The impact of stigma on emotional distress and recovery from psychosis: The mediatory role of internalised shame and self-esteem

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Abstract

Internalised shame and self-esteem have both been proposed to play an integral role in the relationship between stigma and its negative psychological sequalae in people who experience psychosis, but there has been little quantitative exploration to examine their roles further. The aim of this study was to examine the relationship of stigma (experienced and perceived) with emotional distress and recovery in psychosis, and to examine internalised shame and self-esteem as potential mediators. A total of 79 participants were included for the purposes of this study. Participants were administered a battery of assessment measures examining experienced and perceived stigma, internalised shame, self-esteem, depression, hopelessness, and personal recovery. Results illustrated that stigma (experienced and perceived) was significantly associated with internalised shame, low self-esteem, depression, hopelessness and poor personal recovery. Stigma (experienced and perceived) and its relationship with depression, hopelessness and personal recovery was mediated by both internalised shame and low self-esteem. In conclusion, stigma can have significant negative emotional consequences and impede recovery in people with psychosis. This may indicate that stigma needs to be addressed therapeutically for people with psychosis with a particular emphasis on addressing internalised shame and low self-esteem.

1. Introduction

Stigma is a significant difficulty for individuals who experience psychosis with 87% of a large surveyed sample reporting experiences of stigma (The Schizophrenia Commission, 2012). Common stereotypes about people with psychosis, such as dangerousness and unpredictability, cause stigmatising beliefs and behaviours to develop within the public (Corrigan et al., 2012). Therefore, individuals with psychosis have to cope with both the distressing experiences of psychosis and stigma and discrimination from their social system (Corrigan and Watson, 2002a). A study which conducted qualitative interviews with individuals who experience psychosis identified that experiences of discrimination, including physical abuse, verbal abuse, and being patronised, are frequently reported (Dinos et al., 2004).

Researchers have attempted to conceptualise stigma and have developed a number of important sub-components in order to understand why stigma occurs and how it impacts on the individual (Corrigan and Watson, 2002b; Link and Phelan, 2001). Corrigan and Watson (2002b) distinguished between public stigma, the negative stereotypes, beliefs and discriminatory behaviours held by the public, and self-stigma, the internalisation of negative stereotypes, beliefs and discriminatory behaviours. A more recent conceptualisation focused specifically on the personal impacts of stigma. Brohan et al. (2010) outlined personal stigma as having three components of experienced, perceived and internalised stigma. Experienced stigma can be understood as overt acts of discrimination which occur towards the individual, such as abuse, bullying and lack of opportunity (Link and Phelan, 2001). Perceived stigma occurs when an individual believes they belong to a stigmatised group, and also that the negative stereotypes associated with this group apply to themselves (Kleim et al., 2008). These can both lead to internalised stigma, which is the sum of negative cognitive, behavioural and emotional consequences resulting from experienced and perceived stigma (Corrigan and Watson, 2002b). These consequences include low self-esteem, internal shame, depression, hopelessness, and poorer personal recovery (Birchwood et al., 2007; Link et al., 2001; Livingston and Boyd, 2010).

The way in which experienced and perceived stigma leads to internalised stigma, i.e. the internalisation of shame, blame, hopelessness, guilt, and fear of discrimination resulting from stigma (Corrigan and Watson, 2002b), has been of particular interest to researchers. One main hypothesis is that self-esteem mediates the relationship between experienced and perceived

stigma and the personal impact of stigma (Link et al., 2001; Vass et al., 2015). Watson et al. (2007) suggest that agreement with, and self-application of, the negative stereotypes decreases self-esteem and self-efficacy which leads to emotional distress. Furthermore, Vass et al. (2015) identified self-esteem as a mediator between experienced stigma with positive symptoms of psychosis and personal recovery. Drapalski et al. (2013) have also highlighted that self-esteem plays a mediatory role between poor self-concept, resulting from stigma, and emotional distress such as depression, anxiety and psychiatric symptoms. It has been suggested that internalised shame (a painful affect associated with perceptions that one has personal attributes that others will find undesirable; Gilbert, 2000) may play a similar role in explaining the impacts of experienced stigma and discrimination in people who experience psychosis (Birchwood et al., 2007), although this has not been investigated as thoroughly as self-esteem. Based on social mentality theory (SMT), Birchwood et al. (2007) outlined that stigma is a social threat which challenges the stigmatised person's social ranking, leading them to feel inferior to others. This perception of being of low social rank can lead to feelings of internalised shame (Gilbert, 2010). Internalised shame has been acknowledged to be a sub-component of internalised stigma in a number of research studies examining the phenomenon (Barney et al., 2010; Link et al., 2015; Ritscher and Phelan, 2004).

As outlined, internalised shame and self-esteem have been identified as potential mediators in the relationship between experienced stigma and emotional distress in psychosis has been proposed (Birchwood et al., 2007; Watson et al., 2007). Both internalised shame and self-esteem have been found to be associated with depression, hopelessness, and a poorer prognosis for personal recovery in people with experiences of psychosis and stigma (Birchwood et al., 2007; Vass et al., 2015). As stated, internal shame has been acknowledged as a component of internalised stigma (Link et al., 2015), but its relationship as a mediator between stigma (experienced and perceived) and its personal consequences (recovery and emotional distress) has not been examined in the same manner as self-esteem.

