Attendance.	No significant differences by information type on perceived stigma , perceived helpfulness, treatment entry or number of sessions attended. Information type had a differential impact on perceived stigma depending on perceived need for treatment and treatment uncertainty at baseline.	22/29 76%
Griffiths et al., 2004	525 adults with elevated score on depression screening measure.	RCT & pre-post postal survey.	5 weekly modules of either: BluePages or MoodGYM website or attention control.	Depression Stigma Scale , Kessler Psychological Distress Scale, Center for Epidemiologic Studies Depression Scale, Depression Literacy, CBT Literacy, Automatic Thoughts Questionnaire.	Significantly greater reduction in personal stigma following BluePages compared to MoodGYM & controls. Significant increase in perceived stigma following MoodGYM.	25/29 86%
Knight et al., 2006	21 outpatients schizophrenia, low self-esteem & high stigma.	Waiting list control. Baseline, pre, post and follow up measures.	6 weekly (1hr) group CBT sessions.	PDD , Index of Self-Esteem, Cybernetic Coping Scale, Empowerment, Positive and Negative Syndrome Scale, Beck Depression Inventory.	No change over control period yet significant improvement in self-esteem, depression, and psychopathology over treatment period. Effects on psychopathology remained over follow-up. No effect on perceived stigma .	21/29 72%
Link et al., 2002	88 outpatients from clubhouse program. SMI (50% schizophrenia).	RCT & pre, 6 month and 24 month post measures. Controls offered intervention at 6 months.	16 session, twice-weekly psychosocial group vs TAU control.	PDD, Self-Reported Experiences of Rejection, Stigma Coping, Stigma Related Feelings , Adapted Rosenberg Self-Esteem Scale, Center for Epidemiological Studies Depression Scale.	At 6 months, no significant differences between intervention and control groups on stigma variables , depression or self-esteem. At 24 months, increased endorsement of secrecy and feelings of shame and difference compared to baseline. Correlations between feeling different and ashamed and both depression and self-esteem had reduced.	20/29 69%
McCay et al., 2007	67 outpatients with schizophrenia.	RCT & pre-post measures.	12 week (90min) manualised psychosocial group plus TAU versus TAU alone.	PDD , Modified Engulfment Scale, Tennessee Self-concept Scale, Rosenberg Self Esteem Scale, Self Efficacy Scale, Quality of Life Scale, Miller Hope Scale, Positive and negative Symptom Scale, Global Assessment of functioning Scale.	Significant improvements in engulfment, quality of life and hope in intervention group compared to TAU alone. No improvement in self-concept, self-esteem, self-efficacy or perceived stigma .	20/29 69%

Continued...

Authors	Sample	Design	Intervention(s)	Measures	Findings	Score
Shin & Lukens, 2002	48 Korean-American outpatients with schizophrenia.	RCT & pre-post measures.	10 week (90min) group psychoed + individual supportive therapy (45mins) vs individual supportive therapy.	<i>PDD</i> , Brief Psychiatric Rating Scale, Family Crisis Oriented Personal Evaluation Scales.	<i>Perceived stigma</i> and severity of both overall and positive symptoms decreased for the whole sample but to a greater degree in the intervention group. Coping dimensions of social support, mobilising family and reframing improved significantly for the intervention group only.	22/29 76%
Wade et al., 2011	263 undergrads met clinical cut-off on CORE-OM subscale.	RCT & pre-post measures.	Single (90min) group counselling session. Therapist self-disclosure versus no disclosure conditions.	<i>Self-stigma of Seeking Help Scale</i> , Clinical Outcomes in Routine Evaluation Outcome Measure, Intentions to Seek Counseling Inventory, Working Alliance Inventory, Group Climate Questionnaire, Session Evaluation Questionnaire, Interest in continued counselling (Y/N).	Reduction in <i>self-stigma of seeking help</i> post-session, predicted by greater session depth and working alliance-bond. Intention to seek help post-session predicted by being female, greater session depth and working alliance-bond, more psychological problems and lower <i>self-stigma of seeking help</i> . Interest in continuing with counselling predicted by lower <i>self-stigma of seeking help</i> and greater session depth.	24/29 83%
Pre-post designs						
Lucksted et al., in press	50 outpatients self-reported schizophrenia or major mood disorder.	Pre-post measures.	9 weekly (90min) group CBT sessions.	<i>Internalized Stigma of Mental Illness Scale</i> , Mental Health Recovery Measure, Multidimensional Scale of Perceived Social Support, Boston University Empowerment Scale.	<i>Internalised stigma</i> decreased significantly (ES=0.57) and both recovery orientation (ES=0.64) and social support (ES=0.37) increased significantly post-intervention. Significant (non-adjusted) improvements on alienation, stereotype endorsement, discrimination experience and social withdrawal subscales of ISMI but not on stigma resistance subscale.	12/29 41%
Luoma et al., 2006	88 adults in residential treatment for substance use disorder.	Pre-post measures.	3 (2hr) group ACT and mindfulness workshops.	<i>Internalised Stigma of Substance Abuse, Stigma-related Rejection, PDD(adapted), Stigmatising Attitudes Believability</i> , Internalised Shame Scale, General Health Questionnaire, Self-Concealment Scale, Rosenberg Self-Esteem Scale, Quality of Life Scale, Multidimensional Scale of Perceived Social Support, Acceptance and Action Questionnaire, Believability of Reasons (for using drugs) Scale, Working Alliance Inventory, Client Satisfaction Questionnaire.	Significant improvement in internalised shame (ES=0.50), <i>internalised stigma</i> (ES=0.67; last 4 groups), general mental health (ES=0.49), self-esteem (ES=0.89), social support from friends (ES=0.54) and self-concealment (ES=0.65; last 4 groups) post treatment. Significant improvements in experiential avoidance (ES=0.56/0.84). No change in <i>stigma related rejection, perceived stigma</i> (first 5 groups), social support from family or significant others. No change on believability measures.	12/29 41%
MacInnes & Lewis, 2008	20 male inpatients with SMI.	Pre-post measures.	6 weekly group CBT sessions.	<i>PDD</i> , Rosenberg Self Esteem Scale, Shortened General Attitude and Belief Scale, General Health Questionnaire-28	Significant reduction in <i>perceived stigma</i> . Non-significant increases in self-esteem, self-acceptance and general psychological health.	18/29 62%

Continued...

Authors	Sample	Design	Intervention(s)	Measures	Findings	Score
<i>Qualitative study</i>						
Roe et al., 2010	18 outpatients with SMI.	Qualitative. Semi-structured interviews.	20 (1hr) group sessions of Narrative Enhancement & Cognitive Therapy.	Narrative Evaluation of Intervention Interview.	6 domains of improvement: experiential learning, positive change in experience of self, acquiring cognitive skills, enhanced hope, coping and emotional change. Mechanisms: taking an active role, sharing, providing and receiving support and authoring alternative stories.	23/34 68%
<i>Descriptive studies</i>						
Kondrat & Teater, 2009	SMI.	Description of approach & composite case study.	Combines empowerment, social constructivism and narrative therapy.	None.	None.	N/A
Larson & Corrigan, 2010	50 year old rural male with depression.	Case study.	25 (1 hour) individual CBT sessions.	Ideographic measures and behavioural frequency counts.	Self-reported improvement of symptoms. Weekly worthlessness ratings fell from 8/10 to 2/10. Increase in social and business contacts.	N/A
Yanos et al., in press	17 outpatients with SMI (Israel, New York & Indianapolis).	Description of manual development, feedback and composite case study.	20 (1hr) group sessions of Narrative Enhancement & Cognitive Therapy.	None.	Good engagement and attendance. Participants reported being helped by the group and appeared to make important changes as a result.	5/29 17%

Note: Stigma measures are in bold italics. Expanded data extraction table available in Appendix 5.

Key: PDD = Perceived Devaluation Discrimination Scale (Link, 1987). SMI = serious mental illness (e.g., schizophrenia, bipolar disorder).

5. References

Alvidrez, J., Snowden, L. R., Rao, S. M. Boccellari, A. (2009). Psychoeducation to address stigma in black adults referred for mental health treatment: A randomized pilot study. *Community Mental Health Journal, 45*, 127-136.

American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders* (Revised 4th ed.) Washington, DC: Author.

Birchwood, M., Trower, P., Brunet, K., Gilbert, P., Iqbal, Z., & Jackson, C. (2006). Social anxiety and the shame of psychosis: A study in first episode psychosis. *Behaviour Research and Therapy, 45*, 1025-1037.

Brohan, E., Slade, M., Clement, S., & Thornicroft, G. (2010). Experiences of mental illness stigma, prejudice and discrimination: A review of measures. *BMC Health Services Research, 10* (1), 80.

Corrigan, P. W. (2002). Empowerment and serious mental illness: Treatment partnerships and community opportunities, *Psychiatric Quarterly, 73*, 217-228.

Corrigan, P. W. (2004). How stigma interferes with mental health care. *American Psychologist, 59* (7), 614–625.

Corrigan, P. W., Kerr, A., & Knudsen, L. (2005). The stigma of mental illness: Explanatory models and methods for change. *Applied and Preventative Psychology, 11*, 179-190.

- Corrigan, P. W., Larson, J. E., & Rüsçh, N. (2009). Self-stigma and the “why try” effect: impact on life goals and evidence-based practices. *World Psychiatry, 8*, 75-81.
- Corrigan, P. W. & Penn, D. L. (1999). Lessons from social psychology on discrediting psychiatric stigma. *The American Psychologist, 54*, 765-776.
- Corrigan, P. W., River, L. P., Lundin, R. K., Penn, D. L., Uphoff-Wasowski, K., Champion, J., Mathisen, J., Gagnon, C., Bergman, M., Goldstein, H., & Kubiak, M. A. (2001). Three strategies for changing attributions about severe mental illness. *Schizophrenia Bulletin, 27* (2), 187-195.
- Corrigan, P. W., & Wassel, A. (2008). Understanding and influencing the stigma of mental illness. *Journal of Psychosocial Nursing and Mental Health Services, 46* (1), 42-48.
- Corrigan, P. W. & Watson, A. C. (2002). The paradox of self-stigma and mental illness. *Clinical Psychology: Science and Practice, 9*, 35-53.
- Corrigan, P. W., Watson, A. C., & Barr, L. (2006). The self-stigma of mental illness; Implications for self-esteem and self-efficacy. *Journal of Social and Clinical Psychology, 25* (9), 875-884.
- Couture, S. M., & Penn, D. L. (2003). Interpersonal contact and the stigma of mental illness: A review of the literature. *Journal of Mental Health, 12* (3), 291-305.
- Critical Appraisal Skills Programme. (2006). *Ten Questions to Help you Make Sense of Qualitative Research*. Public Health Resource Unit: England.

- Dickstein, B. D., Vogt, D. S., Handa, S., & Litz, B. T. (2010). Targeting self-stigma in returning military personnel and veterans: A review of intervention strategies. *Military Psychology, 22*, 224-236.
- Dinos, S., Stevens, S., Serafaty, M., Weich, S., & King, M. (2004). Stigma: The feelings and experiences of 46 people with mental illness. *British Journal of Psychiatry, 184*, 176-181.
- Downs, S. H., & Black, N. (1998). The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. *Journal of Epidemiology and Community Health, 52*, 377-384.
- Garety, P. A. Kuipers, E., Fowler, D., Freeman, D., & Bebbington, P. E. (2001). A cognitive model of the positive symptoms of psychosis. *Psychological Medicine, 31*, 189-195.
- Griffiths, K. M., Christensen, H., Jorm, A. F., Evans, K., & Groves, C. (2004). Effects of web-based depression literacy and cognitive-behavioural therapy interventions on stigmatising attitudes to depression. *British Journal of Psychiatry, 185*, 342-349.
- Hayes, S. C., Strosahl, K., Wilson, K. G., et al. (2004). Measuring experiential avoidance: A preliminary test of a working model. *Psychological Record, 54* (4), 553-578.
- Herek, G. M. (2007). Confronting sexual stigma and prejudice: Theory and practice. *Journal of Social Issues, 63* (4), 905-925.

- Herek, G. M., Gillis, J. R., & Cogan, J. C. (2009). Internalized stigma among sexual minority adults: Insights from a social psychological perspective. *Journal of Counseling Psychology, 56* (1), 32-43.
- Hinshaw, S. P. (2007). *The Mark of Shame: Stigma of Mental Illness and an Agenda for Change*. New York: Oxford University Press.
- Knight, M. T. D., Wykes, T., & Hayward, P. (2006). Group treatment of perceived stigma and self-esteem in schizophrenia: A waiting list trial of efficacy. *Behavioural and Cognitive Psychotherapy, 34*, 305-318.
- Kondrat, D. C., & Teater, B. (2009). An anti-stigma approach to working with persons with severe mental disability: Seeking real change through narrative change. *Journal of Social Work Practice, 23* (1), 35-47.
- Larson, J. E. & Corrigan, P. W. (2010). Psychotherapy for self-stigma among rural clients. *Journal of Clinical Psychology: In Session, 66* (5), 524-536.
- Link, B. G. (1987). Understanding labeling effects in the area of mental disorders: An assessment of the effects of expectations of rejection. *American Sociological Review, 52* (1) 96-112.
- Link, B. G., Cullen, F. T., Struening, E., Shrout, P. E., & Dohrenwend, B. P. (1989). A modified labeling theory approach to mental disorders: An empirical assessment. *American Sociological Review, 54* (3) 400-423.
- Link, B. G., Mirotznik, J., & Cullen, F. T. (1991). The effectiveness of stigma coping orientations: Can negative consequences of mental illness labeling be avoided? *Journal of mental Health and Social Behavior, 32* (3), 302-320.

- Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2002). On describing and seeking to change the experience of stigma. *Psychiatric Rehabilitation Skills, 6* (2), 201-231.
- Link, B. G., Struening, E. L., Rahav, M., Phelan, J.C., & Nuttbrock, L. (1997). On stigma and its consequences: Evidence from a longitudinal study of men with dual diagnosis of mental illness and substance abuse. *Journal of Health and Social Behavior, 38*, 177-190.
- Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness; A systematic review and meta-analysis. *Social Science and Medicine, 71*, 2150-2161.
- Lucksted, A., Drapalski, A., Calmes, C., Forbes, C., DeForge, B., & Boyd, J. (in press). Ending self-stigma: Pilot evaluation of a new intervention to reduce internalized stigma among people with mental illnesses. *Psychiatric Rehabilitation Journal*.
- Luoma, J. B., Kohlenberg, B. S., Hayes, S. C., Bunting, K., & Rye, A. K. (2008). Reducing self-stigma in substance abuse through acceptance and commitment therapy: Model, manual development and pilot outcomes. *Addiction Research and Theory, 16* (2), 149-165.
- Lysaker, P. H., Roe, D., & Yanos, P. T. (2007). Toward understanding the insight paradox: Internalized stigma moderates the association between insight and social functioning, hope, and self-esteem among people with schizophrenia spectrum disorders. *Schizophrenia Bulletin, 33* (1), 192-199.

- MacInnes, D. L., & Lewis, M. (2008). The evaluation of a short group programme to reduce self-stigma in people with serious and enduring mental health problems. *Journal of Psychiatric and Mental Health Nursing, 15*, 59-65.
- McCay, E., Beanlands, H., Leszcz, M., Goering, P., Seeman, M. V., Ryan, K., Johnston, N., & Vishnevsky, T. (2006). A group intervention to promote healthy self-concepts and guide recovery in first episode schizophrenia: A pilot study. *Psychiatric Rehabilitation Journal, 30* (2), 105-111.
- McCay, E., Beanlands, H., Zipursky, R., Roy, P., Leszcz, M., Landeen, J., Ryan, K., Conrad, C., Romano, D., Francis, D., Hunt, J., Costantini, L., & Chan, E. (2007). A randomised controlled trial of a group intervention to reduce engulfment and self-stigmatisation in first episode schizophrenia. *Australian e-Journal for the Advancement of Mental Health, 6* (3).
- Mendoza-Denton, R., Purdie, V., Downey, G., & Davis, A. (2002). Sensitivity to status-based rejection: Implications for African-American students' college experience. *Journal of Personality and Social Psychology, 83*, 896-918.
- Moher, D., Hopewell, S., Schulz, K. F., Montori, V., Gøtzsche, P. C., Devereaux, P. J., Elbourne, D., Egger, M., & Altman, D. G., for the CONSORT Group. CONSORT (2010). Explanation and Elaboration: updated guidelines for reporting parallel group randomised trial. *Journal of Clinical Epidemiology, 63* (8), e1-7.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., The PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Public Library of Science: Medicine, 6* (7).

- Rawlins, M. (2008). De testimonio: On the evidence for decisions about the use of therapeutic interventions. *Lancet*, 372, 2152-2161.
- Ritscher, J. B., Otilingam, P. G., & Grajales, M. (2003). Internalized stigma of mental illness: Psychometric properties of a new measure. *Psychiatry Research*, 121, 31-49.
- Roe, D., Hasson-Ohayon, I., Derhi, O., Yanos, P. T., & Lysaker, P. H. (2010). Talking about life and finding solutions to different hardships: A qualitative study on the impact of narrative enhancement and cognitive therapy on persons with serious mental illness. *The Journal of Nervous and Mental Disease*, 198 (11), 807-812.
- Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: Concepts, consequences and initiatives to reduce stigma. *European Psychiatry*, 20, 529-539.
- Rüsch, N., Corrigan, P. W., Wassel, A. Michaels, P., Olschewski, M., Wilkniss, S., & Batia, K. (2009a). A stress-coping model of mental illness stigma: I. Predictors of cognitive stress appraisal. *Schizophrenia Research*, 110, 59-64.
- Rüsch, N., Corrigan, P. W., Powell, K., Rajah, A., Olschewski, M., Wilkniss, S., Batia, K. (2009b). A stress-coping model of mental illness stigma: II. Emotional stress responses, coping behaviour and outcome. *Schizophrenia Research*, 110, 65-71.
- Schulz, K. F., Altman, D. G., & Moher, D., for the CONSORT Group. CONSORT (2010). Statement: updated guidelines for reporting parallel group randomised trials. *Journal of Pharmacology and Pharmacotherapy*, 1 (2), 100-107.

