

**Cultural Differences in Psychosis:
The Role of Causal Beliefs and Stigma in White British and South Asians**

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Abstract

While previous research has demonstrated the negative impact of stigma in individuals with mental health problems, little is known about cross-cultural differences in experiences and explanations of mental health, in particular in young people, despite the first episode of psychosis often occurring in adolescence. Aim of this study was to examine cultural differences in causal beliefs and stigma towards mental health, in particular psychosis. White British and South Asian young people ($N = 128$) from two schools and colleges in the United Kingdom, aged 16-20 years, completed a cross-sectional survey. Results revealed significant associations between ethnic group and our dependent measures. White British reported more previous contact with a mental health service as well as with people with mental health problems than South Asians. They also reported lower stigma in form of a greater intentions to engage in contact with people with mental health problems. Furthermore, South Asians reported higher beliefs in supernatural causes of psychosis than White British. Psychotic experiences moderated the effect of ethnic group on supernatural beliefs, with South Asians reporting higher supernatural beliefs than White British when their own psychotic experiences were low to moderate. We discuss the implications of the findings, arguing that a greater culture-sensitive understanding of mental health is important to reach ethnic minorities with psychosis, and to challenge stigma towards psychosis from an early age on.

Keywords: mental health, psychosis, stigma, cultural differences, South Asians, causal beliefs, supernatural attitudes

Individuals with mental health problems such as psychosis experience severe negative attitudes and discrimination from the public (Barry, McGinty, Pescosolido, & Goldman, 2014; Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003; Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Phelan, Link, Stueve, & Pescosolido, 2000; Huggett et al., 2018; Wood, Birtel, Alsawy, Pyle, & Morrison, 2014). Beliefs about mental disorders (causal attributions) and about people with mental disorders (stigma) can be detrimental for people's wellbeing (Carter, Read, Pyle, & Morrison, 2018; Rüsch, Angermeyer & Corrigan, 2005). According to the World Health Organization and the National Health Service in the United Kingdom, psychosis, which is also called 'psychotic experience' or 'psychotic episode', is a mental health problem with two main symptoms, auditory hallucinations and delusional beliefs, sometimes also disorganized thinking and speech. These symptoms can result in severe distress and behavioral changes (NHS, 2018; WHO, 2018). Young people and ethnic minorities are particularly vulnerable to psychosis. This is because psychosis usually develops in adolescence (Kessler et al., 2008), and because South Asians are more likely to experience psychosis and are less likely to access mental health services than the general population in the United Kingdom (McManus, Bebbington, Jenkins, & Brugha, 2016), whose largest ethnic minority group is South Asians (Office for National Statistics, 2011). In line with the definition by the Office for National Statistics, in this research the term South Asian refers to those young people who were born in the United Kingdom, but whose parents were born in Asia, mainly of Indian, Pakistani, Bangladeshi or Sri Lankan heritage (Gardener & Connolly, 2005).

While there is a wealth of research on the negative consequences of stigma and some research on causal attributions in the Western World, there are some gaps that need to be addressed. Little research has examined cross-cultural differences in beliefs about the causes of psychosis and in stigma towards psychosis, in particular considering a minority ethnic

group living in a White dominant host culture such as South Asians in the United Kingdom. Perceptions about mental health cannot be studied isolated from its socio-cultural context, and by examining cross-cultural differences a greater understanding of mental disorders that is culture-sensitive can be developed. Aim of the present study was to fill this empirical gap, by using a sample of White British and South Asian young people in the United Kingdom, and comparing them to examine cultural differences in causal beliefs about and stigma towards psychosis.

Psychosis in the United Kingdom

The recent Adult Psychiatric Morbidity Survey in England in 2014 (McManus et al., 2016) estimated that one in six people aged 16 and over experience a mental health problem in any given week, and 10% of children and young people (aged 5-16) were diagnosed with a mental health problem (Children's Society, 2008). The mental health support services in the United Kingdom are free on the National Health Service (NHS), and can be accessed either through a referral from a doctor, such as the Early Intervention in Psychosis service which provides long-term treatment for psychosis, or through self-referral, such as the Improving Access to Psychological Therapies service which is a short-term therapy for depression and anxiety (NHS, 2018). In order to treat psychosis without delay after the first episode has occurred, the Early Intervention in Psychosis service has been established (NICE, 2014). To treat psychosis, the NHS recommends a combination of antipsychotic medication, psychological therapy and strengthening social support (NHS, 2018). The lifetime prevalence of a psychotic disorder in England is estimated at 0.7% (McManus et al., 2016).