Internalised shame and low self-esteem both reflect intrinsic feelings about oneself which manifest at a deep emotional level (Fennell, 1998; Gilbert, 2010). However, they have been proposed to be the negative emotional consequences of different emotional systems (the drive and compassion systems respectively; Gilbert, 2009). Therefore, the identification of their roles would provide potentially useful information regarding the psychological mechanisms underpinning the negative personal consequences of stigma. The aim of this study is to examine the relationship between stigma (experienced and perceived) with internalised

shame, self-esteem, emotional distress (depression, and hopelessness), and personal recovery. Firstly, it will examine whether experienced and perceived stigma are predictors of depression, hopelessness and personal recovery in psychosis. Secondly, internalised shame and self-esteem will be examined as mediators within these relationships.

2. Method

2.1 Participants

Participants for this current study were recruited from the sample (n=79) of the semi-structured interview measure of stigma (SIMS) study (Wood et al., 2016). Participants were either recruited from (a) an inner London acute psychiatric inpatient unit and identified via nursing staff or (b) a trial examining the efficacy of Cognitive Therapy for internalised stigma in psychosis (Morrison et al., 2016). Participants were included if they were (i) aged between 18-65, and (ii) met ICD-10 criteria for schizophrenia, schizoaffective disorder or delusional disorder or met criteria for an Early Intervention service to allow for diagnostic uncertainty. Exclusion criteria were moderate to severe learning disability, organic impairment, not having the capacity to consent to research participation, non-English speaking, severe thought disorder**,** and a primary diagnosis of drug and alcohol dependency.

2.2.Materials

Independent variables

The Semi-structured Interview Measure of Stigma (SIMS) in psychosis was used as a measure of stigma (Wood et al., 2016). It is an eleven item semi-structured interview which examines interviewee's experienced stigma, perceived stigma and internalised stigma. It is conducted by an interviewer who rates participant responses on a scale of 0 (no stigma present) to 4 (severe stigma present). It has good internal consistency with a Cronbach's Alpha score of $\alpha=0.87$ and high inter rater reliability (Intraclass Correlations of 0.87 – 0.94). Only the experienced stigma and perceived stigma items were used for the purposes of the analysis. Higher scores indicate higher levels of stigma.

Mediator variable

Internalised shame was measured using the Internalised Shame Scale (ISS; (Cook, 1987), a 30-item questionnaire with responses scored on a 5-point Likert scale from 'never' to 'almost always'. Example items include 'I feel like I am never quite good enough' and 'I feel

somehow left out'. The measure has good reliability, Cronbach's Alpha score of α=0.95. Higher scores indicate higher levels of internalised shame.

Self-esteem was measured using the Self-Esteem Rating Scale – Short form (SERS; (Lecomte et al., 2006), a 20-item questionnaire with responses scored on a 7-point Likert scale from never to always with higher scores indicating higher self-esteem. It has good internal consistency of Cronbach's Alpha score of α=0.77. The SERS illustrated good validity with people who experience psychosis.

Dependent variables

The Process of Recovery Questionnaire – Short form (QPR; (Law et al., 2014) was used to measure user-defined recovery. This is a 15-item questionnaire which was developed collaboratively with service users and which measures subjective recovery. Items are scored on a 5-point Likert scale, from 'disagree strongly' to 'agree strongly'. Increased scores illustrate higher levels of perceived recovery. The QPR illustrated good reliability and internal consistency (intrapersonal subscale α=0.94; interpersonal subscale 2 α=0.77).

The Beck Depression Inventory for Primary Care (BDI-7; (Winter et al., 1999) was used to measure depression. It is a 7-item scale and a score of greater than 3 indicates a probable diagnosis of major depressive disorder. Higher scores indicate increased levels of depression. It has good internal consistency (α=0.85).

The Beck Hopelessness Scale (BHS; (Beck et al., 1974) was used to measure hopelessness. It consists of 20 true/false items covering three factors: 'feelings about the future', 'loss of motivation'; and 'future expectations'. Internal consistency of scores was satisfactory (Cronbach's alpha = .88). Higher scores show increased hopelessness.

2.3. Procedure

Full ethical approval was sought for this study from the NHS Research Ethics Committee (14/LO/2164) and the study was sponsored by the University of Manchester. Once informed consent was obtained, participants were administered a battery of outcome measures. The SIMS was conducted by the authors (LW, EB and GE) with the participants. For the rest of the measures, the participant was given a choice of completing the measures with the researcher or on their own, in order to reduce participant burden.

2.4. Statistical Analysis

Data analysis was conducted with IBM SPSS version 20 (IBM Corp, 2011). Missing data (<20%) for individual outcome measure items was replaced with the mean. Missing measures were excluded pairwise. Data was checked for normality through examination of skewness and kurtosis. All data were normally distributed. Missing data was excluded pairwise for all regression analysis.