- Schulz, K. F., Chalmers, I., Hayes, R. J., & Altman, D. G. (1995). Empirical evidence of bias. Dimensions of methodological quality associated with estimates of treatment effects in controlled trials. *Journal of the American Medical Association*, 273 (5), 408-412.
- Shin, S., & Lukens, E. P. (2002). Effects of psychoeducation for Korean Americans with chronic mental illness. *Psychiatric Services*, 53 (9), 1125-1131.
- Thoits, P. A. (2011). Resisting the stigma of mental illness. *Social Psychology Quarterly*, 74 (1), 6-28.
- Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology*, 53, 325-337.
- Wade, N. G., Post, B. C. Cornish, M. A., Vogel, D. L., & Tucker, J. R. (2011). Predictors of the change in self-stigma following a single session of group counselling. *Journal of Counseling Psychology*, 58 (2), 170-182.
- Wahl, O. F. (1999). Mental health consumers experience of stigma. *Schizophrenia Bulletin*, 25, 467-478.
- Watson, A. C. Corrigan, P., Larson, J. E., & Sells, M. (2007). Self-stigma in people with mental illness. *Schizophrenia Bulletin*, 33 (6), 1312-1318.
- Yanos, P. T., Roe, D., & Lysaker, P. H. (in press). Narrative Enhancement and Cognitive Therapy: A new group-based treatment for internalized stigma among persons with severe mental illness. *International Journal of Group Psychotherapy*.

Section 2

Promoting positive behaviours towards people with mental illness: Using implementation intentions to overcome avoidance responses rooted in implicit associations

Abstract

Stigmatised views of mental illness are widespread in society. These are manifest in stereotypes, prejudice and discrimination which target people with mental illness. Negative attitudes about mental illness may not be expressed explicitly but can be accessed using tests of implicit attitudes. The present study investigated whether negative implicit attitudes towards mental illness predicted physical proximity to a target person with schizophrenia in an anticipated interaction. Furthermore, we investigated whether this link between implicit avoidance motivations and physical proximity could be overcome by forming an “if-then” plan, known as an implementation intention. One hundred and nineteen female psychology undergraduates were randomised to Control, Goal Intention and Implementation Intention conditions. As anticipated, participants who formed implementation intentions sat significantly closer to the anticipated target than control participants or participants who formed a goal intention. Implicit avoidance motivations predicted seating distance in both Control and Goal Intention conditions. However, participants in the Implementation Intention condition were able to overcome implicit avoidance motivations to reduce their physical proximity to an anticipated target with schizophrenia. The same pattern was found for explicit attitudes. Explicit attitudes towards schizophrenia predicted physical proximity in both Goal Intention and Control conditions, but not in the Implementation Intention condition. This novel anti-stigma approach succeeded in reducing discriminatory behaviours directly, rather than attempting to change negative attitudes which have been targeted by previous anti-stigma approaches with limited success.

1. Introduction

1.1. Mental Illness Stigma

Stigmatisation of mental illness is widespread (Crisp et al., 2000). Stigma is conceptualised by Goffman (1963, p. 3) as “an attribute that is deeply discrediting” and reduces the bearer of the mark “from a whole and usual person to a tainted, discounted one” (p.3). The embodiment of a devalued status in society can be instigated by many attributes, both overt and subtle, including both physical and mental health. Elliott et al. (1982) highlight the inter-relational element of stigma, whereby perceived deviance leads others to consider an individual as illegitimate for participation in social interaction which results in social exclusion. Weiss et al. (2006) define health-related stigma as “a social process, experienced or anticipated, characterized by exclusion, rejection, blame, or devaluation that results from experience, perception or reasonable anticipation of an adverse social judgement about a person or group” (p.280).

There are two main levels at which the effects of stigma are felt (Corrigan & Watson, 2002). At the societal level, *public stigma* entails “large social groups endorsing stereotypes about and acting against a stigmatised group” (Corrigan, Kerr & Knudsen, 2005, pp. 187). At an individual level, those for whom these stereotypes become self-relevant begin to internalise and accept society’s negative evaluations, incorporating these into their sense-of-self and retaining the belief that they are devalued members of society. This can lead to low self-esteem, low self-efficacy and behavioural consequences such as a “why try?” effect where the pursuit of life goals is impeded (Corrigan, Larson & Rüsçh, 2009). This is termed *self-stigma*.

Both public stigma and self-stigma comprise three components: stereotypes (problems of knowledge), prejudice (problems of attitude), and discrimination (problems of behaviour; Corrigan & Watson, 2002; Thornicroft et al., 2007). Stereotypes are learned by most members of a social group (Major & O'Brien, 2005). However, prejudice exists only where these stereotypical attitudes about people with mental illness are endorsed. Jussim et al. (1995) point out that knowledge of stereotypes alone is not sufficient for prejudice to ensue.

Angermeyer & Dietrich's (2006) review of population-based research into public beliefs about and attitudes towards people with mental illness found widespread misconceptions about mental illness across 14 countries. Marked differences in beliefs and attitudes were found to be dependent on the particular mental illness. Most commonly, stereotypes of 'dangerousness' and 'unpredictability' were associated with schizophrenia and were also the most important predictors of behavioural intentions towards people with schizophrenia (Angermeyer & Matschinger, 2004). Similarly, negative attitudes towards people with mental illness are prevalent among the UK adult population, with the stereotype that people with a mental illness are 'dangerous' generalised most widely to people with schizophrenia (Crisp et al., 2000). In a recent review of mental health professionals' attitudes towards mental illness, Wahl and Aroesty-Cohen (2010) reported that although 14 of the 19 studies reviewed found the overall attitudes of mental health professionals to be positive, negative attitudes remained. Attitudes were especially negative on social distance measures which asked respondents to rate their willingness to interact with a person from a vignette in a variety of social situations. In particular, Nordt et al. (2006) reported that all groups of mental health professionals indicated greater desire for social distance from a person with schizophrenia than from people with depression or no symptoms. Many mental

health professionals shared the public's belief that people with mental illnesses are dangerous and doubted the possibility of recovery. This raises concerns about the impact of mental health professionals' attitudes on patient care and the formation of effective therapeutic relationships.

Where stereotypes are endorsed, stigma confers real-world consequences for those with mental illness through discriminatory behaviours. Society tends to distance itself from and limit the rights of people with mental illness (Angermeyer & Dietrich, 2006; Hinshaw & Stier, 2008), denying opportunities to obtain housing or employment (Corrigan et al., 2010). Angermeyer and Matschinger (2004) found that demographic characteristics and beliefs about schizophrenia accounted for 27% of the variance in a measure of social distance which asked participants how likely they would be to engage in various behaviours with someone with schizophrenia (e.g., work with, rent a room to, etc.). As Goffman (1963) warns, people with stigmatised identities, whether they accept the label or not, will discover limits to society's acceptance.

Discrimination and social exclusion persistently remind the stigmatised that they are different, undesirable and unworthy (Goffman, 1963). In a cross-sectional survey of 27 countries, Thornicroft et al. (2009) found that negative discrimination was experienced by people with schizophrenia in making or keeping friends (47%), from family members (43%), in finding and keeping a job (29%) and in intimate relationships (27%). Anticipated discrimination affected 64% of those sampled in looking for work, training or education and 55% in looking for a close relationship. Brohan et al. (2010) collected data from 1229 people diagnosed with schizophrenia across 14 European countries and found that almost half reported moderate or high levels of self-stigma and 69% reported moderate or high levels of

perceived stigma. Forty-two per cent of the variance in self-stigma scores was predicted by levels of perceived discrimination, social contact and empowerment. Robust negative associations exist between self-stigma and a range of psychosocial variables, including hope, self-esteem and empowerment (Livingston & Boyd, 2010). In addition, self-stigma is positively associated with psychiatric symptom severity and negatively associated with treatment adherence, demonstrating that self-stigma presents a significant barrier to recovery.

Hinshaw and Stier (2008) highlight the hostility, anxiety and rejection embodied within social contact with those stigmatised through mental illness. Jenkins and Carpenter-Song (2009) conducted a qualitative exploration of the subjective experience of stigma as an interpersonal process for those with schizophrenia, finding that 96% of the 90 outpatients interviewed were aware of stigma affecting them on a daily basis. Participants were most aware of stigma in anonymous social interactions, including both overt discrimination and more subtle rejection and distancing experiences. Lundberg et al. (2007) found a higher degree of rejection experiences among those with a psychosis diagnosis compared to those with other diagnoses.

For people with mental illnesses, there is an expectation of negative reactions from the public (Wahl, 1999). Mendoza-Denton et al. (2002) found that experiences of rejection based on membership of a socially devalued group can lead people to anxiously expect, readily perceive and intensely react to status-based rejection. This cognitive-affective processing disposition can serve to undermine interpersonal relationships by increasing perceptions of intentional rejection in the ambiguous behaviours of others (Downey & Feldman, 1996). Rüsç et al. (2009) incorporate rejection sensitivity as a factor affecting the cognitive appraisal

of stigma as a stressor in their model of mental illness stigma. Henry, von Hippel and Shapiro (2010) studied stereotype threat in schizophrenia. Stereotype threat occurs when the prospect of conforming to a stereotype, or of being treated under these terms, become self-threatening. During a social interaction, confederates rated people with schizophrenia who thought that the confederate *knew* about their diagnosis as lower in social skill than people with schizophrenia who were told that the confederate *knew nothing* about their diagnosis. In reality, neither confederate was informed of the participant's diagnosis. This suggests that social skill difficulties in schizophrenia are exacerbated if the individual believes that others know about their mental health status. Therefore, stereotype threat contributes to social difficulties in schizophrenia. In sum, a catalogue of evidence illustrates that bearing a stigmatised label, coupled with expectations or experiences of social rejection, results in diminished life chances and quality of life for those with mental illness (review by Thoits, 2011).

1.2. Methodological Advances in Attitude Research

Most empirical research has utilised explicit (self-report) measures of attitudes towards people with mental illness, yet these methods are vulnerable to socially desirable response tendencies whereby negative attitudes are censored (Hinshaw & Stier, 2008). Measures include attitude scales and social distance scales, where the respondent is asked what degree of social proximity they would be willing to have to a person with a mental illness (Hayward & Bright, 1997). Preferred social distance is influenced by prejudicial attitudes and these self-report scales are used as a proxy for discriminatory behaviours towards people with mental illness (Corrigan et al., 2001b).

A significant advance in stigma research has been the development of measures which access implicit attitudes, such as the Implicit Association Test (IAT; Greenwald, McGhee & Schwartz, 1998). Implicit attitudes are associations learned through experience which influence our judgement and behaviour and yet operate outside of our introspective awareness (Greenwald & Banaji, 1995). The IAT is a computerised measure of association strength which is commonly employed in social cognition research due to its ease of administration and robust findings. Participants are asked to pair social attributes with a complementary pair of concepts from a socially significant category (e.g., young and old). Verbal stimuli are classified more quickly when the target and attribute category pairing matches respondents associations stored in implicit memory (e.g., young/fast or old/slow).

The Single Category Implicit Association Task (SC-IAT; Karpinski & Steinman, 2006) has been developed to study implicit attitudes to a single attitude object where there is no obvious complementary category, such as with mental illness. The SC-IAT presents target stimuli associated with the attitude object and an evaluative dimension in random order. In the first stage, participants are required to map target stimuli and positive items onto one response key and negative items onto another. In the second stage, this process is inverted. Target stimuli and negative words are mapped onto one response key and positive words onto the opposite key. A difference score is then calculated between response times in the first and second phases. This score is indicative of automatic affective reactions (implicit attitudes) towards the attitude object. This single category modification is intended to reduce the arbitrary influence of a contrast concept on the traditional IAT preference index (Bluemke & Friesse, 2008). Further modifications to the traditional IAT have seen evaluative categories (e.g., good/bad) replaced with

action tendency categories, for example, approach/avoidance (Palfai & Ostafin, 2003; Ostafin & Marlatt, 2008; Ostafin, Marlatt & Greenwald, 2008).

1.3. Studies of Implicit Attitudes towards Mental Illness

Among medical and psychology students, Lincoln et al. (2008) found stronger implicit stereotyping of schizophrenia than depression in terms of danger and responsibility using the IAT. Significant decreases in explicit stereotype components were found following an educational intervention. However, implicit attitudes remained unchanged post-intervention. Teachman, Wilson & Komarovskaya (2006) found negative implicit attitudes about the helplessness and blameworthiness of persons with mental illness in both healthy and diagnosed samples, demonstrating both implicit public and self-stigma of mental illness. Rüscher et al. (2010a) found that greater implicit self-stigma in people with mental illness predicted lower quality of life. In a second study, Rüscher et al. (2010b) found that automatic shame related reactions at baseline, as assessed using the IAT, predicted higher perceived legitimacy of discrimination at six months. This suggests that automatically activated shame reactions increase vulnerability to internalising stigma.

1.4. The Predictive Validity of Implicit and Explicit Attitude Measures

In a meta-analysis of 126 studies, Hoffman et al. (2005) found a small but significant positive population correlation of $r = .24$ between self-reported attitudes and attitudes assessed using the IAT. Greenwald et al.'s (2009) meta-analysis assessed the predictive validity of the IAT across 122 studies. They found that IAT scores predicted judgements, choices, physiological responses and behaviours (mean $r = .27$). This exceeded the predictive validity of self-report

measures which was impaired for socially sensitive topics where impression management was likely.

Peris et al. (2008) found that although individuals with mental health training had more positive explicit and implicit evaluations of people with mental illness compared to those without mental health training, both implicit and explicit biases influenced clinical decision making. Explicit biases predicted more negative prognoses, whereas implicit biases predicted over-diagnosis. These findings highlight the importance of both implicit and explicit attitudes in clinical care.

Implicit attitudes are assumed to influence behavioural responses that are automatic, spontaneous and uncontrolled whereas explicit attitudes are assumed to influence non-automatic, deliberative or controlled behaviours (Conner et al., 2007). In relation to this concept, Gawronski and Bodenhausen (2006) have proposed that implicit and explicit *self-stigma* may have different behavioural consequences. Both Rydell and McConnell (2006) and McConnell and Leibold (2001) have shown that implicit and explicit attitudes predict different behaviours. In a double dissociation, implicit attitudes uniquely predicted subtle, spontaneous behaviours (i.e., seating distance from target) whereas explicit attitudes uniquely predicted deliberative, target-relevant judgements (i.e., desire for social contact with target). Friese et al. (2008) proposed that the predictive validity of implicit measures varies according to conditions which moderate the impact of automatic processes on self-regulation. Namely, that implicit measures will predict behaviour most successfully under conditions of low opportunity or low motivation to control or where automatic processes are relied upon to guide behaviour.

1.5. Behavioural Measures of Stigma

People maintain closer physical proximity to people they like or feel comfortable interacting with. Seating distance has been successfully used as an objective measure of discriminatory behaviour towards people with mental illness (Norman et al., 2010a; 2010b) and members of other stigmatised groups (Wyer & Calvini, 2011). Seating distance paradigms lead participants to anticipate meeting an individual from a stigmatised group (the anticipated target). Whereas most studies that have employed seating distance as a behavioural measure asked participants to select from a set of seats with varying proximity from the target's seat, Wyver and Calvini (2011), Vohs et al. (2006) and Rydell and McConnell (2006) used continuous measures of seating distance by measuring the distance in centimetres between two chairs that a participant was asked to position. The latter method accesses a more subtle marker of behaviour compared to the more deliberate choice involved in selecting from a row of chairs whilst improving upon the specificity of paradigms which restrict choice to one of a set of chairs. Gifford and O'Connor (1986) have clarified that social intimacy is related to seating distance but not orientation.

Norman et al. (2010a) investigated whether personal value priorities influence prejudicial behaviours towards people with schizophrenia. They found that physical proximity was predicted by the explicit attitudes of participants with low prioritisation of self-transcendent values (reflecting concern for the welfare and interests of others through social justice) but not predicted by the explicit attitudes of those with high prioritisation of self-transcendent values. Norman et al. (2010b) tested the relationship between explicit and implicit attitudes, cortisol levels and physical proximity in anticipation of meeting someone with schizophrenia.

Although both explicit attitudes and cortisol levels independently predicted physical proximity, implicit attitudes did not. Wyer and Calvini (2011) also found that autonomic anxiety produced a tendency to move away from individuals stereotyped as dangerous or violent (e.g., 'hoodies') using a seating distance paradigm. They attributed these findings to a non-conscious affective mechanism responsible for priming interpersonal behaviour. This suggests that emotional responses to those with mental illness, such as intergroup anxiety, can contribute to the prediction of behaviours in relation to the stigmatised group. Stephan & Stephan (1985) propose that normative behaviour patterns are amplified by high levels of intergroup anxiety.

1.6. Interventions Directed at Reducing Public Stigma

As Norman et al. (2010b) point out, "past research has focused on predicting and changing explicit statements of beliefs, attitude and behavioural intentions towards those with a mental illness" (p.74). Much energy has been put into public stigma reduction using three main strategies; protest, education and contact (Corrigan & Penn, 1999). Protest involves appealing to a moral authority about disrespectful portrayals of mental illness. This strategy of asking people to suppress stereotypical attitudes can have the unintended effect of augmenting stigmatisation through 'rebound effects' (Macrae et al., 1994). Rebound effects are not ubiquitous (Monteith et al., 1998a, b). However, protest strategies have in general been found ineffective at changing attitudes about mental illness (Corrigan et al., 2001a).

Educational approaches, which replace myths about mental illness with fact, enhance knowledge of conditions and can facilitate improved attitudes and beliefs about people with mental illness. However, Norman et al. (2010c) note that they

are less likely to change behavioural intentions towards people with mental illness. Educational strategies are widely endorsed due to ease of dissemination and the belief that educational processes are fundamental to human behaviour (Corrigan & Wassel, 2008). However, effects of education on attitude change have been small and inconsistent (Hinshaw, 2007) and are not maintained over time (Corrigan et al, 2001a).

Contact-based strategies, where public stigma is challenged through interaction with members of the stigmatised group, have been the most effective strategy in changing public stigma (Pettigrew & Tropp, 2000). The contact hypothesis (Allport, 1979) posits that social interactions between individuals can overcome prejudice, discrimination and stigma (Hinshaw & Stier, 2008). Indeed, people who have relatively more familiarity with mental illness are less likely to endorse prejudicial attitudes about this group, less likely to perceive people with mental illness as dangerous, less likely to avoid or desire social distance from this group and are more likely to offer them interpersonal help (Angermeyer, Matschinger & Corrigan, 2004; Corrigan et al., 2003; Corrigan et al., 2001b). In a review of the literature, Couture and Penn (2003) found that both retrospective and prospective contact with people who were mentally ill reduced stigmatised attitudes towards this group. Conditions of equal status among participants, a cooperative interaction, institutional support and a minority member who mildly disconfirms the prevailing stereotype foster the most advantageous environment for interpersonal contact (Rüsch, Angermeyer & Corrigan, 2005). Stigma change has been shown to be most effective when targeted at specific groups of people as opposed to the general public (Corrigan, Kerr & Knudsen, 2005). Targeted stigma change is especially important when directed at those who interact most

frequently with or are in a position to influence the life goals of people with mental illness through discrimination, e.g., landlords, employers and health care providers (Corrigan & Wassel, 2008).

1.7. Interventions Directed at Reducing Self-stigma

The attached report systematically reviews the literature on interventions directed at self-stigma. A variety of approaches, both group and individual, have been applied to those with self-stigma related to mental illness with some evidence of effectiveness in reducing stigma and improving related psychosocial outcomes. Approaches have included; culturally-sensitive psychoeducation (Alvidrez et al., 2009; Shin & Lukens, 2002), CBT approaches aimed at challenging the legitimacy of stigmatisation (Griffiths et al., 2004; Knight, Wykes & Hayward, 2006; Larson & Corrigan, 2010; Lucksted et al. in press; MacInnes & Lewis, 2008), psychosocial approaches which promote effective coping (Link et al., 2002; McCay et al., 2007), narrative approaches where the individual is enabled to construct a sense-of-self free from stigma (Kondrat & Teater, 2009; Yanos, Roe & Lysaker, in press) and acceptance and commitment therapy (ACT; Luoma et al., 2008). However, Link et al. (1991) argue that the power of socio-cultural labelling and mental illness stigma is insurmountable by individual coping strategies and that efforts should be directed at changing society's attitudes.

Link et al. (2002) raise the question of whether interventions targeting self-stigma should aim to reduce perceptions of societal stigma, or whether the aim should be to modify the link between private experience (e.g., stereotype awareness) and overt behaviour (e.g., self-discrimination or social withdrawal). It may be more realistic that interventions targeting self-stigma impact the relationship between stigma and psychological health whilst the presence of societal stigma remains

unchanged. This notion of detaching stigma outcomes (e.g., discrimination) from attitudes (e.g., stereotypes and implicit associations) represents a novel approach which may be applicable to public stigma-reduction strategies. Consistent with the ACT approach, Luoma et al. (2008) suggest that rather than try to eliminate pervasive cultural stereotypes which are difficult to 'unlearn' (Devine, 1989), or reduce the content or frequency of the thoughts themselves, it may be more fruitful to modify the link between thoughts, feelings and overt behaviour.

1.8. Reducing Self-stigma by Reducing Public Stigma

Self-stigma entails interacting processes at both individual and societal levels, yet no interventions have paralleled this by tackling both processes simultaneously. As detailed in the attached systematic review, interventions to reduce self-stigma have been rooted in empowering those with mental illness to resist external stigma. However, Link et al. (2002) and Ritsher and Phelan (2004) call for interventions which simultaneously address multiple levels of influence, targeted at both those who stigmatise and stigma recipients. Narrative therapy posits that individuals' sense-of-self is constructed through interactions with their environment (Kelley, 1996). For those with mental illness, these interactions are often negative and result in self-stigma. One way of reducing self-stigma by intervening at a societal level would be to provide alternative experiences to the dominant narrative (Freedman & Combs, 1993) by reducing negative behavioural cues. An intervention which facilitated the occurrence of positive interpersonal experiences for people with mental illness could enable them to construct a more positive sense-of-self.

Research to date has focused on changing explicit attitudes to mental illness rather than working at an implicit level. Implicit evaluations are argued to reflect

immediate affective reactions derived from the associations activated when encountering a subject which then predict spontaneous behaviours (Norman et al., 2010b). However, Webb, Sheeran and Pepper (2010) found implementation intentions effective in breaking this link between implicit attitudes and behavioural responses.

Implementation intentions are “if-then” plans which specify (a) a critical opportunity to act, and (b) an appropriate goal directed response to that opportunity (Gollwitzer, 1999; Gollwitzer & Sheeran, 2006). Implementation intentions supplement goal intentions (e.g. intending to be polite to someone with a mental illness) by making the critical situation accessible and automating the linked response (e.g. *As soon as I have an opportunity to be open and welcoming to someone with a mental illness, then I will take it*). Upon encountering the specified opportunity, the goal-directed response is carried out swiftly and effortlessly due to the strength of the situation-response association (Webb & Sheeran, 2007, 2008).

Implementation intentions have been found effective in enabling people to translate intention into action, even when these actions are implicitly driven. Webb et al. (2010) found that formation of implementation intentions was effective in enabling participants to provide a response on the IAT which was contrary to their implicit attitude about the attitude object, thus gaining control over their implicit attitude. Although no attempt was made to alter implicit attitudes, implicit stereotyped *responses* were modified. This finding suggests that forming implementation intentions could help people overcome the more spontaneous behaviours driven by their implicit associations to act in a less stigmatising way towards individuals with mental illness.

Gollwitzer et al. (in press) have studied whether implementation intentions enable people to protect ongoing goal pursuits from disruptive concept or goal-priming effects. Participants performed a baseline driving simulator task and then received one of three experimental manipulations before a follow-up driving task. One group received the implementation intention “If I enter a curve then I will slow down, and if I enter a straight road then I will accelerate!”, another group formed the goal intention “I will only drive as fast as safety allows!” and a third group received no further instructions. Participants were then asked to complete a separate study, in a separate lab, whilst baseline data were being analysed. This decoy study comprised the goal priming manipulation. Participants were asked to complete join-the-dots tasks. Here, there were two further manipulations which primed performance speed. One group were instructed to complete as many join-the-dots tasks out of twelve as possible in five minutes (fast prime), another group were instructed to complete only six join-the-dots tasks in their own time (control prime). Participants then returned to complete the follow-up driving task.

Analyses revealed that both the no-instruction and goal intention participants who received the fast prime demonstrated an increase in driving speed and errors from baseline to follow-up compared to participants who received the control prime. However, participants who formed implementation intentions were not influenced by the fast prime. They demonstrated the same reduction in driving errors from baseline to follow-up regardless of whether they received the fast prime or the control prime. Thus, the implementation intention eliminated the priming effect whereas the goal intention did not. In sum, Gollwitzer et al.’s (in press) study suggests that implementation intentions present an effective self-regulatory tool for preventing unwanted behaviour-priming effects.

The current study seeks to alter behaviour towards people with schizophrenia. The intervention is targeted at reducing enacted stigma and therefore has potential to diminish the internalisation of self-stigma for those with mental illness. Implementation intentions are intended to enable those with stigmatised attitudes to transgress the automatic behaviours rooted in their implicit attitudes to behave more positively towards people with mental illnesses, without attempting to change the content of their stigmatised beliefs. The idea is that facilitating more positive interactions between in-group and out-group members would not only reduce perceptions of social rejection for those with mental illnesses, but indirectly foster optimum conditions for public attitude change through the contact hypothesis.

1.9. The Present Study

The present study investigated whether implementation intentions were effective in enabling people to overcome potentially stigmatising implicit attitudes towards mental illness by setting two chairs closer together prior to an anticipated interaction with a man with a diagnosis of schizophrenia. Seating distance therefore represented a proxy measure of interpersonal interaction. Schizophrenia was chosen as it represents a particularly stigmatized diagnosis (Angermeyer & Dietrich, 2006; Angermeyer & Matschinger, 2004; Crisp et al., 2000). At the beginning of the study, participants were told they would meet a man with schizophrenia. They were then asked to complete measures of attitudes towards mental illness. The design involved a single experimental group (Implementation Intentions) and two control groups (Goal Intention, No-instruction). Participants in the experimental group formed the implementation intention "As soon as I get a chance to be friendly and warm to this person, then I'll take it". Participants in the

Goal Intention control group formed the goal “to be friendly and warm to this person”. An additional control group received no instructions. Although the fictional target did not arrive, the outcome variable of interest was the distance between the chairs set out by the participant in anticipation of meeting someone with schizophrenia. Because of important gender differences in seating distance (Norman et al., 2010a) and attitudes to mental illness (Savrun et al., 2007; Mann & Himelein, 2004), only females were included in the study.

Schoenefeld’s (2010) power calculator was used to compute the power analysis. Assuming $p < .05$ (two-sided), power = 80%, and $d = .65$ for the effect of implementation intentions (from Gollwitzer & Sheeran’s, 2006, meta-analysis), 39 participants are required in both the experimental and control condition. Extending this analysis to the two control condition scenario in the present study, a total of 117 participants (i.e., 3 x 39) were required.

It was hypothesised that those who formed implementation intentions would demonstrate closer physical proximity to the anticipated target than controls. Furthermore, it was hypothesised that for controls, implicit attitudes would predict physical proximity whereas for those who formed implementation intentions, there would be no relationship between implicit attitude and physical proximity.

2. Method

2.1. Participants

Female undergraduate psychology students at the University of Sheffield were approached by email to participate in the study in exchange for course credit

(Appendix 6). It was presumed that students would have sufficient English language skills to comprehend written study materials and verbal instructions, however those with sensory impairments were necessarily excluded. One-hundred-and-nineteen students elected to participate by booking a participation slot on the Psychology Department Online Participation System. The mean age of the sample was 19.15 years (range = 18 to 35 years, $SD = 1.82$).

2.2. Design

A between-participants experimental design was employed, whereby participants were randomly assigned to one of three groups; a single experimental group (*Implementation Intention*) or one of two control groups (*Goal Intention* or *No-instruction*).

2.3. Procedure

This study received ethical approval from and took place at the University of Sheffield Psychology Department (Appendix 7). Participants were seated at a desk in a small lab room and provided with a detailed information sheet which explained that they would be meeting a person with a mental illness during the course of the study (Appendix 8). All participants consented to participate on the basis of this information by completing a consent form (Appendix 9). A random number list generated at researchrandomiser.com was used to randomly assign participants to one of the three experimental conditions.

A brief standardised introduction to the study followed: *"This study looks at attitudes towards mental illness. What we know is that one of the most successful ways of changing attitudes towards mental illness is to have contact with someone who has a mental illness. So in a while I'll take you to meet John but first of all I would*

like you to fill in this questionnaire about your attitudes towards mental illness.”

Participants completed this paper questionnaire alone (Appendix 10).

Upon completion of the questionnaire, the experimenter re-entered the room and presented an A4 sheet detailing the pre-allocated experimental manipulation (Appendix 11). The participant was invited to read through the sheet with the experimenter. All three conditions began with: *“In a while I’m going to introduce you to a man called John who has schizophrenia and you’ll be able to have a conversation with him for about five minutes. I’ll leave the room, there’ll be no hidden cameras or feedback, this is just an opportunity for you to interact with someone who has a mental illness. Afterwards I’ll ask you some questions about the meeting”.*

Below this paragraph, the information presented varied by condition; Participants in the *No-instruction* condition received no further instructions, *Goal Intention* participants received the goal intention *“Your goal is to be friendly and warm to this person”* and participants in the *Implementation Intention* condition received the same goal intention plus the implementation intention, *“As soon as I get a chance to be friendly and warm to this person, then I’ll take it.”*

Participants in the *Goal Intention* and *Implementation Intention* conditions were instructed to read through the goal or implementation intention statement in their head three times. They were then asked to rate their commitment to the goal.

Following the experimental manipulation, all participants were told: *“Before you meet John, we need to measure your associations towards people with schizophrenia. Please follow the prompts on the screen to complete this computerised task”.*

Participants were then left alone to complete a computerised Single Category

Implicit Association Test (SC-IAT) which ran in EPrime software. Instructions were presented on-screen (Appendix 12).

Participants were then invited to follow the experimenter and told: *"I'll take you down the corridor to the meeting room and then I'll go and fetch John."* Upon reaching the meeting room, the experimenter pointed at two chairs set side-by-side against the back wall and said: *"I'll go and get John. Could you set the chairs out ready for your meeting whilst I go and fetch him? Thanks."*

The experimenter left the participant to set out the chairs and returned a minute later, stating: *"He's on his way, he won't be long. We can fill out this questionnaire whilst we're waiting"*. The participant then answered questions regarding their beliefs about the nature of the experiment (Appendix 13). Upon completion of these questions, the experimenter explained that the study was over and John wouldn't be coming. Participants were asked to rate how certain they had been that John would arrive (Appendix 14). The need for deception in the study design was explained and participants were asked not to share the process or content of the study with their course-mates whilst recruitment continued. Participants were provided with an information sheet about schizophrenia which included information on befriending and volunteering opportunities to ameliorate any disappointment on not getting to meet John (Appendix 15). Once the participant had left the meeting room, the dependent measure was assessed by measuring the distance between the corresponding corners of the two chairs. Full debrief sheets including relevant references were later provided to participants via email (Appendix 16).

2.4. Measures

Demographics. Age and self-reported personal experience of mental illness (“Have you ever had a mental illness?”) were recorded.

Familiarity with mental illness. Familiarity was assessed using seven situations employed by Corrigan et al. (2003) selected from Holmes et al.’s (1999) Level of Contact Report. Sample items are; “*I live with a person who has a severe mental illness*” and “*I have observed, in passing, a person I believe may have has a severe mental illness*”. Participants are required to tick all the situations they have encountered from the list which are then summed, resulting in an index score ranging from 0 to 7.

Explicit attitudes towards mental illness. The Attitudes to Mental Illness Questionnaire (AMIQ, Luty et al., 2006), is a short questionnaire instrument adapted from Cunningham et al. (1993) designed to assess the attitudes of members of the general public towards individuals with mental illnesses. Participants answer five questions about their attitudes towards a person depicted in one of three available vignettes. The vignette about a man called Michael who has schizophrenia was selected. Sample items are; “*How likely do you think that it would be for Michael to get in trouble with the law?*” and “*I would be comfortable if Michael was my colleague at work*”. Responses are recorded on a 5-point Likert scale (maximum +2, minimum -2) with blank, ‘neutral’ and ‘don’t know’ responses scored 0. Scores are summed across the five questions giving a total score between -10 and +10. Using factor analysis, Luty et al. (2006) found that one factor, ‘stigmatisation’, accounted for 80.2% of the variance in responses (n = 1079), with significant contribution from all five questions. Internal consistency using Cronbach’s alpha was 0.93 (n = 879) and a Pearson’s correlation coefficient of test-

retest reliability over 2-4 weeks was 0.70 (n = 256). The alpha reliability of the AMIQ in the current study was .62.

Intended behaviours towards people with mental illness. Four items designed to assess stigma related behavioural intentions related to social distance were administered from the Reported and Intended Behaviour Scale (RIBS; Evans-Lacko et al., submitted). Sample items are; *“In the future, I would be willing to live with someone with a mental health problem”* and *“In the future, I would be willing to continue a relationship with a friend who developed a mental health problem”*. Items are scored on an ordinal scale from 5 = strongly agree to 1 = strongly disagree. ‘Don’t know’ responses are coded as neutral. Scores are summed across the four items to obtain a total score. The overall test-retest reliability of the scale is 0.75 with internal consistency of 0.85. The current study found alpha reliability of .76.

Intergroup anxiety. Affective reactions towards the stigmatised group were assessed using an adaptation to Stephan & Stephan’s (1985) intergroup anxiety measure. The scenario presented is: *“Imagine you attend a group meeting for people with schizophrenia and you are the only person there who is not a member of the group (i.e. you do not have schizophrenia). How would you feel about interacting at the group?”* The measure assesses the degree to which the participant would feel *nervous, anxious, comfortable, awkward, safe* and *at ease* when meeting someone with a mental illness on a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Alpha reliability of this scale in the current study was .71.

Implicit attitudes towards mental illness. The Single Category Implicit Association Test (SC-IAT; Karpinski & Steinman, 2006) is an adaptation to the extensively used IAT (Greenwald, McGhee & Schwartz, 1998) for use when measuring the strength

of evaluative associations, existing outside of conscious control or awareness, towards a single attitude object. The SC-IAT has reasonable internal consistency ($r = .69$) and sufficient levels of reliability to be of use as an individual difference measure of implicit social cognition (Karpinsky & Steinman, 2006).

Whereas typically, IAT studies measure the strength of evaluative associations with an attitude object, modified versions of the IAT have replaced evaluative categories (e.g., good/bad) with behavioural activation categories of *approach* and *avoid* (Ostafin & Marlatt, 2008; Ostafin, Marlatt & Greenwald, 2008; Palfai & Ostafin, 2003).

This study combines both of the above modifications to the traditional IAT procedure to measure implicit motivations towards interacting with people with schizophrenia by assessing the strength of automatic approach motivations towards the single attitude object, *schizophrenic*.

Each participant completed the SC-IAT on a personal computer using EPrime software (Schneider, Eschman & Zuccolotto, 2002). In each trial, participants were required to categorise a stimulus word into its corresponding category by pressing one of two response keys. The left and right response keys correspond to the category titles presented on the left and right sides of the computer screen which remain throughout the duration of each block. The stimulus words are presented at random and belong to three categories; the target category (words associated with *schizophrenic*) and two behavioural activation categories (*approach* and *avoid* related words). Five target words related to *schizophrenic* (*schizophrenia*, *schizophrenic*, *psychosis*, *psychotic*, *paranoid*) were chosen (Lincoln et al., 2008). The five *approach* words (*approach*, *advance*, *closer*, *forward*, *toward*) and five

avoid words (*avoid, leave, escape, withdraw, away*) were taken from Ostafin and Marlatt (2008).

As shown in Table 2, the SC-IAT consisted of two stages which all participants completed in the same order. Each stage was preceded by instructions detailing the appropriate key responses. Participants were instructed to keep their left index finger over the ‘e’ key and their right index finger over the ‘i’ key to ensure rapid responses. Instructions explained that when errors were made, a red cross would appear on screen at which point participants should provide the correct response by pressing the other key. In Blocks 1 and 2, the target category *schizophrenic* was paired with the *approach* attribute category and in Blocks 3 and 4, *schizophrenic* was paired with the *avoid* attribute category. Accordingly, during Blocks 1 and 2, the left key should be pressed when either *schizophrenic* or *approach* words were presented and the right key should be pressed when *avoid* words were presented. No effects of category key assignment (Greenwald et al., 1998) or handedness (Greenwald & Nosek, 2001) have been found on past IAT paradigms. Each participant completed 24 practice trials immediately followed by 72 test trials for each category pairing. Target words were presented in the centre of the screen and remained on screen until a response was made.