Exploratory data analysis was conducted through examination of the Pearson correlation coefficient (one-tailed) in order to examine relationships between variables. Independent analysis was conducted to examine the role of self-esteem and internalised shame as mediators respectively. In order to examine the relationships between the independent variables (IV), mediator variable (M) and dependent variables (DV), a number of multiple linear regression analyses were conducted following guidance by Baron and Kenny (1986) to examine if potential mediation was present. All models met the assumptions required for a regression analysis, including assumptions required to ensure multicollinearity was not present (Variance Inflation Factor: VIF). Firstly, the IV was entered as a predictor variable to M and the DV respectively, as recommended by Baron and Kenny (1986). The IV and M were subsequently entered together to predict the DV. If the IV became non–significant, it was assumed the mediation was likely. Mediation analysis was conducted using the procedures outlined by Hayes and Preacher (2010) using the SPSS macro. Mediation analysis was conducted only when suggested by the regression analysis. Significant indirect effects were examined using the bootstrapped bias-corrected confidence intervals of 1000 bootstraps. Mediating effects were considered present when 0 did not fall between the confidence intervals.

3. Results

A total of 79 participants took part in the study, the average age of the sample was 36.49 (SD: 11.69; range: 18-62). Further demographics can be found in table 1.

[INSERT TABLE 1 HERE]

3.1. Exploratory data analysis

Pearson correlation coefficients and descriptive statistics can be found in table 2. The mean scores of the outcome variables illustrate a sample with moderate levels of stigma (Wood et al., 2016). The sample is experiencing relatively high levels of internalised shame (>50 indicating a problematic level (Cook, 1987), along with moderate depression and hopelessness (Beck et al., 1974; Beck et al., 1996). Furthermore the sample has a low personal recovery score indicating that the sample is not recovered (Law et al., 2014).

The correlation coefficients indicate that experienced (SIMS-E) and perceived (SIMS-P) stigma are highly correlated to internalised shame, hopelessness, depression and negative correlated to personal recovery. Furthermore, internalised shame is also highly correlated with hopelessness and depression, and negatively correlated with personal recovery.

[INSERT TABLE 2 HERE]

3.2. Linear Regression

All multiple linear regression analysis coefficient descriptives can be found in table 3. To follow guidance outlined by Baron and Kenny (1986), both IV's were regressed with both mediator variables to ensure a significant relationship was identified which was essential for further exploration of mediation. Experienced stigma significantly predicted self-esteem (F (1,75) = 46.635, r^2=0.383, p<0.001) and internalised shame (F (1,61) = 39.652, r^2=0.394, p<0.001). Similarly perceived stigma also significantly predicted self-esteem (F (1,75) = 25.154, r^2=0.251, p<0.001) and internalised shame (F (1,61) = 18.764, r^2=0.235, p<0.001).

To further explore the relationships between the IVs, DVs, and potential mediators, a number of linear regression analyses were conducted. These analyses aimed to (i) explore the relationships between variables to meet the required aims of the study, and (ii) to identify where potential mediatory relationships may be present.

Experienced stigma predicted depression (F (1, 75)=19.161, r^2=0.203, $p<0.001$), and the model significantly improved when self-esteem was included as a predictor (F(2,74)=61.044, r^2=0.623, $p<0.001$) with experienced stigma becoming insignificant. Internalised shame had the same impact when entered as a predictor (F (2, 60) = 57.461, r^2=0.657, $p<0.001$), with experienced stigma becoming insignificant. The same was found with perceived stigma (F(1,75)=16.919, r^2=0.184, $p<0.01$) when self-esteem was then entered as a predictor (F(2,74)=60.887, r^2=0.622, $p<0.001$), and internalised shame (F (2, 60) = 56.441, r^2=0.653, $p<0.001$) respectively. This suggests mediation is present within all models.

Experienced stigma significantly predicted hopelessness (F(1,74)=14.298, r^2=0.162, $p<0.01$), and the model improved when self-esteem was entered into the model (F(2,73)=49.345, r^2=0.575, $p<0.001$) with experienced stigma becoming an insignificant predictor. The same occurred when internalised shame was entered alongside experienced stigma (F (2,59) = 31.836, r^2=0.519, $p<0.001$). Perceived stigma significantly predicted hopelessness (F(1,74)=10.851151, r^2=0.128, $p<0.05$) and the model improved when self-esteem was entered into the model (F(2 ,73)=48.229, r^2=0.569, $p<0.001$) and perceived stigma became a non-significant predictor. The same occurred when internalised shame was entered as a predictor alongside perceived stigma (F (2,59) = 32.105, r^2=0.521, $p<0.001$). Again, all models suggested mediation was present.