Table 2: SC-IAT Trials

Block	Trials	Purpose	Left key response	Right key response
1	24	Practice	Approach words + Schizophrenic words	Avoid words
2	72	Test	Approach words + Schizophrenic words	Avoid words
3	24	Practice	Approach words	Avoid words + Schizophrenic words
4	72	Test	Approach words	Avoid words + Schizophrenic words

This modified SC-IAT is based on the idea that stronger behaviour activation associations will lead to faster response latencies. Therefore, those with a stronger automatic approach motivation towards people with schizophrenia will be faster at responding when the schizophrenia target category and approach attribute category are paired on the same key. Those with a stronger automatic avoidance motivation towards schizophrenia will be faster to respond when the schizophrenia target category and avoid attribute category are paired on the same key.

SC-IAT data reduction. The SC-IAT scoring algorithm was modelled on an established scoring paradigm devised by Greenwald, Nosek and Banaji (2003). Data from the 24 practice trials in each stage (Blocks 1 and 3) were discarded. No subjects needed to be eliminated on the basis of displaying response latencies below 300ms on more than 10% of trials. One trial with a response latency above 10,000ms was removed from the test blocks. Because the SC-IAT procedure enabled error responses to be corrected, error response latencies were removed from the analysis and replaced with the subsequent latency to correct response.

D was calculated for each participant individually by subtracting the average response time of Block 2 (approach + schizophrenic) from the average response time of Block 4 (avoid + schizophrenic). The resulting figure was then divided by the standard deviation of the participant's pooled correct response latencies in Blocks 2 and 4. Thus, a negative D score represents automatic avoidance motivations towards people with schizophrenia whereas a positive D score represents automatic approach motivations towards people with schizophrenia.

Commitment to goal. Participants in the Goal Intention and Implementation Intention conditions were asked: *How committed are you to the goal of being friendly and warm to this person?* With responses recorded on a 10-point scale ranging from 1 = not committed to 10 = very committed.

Suspiciousness questions. In line with recommendations of Norman et al. (2010a), a short survey which asked (1) whether the participant had heard about the study prior to participating and (2) what they thought might be the 'key measure' of the study, was administered prior to revealing that the anticipated target 'John' was fictitious. After learning that the anticipated target was fictitious, the participant was asked to rate how certain they were that they would actually be meeting a person with schizophrenia on a 10-point scale ranging from 1 = very uncertain to 10 = very certain, as employed by Norman et al. (2010b).

Seating distance. All four corresponding corners (a, b, c and d) between the two chairs set out by the participant were measured in centimetres. The shortest corresponding corner distance constituted the outcome variable in this study.

3. Results

3.1. Data Screening

Participants could only be included in the analysis if they met three criteria; (1) participants should not have heard about the study procedure prior to participating, (2) participants should not have guessed that the study was actually measuring seating distance and (3) participants should have been certain (i.e., scored at least 5 on the 10 point certainty measure) that they were about to meet a person with schizophrenia. These checks were necessary to ensure the validity of

the data. No participants had heard anything regarding the study. However, 19 participants out of 119 (16%) guessed that the dependent variable was seating distance and 17 out of 119 (14%) were not certain they would be meeting a person with schizophrenia. Eighty-eight out of 119 participants (74%) met these criteria and were retained in the analysis.

3.2. Rationale for Analyses

The analyses employed hierarchical analysis of variance (ANOVA) in which the overarching factor was Implementation Intention (*formed/not-formed*). The *not-formed* factor contained both control conditions (*Goal Intention* and *No-instruction*) as nested factors. This is conventional in implementation intention research where the hypothesis anticipates that there will be no difference between the nested control factors (*Goal Intention* and *No-instruction*) but that there will be a significant difference between the overarching factors (Implementation Intention: *formed/not formed*). This type of design is used to exemplify that forming a goal intention alone is insufficient for goal directed behaviour to ensue. Therefore, forming a goal is seen to be equally as ineffective as being given no instructions. In this way, the analysis can demonstrate that implementation intentions serve the function of promoting goal attainment where goals alone have been insufficient in facilitating goal directed behaviour.

3.3. Randomisation Check

A chi-square test highlighted that the categorical variable of personal experience of mental illness was not balanced across the conditions, chi squared = 7.75, $df = 2$, $p < 0.05$. Seven participants reported personal experience of mental illness, six of whom were in the implementation intention condition and one of which was in the

goal intention condition. As this represents too few people to permit meaningful analysis, these individuals were excluded, leaving 81 participants in the analysis.

The data were tested for normality and linearity by looking at skewness and kurtosis and there were no problems. A hierarchical ANOVA was used to compare scores on continuous variables (age, intended behaviour, explicit attitudes, intergroup anxiety, familiarity, implicit attitudes and certainty) between the experimental condition and the two control conditions. Thus, the key independent variable was Implementation Intention (*formed vs. not-formed*). Control condition (*Goal Intention vs. No-instruction*) was a nested factor within the over-arching factor of Implementation Intention.

Table 3 presents the means, standard deviations and F-ratios for the implementation intention and control condition factors. Randomisation was largely successful. However, the effect of implementation intention on intended behaviour was marginally significant ($p < 0.06$). Participants who formed implementation intentions had marginally more positive behavioural intentions towards people with mental illness than controls. Subsequent analyses are therefore computed controlling for intended behaviour to account for the potential influence of this variable.

Table 3: Means, Standard Deviations and F-ratios for the Implementation Intention and Control Condition Factors.

Variable	Implementation Intention			Control Condition		
	Formed N=27	Not-formed N=54	F	Control N=25	Goal Intent N=29	F
Age	18.96 (1.09)	18.89 (1.00)	0.13	18.68 (0.63)	19.07 (1.22)	1.93
Intended behaviour	4.49 (0.47)	4.23 (0.59)	3.96 [†]	4.32 (0.47)	4.15 (0.67)	1.34
Explicit attitudes	3.02 (0.54)	3.20 (0.62)	1.58	3.18 (0.60)	3.21 (0.64)	0.03
Intergroup anxiety	3.95 (0.93)	3.97 (0.86)	0.00	3.90 (1.05)	4.03 (0.66)	0.29
Familiarity	1.41 (0.84)	1.35 (0.95)	0.06	1.40 (0.71)	1.31 (1.14)	0.13
Implicit attitudes	0.15 (0.28)	0.10 (0.28)	0.70	0.14 (0.28)	0.05 (0.28)	1.43
Certainty	8.89 (1.42)	8.15 (1.76)	3.42	8.40 (1.78)	7.93 (1.75)	1.07
Commit- ment	9.19 (1.18)				9.21 (1.32)	0.01

Note: [†] p<.06, *p<.05, **p<.01, ***p<.001

3.4. Effect of Implementation Intention on Seating Distance

The same hierarchical ANOVA was used to analyse the effect of forming an implementation intention on seating distance. As shown in Figure 3, participants who formed an implementation intention set the chairs significantly closer together ($M = 90.26, SD = 11.10$) than participants who did not form implementation intentions ($M = 97.96, SD = 16.26$), $F(1,78) = 4.70, p < .05$. As expected, the effect of the nested control condition was not significant, $F(1,78) = 1.00, ns$. That is, there was no difference in seating distance for control participants

($M = 95.80, SD = 15.13$) compared to participants who formed a goal intention ($M = 99.83, SD = 17.22$).

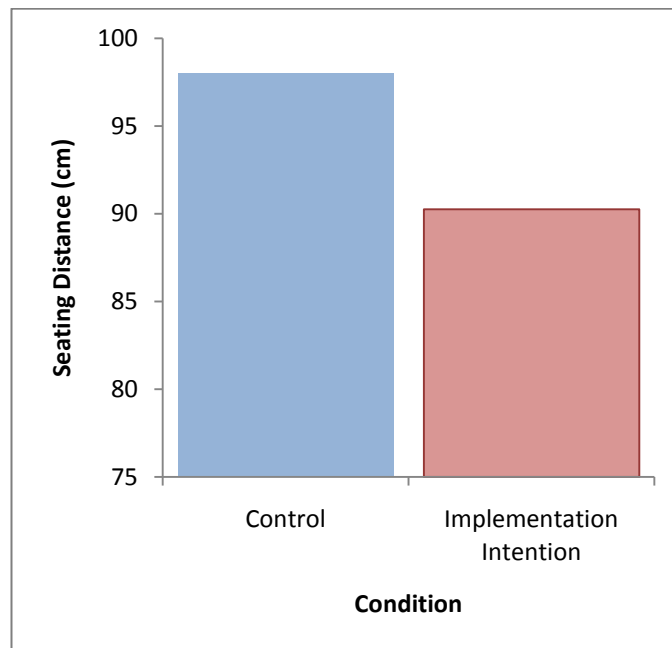


Figure 3: Mean Seating Distance in Control and Implementation Intention Conditions.

Equivalent findings were obtained using Analysis of Covariance (ANCOVA) that controlled for the marginally significant effect of intended behaviours. Intended behaviour was not associated with seating distance, $F(1, 77) = 0.02, ns$. The effect of implementation intentions remained significant, $F(1, 77) = 4.54, p < 0.05$, and there continued to be no effect of the nested control condition, $F(1, 77) = 1.00, ns$.

3.5. Correlations

Table 4 shows intercorrelations between the continuous variables across the entire sample. A significant positive correlation was found between intergroup anxiety and seating distance, such that the more anxious participants were, the further away they sat. Significant negative correlations were found between both explicit attitudes and seating distance and familiarity and seating distance, such

that the more negative explicit attitudes participants held, or the less familiarity participants had with mental illness, the further away they sat. A significant negative correlation was found between explicit attitudes and intergroup anxiety, such that the more negative explicit attitudes participants held about mental illness, the more anxious they were about interacting with people with mental illness. Finally, a significant positive correlation was found between explicit attitudes and intended behaviours, such that the more positive participants' explicit attitudes were towards mental illness, the greater their intentions were to behave positively towards people with mental illness.

Table 4. Intercorrelations for Familiarity, Intended Behaviour, Intergroup Anxiety, Implicit and Explicit Attitude and Seating Distance Variables.

	1	2	3	4	5	6
1. Implicit attitude	---	-.18	-.15	.17	.11	.14
2. Seating distance		---	.30**	-.25*	-.26*	-.06
3. Intergroup anxiety			---	-.31**	-.16	-.21
4. Explicit attitude				---	-.01	.34**
5. Familiarity					---	.17
6. Intended behaviour						---

Note: *p<.05, **p<.01, ***p<.001

3.6. Moderation of Implicit Attitude–Seating Distance Relation by Implementation

Intentions

To test whether implementation intentions moderated the relationship between implicit attitudes and seating distance, a two-step moderated regression analysis was conducted with seating distance as the dependent variable. Intended behaviour, implicit attitudes and implementation intentions (coded not formed = 0, formed = 1) entered the equation at step 1. The multiplicative interaction between implicit attitudes and implementation intentions was entered at step 2.

Implicit attitude scores were mean-centred to reduce potential multicollinearity (Aiken and West, 1991). Table 5 shows that intended behaviour, implicit attitudes and implementation intention formation explained 8% of the variance in seating distance on the first step. Implementation intention was a significant predictor. Addition of the implicit attitude by implementation intention interaction term produced a significant increment in the variance explained in seating distance (F Change = 8.40, $p < .01$, R^2 Change = .09). Implicit attitude, implementation intention and their interaction all had significant beta coefficients. However, the effect of intended behaviour was not significant. The final model explained 17% of the variance in seating distance.

Table 5: Hierarchical Regression of Seating Distance on Intended Behaviour, Implicit Attitude, Implementation Intentions and their Interaction

Step	Variable(s) entered	Beta	Beta
1.	Intended behaviour	.02	.08
	Implicit attitude	-.16	-.38**
	Imp	-.23*	-.28**
2.	Implicit attitude X		.38**
	Imp		
	ΔR^2	.08	.09
	ΔF	2.32	8.40**
	R^2	.08	.17
	Model F	2.32	4.01**

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Key: Imp = Implementation intention

The significant interaction was decomposed using simple slopes analysis. For controls, greater avoidance tendencies were associated with greater seating distance ($B = -5.61$, $SE = 2.16$, $p < .05$). For participants who formed implementation intentions on the other hand, avoidance tendencies did not predict seating distance ($B = 4.01$, $SE = 2.09$, $ns.$). Figure 4 shows that control participants with more negative implicit attitudes set the chairs further apart, whereas those

who formed implementation intentions were able to overcome their implicit attitudes and set the chairs closer together.

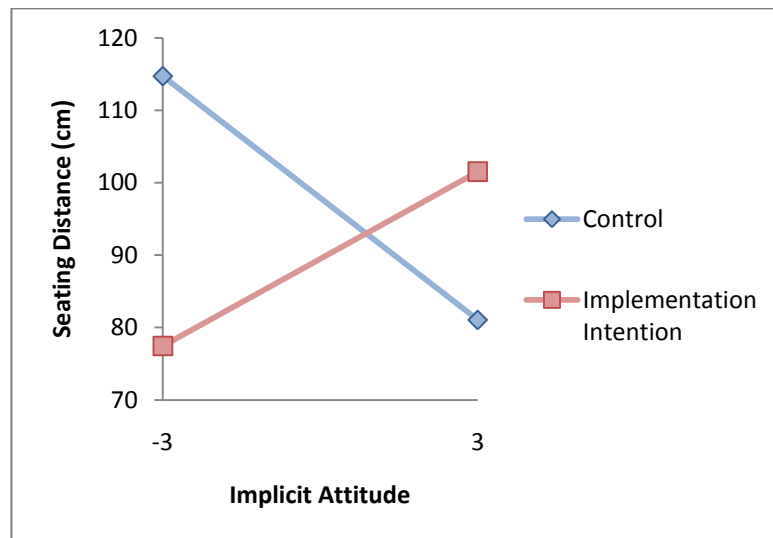


Figure 4: Interaction between Condition and Implicit Attitude on Seating Distance.

3.7. Moderation of Explicit Attitude–Seating Distance Relation by Implementation Intentions

To test whether implementation intentions moderated the relationship between explicit attitudes and seating distance, the same two-step moderated regression analysis was conducted with seating distance as the dependent variable. Intended behaviour, explicit attitudes and implementation intentions (coded not formed = 0, formed = 1) entered the equation at step 1. The multiplicative interaction between explicit attitudes and implementation intentions was entered at step 2. Again, explicit attitude scores were mean-centred to reduce potential multicollinearity. Table 6 shows that intended behaviour, explicit attitudes and implementation intention formation explained 10% of the variance in seating distance on the first step. Implementation intention was a significant predictor. Addition of the explicit attitude by implementation intention interaction term produced a significant increment in the variance explained in seating distance (F Change = 7.89, $p < 0.01$,

R^2 Change = .08). Explicit attitude, implementation intention and their interaction all had significant beta coefficients. However, the effect of intended behaviour was not significant. The final model explained 19% of the variance in seating distance.

Table 6: Hierarchical Regression of Seating Distance on Intended Behaviour, Explicit Attitude, Implementation Intentions and their Interaction

Step	Variable(s) entered	Beta	Beta
1.	Intended behaviour	.07	.12
	Explicit attitude	-.22	-.44**
	Imp	-.25*	-.28*
2.	Explicit attitude X		.36**
	Imp		
ΔR^2		.10	.08
ΔF		2.95*	7.89**
R^2		.10	.19
Model F		2.95*	4.39**

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Key: Imp = Implementation intention

Again, simple slopes analysis was used to decompose the significant interaction.

For controls, more positive explicit attitudes were associated with reduced seating distance ($B = -9.76$, $SE = 3.41$, $p < 0.05$). For participants who formed implementation intentions on the other hand, explicit attitudes did not predict seating distance ($B = 2.96$, $SE = 2.13$, *ns.*). Figure 5 shows that control participants with more negative explicit attitudes set the chairs further apart, whereas those who formed implementation intentions were able to overcome explicit attitudes and set the chairs closer together.

There were no significant interactions between implementation intentions and intergroup anxiety ($B = -.13$, *ns.*) or implementation intentions and familiarity ($B = -.07$, *ns.*).

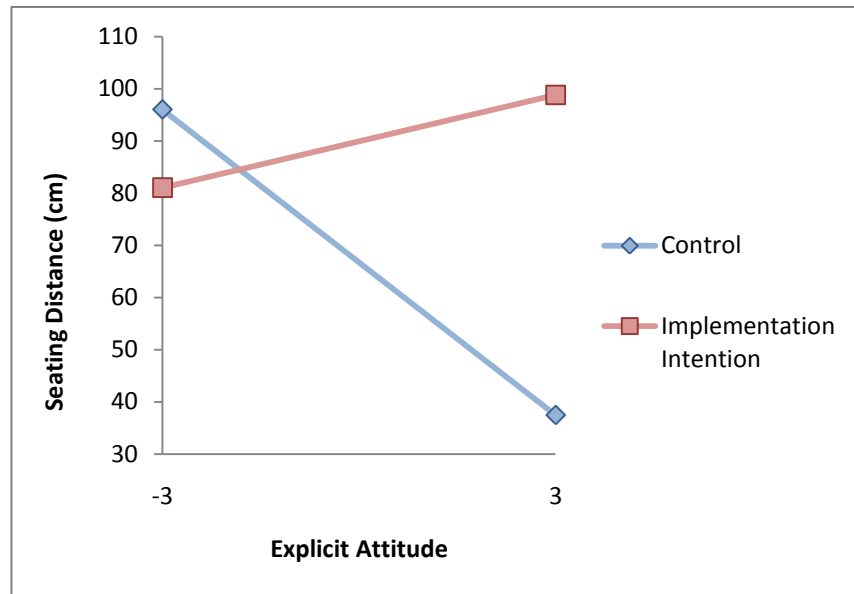


Figure 5: Interaction between Condition and Explicit Attitude on Seating Distance.

In sum, the analyses show that for participants in the control condition, discriminatory behaviours were governed by both their implicit and explicit attitudes. However, those who formed implementation intentions set the chairs closer together regardless of either implicit or explicit attitudes.

4. Discussion

The present research investigated whether forming implementation intentions allowed individuals to gain control over stereotyped responses rooted in implicit associations about mental illness, specifically schizophrenia. The results show a significant main effect, whereby participants who formed the implementation intention *“As soon as I get a chance to be friendly and warm to this person, then I’ll take it”*, were able to sit significantly closer to an anticipated target with schizophrenia than both participants who formed a goal to be *“friendly and warm”* and participants who received no instructions. Hierarchical regression analyses

showed that for those in the two control groups, implicit attitudes towards schizophrenia predicted physical proximity to the anticipated target. This means that controls with more negative implicit attitudes sat further away than controls with more positive implicit attitudes. However, for the experimental group, implicit attitudes did not predict physical proximity. Therefore, forming implementation intentions enabled participants to sit closer to the anticipated target regardless of their implicit attitudes. The results therefore support the experimental hypotheses.

Further hierarchical regression analyses found that explicit attitudes had the same predictive pattern. Explicit attitudes towards schizophrenia predicted physical proximity in both control groups but not in the implementation intention group. Controls with more negative explicit attitudes sat further away than controls with more positive explicit attitudes. Again, the group who formed implementation intentions sat closer to the anticipated target regardless of their explicit attitudes. In summary, the findings suggest that for participants in the control groups, both implicit and explicit attitudes about schizophrenia were important in determining social behaviours towards the anticipated target. However, for those in the implementation intention group, neither implicit nor explicit attitudes influenced social behaviours. This group were able to act in a more warm and friendly way towards the anticipated target regardless of their implicit and explicit attitudes about schizophrenia.

The findings imply that the link between automatic associations in memory and the behaviours they predict can be broken. When we map this onto Corrigan and Watson's (2002) three stage model of stigma, the link between prejudice and discrimination has been broken. The finding that goal intentions did not enable

participants to overcome implicit attitudes, whereas implementation intentions did, emphasises that implementation intentions encompass a qualitatively different mechanism which enables good intention to be translated into action. The success of this mechanism is thought to lie in the strong link forged between the specified opportunity and response when people form implementation intentions (Webb & Sheeran, 2007, 2008). The consequence is that upon encountering the opportunity, the planned behavioural response follows relatively automatically (Brandstätter, Lengfelder & Gollwitzer, 2001). The control of goal-directed responses is therefore delegated to situational cues (Gollwitzer, 1999), in this case, the opportunity to be warm and friendly when invited to set out the chairs. Crucially, implementation intentions ensure that participants are tuned to spot this opportunity so that it is not missed; moreover when the opportunity is identified, it is swiftly and effortlessly acted upon. Enabling members of the public to behave in a warm and friendly way towards people with mental illnesses is crucial, given that mental health consumers expect negative reactions from the public (Wahl, 1999) and are more likely to anxiously expect, readily perceive and intensely react to status-based rejection (Mendoza-Denton et al., 2002). Rejection sensitivity influences the cognitive appraisal of stigma as a stressor (Rüsch et al. 2009), and can therefore exacerbate the experience of self-stigma. Reducing the rejection and hostility embodied within social contact with those stigmatised through mental illness could reduce interpersonal experiences of rejection for those with mental illness (Hinshaw & Stier, 2008; Jenkins & Carpenter-Song, 2009). Through this mechanism, perception and subsequent internalisation of societal stigma could be reduced, with positive consequences for psychosocial recovery.

We hypothesised that implicit attitudes would predict physical proximity at the outset because past research has suggested that implicit attitudes are more predictive of intergroup behaviours than self-reported attitudes (Greenwald et al., 2009). In addition, implicit attitudes are thought to be predictive of behaviours that are automatic, spontaneous and uncontrolled, whereas explicit attitudes are thought to influence non-automatic, deliberative or controlled behaviours (Conner et al., 2007; McConnell & Leibold, 2001; Rydell & McConnell, 2006). The primary outcome variable of seating distance therefore represented an automatic, spontaneous behaviour, governed by implicit attitudes. However, in the present study, both implicit and explicit attitudes predicted seating distance. One possible explanation for this unexpected finding is that choice of seating distance represented a deliberate rather than spontaneous process (Norman et al., 2010b). In some cases, this was qualitatively reflected in participants asking for further clarification about where to place the chairs. Although clarification was withheld, this thoughtfulness may have rendered the behaviour less of a spontaneous, automatic process and more of a deliberative, target relevant judgement which are thought to be predicted by explicit attitudes. Frieze et al. (2008) propose that self-regulation is most successfully influenced by automatic (implicit) processes under conditions of low opportunity or motivation to control. It is possible that the study design inadvertently fostered more motivation and opportunity to control automatic processes than was intended.

Alternatively, the finding that explicit attitudes predicted physical proximity may be related to greater variability in self-reported attitudes than was anticipated. Given that it is not socially acceptable to express prejudice overtly and that the sample had chosen to study psychology at university, it was anticipated that

negative attitudes towards mental illness would be censored on self-report measures (Hinshaw & Stier, 2008). It was expected that explicit attitude measures would provide an inaccurate representation of the implicit attitudes held by participants and therefore would not accurately capture any effect of the intervention on social behaviours. However, it is possible that participants in the current study were forthcoming in expressing negative explicit attitudes towards schizophrenia and that these self-reported attitudes more accurately represented underlying implicit associations than was anticipated.

Nevertheless, this study design had several strengths. To our knowledge, this is the first study to investigate a novel anti-stigma approach which works directly at the level of discrimination (i.e., behaviour). The study benefitted from employing a range of validated attitude measures and from measuring theoretically relevant constructs, such as familiarity with mental illness, intergroup anxiety and behavioural intentions. Measurement of implicit attitudes using the SC-IAT modified a method introduced by Palfai and Ostafin (2003) which accesses automatic approach and avoid dispositions, rather than evaluations. These categories were chosen to map conceptually onto the social behaviours the measure was intended to predict. By using seating distance as an objective, behavioural marker of discrimination, this design has improved upon others which have employed prospective self-report measures of behavioural intentions or preferred social distance as outcomes. A continuous measure of seating distance was intended to provide a more subtle marker of behaviour and improve on the specificity of studies which asked participants to select from one of a restricted range of chairs in relation to a target seat. The use of an equivalent goal intention group within the nested control enabled the unique effect of implementation

intentions to be exemplified over and above a no-instruction control condition. In addition, there were stringent criteria regarding what data were included in the analysis. Participants could only be included if they had not heard any details about the study prior to participating, did not guess that the dependent measure was seating distance and were sufficiently certain that the anticipated target was going to arrive. These measures conservatively reduced the influence of demand characteristics. It is acknowledged, however, that these criteria were self-reported.

Some participants relayed qualitative feedback about factors they introspectively felt had influenced their behaviour. Several reported that they were socially anxious in general and preferred maintaining physical distance from people regardless of their mental health status. The influence of social anxiety on physical proximity may have been captured in part by the intergroup anxiety and intended behaviour measures. Indeed, a significant positive correlation was found between intergroup anxiety and seating distance, such that more anxious participants sat further away. There was no correlation between intended behaviour and seating distance, however. Drawing upon the findings of Norman et al. (2010c), attitudes towards specific behaviours reflecting social distance can show a higher correlation with behavioural intentions than attitudes towards the mentally ill person. Attitudes towards seating distance could not have been measured in the current study without revealing the dependent measure. Future research may need to measure both attitudes towards the specific behaviour as well as attitudes towards the person with mental illness in order to increase the amount of variance in physical proximity accounted for by predictor variables.

By getting to the root of social interactions in a controlled setting, this study opens up a promising avenue of research into stigma reduction. Further research is

needed to investigate whether implementation intentions are successful in enabling people to overcome prejudicial attitudes towards different stigmatised groups in both lab and field settings. Research has suggested that stigma-reduction strategies are most effective when targeted at those who come into most contact with or hold influence over the stigmatised, including landlords, employers and health care professionals (Corrigan, Kerr & Knudsen, 2005; Corrigan & Wassel, 2008). Peris et al.'s (2008) study implied that both implicit and explicit attitudes influence clinical decision making about people with mental illnesses.

Implementation intentions could provide a brief, easy to disseminate and cost-effective means of enabling mental health professionals to work with people with mental illnesses without the unconscious influence of implicit prejudice on clinical decision making and behaviour. Furthermore, it would be interesting to see whether subtle changes in behaviour enabled by implementation intentions are registered by those on the receiving end of stigma and discrimination.

Research has shown that self-stigma operates at both explicit and implicit levels (Rüsch et al, 2010a, 2010b; Teachman, Wilson & Komarovskaya, 2006).

Considering Corrigan and Watson's (2002) proposal that three, parallel levels operate in both public stigma and self-stigma, implementation intentions and the current findings may have useful applications for the stigmatised themselves. Self-stigma consists of awareness of stereotypes, self-prejudice and resultant self-discrimination. This may include failure to pursue life goals, known as the "why try" effect (Corrigan, Larson & Rüsch, 2009). If implementation intentions are effective in breaking the link between prejudice and discrimination at a public level, they may also be effective in preventing self-prejudice from being translated into self-discriminatory behaviours at a self-stigma level. For example, the person

could form an implementation intention such as *“As soon as negative thoughts about mental illness get in my way, then I will ignore those thoughts and redouble my efforts on the task”*.

In previous research, it was shown that people with high anxiety who formed implementation intentions could overcome the underestimation of performance that is a key characteristic of social anxiety (Webb et al., 2010). Participants were asked to make a three minute speech. Those who formed the implementation intention *“If I feel concerned, then I will focus on the wall at the back of the room!”* were able to prevent the characteristic shift of attention towards physiological anxiety cues that exacerbates social anxiety (Clark & Wells, 1995) and therefore gave more realistic appraisals of their performance. Implementation intentions were therefore able to overcome the systematic underestimation of performance indicative of social anxiety. Approaches utilising implementation intentions are commensurate with self-stigma interventions such as ACT which conceptualise stigma as arising from the function of stigmatising thoughts, rather than their presence. Individuals are enabled to be mindful of difficult thoughts and feelings whilst being aware of their negative influence on their pursuit of life goals. This enables individuals to disconnect thoughts from previously linked overt behaviours which obstructed recovery in order to pursue alternative, positive behaviours (Luoma et al., 2008). This approach ensures recovery options remain open to individuals with mental illness despite the continued existence of stigma in society.

4.1. Conclusions

This study has shown promising evidence that negative implicit or explicit attitudes towards mental illness may no longer be a barrier to individuals

behaving positively towards people with mental illness. More broadly, this study has shown that intentions to pursue set goals can be protected from automatically activated, unconscious biases by forming implementation intentions.

Implementation intentions enabled individuals to overcome stereotypical, discriminatory responses rooted in implicit associations and instead behave in a warm and friendly way towards people with mental illness. This finding has broad applicability for both public stigma and self-stigma related to mental illness.

5. References

- Aiken, L. S. & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Allport, G. W. (1979). *The Nature of Prejudice*. Cambridge MA: Perseus Books.
- Alvidrez, J., Snowden, L. R., Rao, S. M. Boccellari, A. (2009). Psychoeducation to address stigma in black adults referred for mental health treatment: A randomized pilot study. *Community Mental Health Journal, 45*, 127-136.
- Angermeyer, M. C., & Dietrich, S. (2006). Public beliefs about and attitudes towards people with mental illness: a review of population studies. *Acta Psychiatrica Scandinavica, 113* (3) 163–179.
- Angermeyer, M. C., & Matschinger, H. (2004). The stereotype of schizophrenia and its impact on discrimination against people with schizophrenia: results of a representative survey in Germany. *Schizophrenia Bulletin, 30*, 1049-1061.
- Angermeyer, M. C., Matschinger, H., & Corrigan, P.W. (2004). Familiarity with mental illness and social distance from people with schizophrenia and major depression: Testing a model using data from a representative population survey. *Schizophrenia Research, 69*, 175-182.
- Bluemke, M., & Friese, M. (2008). Reliability and validity of the Single-Target IAT (ST-IAT): Assessing automatic affect towards multiple attitude objects. *European Journal of Social Psychology, 38*, 977-997.

- Brandstätter, V., Lengfelder, A., & Gollwitzer, P. M. (2001). Implementation intentions and efficient action initiation. *Journal of Personality and Social Psychology, 81*, 946-960.
- Brohan, E., Elgie, R., Sartorius, N., & Thornicroft, G. (2010). Self-stigma, empowerment and perceived discrimination among people with schizophrenia in 14 European countries: The GAMIAN-Europe study. *Schizophrenia Research, 122* (1-3), 232-238.
- Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In R. Heimberg, M. Liebowitz, D. A. Hope, & F. R. Schneider (Eds.), *Social Phobia: Diagnosis, assessment and treatment* (pp. 69-93). New York: Guilford.
- Conner, M., Perugini, M., O’Gorman, R., Ayres, K., & Prestwich, A. (2007). Relations between implicit and explicit measures of attitudes and measures of behavior: Evidence of moderation by individual difference variables. *Personality and Social Psychology Bulletin, 33*, 1727–1740.
- Corrigan, P. W., River, L. P., Lundin, R. K., Penn, D. L., Uphoff-Wasowski, K., Champion, J., Mathisen, J., Gagnon, C., Bergman, M., Goldstein, H., & Kubiak, M. A. (2001a). Three strategies for changing attributions about severe mental illness. *Schizophrenia Bulletin, 27* (2), 187-195.
- Corrigan, P. W., Edwards, A., B., Green, A., Diwan, S. L., & Penn, D. L. (2001b). Prejudice, social distance and familiarity with mental illness. *Schizophrenia Bulletin, 27*, 219-25.

- Corrigan, P. W., Kerr, A., & Knudsen, L. (2005). The stigma of mental illness: Explanatory models and methods for change. *Applied and Preventative Psychology, 11*, 179-190.
- Corrigan, P. W., Larson, J. E., & Rüsch, N. (2009). Self-stigma and the “why try” effect: impact on life goals and evidence-based practices. *World Psychiatry, 8*, 75-81.
- Corrigan, P., Markowitz, F. E., Watson, A., Rowan, D., Kubiak, M. A. (2003). An attribution model of public discrimination towards persons with mental illness. *Journal of Health and Social Behavior, 44*, (2) 162-179.
- Corrigan, P. W., Morris, S., Larson, J., et al. (2010). Self-stigma and coming out about one’s mental illness. *Journal of Community Psychology, 38* (3), 259-275.
- Corrigan, P. W., & Wassel, A. (2008). Understanding and influencing the stigma of mental illness. *Journal of Psychosocial Nursing and Mental Health Services, 46* (1), 42-48.
- Corrigan, P. W. & Watson, A. C. (2002). The paradox of self-stigma and mental illness. *Clinical Psychology: Science and Practice, 9*, 35-53.
- Couture, S. M., & Penn, D. L. (2003). Interpersonal contact and the stigma of mental illness: A review of the literature. *Journal of Mental Health, 12* (3), 291-305.
- Crisp, A. H., Gelder, M.G., Rix, S., Meltzer, H. I. & Rowlands, O. J. (2000). Stigmatisation of people with mental illnesses. *British Journal of Psychiatry, 177*, 4-7.

- Cunningham, J. A., Sobell, L. C. & Chow, V. M. C. (1993). What's in a label? The effects of substance types and labels on treatment considerations and stigma. *Journal of Studies on Alcohol and Drugs*, 54, 693-9.
- Devine, P. G. (1989) Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, 56 (1), 5-18.
- Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology*, 70, 1327–1343.
- Elliott, G. C., Ziegler, H. L., Altman, B. M., & Scott, D. R. (1982). Understanding stigma: Dimensions of deviance and coping. *Deviant Behavior*, 3, 275-300.
- Evans-Lacko, S., Rose, D., Little, K., Rhydderch, D., Henderson, C. & Thornicroft, G. (submitted). Development and psychometric properties of the Reported and Intended Behaviour Scale (RIBS).
- Freedman, J. & Combs, G. (1993). Invitations to new stories: Using questions to explore alternative possibilities. In S. Gilligan & R. Price (Eds.), *Therapeutic Conversations* (pp. 291-303). New York: W. W. Norton.
- Friese, M., Hoffmann, W., & Schmitt, M. (2008). When and why do implicit measures predict behavior? Evidence for the moderating role of opportunity, motivation, and process reliance. *European Review of Social Psychology*, 19, 285–338.
- Gawronski, B., & Bodenhausen, G. V. (2006). Associative and propositional processes in evaluation: An integrative review of implicit and explicit attitude change. *Psychological Bulletin*, 132, 692-731.

- Gifford, R., & O'Connor, B. (1986). Nonverbal intimacy: Clarifying the role of seating distance and orientation. *Journal of Nonverbal Behavior*, 10 (4), 207-214.
- Goffman, E. (1963). *Stigma: Notes on the Management of Spoiled Identity*. New York: Prentice Hall.
- Gollwitzer, P. (1999). Implementation intentions: strong effects of simple plans. *American Psychologist*, 54(7), 493-503.
- Gollwitzer, P. M. & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology*, 38, 69-119.
- Gollwitzer, P. M. & Sheeran, P., Trötschel, R., & Webb, T. L. (in press). Self-regulation of priming effects on behavior. *Psychological Science*.
- Greenwald, A. G., Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem and stereotypes. *Psychological Review*, 102, 4 -27.
- Greenwald, A.G., McGhee D. E., & Schwartz, J.L. (1998). Measuring individual differences in implicit cognition: the implicit association test. *Journal of Personality and Social Psychology*, 74,1464-1480
- Greenwald, A. G., & Nosek, B. A. (2001). Health of the Implicit Association Test at age 3. *Zeitschrift für Experimentelle Psychologie*, 48, 85-93.
- Greenwald, A. G., & Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology*, 85 (2), 197-216.

Greenwald, A. G., Poehlman, A. T., Uhlmann, E. L., & Banaji, M. R. (2009).

Understanding and using the Implicit Association Test: III. meta-analysis of predictive validity. *Journal of Personality and Social Psychology*, 97 (1), 17-41.

Griffiths, K. M., Christensen, H., Jorm, A. F., Evans, K., & Groves, C. (2004). Effects of web-based depression literacy and cognitive-behavioural therapy interventions on stigmatising attitudes to depression. *British Journal of Psychiatry*, 185, 342-349.

Hayward, P., & Bright, J. A. (1997). Stigma and mental illness: A review and critique. *Journal of Mental Health*, 6 (4), 345-354.

Henry, J. D., von Hippel, C., & Shapiro, L. (2010). Stereotype threat contributes to social difficulties in people with schizophrenia. *British Journal of Clinical Psychology*, 49, 31-41.

Hinshaw, S. P. (2007). *The Mark of Shame: Stigma of Mental Illness and an Agenda for Change*. New York: Oxford University Press.

Hinshaw, S. P., & Stier, A. (2008). Stigma as related to mental disorders. *Annual Review of Clinical Psychology*, 4, 376-93.

Hoffman, W., Gawronski, B., Gschwender, T., Le, H., & Schmitt, M. (2005). A meta-analysis on the correlation between the implicit association test and explicit self-report measures. *Personality and Social Psychology Bulletin*, 31 (10), 1369-1385.