Experienced stigma significantly predicted personal recovery (F (1,74) = 5.484, r^2=0.070, $p<0.05$). When self-esteem was also entered as a predictor to the model improved and explained more variance (F=(2,73)=31.289., r^2=0.465, $p<0.001$) and experienced stigma became a less significant predictor indicating that it may be a potential mediator (table 3). The same occurred when internalised shame was entered as a predictor alongside experienced stigma (F (2, 58) = 26.354, r^2=0.476, $p<0.001$). Similarly, perceived stigma significantly predicted personal recovery (F(1,74) =4.384, r^2=0.057, $p<0.05$), and when self-esteem was also entered into the model, the model significantly improved (F(2,53)=28.282, r^2=0.441, $p<0.001$) and perceived stigma became a non-significant predictor (table 3). This occurred when internalised shame was entered alongside perceived stigma (F (2, 58) = 26.610, r^2=0.479, $p<0.001$). All models suggest that mediation may be present.

[INSERT TABLE 3 HERE]

3.3.Mediation analysis

As suggested by the regression analysis, internalised shame and self-esteem were suggested as potential mediators between stigma (experienced and perceived) with depression, personal recovery and hopelessness. In order to explore these relationships, Hayes and Preacher (2010) SPSS macro was utilised to examine the mediatory role of internalised shame and self-esteem respectively. Mediation descriptives for internalised shame and self-esteem can be found in table 4. Both self-esteem and internalised shame were found to mediate the relationships between experienced and perceived stigma, with each of depression, recovery and hopelessness. The kappa statistic suggested moderate effect sizes for all mediators.

[INSERT TABLE 4 HERE]

4. **Discussion**

This study demonstrated that stigma was significantly associated with internalised shame, low self-esteem, depression, hopelessness, and poorer personal recovery, supporting previous research (Link et al., 2001; Vass et al., 2015). The data was also consistent with internalised shame and self-esteem both being mediators in their respective relationships between stigma (experienced and percieved) and depression, hopelessness and personal recovery in psychosis. This indicates that there are potentially different psychological mechanisms underpinning emotional distress caused by stigma.

The analysis demonstrated that internalised shame mediated the relationship between stigma and depression, hopelessness and recovery respectively. To the authors' knowledge, the relationship between stigma and internalised shame has not previously been quantitatively examined in people who experience psychosis. Internalised shame is widely noted as an integral part of mental distress and occurs due to threatening and traumatic life experience (Gilbert, 2010). Therefore, given that stigma is a threatening social experience which causes devaluation and loss of social status (Link and Phelan, 2001), it is unsurprising that internalised shame has been identified as a mediator between stigma and negative emotional consequences. Importantly, internalised shame played a mediatory role with both IVs of stigma and all DVs which demonstrates that it has a role in understanding stigma experiences. As stated in the introduction, internalised shame can be differentiated from self-esteem due to it being a prototypical emotion experienced as a result of a lowering of social status and perceived inferiority (Gruenewald et al., 2004), whereas self-esteem is not explicitly defined as a relational concept and is considered to be a personal attitude about the self (Heatherton and Wyland, 2003).

This study also identified that self-esteem mediated the relationships between stigma and depression, hopelessness and personal recovery. This supports the previous findings from Vass et al. (2015) who identified that self-esteem mediated the relationship between experiences of stigma and personal recovery. Self-esteem has been identified in the service user-informed recovery literature as an important component of recovery (Andreasen et al., 2003). For example, in Pitt et al. (2007) user-led study qualitatively examining recovery from psychosis, the theme 'rebuilding self' incorporated the importance of improving self-esteem. Hopelessness has been widely identified with stigma (Livingston and Boyd, 2010), but this

relationship has not been shown to be mediated by self-esteem in previous research. Again, these findings indicate that if service users are presenting with hopelessness and poor levels of personal recovery, assessment of their self-esteem may be helpful.

One of the strengths of the study was its examination of perceived stigma. Interestingly, this study identified that perceived stigma was also associated with the same outcomes and trends as experienced stigma which has not been identified in previous research. This research may support the important idea that a person does not have to have overt experiences of stigma to experience the negative consequences of stigma (Brohan et al., 2010). Perceived stigma was associated with all dependent variables and was mediated by both self-esteem and internalised shame. However, this must be interpreted tentatively as perceived stigma was not examined in a model along with experienced stigma, which may share some or all of its significant variance. This has important clinical implications, in that perceived stigma should be explored with people who experience psychosis to examine its potential impacts.

This study also has a number of limitations. It was a secondary analysis of data collected for a research trial and validation of the SIMS measure (Morrison et al., 2016; Wood et al., 2016) . Therefore, the outcome variables examined in this study were limited to what was included in these studies. The trial and SIMS study were designed in partnership with service users who did not feel measures examining symptoms of psychosis were a necessary part of the trial or validation. However, a limitation of the current study was the lack of measurement of experiences of psychosis which would have provided important insight into the psychological impacts of stigma and consequences for psychotic experiences. Another limitation of the study was the cross-sectional design. This design can identify associations between variables but cannot truly identify causation which would require a longitudinal design. Furtermore, a criticism of mediation analysis is that other unmeasured variables may be responsible for change in both mechanisms and outcomes which has not been accounted for. Future research, should attempt to examine any potential confounders and control for those using appropirate analysis (Emsley et al., 2010)

Furthermore, the construct of internalised shame (measured by the internalised shame scale) arguably overlapped with a number of other relevant factors such as self-esteem, social

exclusion, and internalised stigma. This was demonstrated by the potential multicolinearity with a number of the other examined factors. The high multicolinearity and small sample size also meant that internalised shame and self-esteem were not examined in the same mediation model, and therefore it cannot be determined how these mediator variables compare. In summary, further research should examine the impacts of stigma, internalised shame and self-esteem on particular aspects of experiences of psychosis such as auditory hallucinations and delusions. The use of other outcome measures should be explored, such as measure of psychotic symptoms (e.g. Positive and Negative Synrome Scale, (Kay et al., 1987)) and more specific measure of shame (e.g. Other as Shamer Scale (Goss et al., 1994)). Moreover, a larger sample of participants should be included in order to compare all variables in one model.