Holmes, P. E., Corrigan, P.W., Williams, P., Canar, J. & Kubiak, M. A. (1999).

Changing attitudes about schizophrenia. *Schizophrenia Bulletin*, 25, 447-56.

- Jenkins, J. H., & Carpenter-Song, E. A. (2009). Awareness of stigma among persons with schizophrenia: Marking the contexts of lived experience. *Journal of Nervous and Mental Disease, 197*, 520-529.
- Jussim, L., Nelson, T. E., Manus, M., & Soffin, S. (1995). Prejudice, stereotypes and labeling effects: Sources of bias in person perception. *Journal of Personality and Social Psychology, 68*, 228-246.
- Karpinski, A. & Steinman, R. B. (2006). The single category Implicit Association Test as a measure of implicit social cognition. *Journal of Personality and Social Psychology, 91* (1), 16-32.
- Kelley, P. (1996). Narrative theory and social work treatment. In F. J. Turner (Ed.), *Treatment: Interlocking Theoretical Approaches* (pp.61-479). New York: Free Press.
- Knight, M. T. D., Wykes, T., & Hayward, P. (2006). Group treatment of perceived stigma and self-esteem in schizophrenia: A waiting list trial of efficacy. *Behavioural and Cognitive Psychotherapy, 34*, 305-318.
- Kondrat, D. C., & Teater, B. (2009). An anti-stigma approach to working with persons with severe mental disability: Seeking real change through narrative change. *Journal of Social Work Practice, 23* (1), 35-47.
- Larson, J. E. & Corrigan, P. W. (2010). Psychotherapy for self-stigma among rural clients. *Journal of Clinical Psychology: In Session, 66* (5), 524-536.
- Lincoln, T. M., Arens, E, Berger, C. & Reif, W. (2008). Can anti-stigma campaigns be improved? A test of the impact of biogenetic Vs psychosocial causal

explanations on implicit and explicit attitudes to schizophrenia.

Schizophrenia Bulletin, 34 (5), 984-994.

Link, B. G., Mirotznic, J., & Cullen, F. T. (1991). The effectiveness of stigma coping orientations: Can negative consequences of mental illness labeling be avoided? *Journal of mental Health and Social Behavior*, 32 (3), 302-320.

Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2002). On describing and seeking to change the experience of stigma. *Psychiatric Rehabilitation Skills*, 6 (2), 201-231.

Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness; A systematic review and meta-analysis. *Social Science and Medicine*, 71, 2150-2161.

Lucksted, A., Drapalski, A., Calmes, C., Forbes, C., DeForge, B., & Boyd, J. (in press). Ending self-stigma: Pilot evaluation of a new intervention to reduce internalized stigma among people with mental illnesses. *Psychiatric Rehabilitation Journal*.

Lundberg, B., Hansson, L., Wentz, E., & Björkman, T. (2007). Sociodemographic and clinical factors related to devaluation/discrimination and rejection experiences among users of mental health services. *Social Psychiatry and Psychiatric Epidemiology*, 42, 295-300.

Luoma, J. B., Kohlenberg, B. S., Hayes, S. C., Bunting, K., & Rye, A. K. (2008). Reducing self-stigma in substance abuse through acceptance and commitment therapy: Model, manual development and pilot outcomes. *Addiction Research and Theory*, 16 (2), 149-165.

- Luty, J., Fekadu, D., Umoh, O. & Gallagher, J. (2006). Validation of a short instrument to measure stigmatised attitudes towards mental illness. *Psychiatric Bulletin*, 30, 257-260.
- Macrae, C. N., Bodenhausen, G. V., Milne, A. B., & Jetten, J. (1994). Out of mind but back in sight: Stereotypes on the rebound. *Journal of Personality and Social Psychology*, 67, 808-817.
- Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology*, 56, 393-421.
- Mann, C. E., & Himelein, M. J. (2004). Factors associated with stigmatization of persons with mental illness. *Psychiatric Services*, 55, 185-187.
- McConnell, A. R. & Leibold, J. M. (2001). Relations among the implicit association test, discriminatory behaviour and explicit measures of racial attitudes. *Journal of Experimental Social Psychology*, 37, 435-442.
- McCay, E., Beanlands, H., Zipursky, R., Roy, P., Leszcz, M., Landeen, J., Ryan, K., Conrad, C., Romano, D., Francis, D., Hunt, J., Costantini, L., & Chan, E. (2007). A randomised controlled trial of a group intervention to reduce engulfment and self-stigmatisation in first episode schizophrenia. *Australian e-Journal for the Advancement of Mental Health*, 6 (3).
- Mendoza-Denton, R., Purdie, V., Downey, G., & Davis, A. (2002). Sensitivity to status-based rejection: Implications for African-American students' college experience. *Journal of Personality and Social Psychology*, 83, 896-918.
- Monteith, M. J., Sherman, J. W., & Devine, P. G. (1998a). Suppression as a stereotype control strategy. *Personality and Social Psychology Review*, 2, 63-82.

- Monteith, M. J., Spicer, C. V., & Tooman, G. D. (1998b). Consequences of stereotype suppression: Stereotypes on and not on the rebound. *Journal of Experimental Social Psychology, 34*, 355-377.
- Nordt, C., Rossler, W., & Lauber, C. (2006). Attitudes of mental health professionals toward people with schizophrenia and major depression. *Schizophrenia Bulletin, 32*, 709-714.
- Norman, R. M. G., Gawronski, B., Hampson, E., Sorrentino, R. M., Szeto, A. & Ye, Y. (2010b). Physical proximity in anticipation of meeting someone with schizophrenia: The role of explicit evaluations, implicit evaluations and cortisol levels. *Schizophrenia Research, 124*, 74-80.
- Norman, R. M. G., Sorrentino R. M., Gawronski, B., Szeto, A. C. H., Ye, Y. & Windell, D. (2010a). Attitudes and physical distance to an individual with schizophrenia: the moderating effect of self-transcendent values. *Social Psychiatry and Psychiatric Epidemiology, 45*, 751-758.
- Norman, R. M. G., Sorrentino, R. M. Windell, D., Ye, Y., Szeto, A. C. H., & Manchanda, R. (2010c). Predicting behavioural intentions to those with mental illness: The role of attitude specificity and norms. *International Journal of Social Psychiatry, 56* (3), 239-254.
- Ostafin, B. D. & Marlatt, G. C. (2008). Surfing the urge: Experimental acceptance moderates the relation between automatic alcohol motivation and hazardous drinking. *Journal of Social and Clinical Psychology, 27* (4), 404-418.

- Ostafin, B. D., Marlatt, G. A. & Greenwald, A. G. (2008). Drinking without thinking: An implicit measure of alcohol motivation predicts failure to control alcohol use. *Behaviour Research and Therapy*, *46*, 1210-1219.
- Palfai, T. P. & Ostafin, B. D. (2003). Alcohol related tendencies in hazardous drinkers: Assessing implicit response tendencies using the modified IAT. *Behaviour Research and Therapy*, *41*, 1149-1162.
- Peris, T. S., Teachman, B. A., & Nosek, B. A. (2008). Implicit and explicit stigma of mental illness: Links to clinical care. *The Journal of Nervous and Mental Disease*, *196* (10), 752-760.
- Pettigrew, T. F., & Tropp, L. R. (2000). Does intergroup contact reduce prejudice? Recent meta-analytic findings. In S. Oskamp (Ed.), *Reducing Prejudice and Discrimination: Social Psychological Perspectives* (pp.93-114). Mahwah, NJ: Erlbaum.
- Ritsher, J.B., Phelan, J.C., 2004. Internalized stigma predicts erosion of morale among psychiatric outpatients. *Psychiatry Research* *129*, 257–265.
- Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005) Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *European Psychiatry*, *20*, 529-539.
- Rüsch, N., Corrigan, P. W., Todd, A. R., & Bodenhausen, G. V. (2010a). Implicit self-stigma in people with mental illness. *The Journal of Nervous and Mental Disease*, *198* (2), 150-152.

- Rüsch, N., Corrigan, P. W., Wassel, A. Michaels, P., Olschewski, M., Wilkniss, S., & Batia, K. (2009). A stress-coping model of mental illness stigma: I. Predictors of cognitive stress appraisal. *Schizophrenia Research, 110*, 59-64.
- Rüsch, N., Todd, A. R., & Bodenhausen, G. V., Olschewski, M., & Corrigan, P. W. (2010b). Automatically activated shame reactions and perceived legitimacy of discrimination: A longitudinal study among people with mental illness. *Journal of Behavior Therapy and Experimental Psychiatry, 41*, 60-63.
- Rydell, R. J. & McConnell, A. R. (2006). Understanding implicit and explicit attitude change: A systems of reasoning analysis. *Journal of Personality and Social Psychology, 91* (6), 995-1008.
- Savrun, B. M., Arikan, K. Uysal, O. Cetin, G. Poyaraz, B. C., Aksoy, C., & Bayar, M. R. (2007). Gender effect on attitudes towards the mentally ill: A survey of Turkish university students. *Israel Journal of Psychiatry & Related Sciences, 44* (1), 57-61.
- Schneider, W., Eschman, A., & Zuccolotto, A. (2002). E-prime user's guide. Pittsburgh: Psychology Software Tools Inc.
- Schoenfeld, D. A. (2010). *Statistical considerations for clinical trials and scientific experiments* accessed at http://hedwig.mgh.harvard.edu/sample_size/size.html#meas.
- Shin, S., & Lukens, E. P. (2002). Effects of psychoeducation for Korean Americans with chronic mental illness. *Psychiatric Services, 53* (9), 1125-1131.
- Stephan, W. G. & Stephan, C. W. (1985). Intergroup anxiety. *Journal of Social Issues, 41* (3), 157-175.

- Teachman, B. A., Wilson, J. G., & Komarovskaya, I. (2006). Implicit and explicit stigma of mental illness in diagnosed and healthy samples. *Journal of Social and Clinical Psychology, 25* (1), 75-95.
- Thoits, P. A. (2011). Resisting the stigma of mental illness. *Social Psychology Quarterly, 74* (1), 6-28.
- Thornicroft, G., Rose, D., Kassam, A., Sartorius, N. (2007). Stigma: Ignorance, prejudice or discrimination? *British Journal of Psychiatry, 190*, 192-193.
- Thornicroft, G., Brohan, E., Rose, D., Sartorius, N., & Leese, M. (2009). Global pattern of experienced and anticipated discrimination against people with schizophrenia: A cross-sectional survey. *Lancet, 373*, 408-15.
- Urbaniak, G. C., & Plous, S. (2011). *Research Randomizer* (Version 3.0) [Computer software]. Retrieved on February 10, 2011, from <http://www.randomizer.org/>
- Vohs, K. D., Mead, N. L. & Goode, M. (2006). The psychological consequences of money. *Science, 314*, 1154-1156.
- Wahl, O. F. (1999). Mental health consumers' experience of stigma. *Schizophrenia Bulletin, 25*, 467-478.
- Wahl, O., & Aroesty-Cohen, E. (2010). Attitudes of mental health professionals about mental illness: A review of the recent literature. *Journal of Community Psychology, 38* (1), 49-62.
- Webb, T. L., Ononaiye, M. S P., Sheeran, P., Reidy, J. G., & Lavda, A. (2010). Using implementation intentions to overcome the effects of social anxiety on

attention and appraisals of performance. *Personality and Social Psychology Bulletin*, 36 (5), 612-627.

Webb, T. L., & Sheeran, P. (2007). How do implementation intentions promote goal attainment? A test of component processes. *Journal of Experimental Social Psychology*, 43, 295-302.

Webb, T. L. & Sheeran, P. (2008). Mechanisms of implementation intention effects: the role of goal intentions, self-efficacy, and accessibility of plan components. *British Journal of Social Psychology*, 47, 373-395.

Webb, T. L. Sheeran, P & Pepper, J. (2010). Gaining control over responses to implicit attitude tests: Implementation intentions engender fast responses on attitude-incongruent trials. *British Journal of Social Psychology*, 00, 1-21.

Weiss, M. G., Ramajrishna, J., & Somma, D. (2006). Health-related stigma: Rethinking concepts and interventions. *Psychology, Health and Medicine*, 11 (3), 277-287.

Wyer, N. A., & Calvini, G. (2011). Don't sit so close to me: Unconsciously elicited effect automatically provokes social avoidance. *Emotion*. Advance online publication, doi: 10.1037/a0023981

Yanos, P. T., Roe, D., & Lysaker, P. H. (in press). Narrative Enhancement and Cognitive Therapy: A new group-based treatment for internalized stigma among persons with severe mental illness. *International Journal of Group Psychotherapy*.

Appendices

Appendix 1: Guidelines for Authors, Journal of Social and Clinical Psychology

INFORMATION FOR AUTHORS

The JOURNAL OF SOCIAL AND CLINICAL PSYCHOLOGY is devoted to the application of theory and research from social psychology toward the better understanding of human adaptation and adjustment, including both the alleviation of psychological problems and distress (e.g., psychopathology) and the enhancement of psychological well-being among the psychologically healthy. Topics of interest include (but are not limited to) traditionally defined psychopathology (e.g., depression), common emotional and behavioral problems in living (e.g., conflicts in close relationships), the enhancement of subjective well-being, and the processes of psychological change in everyday life (e.g., self-regulation) and professional settings (e.g., psychotherapy and counseling). Articles reporting the results of theory-driven empirical research are given priority, but theoretical articles, review articles, clinical case studies, and essays on professional issues are also welcome. Articles describing the development of new scales (personality or otherwise) or the revision of existing scales are not appropriate for this journal.

All submissions must be made electronically (preferably in MSWord format) to Thomas E. Joiner at joiner@psy.fsu.edu. Electronic submissions should include all figures and tables in the article file itself, not as separately attached files. Only original articles will be considered.

Articles should not exceed 10,000 words (text and references). Exceptions may be made for reports of multiple studies.

Instructions for paper submissions: Paper submissions will be accepted upon request if electronic submission is not possible. All submissions must be double-spaced, on one side of standard 8 1/2" x 11" white paper. Four copies should be submitted; each must be clearly legible, have all pages numbered, and contain all figures and tables.

Authors desiring an anonymous review should request this in the submission letter. In such cases identifying information about the authors and their affiliations should appear only on a cover page.

Tables should be numbered and referred to by number in the text. Each table is to be typed on a separate sheet of paper.

List **references** alphabetically at the end of the paper and refer to them in the text by name and year in parentheses.

Authors may consult the publication manual of the American Psychological Association, 5th Edition (2002), for rules on format and style. All research papers submitted to the JOURNAL OF SOCIAL AND CLINICAL PSYCHOLOGY must conform to the ethical standards of the American Psychological Association. Articles should be written in nonsexist language.

Contributors are responsible for obtaining permission from copyright owners if they use an illustration, table, or lengthy quote (100+ words) that has been published elsewhere. Contributors should write both the publisher and author of such material, requesting nonexclusive world rights in all languages for use in the article and in all future editions of it.

Appendix 2: Journal Approval Letter



Department Of Psychology.
Clinical Psychology Unit.

Doctor of Clinical Psychology (DClin Psy) Programme
Clinical supervision training and NHS research training
& consultancy.

Clinical Psychology Unit
Department of Psychology
University of Sheffield
Western Bank
Sheffield S10 2TP UK

Telephone: 0114 2226550
Fax: 0114 2226610
Email: c.harrison@sheffield.ac.uk

14th March 2011

Katharine Tidswell
Third year trainee
Clinical Psychology Unit
University of Sheffield

Dear Katharine

I am writing to indicate our approval of the journal(s) you have nominated for publishing work contained in your research thesis.

Literature Review: Journal of Social & Clinical Psychology

Research Report: Journal of Social & Clinical Psychology

Please ensure that you bind this letter and copies of the relevant Instructions to Authors into an appendix in your thesis.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'A. Thompson', on a white background.