This study has important clinical implications for future research examining interventions for people who experience psychosis and are struggling with the impacts of stigma. A number of trials have already assessed the acceptability and feasibility of psychosocial interventions for internalised stigma in people who experience psychosis but have often not improved their primary outcome of internalised stigma, or secondary outcomes such as self-esteem (Fung et al., 2011; Lucksted et al., 2011; Russinova et al., 2014), empowerment and social anxiety. The majority of examined interventions have not used intervention strategies which focus on alleviating internalised shame as part of their intervention. A handful of intervention studies have attempted to target self-esteem to alleviate internalised stigma; Knight et al. (2006), Yanos et al. (2011), and McCay et al. (2007) all describe an intervention which focused on self-esteem and stigma, and which found positive change in self-esteem following their group interventions. The findings of this study would indicate that internalised shame and low self-esteem are important factors in understanding the impacts of stigma on emotional distress, personal recovery, and disclosure. Therefore future interventions addressing internalised shame and self-esteem in relation to stigma should be piloted and assessed for feasibility and acceptability.

In conclusion, stigma is associated with depression, hopelessness and personal recovery in psychosis. Internalised shame and low self-esteem play an important role in further understanding this relationship.

References

Andreasen, R., Oades, L., Caputi, P., 2003. The Experience of Recovery from Schizophrenia: Towards an Empirically Validated Stage Model. Australian and New Zealand Journal of Psychiatry 37, 584 - 594.

Barney, L.J., Griffiths, K.M., Christensen, H., Jorm, A.F., 2010. The Self Stigma of Depression Scale (SSDS): development and psychometric evaluation of a new instrument. . International journal of methods in psychiatric research 19, 243-254.

Baron, R.M., Kenny, D.A., 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. Journal of Personality and Social Psychology 51, 1173-1182.

Beck, A., Weissman, A., Lester, D., Trexler, L., 1974. The measurement of pessimism: The Hopelessness Scale. Journal of Consulting and Clinical Psychology 42, 861-865.

Beck, A.T., Steer, R.A., Brown, G.K., 1996. Beck Depression Inventory. Psychological Corporation, San Antonio.

Birchwood, M., Trower, P., Brunet, K., Gilbert, P., Iqbal, Z., Jackson, C., 2007. 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, 80.

Cook, D.R., 1987. Measuring shame: The Internalized Shame Scale. Alcoholism Treatment Quarterly 4, 197-215.

Corrigan, P., Watson, A., 2002a. The paradox of self-stigma and mental illness. Clinical Psychology: Science and Practice 9, 35 - 53.

Corrigan, P.W., Morris, S.B., Michaels, P., Rafacz, J., Rusch, N., 2012. Challenging the Public Stigma of Mental Illness: AMeta-Analysis of Outcome Studies. Psychiatric Services 63, 962 - 973.

Corrigan, P.W., Watson, A.C., 2002b. The paradox of self-stigma and mental illness. Clinical Psychology: Science and Practice 9, 35 - 53.

Dinos, S., Stevens, S., Serfaty, M., Weich, S., King, M., 2004. Stigma: the feelings and experiences of 46 people with mental illness. British Journal of Psychiatry 184, 176 - 181.

Drapalski, A.L., Lucksted, A., Perrin, P.B., Aakre, J.M., Brown, C.H., DeForge, B.R., Boyd, J.E., 2013. A Model of Internalized Stigma and Its Effects on People With Mental Illness Psychiatric Services 64, 264-269.

Emsley, R., Dunn, G., White, I.R., 2010. Mediation and moderation of treatment effects in randomised controlled trials of complex interventions. Statistical Methods in Medical Research 19, 237-270.

Fennell, M.J., 1998. Cognitive therapy in the treatment of low self-esteem. Advances in Psychiatric Treatment 4, 296-304.

Fung, K.M., Tsang, H.W., Cheung, M., 2011. Randomized controlled trial of the self-stigma reduction program among individuals with schizophrenia. Psychiatry Research 30, 208-214.

Gilbert, P., 2000. The relationship of shame, social anxiety and depression: The role of evaluation of social rank. Clinical Psychology and Psychotherapy 7, 174 - 189.

Gilbert, P., 2009. An Introduction to Compassion Focused Therapy. Advances in Psychiatric Treatment 15, 199 - 208.

Gilbert, P., 2010. Compassion Focused Therapy. Routledge, Hove.

Goss, K., Gilbert, P., Allan, S., 1994. An exploration of shame measures: I: The 'other as shamer'scale. Personality and Individual Differences 17, 713 - 717.

Gruenewald, T.L., Kemeny, M.E., Aziz, N., Fahey, J.L., 2004. Acute threat to the social self: shame, social self-esteem and cortisol activity. Psychosomatic Medicine 66, 915-924.

Hayes, A.F., Preacher, K.J., 2010. Estimating and testing indirect effects in simple mediation models when the constituent paths are nonlinear. Multivariate Behavioral Research 45, 627-660.

Heatherton, T.F., Wyland, C.L., 2003. Assessing self-esteem, in: Lopez, S., Snyder, C.R. (Eds.), Positive Psychological Assessment: A Handbook of Models and Measures. American Psychological Association, Washington, DC.

IBM Corp, 2011. IBM SPSS Statistics for Windows, Version 20.0. IBM Corp, Armonk, NY.

Kay, S.R., Fiszbein, A., Opler, L.A., 1987. The positive and negative syndrome scale (PANSS) for schizophrenia. Schizophr Bull 13, 261-276.

Kleim, B., Vauth, R., Adam, G., Stieglitz, R., Hayward, P., Corrigan, P.W., 2008. Perceived stigma predicts low self-efficacy and poor coping in schizophrenia. Journal of Mental Health 17, 482-491.

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.

Law, H., Neil, S.T., Dunn, G., Morrison, A.P., 2014. Psychometric properties of the Questionnaire about the Process of Recovery (QPR). Schizophrenia Research 156, 184-189.

Lecomte, T., Corbiere, M., Laisne, F., 2006. Investigating self-esteem in individuals with schizophrenia: Relevance of the Self-Esteem Rating Scale-Short Form. Psychiatry Research 143, 99-108.

Link, B., Phelan, J.C., 2001. Conceptualizing stigma. Annual Review of Sociology 27, 363-385.

Link, B.G., Struening, E.L., Neese-Todd, S., Asmussen, S., Phelan, J.C., 2001. Stigma as a barrier to recovery: the consequences of stigma for the self-esteem of people with mental illness. Psychiatric Services 52, 1621 - 1626.

Link, B.G., Wells, J., Phelan, J., Yang, L.H., 2015. Understanding the importance of 'symbolic interaction stigma'. How expectations about the reactions of others adds to the burden of mental illness stigma. Psychiatric Rehabilitation Journal 38, 117-124.

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 & Medicine 71, 2150-2161.

Lucksted, A., Drapalski, A., Calmes, C., Forbes, C., DeForge, B., Boyd, J., 2011. Ending Self-Stigma: Pilot Evaluation of a New Intervention to Reduce Internalized Stigma Among People with Mental Illnesses. Psychiatric Rehabilitation Journal 35, 51-54.

McCay, E., Beanlands, H., Zipursky, R., Roy, P., Leszcz, M., Landeen, J., Ryan, K., Conrad, G., 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-ournal for the Advancement of Mental Health 6, 1-9.

Morrison, A., Burke, E., Murphy, E., Pyle, M., Bowe, S., Varese, F., Dunn, G., Chapman, N., Hutton, P., Welford, M., Wood, L., 2016. Cognitive Therapy for Internalised Stigma in People Experiencing Psychosis: A pilot randomised controlled trial. Psychiatry Research.

Pitt, L., Kilbride, M., Nothard, S., Welford, M., Morrison, A.P., 2007. Researching Recovery from Psychosis: A User-Led Project. Psychiatry Bulletin 31, 55 - 60.

Ritscher, J.B., Phelan, J., 2004. Internalised stigma predicts erosion of morale among psychiatric outpatients. Psychiatry Research 129, 257 - 265.

Russinova, Z., Rogers, E.S., Gagne, C., Bloch, P., Drake, K.M., Mueser, K.T., 2014. A randomized controlled trial of a peer-run antistigma photovoice intervention. Psychiatric Services 65, 242-246.

The Schizophrenia Commission, 2012. The Abandoned Illness: A report by the Schizophrenia Commission. Rethink Mental Illness, London.

Vass, V., Morrison, A., Law, H., Dudley, J., Taylor, P., Bennett, K.M., Bentall, R.P., 2015. How stigma impacts on people with psychosis: The mediating effect of self-esteem and hopelessness on subjective recovery and psychotic experiences. Psychiatry Research doi:10.1016/j.psychres.2015.09.042.

Watson, A.C., Corrigan, P.W., Larson, J.E., Sells, M., 2007. Self-stigma in people with mental illness. Schizophrenia Bulletin 33, 1312-1318.

Winter, L.B., Steer, R., Jones-Hicks, L., Beck, A.T., 1999. Screening for major depressive disorder in adolescent medical outpatients with the Beck Depression Inventory for Primary Care. Journal of Adolescent Health 24, 389 - 394.

Wood, L., Burke, E., Byrne, R., Enache, G., Morrison, A., 2016. Validation of a semi-structured interview measure of stigma (SIMS) in psychosis. Schizophrenia Research.