Dr Andrew Thompson
Director of Research Training

Appendix 3: Quantitative Quality Control Checklist

Quality Dimensions	Item	Criteria	Scoring
Design	1.	Was a control or comparison group used?	No =0 Yes=1
	2.	Was the control or comparison group equivalent?	No =0 Yes=1
	3.	Was a follow-up measurement taken to assess sustainability of effects?	No =0 Yes=1
Reporting	4.	Is the hypothesis/aim/objective of the study clearly described?	No =0 Yes=1
	5.	Are the main outcomes to be measured clearly described in the introduction or method section?	No =0 Yes=1
	6.	Are the characteristics of patients included in the study clearly described?	No =0 Yes=1
	7.	Are the interventions of interest clearly described?	No =0 Yes=1
	8.	Are the characteristics of those delivering the intervention clearly described?	No =0 Yes=1
	9.	Are the distributions of principal confounders in each group of subjects to be compared clearly described (were randomisation checks performed)?	No =0 Yes=1
	10.	Are the main findings of the study clearly described?	No =0 Yes=1
	11.	Have the numbers / characteristics of patients lost to follow-up been reported?	No =0 Yes=1
	12.	Has compliance/adherence with the intervention been reported?	No =0 Yes=1
	13.	Have actual probability values been reported for the main outcomes except where the probability value is less than 0.001?	No =0 Yes=1
External validity	14.	Were the subjects asked to participate in the study representative of the entire population from which they were recruited?	No =0 Yes=1
	15.	Were those subjects prepared to participate representative of the entire population from which they	

Appendix 3: Quantitative Quality Control Checklist

Quality Dimensions	Item	Criteria	Scoring
		were recruited?	No =0 Yes=1
	16.	Were the staff, places and facilities where the patients were treated representative of the treatment the majority of patients receive?	No =0 Yes=1
Internal validity – bias	17.	Was an attempt made to blind those measuring the main outcomes of the intervention?	No =0 Yes=1
	18.	If any of the results of the study were based on “data dredging” was this made clear?	No =0 Yes=1
	19.	Do the analyses adjust for different lengths of follow-up of patients?	No =0 Yes=1
	20.	Were the statistical tests used to assess the main outcomes appropriate?	No =0 Yes=1
	21.	Were adjustments made for multiple comparisons?	No =0 Yes=1
	22.	Were the main outcome measures used accurate (valid and reliable)?	No =0 Yes=1
Internal validity - confounding	23.	Were the patients in different intervention groups recruited from the same population?	No =0 Yes=1
	24.	Were study subjects in different intervention groups recruited over the same period of time?	No =0 Yes=1
	25.	Were study subjects randomised to intervention groups?	No =0 Yes=1
	26.	Was there adequate adjustment for confounding in the analyses from which the main findings were drawn (e.g. if randomisation was not successful)?	No =0 Yes=1
	27.	Were there any attempts to monitor treatment fidelity?	No =0 Yes=1
	28.	Were losses of patients to follow-up taken into account (was ITT analysis performed)?	No =0 Yes=1
Power	29.	Did the study report a power analysis that confirmed adequate power to detect effects?	No =0 Yes=1

Appendix 4: Qualitative Quality Control Checklist

Qualitative quality dimensions	Item	Criteria	Scoring
Was there a clear statement of the aims of the research?	1.	Do they consider: The goal of the research?	No =0 Yes=1
	2.	Why it is important?	No =0 Yes=1
	3.	Its relevance?	No =0 Yes=1
Is a qualitative methodology appropriate?	4.	Does the research seek to interpret or illuminate the actions and/or subjective experiences of research participants?	No =0 Yes=1
<i>If yes to the above, continue...</i>			
Was the research design appropriate to address the aims of the research?	5.	Has the researcher justified the research design (e.g., have they discussed how they decided which methods to use)?	No =0 Yes=1
Was the recruitment strategy appropriate to the aims of the research?	6.	Has the researcher explained how the participants were selected?	No =0 Yes=1
	7.	Do they explain why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study?	No =0 Yes=1
	8.	Are there any discussions around recruitment (e.g., why some people chose not to take part)?	No =0 Yes=1

Appendix 4: Qualitative Quality Control Checklist

Qualitative quality dimensions	Item	Criteria	Scoring
Were the data collected in a way that addressed the research issue?	9.	Is the setting for data collection is justified?	No =0 Yes=1
	10.	Is it clear how data were collected (e.g., focus group, semi-structured interview etc)?	No =0 Yes=1
	11.	Does the researcher justify the methods chosen?	No =0 Yes=1
	12.	Has the researcher made the methods explicit (e.g., for interview method, is there an indication of how interviews were conducted, did they use a topic guide?)	No =0 Yes=1
	13.	If methods were modified during the study, has the researcher explained how and why?	No =0 Yes=1
	14.	Is the form of data made clear (e.g., tape recordings, video data, notes etc).	No =0 Yes=1
	15.	Has the researcher discussed saturation of data?	No =0 Yes=1
Has the relationship between researcher and participants been adequately considered?		Consider whether the researcher critically examined their own role, potential bias and influence during:	
	16.	Formulation of research questions?	No =0 Yes=1
	17.	Data collection, including sample recruitment and choice of location?	No =0 Yes=1
	18.	How the researcher responded to events during the study and whether they considered the implications of any changes in the research design?	No =0 Yes=1
Have ethical issues been taken into consideration?	19.	Are there sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained?	No =0 Yes=1

Qualitative quality dimensions	Item	Criteria	Scoring
Was the data analysis sufficiently rigorous?	20.	Does the researcher discuss issues raised by the study (e.g., issues around informed consent or confidentiality or how they have handled the effects of the study on the participants before and after the study)?	No =0 Yes=1
	21.	Has approval been sought from an ethics committee?	No =0 Yes=1
	22.	Is there an in-depth description of the analysis process?	No =0 Yes=1
	23.	Is thematic analysis used? If so, is it clear how the categories/ themes were derived from the data?	No =0 Yes=1
	24.	Does the researcher explain how the data presented were selected from the original sample to demonstrate the analysis process?	No =0 Yes=1
	25.	Are sufficient data presented to support the findings?	No =0 Yes=1
	26.	Are contradictory data taken into account?	No =0 Yes=1
Is there a clear statement of findings?	27.	Does the researcher critically examine their own role, potential bias and influence during analysis and selection of data for presentation?	No =0 Yes=1
	28.	Are the findings made explicit?	No =0 Yes=1
	29.	Is there adequate discussion of the evidence both for and against the researcher's arguments?	No =0 Yes=1
	30.	Does the researcher discuss the credibility of their	

Qualitative quality dimensions	Item	Criteria	Scoring
		findings (e.g., triangulation, respondent validation, more than one analyst).	No =0 Yes=1
	31.	Are the findings discussed in relation to the original research questions?	No =0 Yes=1
How valuable is the research?	32.	Does the researcher discuss the contribution the study makes to existing knowledge or understanding (e.g., do they consider the findings in relation to current practice or policy, or relevant research-based literature)?	No =0 Yes=1
	33.	Do they identify new areas where research is necessary?	No =0 Yes=1
	34.	Have the researchers discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used.	No =0 Yes=1

Appendix 5: Extended Data Extraction Table

Authors	Sample	Design	Intervention(s)	Measures	Analysis	Findings	Critique	Score
Randomised / controlled trials								
Alvidrez et al., 2009	42 Black outpatients non-psychotic DSM IV diagnoses. 69% female, Average age 44.8 years.	RCT & pre & 3 months post treatment entry measures.	Psychoeducational booklet (N=22) versus existing service leaflet (N=20).	PDD , Brief Symptom Inventory, Patient's Experience of Hospitalisation Scale, Treatment Concerns, Helpfulness of Information, Treatment Entry, Treatment Attendance.	General linear models and interaction analyses.	No significant differences by information type on perceived stigma , perceived helpfulness, treatment entry or number of sessions attended. Information type had a differential impact on perceived stigma depending on perceived need for treatment and treatment uncertainty at baseline.	Pro: Objective measure of treatment entry rather than intentions. Con: Variable lag between information session and treatment start date. Eight lost to follow up - no analysis of differences in baseline characteristics compared to completers.	22/29 76%
Griffiths et al., 2004	525 adults with elevated score on depression screening measure. 71% female, average age 36.4 years.	RCT & pre-post postal survey.	5 weekly modules of either: BluePages depression literacy website or MoodGYM CBT skills training website or attention control.	Depression Stigma Scale , Kessler Psychological Distress Scale, Center for Epidemiologic Studies Depression Scale, Depression Literacy, CBT Literacy, Automatic Thoughts Questionnaire.	Repeated measures ANOVAs and mediator analyses.	Significantly greater reduction in personal stigma following BluePages compared to MoodGYM & controls. Significant increase in perceived stigma following MoodGYM.	Pro: ITT analysis using LOCF. Equivalent control group. Bonferroni adjustment. Con: 22.7% response rate - more stigmatised/depressed subgroup underrepresented. Potential floor effect on baseline levels of stigma.	25/29 86%
Knight et al., 2006	21 outpatients with DSM-IV schizophrenia, low self-esteem & significant stigma perception. 55% male, average age 39.3 years.	Waiting list control. Measures at baseline, pre intervention (week 6), post intervention (week 12) and follow up (week 18).	6 weekly (1hr) group CBT sessions. 2 trained CBT therapists per group.	PDD , Index of Self-Esteem, Cybernetic Coping Scale, Empowerment, Positive and Negative Syndrome Scale, Beck Depression Inventory.	Random effects modelling of change during each phase.	No change over control period yet significant improvement in self-esteem, depression, and psychopathology over treatment period. Effects on psychopathology remained over follow-up. No effect on perceived stigma .	Pro: Follow up. Examines "clinical importance" of change. Low attrition (N=2). Representative sample of those attending AMH services with schizophrenia.	21/29 72%

Appendix 5: Extended Data Extraction Table

Authors	Sample	Design	Intervention(s)	Measures	Analysis	Findings	Critique	Score
Link et al., 2002	88 members of community clubhouse program. 50% with schizophrenia diagnosis 61.4% male, average age 40.9 years.	RCT & pre, 6 month measures (N=70). Controls then offered intervention. 24 month post measures (N=55).	16 session, twice-weekly psychosocial group vs TAU control. Delivered by social worker.	PDD, Self-Reported Experiences of Rejection, Stigma Coping, Stigma Related Feelings, Adapted Rosenberg Self-Esteem Scale, Center for Epidemiological Studies Depression Scale.	Multiple regression analyses of change from baseline to 6 months and baseline to 24 months.	At 6 months, no significant differences between intervention and control groups on stigma variables , depression or self-esteem. At 24 months, increased endorsement of secrecy and feelings of shame and difference compared to baseline. Correlations between feeling different and ashamed and both depression and self-esteem had reduced.	Pro: Several measures of stigma experiences. Con: Numbers randomised to intervention unreported. Variable follow-up window across sample. Lack of clarity in reporting follow-up design and attrition. No ITT. Insufficient power to detect small and medium effect sizes.	20/29 69%
McCay et al., 2007	67 outpatients with DS-IV schizophrenia. 18-35 years, within 2 years of initial treatment.	RCT & pre-post measures (or at 12 weeks TAU)..	12 week (90min) manualised psychosocial group plus TAU versus TAU alone. Interventions delivered by supervised clinicians.	PDD , Modified Engulfment Scale, Tennessee Self-concept Scale, Rosenberg Self Esteem Scale, Self Efficacy Scale, Quality of Life Scale, Miller Hope Scale, Positive and negative Symptom Scale, Global Assessment of functioning Scale.	Repeated measures ANOVA and post hoc t-tests.	Significant improvements in engulfment, quality of life and hope in intervention group compared to TAU alone. No improvement in self-concept, self-esteem, self-efficacy or perceived stigma .	Pro: Comparison of completers and non-completers. Manual fidelity monitored. Con: No ITT analysis. No follow up. Employed measure of perceived stigma & coping, not self-stigma as reported.	20/29 69%
Shin & Lukens, 2002	48 Korean-American outpatients with DSM-IV schizophrenia.	RCT & pre-post measures.	10 weeks (90min) of group psychoed + individual supportive therapy (45mins) (N=24) vs individual supportive therapy alone (N=24). Delivered in Korean by psychiatric social worker & graduate student.	PDD , Brief Psychiatric Rating Scale, Family Crisis Oriented Personal Evaluation Scales.	ANCOVA	Perceived stigma and severity of both overall and positive symptoms decreased for the whole sample but to a greater degree in the intervention group. Coping dimensions of social support, mobilising family and reframing improved significantly for the intervention group only.	Pro: Treatment control group. Measures relational coping factors within the family. Meets culturally specific needs. Con: No analysis of adherence or drop out. Does not report family attendance at parallel groups. No follow up.	22/29 76%

Appendix 5: Extended Data Extraction Table

Authors	Sample	Design	Intervention(s)	Measures	Analysis	Findings	Critique	Score
Wade et al., 2011	263 undergrads met clinical cut-off on CORE-OM subscale. 55% female, average age 19.1years.	RCT & pre-post measures.	Single (90min) group counselling session. Therapist self-disclosure versus no disclosure conditions. Delivered by trainee doctoral counsellors under supervision.	Self-stigma of Seeking Help Scale , Clinical Outcomes in Routine Evaluation Outcome Measure, Intentions to Seek Counseling Inventory, Working Alliance Inventory, Group Climate Questionnaire, Session Evaluation Questionnaire, Interest in continued counselling (Y/N).	Multi-level regression and modelling. Hierarchical linear regression.	Reduction in self-stigma of seeking help post-session, predicted by greater session depth and working alliance-bond. Intention to seek help post-session predicted by being female, greater session depth and working alliance-bond, more psychological problems and lower self-stigma of seeking help . Interest in continuing with counselling predicted by lower self-stigma of seeking help and greater session depth.	Pro: Focus on group process and engagement factors. Con: Non-clinical sample limits generalisation. Self-selecting recruitment method misses most stigmatised. No pre-session measure of intention to seek counselling precludes inference of change.	24/29 83%
Pre-post designs								
Lucksted et al., in press	50 outpatients self-reported schizophrenia or major mood disorder. 81% male, average age 51.6 years.	Pre-post measures. (Pre N=50 Post N=34).	9 weekly (90min) sessions of group CBT – Ending Self Stigma. Practice assignments between sessions	Internalized Stigma of Mental Illness Scale , Mental Health Recovery Measure, Multidimensional Scale of Perceived Social Support, Boston University Empowerment Scale.	t tests adjusted for multiple comparisons.	Internalised stigma decreased significantly (ES=0.57) and both recovery orientation (ES=0.64) and social support (ES=0.37) increased significantly post-intervention. Significant (non-adjusted) improvements on alienation, stereotype endorsement, discrimination experience and social withdrawal subscales of ISMI but not on stigma resistance subscale.	Pro: Between session practice assignments increase generalisation of skills outside session. Compare completers and non-completers on baseline scores. Con: No control group. No ITT analysis for 16 lost to follow-up. Self-reported diagnoses.	12/29 41%
Luoma et al., 2006	88 adults with substance use disorder on 28 day residential treatment program 53% female, average age 35.8 years.	Pre-post measures. Differences in measures administered to first 5 groups and last 4 groups.	3 (2hr) group ACT and mindfulness workshops. Experienced ACT therapists with peer supervision. Iterative development and	Internalised Stigma of Substance Abuse, Stigma-related Rejection, PDD(adapted), Stigmatising Attitudes Believability , Internalised Shame Scale, General Health Questionnaire, Self-Concealment Scale, Rosenberg Self-Esteem Scale, Quality of Life Scale, Multidimensional Scale of Perceived Social Support,	t tests. ANOVA with planned linear contrast for cohort effects.	Significant improvement in internalised shame (ES=0.50), internalised stigma (ES=0.67; last 4 groups), general mental health (ES=0.49), self-esteem (ES=0.89), social support from friends (ES=0.54) and self-concealment (ES=0.65; last 4 groups) post treatment. Significant improvements in experiential avoidance (ES=0.56/0.84). No change in stigma related rejection ,	Pro: Completers compared to non-completers. Analysis repeated with all participants yielding similar results to completer sample. Process measures included. Con: Concomitant mental health unreported. No control group - 34 hours per week of concurrent non-specific	12/29 41%

Appendix 5: Extended Data Extraction Table

Authors	Sample	Design	Intervention(s)	Measures	Analysis	Findings	Critique	Score
			refinement of technical content through focus groups with participants following each session.	Acceptance and Action Questionnaire, Believability of Reasons (for using drugs) Scale, Working Alliance Inventory, Client Satisfaction Questionnaire.		<i>perceived stigma</i> (first 5 groups), social support from family or significant others. No change on believability measures.	therapeutic and psychoeducational treatment. No follow-up.	
MacInnes & Lewis, 2008	20 male inpatients with SMI. Average age 31.8 years.	Pre-post measures.	6 weekly group CBT sessions.	<i>PDD</i> , Rosenberg Self Esteem Scale, Shortened General Attitude and Belief Scale, General Health Questionnaire-28	t tests	Significant reduction in <i>perceived stigma</i> . Non-significant increases in self-esteem, self-acceptance and general psychological health.	Pro: Power calculation. N=20 at follow-up. Con: Concomitant inpatient treatment. No control group. No follow-up. Measure of perceived stigma, not self-stigma as reported. No details on therapist.	18/29 62%
Qualitative study								
Roe et al., 2010	18 outpatients with SMI. 61% male, average age 36.	Qualitative. Semi-structured interviews.	20 (1hr) group sessions of Narrative Enhancement & Cognitive Therapy. 2 facilitators (social work, OT or psychology) supervised twice weekly.	Narrative Evaluation of Intervention Interview - 16 open ended questions, administered by 2 graduate students exploring therapeutic aspects of intervention and spontaneous reports of experiences within the intervention.	Grounded theory.	6 domains of improvement: experiential learning, positive change in experience of self, acquiring cognitive skills, enhanced hope, coping and emotional change. Mechanisms: taking an active role, sharing, providing and receiving support and authoring alternative stories.	Pro: Rich exploration of experiential processes and mechanisms of change. High inter rater reliabilities reported for independent analyses. Con: Alternative thematic extrapolations possible.	23/34 68%
Descriptive studies								
Kondrat & Teater, 2009	SMI.	Description of novel approach illustrated by composite case study.	Individual approach utilising empowerment, social constructivism and narrative therapy.	None.	None.	None.	Pro: Integrates theoretical approaches and emphasises empowerment. Con: No experimental investigation of effectiveness.	N/A

Appendix 5: Extended Data Extraction Table

Authors	Sample	Design	Intervention(s)	Measures	Analysis	Findings	Critique	Score
Larson & Corrigan, 2010	50 year old rural male with depression & anxiety around concealing his diagnosis.	Case study.	25 (1 hour) individual CBT sessions. Delivered by female clinical psychologist.	Ideographic measures and behavioural frequency counts.	Descriptive.	Self-reported improvement of symptoms. Weekly worthlessness ratings fell from 8/10 to 2/10. Increase in social and business contacts.	Pro: Transcripts illuminate CBT techniques Couched in stigma theory. Con: No validation of outcome on formal measures.	N/A
Yanos et al., in press	17 outpatients with SMI from clinics in Israel, New York & Indianapolis.	Description of manual development, feedback and composite case study.	20 (1hr) group sessions of Narrative Enhancement & Cognitive Therapy.	None.	Descriptive.	Good engagement and attendance. Participants reported being helped by the group and appeared to make important changes as a result.	Pro: Describes theoretical underpinnings of the approach. Con: No formal outcome measures.. No demographic or diagnostic data on pilot participants.	5/29 17%

Note: Stigma measures in bold italics.

Key: PDD = Perceived Devaluation and Discrimination Scale (Link, 1987). SMI = serious mental illness (e.g. schizophrenia, bipolar disorder).

Appendix 6: Recruitment Email

Clinical Psychology Research Project – 2 credits

Hello

I am conducting a study looking at ways to reduce stigmatisation towards people who are mentally ill.

If you are female, of any age, I would like to invite you to take part in this study. The study will take place at the Psychology Department and should take no more than 30 minutes of your time. You will receive 2 credits for taking part.

Participating in the study will involve filling in a questionnaire about your attitudes towards people with mental illnesses and completing a computerised task which looks at your associations about mental illness.

In accordance with ethical guidelines, your responses will be confidential and you can withdraw from the study at any time without giving a reason.

If you wish to take part in the study, please follow the link below and book a slot on the Online Participation System for the study titled '*Exploring attitudes and behaviours towards people with mental illnesses*':

<http://www.sheffield.ac.uk/psychology/current/orps>

If you have any questions about the study, please do not hesitate to contact me:
pcp08kt@sheffield.ac.uk .

Thank you for your interest in my study

Best wishes

Katharine Tidswell

Trainee Clinical Psychologist
Clinical Psychology Unit
The University of Sheffield
S10 2TN

Appendix 7a: Ethical Approval Letter



The
University
Of
Sheffield.