Yanos, P.T., Roe, D., Lysaker, P.H., 2011. Narrative Enhancement and Cognitive Therapy: A new group-based treatment for internalised stigma among persons with severe mental illness. International Journal of Group Psychotherapy 61, 576.

Table 1 – Sample demographics

Demographic	Category	N
Patient status	Inpatient	47
	Outpatient	32
Gender	Male	59
	Female	20
Ethnicity	Black heritage	12
	White heritage	52
	Asian heritage	10
	Other	5
Diagnosis	Schizophrenia	25
	Paranoid Schizophrenia	18
	Psychotic episode	19
	First Episode Psychosis	10
	Schizoaffective Disorder	2
	Recurrent Psychosis	2
	Persistent Delusional Disorder	2
	Drug Induced Psychosis	1

Table 2– Pearson correlation coefficients and descriptive statistics of outcome measures

Measure	N	1	2	3	4	5	6	M	SD
1. SIMS -E	79	-	-	-	-	-	-	2.44	1.06
2. SIMS-P	79	0.527**	-	-	-	-	-	1.57	1.20
3. ISS	63	0.628**	0.485**	-	-	-	-	60.60	29.87
4. SERS	77	-0.619**	-0.501**	-0.908**	-			85.74	27.58
5. BHS	77	0.402**	0.358**	-0.719**	-0.754**	-	-	8.41	6.42
6. BDI	76	0.451	0.429**	-0.808**	-0.788**	0.800**	-	7.29	5.67
7. QPR	75	-0.264*	-0.238	-0.688**	0.657**	-0.777**	-0.688**	36.31	14.20

BDI = Beck Depression Inventory – Primary Care Version, BHS = Beck Hopelessness Scale, ISS = Internalised Shame Scale, M=Mean, QPR – Process of Recovery Questionnaire, SD=Standard Deviation, SERS = Self-Esteem Rating Scale, SIMS-E = Semi-structured Interview Measure of Stigma in Psychosis – Experienced Stigma Subscale, SIMS-P = Semi-structured Interview Measure of Stigma in Psychosis – Perceived Stigma Subscale, *=p<0.05, **=p<0.01

Table 3 – Multiple regression analysis coefficient descriptives

Regression Model		B	SE (B)	Beta
Experienced stigma				
	Self-esteem	-15.974	2.339	-0.619**
	Internalised shame	17.191	2.730	0.628**
Perceived stigma				
	Self-esteem	-11.639	2.740	0.485**
	Internalised shame	11.871	0.321	-0.501**
Experienced stigma				
	Depression	2.390	0.546	0.451**
	Hopelessness	2.403	0.635	0.402**
	Recovery	-3.475	1.484	-0.264*
Perceived stigma				
	Depression	2.046	0.497	0.429**
	Hopelessness	1.922	0.584	0.358*
	Recovery	-2.843	1.358	-0.238*
Depression				
Model 1: Experienced stigma	Experienced stigma	2.390	0.546	0.451**
	Experienced stigma	-0.315	0.482	-0.059
	Self-Esteem	-0.169	0.019	-0.824**
	Experienced stigma	-0.453	0.514	-0.086
	Internalised shame	0.166	0.019	0.862**
Model 2: Perceived stigma	Perceived stigma	2.046	0.497	0.429
	Perceived stigma	0.218	0.394	0.046
	Self-Esteem	-0.157	0.017	-0.765**
	Experienced stigma	-0.108	0.411	-0.023
	Internalised shame	0.158	0.017	0.819**
Hopelessness				
Model 1: Experienced stigma	Experienced stigma	2.403	0.635	0.402**
	Experienced stigma	-0.633	0.581	-0.106
	Self-Esteem	-0.192	0.023	-0.819**
	Experienced stigma	-0.399	0.708	-0.056
	Internalised shame	0.170	0.026	0.754**
Model 2: Perceived stigma	Perceived stigma	1.922	0.584	0.358*
	Perceived stigma	-0.227	0.482	-0.042
	Self-Esteem	-0.182	0.021	-0.775**
	Experienced stigma	-0.396	0.567	-0.073
	Internalised shame	0.171	0.024	0.756

Recovery				
Model 1: Experienced stigma	*Experienced stigma*	*-3.475*	*1.484*	*-0.254**
	Experienced stigma	*3.083*	*1.447*	*0.235**
	Self-Esteem	*0.421*	*0.058*	*0.803***
	Experienced stigma	*0.976*	*1.592*	*0.075*
	Internalised shame	*-0.359*	*0.060*	*-0.735***
Model 2: Perceived stigma	*Perceived stigma*	*-2.843*	*1358*	*-0.238*
	Perceived stigma	*1.345*	*1209*	*0.113*
	Self-Esteem	*0.374*	*0.053*	*0.712***
	Experienced stigma	*1.021*	*1.271*	*0.087*
	Internalised shame	*-0.356*	*0.053*	*-0.729***

B=unstandardized regression coefficients, SE(B) =standard error B, *=p<0.05, **=p<0.01

Table 4 - Total, Direct, and Indirect Effects of Stigma on all Dependent Variables

Mediator	Stigma Type	Dependent Variable	B	SE (B)	p	95% BCa CI	
						LL	UL
		Depression					
Internalised	*Experienced*	*Total effect*	*2.408*	*0.603*	*0.000*	*-*	*-*
Shame	*stigma*	*Direct effect*	*-0.453*	*0.514*	*0.381*	*-*	*-*
		Indirect effect	*2.861*	*0.451*	*-*	*2.066*	*3.857*
		K^2	*0.530*	*0.059*	*-*	*0.413*	*0.649*
	Perceived stigma	*Total effect*	*1.770*	*0.561*	*0.003*	*-*	*-*
		Direct effect	*-0.108*	*0.411*	*0.793*	*-*	*-*
		Indirect effect	*1.878*	*0.439*	*-*	*1.150*	*2.846*
		K^2	*0.441*	*0.077*	*-*	*0.275*	*0.577*
		Hopelessness					
Internalised	*Experienced*	*Total effect*	*5.091*	*1.033*	*0.000*	*-*	*-*
Shame	*stigma*	*Direct effect*	*1.661*	*1.137*	*0.149*	*-*	*-*
		Indirect effect	*3.430*	*0.951*	*-*	*1.635*	*5.343*
		K^2	*0.337*	*0.090*	*-*	*0.156*	*0.504*
	Perceived stigma	*Total effect*	*2.550*	*1.041*	*0.017*	*-*	*-*
		Direct effect	*-0.352*	*0.919*	*0.703*	*-*	*-*
		Indirect effect	*2.903*	*0.835*	*-*	*1.561*	*4.753*
		K^2	*0.346*	*0.085*	*-*	*0.192*	*0.519*
		Recovery					
Internalised	*Experienced*	*Total effect*	*-5.044*	*1.562*	*0.002*	*-*	*-*

			B	SE	p	LL	UL
Shame	*stigma*	Direct effect	*0.976*	*1.592*	*0.542*	*-*	*-*
		Indirect effect	*-6.019*	*1.307*	*-*	*-8.793*	*-3.806*
		K^2	*0.416*	*0.832*	*-*	*0.251*	*0.572*
	Perceived stigma	Total effect	*-3.074*	*1.480*	*0.042*	*-*	*-*
		Direct effect	*1.020*	*1.270*	*0.425*	*-*	*-*
		Indirect effect	*-4.094*	*1.340*	*-*	*-7.122*	*-2.013*
		K^2	*0.360*	*0.121*	*-*	*0.147*	*0.601*
		Depression					
Self-Esteem	*Experienced stigma*	Total effect	*2.390*	*0.546*	*0.000*	*-*	*-*
		Direct effect	*-0.315*	*0.482*	*0.516*	*-*	*-*
		Indirect effect	*2.705*	*0.460*	*-*	*1.833*	*3.653*
		K^2	*0.496*	*0.061*	*-*	*0.369*	*0.608*
	Perceived stigma	Total effect	*2.046*	*0.498*	*0.000*	*-*	*-*
		Direct effect	*0.218*	*0.394*	*0.581*	*-*	*-*
		Indirect effect	*1.828*	*0.381*	*-*	*1.114*	*2.617*
		K^2	*0.411*	*0.062*	*-*	*0.280*	*0.526*
		Hopelessness					
Self-Esteem	*Experienced stigma*	Total effect	*2.402*	*0.635*	*0.000*	*-*	*-*
		Direct effect	*0.633*	*0.581*	*0.280*	*-*	*-*
		Indirect effect	*3.036*	*0.562*	*-*	*2.061*	*4.220*
		K^2	*0.481*	*0.063*	*-*	*0.346*	*0.586*
	Perceived stigma	Total effect	*1.922*	*0.583*	*0.002*	*-*	*-*
		Direct effect	*0.227*	*0.482*	*0.639*	*-*	*-*
		Indirect effect	*2.150*	*0.445*	*-*	*1.394*	*3.241*
		K^2	*0.415*	*0.065*	*-*	*0.289*	*0.548*
		Recovery					
Self-Esteem	*Experienced stigma*	Total effect	*-3.474*	*1.484*	*0.021*	*-*	*-*
		Direct effect	*3.083*	*1.447*	*0.037*	*-*	*-*
		Indirect effect	*-6.558*	*1.413*	*-*	*9.682*	*4.283*
		K^2	*0.450*	*0.075*	*-*	*-0.313*	*-0.5991*
	Perceived stigma	Total effect	*2.843*	*1.358*	*0.040*	*-*	*-*
		Direct effect	*1.345*	*1.210*	*0.270*	*-*	*-*
		Indirect effect	*4.188*	*1.049*	*-*	*6.683*	*2.434*
		K^2	*0.354*	*0.0944*	*-*	*0.192*	*0.559*

B=unstandardized regression coefficient, SE=standard error, p=significance level,

CI=Confidence Interval, LL=Lower Level, UL=Upper Level, K^2 =Kappa (effect size),