K Tidswell <pcp08kt@sheffield.ac.uk>

Fwd: Approval of your research proposal

p.sheeran@sheffield.ac.uk <paschal.sheeran@googlemail.com>
To: K Tidswell <pcp08kt@sheffield.ac.uk>

8 February 2011 16:34

----- Forwarded message -----

From: **research ethics application management system Psychology Research Ethics Application Management System**
<no_reply@psychology>
Date: 8 February 2011 15:19
Subject: Approval of your research proposal
To: P.Sheeran@sheffield.ac.uk

Your submission to the Department of Psychology Ethics Sub-Committee (DESC) entitled "Promoting positive behaviours towards people with mental illness" has now been reviewed. The committee believed that your methods and procedures conformed to University and BPS Guidelines.

I am therefore pleased to inform you that the ethics of your research are approved. You may now commence the empirical work.

Yours sincerely,

Dr Thomas L Webb

Acting Chair, DESC

Appendix 7b: Scientific Approval Letter



The
University
Of
Sheffield.

Department Of Psychology.
Clinical Psychology Unit.

Doctor of Clinical Psychology (DClin Psy) Programme
Clinical supervision training and NHS research training
& consultancy.

**Clinical Psychology Unit
Department of Psychology
University of Sheffield
Western Bank
Sheffield S10 2TP UK**

Telephone: 0114 2226570
Fax: 0114 2226610
Email: dclinpsy@sheffield.ac.uk
Please address any correspondence to Ms. Christie
Harrison, Research Support Officer

23rd February 2011

To: Research Governance Office

Dear Sir/Madam,

RE: Confirmation of Scientific Approval and indemnity of enclosed Research Project

Project title: Promoting positive behaviours towards people with mental illness: Using implementation intentions to overcome stereotyped responses rooted in implicit associations
Investigators: Katharine Tisdwell (DClin Psy Trainee, University of Sheffield); Prof Paschal Sheeran (Academic Supervisor, University of Sheffield).

I write to confirm that the enclosed proposal forms part of the educational requirements for the Doctoral Clinical Psychology Qualification (DClin Psy) run by the Clinical Psychology Unit, University of Sheffield.

Three independent reviewers appointed by the Clinical Psychology Unit Research Sub-committee have scientifically reviewed it.

I can confirm that all necessary amendments have been made to the satisfaction of the reviewers, who are now happy that the proposed study is of sound scientific quality. Consequently, the University will also indemnify it, and would be happy to act as research sponsor once ethical approval has been gained.

Given the above, I would remind you that the Unit already has an agreement with your office to exempt this proposal from further scientific review. However, if you require any further information, please do not hesitate to contact me.

Yours sincerely

Dr. Andrew Thompson
Director of Research Training

Cc. Katharine Tisdwell

Appendix 8: Participant Information Sheet



Participant Information Sheet – V2 24/1/2011

Exploring attitudes and behaviours towards people with mental illnesses

Invitation to take part in a study

Thank you for showing interest in this study. Before you decide whether to take part, please read through the following information and ask the researcher if you have any further questions.

Purpose of the study

This study is investigating ways to reduce stigmatisation towards people with mental illnesses.

What will happen to me if I decide to take part?

You will be asked to fill out a questionnaire about your attitudes towards people with mental illnesses and then to complete a computerised task which looks at your associations about mental illness.

Following this, you will meet briefly with a person who has a mental illness. This meeting will not be observed or recorded in any way. It is just an opportunity for you to interact with someone who has a mental illness. You will then be asked to answer a few questions about the experience.

Taking part should take no longer than 30 minutes all together. You will be fully debriefed after taking part in the study.

Will my information be kept confidential?

All information collected about you during the course of the research will be kept strictly confidential and stored securely. Your responses to the questions will be anonymised and only aggregated scores will be used for analysis. You will not be able to be identified in any reports or publications. Any information held about you will be destroyed following the completion of the study.

Why have I been chosen?

We are asking all female undergraduate psychology students if they would like to take part in the study.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. You can still withdraw at any time without giving a reason.

What are the possible advantages and disadvantages of taking part?

Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will inform interventions to reduce stigmatisation towards people with mental illnesses. A possible disadvantage is giving up your time to participate.

Who is organising and funding the research?

The research is organised and funded by the University of Sheffield.

Who has ethically reviewed the project?

The study has received ethical approval from the Department of Psychology Ethics Committee.

What will happen to the results of the study?

The results of this study will be published in a thesis report and be submitted to academic journals from July 2011 onwards. You will not be identifiable in these reports.

As we are looking at average scores across a number of participants, it will not be possible to provide individual feedback to participants.

What if I am not happy?

If you are unhappy with any aspect of the study, in the first instance please contact the Principal Investigator, Prof. Paschal Sheeran at the Clinical Psychology Unit (address below). Should you feel your complaint is not then handled satisfactorily you should then contact: Dr David Fletcher, Registrar & Secretary's Office, University of Sheffield, Firth Court, Western Bank, Sheffield, S10 2TN.

Contact for further information

Should you require further information or wish to withdraw from the study please contact Katharine Tidswell, Trainee Clinical Psychologist, C/O The Clinical Psychology Unit, Department of Psychology, The University of Sheffield, Western Bank, Sheffield, S10 2TN. Email: pcp08kt@sheffield.ac.uk

**If you decide to take part, you will be given a copy of this information sheet
and a signed consent form.**

Thank you for taking the time to read this information.

Appendix 9: Participant Consent Form



Participant Consent Sheet

V2 24/1/2011

Exploring attitudes and behaviours towards people with mental illnesses

Name of researcher: Katharine Tidswell: pcp08kt@sheffield.ac.uk

Participant Identification Number for this study:

Please
initial
boxes

1. I confirm that I have read and understood the information sheet (V2) for the above study dated (24/1/2011). I have had time to consider the information and have been given the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw my consent at any time without giving any reason and without there being any negative consequences.
3. I understand that my responses will be anonymised before analysis and all identifying information will be stored securely and will remain confidential. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.
4. I understand my individual responses will be used to calculate average scores and therefore I will be unable to receive any individual feedback on my responses.
5. I agree to take part in the study.

Name of Participant

Date

Signature

Name of Person taking Consent

Date

Signature

Copies: One copy to be given to the participant with a copy of the information sheet; one copy to be retained by the researcher and stored in a secure location.

Appendix 10: Explicit Attitude Questionnaire

The explicit attitude questionnaire has been removed from the thesis in accordance with copyright legislation.

Appendix 10: Explicit Attitude Questionnaire

The explicit attitude questionnaire has been removed from the thesis in accordance with copyright legislation.

Appendix 11a: Experimental Manipulation for Control Condition

Ground rules for interaction

In a while I am going to introduce you to a man called John who has schizophrenia and you'll be able to have a conversation with him for about five minutes.

I'll leave the room, there'll be no hidden cameras or feedback, this is just an opportunity for you to interact with someone who has a mental illness.

Afterwards I'll ask you some questions about the meeting.

Appendix 11b: Experimental Manipulation for Goal Intention Condition

Ground rules for interaction

In a while I am going to introduce you to a man called John who has schizophrenia and you'll be able to have a conversation with him for about five minutes.

I'll leave the room, there'll be no hidden cameras or feedback, this is just an opportunity for you to interact with someone who has a mental illness.

Afterwards I'll ask you some questions about the meeting.

Your goal is...

*To be friendly and warm
to this person.*

Please repeat this statement to yourself three times.

1. How committed are you to the goal of being friendly and warm to this person?

(Please circle one number)

Not committed					Very committed				
1	2	3	4	5	6	7	8	9	10

Appendix 11c: Experimental manipulation for Implementation Intention Condition

Ground rules for interaction

In a while I am going to introduce you to a man called John who has schizophrenia and you'll be able to have a conversation with him for about five minutes.

I'll leave the room, there'll be no hidden cameras or feedback, this is just an opportunity for you to interact with someone who has a mental illness.

Afterwards I'll ask you some questions about the meeting.

Your goal is...

*To be friendly and warm
to this person.*

Tell yourself...

*"As soon as I get a chance to be
friendly and warm to this person,
then I'll take it."*

Please repeat this statement to yourself three times.

1. How committed are you to the goal of being friendly and warm to this person?

(Please circle one number)

Not committed										Very committed	
1	2	3	4	5	6	7	8	9	10		

Appendix 12a: SC-IAT Screen Shots - Instructions

In this experiment you will be presented with a set of words to classify into groups. This task requires you to classify items as quickly as you can while making as few mistakes as possible. Going too slow or making too many mistakes will result in an uninterpretable score.

The following is a list of category labels for the words, and the items that belong to each of the categories.

APPROACH - advance, approach, closer, forward, toward

AVOID - away, avoid, escape, leave, withdraw

SCHIZOPHRENIC - schizophrenic, paranoid, psychotic, psychosis, schizophrenia

Keep in mind:

- * Keep your index fingers above the *e* and *i* keys to ensure a rapid response.
- * Two labels at the top of the screen will tell you which words go with which key.
- * Each word has a correct classification. *Most of these will be easy.*
- * The test gives no results if you go *slow* - please try to go as fast as possible.
- * Expect to make a few mistakes because of going fast. That's OK.

Please press the space bar to continue.

APPROACH or
SCHIZOPHRENIC

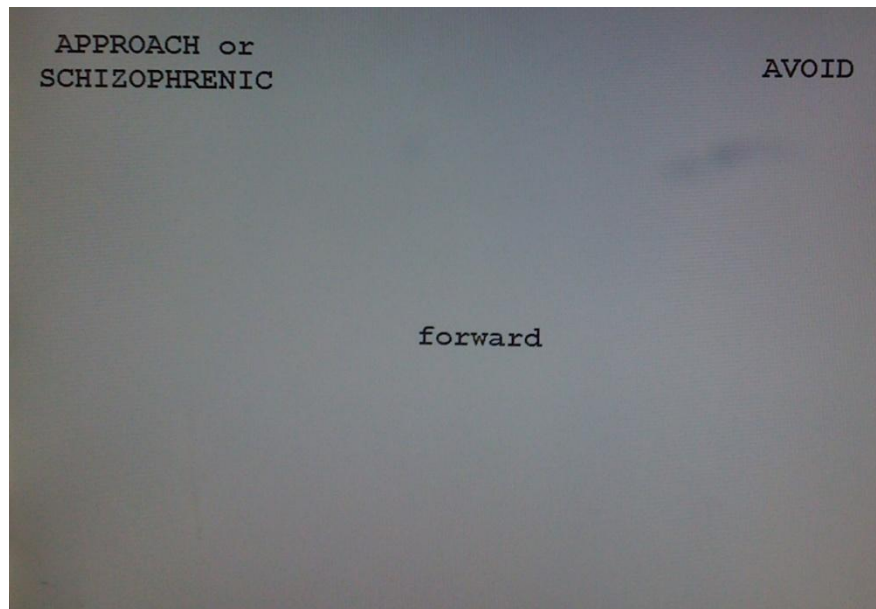
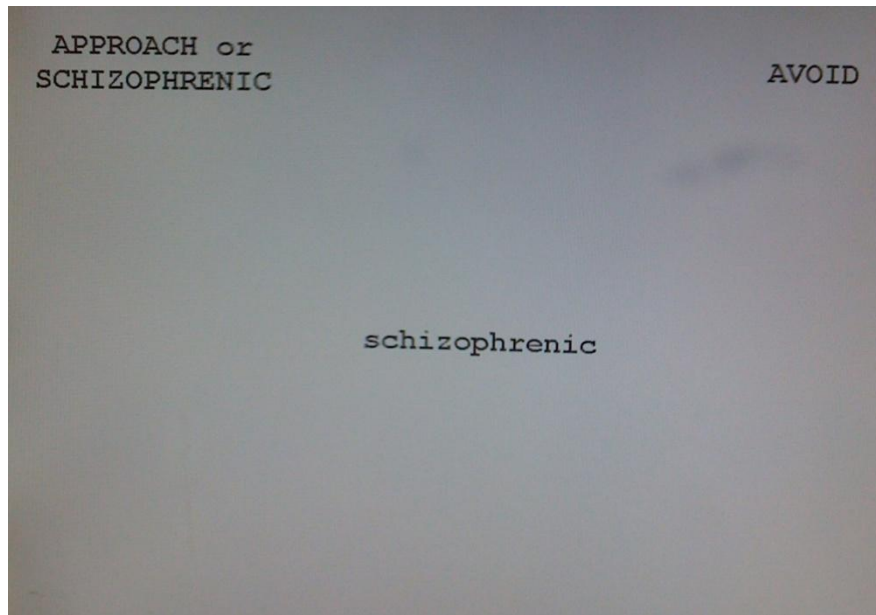
AVOID

Your task is to press the *e* key for words indicated by the concept on the left, and press the *i* key for words indicated by the concept on the right.

An X will appear when you make an error. Whenever the X appears, correct the mistake by pressing the other key.

Press any key to begin.

Appendix 12b: SC-IAT Screen Shots – Example Stimuli and Error Notification



Beliefs about the nature of the experiment: Questionnaire

1. Had you heard anything about this study prior to participating?

- No
- Yes

If yes, what had you heard?

2. What do you think is the key measure in this study?

Appendix 14: Certainty Rating

Post debrief question

1. How certain were you that you would be meeting a person with schizophrenia today?

(Please circle one number)

Very uncertain										Very certain
1	2	3	4	5	6	7	8	9	10	

This is the end of the study.

Thank you very much for participating.

Appendix 15: Information Sheet About Schizophrenia



Information about schizophrenia

Schizophrenia is one term used to refer to a cluster of psychiatric disorders which affect people's perception, thoughts, affect and behaviour. Not everyone with schizophrenia has the same symptoms and experiences. The combination is influenced by the individual's own circumstances. Vulnerability towards developing schizophrenia is thought to result from a complex interaction of biological, psychological and social factors. This vulnerability affects the individual's sensitivity to environmental stressors which can trigger the development of schizophrenia.

One in one hundred people will develop schizophrenia in their lifetime. The onset of schizophrenia typically occurs in early adult life (average 25 years) and is earlier in men than in women. The course of schizophrenia varies widely. Some individuals experience a very frightening sudden onset whereas the development of schizophrenia in most cases is preceded by a 'prodromal' period. In the prodromal period, an individual may show deterioration in personal functioning and exhibit difficulties with motivation, memory, social withdrawal, poor self-care and blunted affect. Usually an acute phase follows, characterised by 'positive symptoms' such as hallucinations, delusions, behavioural disturbance and thought disorder. Resolution of the acute phase, usually following treatment, can lead to full recovery in between 14-20% of individuals. For the remainder, 'negative symptoms' similar to those seen in the prodromal phase can re-emerge. This phase can continue for many years and may include recurrent 'relapses' back to the acute phase. Relapses can be triggered by stress, social adversity or isolation.

Schizophrenia has a considerable impact on people's personal, social and occupational lives and this is often compounded by stigma and social exclusion. The World Health Organisation places schizophrenia within the top ten medical disorders causing disability.

For further information about schizophrenia (and other mental illnesses):

The journal *Schizophrenia Research* (available through MUSE 'find it') has published a series of five articles called *Schizophrenia, "Just the facts"* from 2008 onwards, covering epidemiology and aetiology, neurobiology, clinical features and, most recently:

Tandon, R., Nasrallah, H. A. & Keshavan, M. S. (2010). Schizophrenia, "Just the Facts" 5. Treatment and prevention past, present and future. *Schizophrenia Research*, 122, 1-23.

Please see the *National Institute for Health and Clinical Excellence* for clinical guidance on working with various mental illnesses - www.nice.org.uk

Mind - www.mind.org.uk

Rethink - www.rethink.org

If you would like to gain experience of meeting or working with people with mental illnesses:

SheffieldVolunteering provide a range projects which give students the opportunity to befriend people with mental illnesses. Go to: www.sheffieldvolunteering.info

The *Hearing Voices Network* - www.hearingvoices.org - and the *National Paranoia Network* run training events for members of the general public and charge reduced rates for students.

Appendix 16: Debrief Sheet



Participant Debrief Sheet – V2 24/1/2011

Exploring attitudes and behaviours towards people with mental illnesses

Thank you for taking the time to participate in this study. We are interested in the relationship between attitudes towards people with mental illnesses and social behaviours towards this group. We know that people often build up negative associations towards people in stigmatised groups, including people with mental illnesses. These are *implicit* attitudes which we may not be aware of or may find very difficult to admit to. Often our *explicit* attitudes towards people with mental illnesses are more favourable, especially if we prioritise values such as equality and social justice.

Implicit attitudes are difficult to change and are likely to influence our behaviour towards people with mental illnesses. Members of stigmatised groups are often very sensitive to people reacting negatively towards them, compounding their suffering. We believe that a brief intervention called an 'implementation intention' may enable people to behave more positively towards people with mental illnesses regardless of their implicit attitudes. Implementation intentions are plans which link a situation or opportunity with a desired response.

When you arrived, you answered a questionnaire accessing explicit attitudes towards people with mental illnesses. You were then told that you would have the opportunity to meet and speak to a man with schizophrenia called 'John'. Some people were given the implementation intention "*As soon as I get a chance to be friendly and warm to this person, then I'll take it*", whereas others were given no instructions or a goal intention to "*to be friendly and warm to this person*". You then completed a computerised *Implicit Association Test* which accessed your implicit attitudes towards people with schizophrenia.

You were taken to the meeting room and asked to set out two chairs in anticipation of meeting 'John'. As you know, 'John' did not arrive and was never in fact intended to. The distance between the chairs you laid out was recorded as a measure of social behaviour towards somebody with a mental illness. We anticipate that participants given implementation intentions set the chairs closer together than those who formed goal intentions or were given no instructions.

Your data remains anonymous and will be aggregated towards the analysis. Individual feedback cannot be provided. If you wish to have your responses withdrawn from the study for any reason, please contact Katharine Tidswell at pcp08kt@sheffield.ac.uk and your data will be removed and destroyed.

If you have felt distressed by any of the questions or procedures in this study, please contact your GP or the University's counselling service (0114 2224134).

As you can appreciate, this study could not have worked had you known this information in advance.

Please keep the content and purpose of this study confidential as recruitment continues.

Thank you again for your help with this study.

References

- Gollwitzer, P. (1999). Implementation intentions: strong effects of simple plans. *American Psychologist*, 54(7), 493-503.
- Norman, R. M. G., Gawronski, B., Hampson, E., Sorrentino, R. M., Szeto, A. & Ye, Y. (2010). Physical proximity in anticipation of meeting someone with schizophrenia: The role of explicit evaluations, implicit evaluations and cortisol levels. *Schizophrenia Research*, 124, 74-80.