People with psychosis are particularly vulnerable in several ways. First, it can start at a young age. The first episode of psychosis commonly occurs during adolescence between late teens and early/late twenties, with the majority experiencing psychosis before the age of 35, and only a small minority before the age of 16 (NHS, 2016; Kessler et al., 2008). While a

recent review synthesized the literature on causal explanations (Carter et al., 2018), the average age of individuals included in the review was 36 years, so considerably higher than the age at which the first episode of psychosis is experienced during adolescence. Comparing the statistics for age, the prevalence of psychotic disorders is estimated at 0.4% among the 16-24 year-olds in the general population across ethnic groups (with the prevalence increasing among the 25-34 year-olds to 0.5% and among the 35-44 year-olds to 1%) (McManus et al., 2016). Little is known about causal attributions or stigma in young people closer to the onset of psychosis, where an intervention would be most effective, reducing the risk of suicide and the length of treatment required (Bertolote & McGorry, 2005). Furthermore, stigma interventions based on education or intergroup contact implemented at an early age can counteract prejudice and discrimination towards people with mental health problems (Rüsch, Angermeyer, & Corrigan, 2005). Our study therefore examined perceptions of mental health in young people aged 16-20.

Second, the prevalence of psychosis is associated with ethnicity (McManus et al., 2016). Similar to other Western countries, the United Kingdom is becoming increasingly socially diverse, and is home to over three million South Asians (Office for National Statistics, 2011). The highest number of people with psychosis has been estimated to occur, among other areas, in cities in the North West of England where our data collection took place. South Asians are the largest minority group in the United Kingdom and make up 4.9% of the total population. Interestingly, the prevalence of psychotic disorder in England is higher for ethnic minorities, in particular Blacks (1.4 %) and Asians (0.9%), than for Whites (0.5%) (McManus et al., 2016; Public Health England, 2016).

Third, treatment and recovery from psychosis can be difficult due to causal beliefs and stigma. About 30% of people with psychosis will stop engaging with their treatment at some point, significantly lowering their chances of recovery (Kreyenbuhl, Nossel, & Dixon, 2009).

Research indicates that specific causal attributions such as supernatural attitudes can delay treatment (Burns et al., 2011; Carter et al., 2018). Furthermore, psychosis is one of the most negatively viewed mental health problems by the public (Crisp et al., 2000). Such negative perceptions can inhibit help-seeking and recovery (Sartorius, 2007).

Therefore, in our study we focused on psychosis due to its severity and the stigma attached to it. We examined this in young people due to the early onset of psychosis in the implications for treatment and stigma intervention. Lastly, we compared White British and South Asians due to ethnic minorities being particularly vulnerable to psychosis and stigma, and South Asians comprising the largest minority group in the United Kingdom.

Culture and Psychosis

While the definition of psychosis applies across cultures (WHO, 2018), there may be differences between cultures regarding the meaning and characteristics of its symptoms such as hallucinations. Little is known about such cross-cultural differences (Larøi et al., 2014), in particular in non-Western cultures living in a dominant Western culture. While all cultures can experience mental health problems, culture may influence how these problems are explained, what impact they have on the individual, and how people perceive and behave towards people with mental health problems (Lauber & Rössler, 2007; Ng, 1997). However, Western concepts cannot be easily applied to non-Western cultures. Mental health problems are perceived differently in non-Western societies. For example, in Western cultures there is a stricter distinction between physical and mental disorders, this distinction between mind and body is lower in Asian cultures, generally mental health is characterized by somatization and medicalization (Lauber & Rössler, 2007; Ng, 1997). There is a need to examine ethnicity-based differences in psychosis for South Asians living in a White dominant culture such as the United Kingdom, in which South Asians not only are an ethnic minority group, but which also provides a different normative environment. For example, South Asians not only have to face

discrimination regarding their ethnic minority status (Major & O'Brien, 2005), acculturation processes such as negotiating a new culture and its social norms (e.g., mental health beliefs) can be challenging (Berry, 1997; 2003; Sam & Berry, 2010). Individuals can adopt different strategies of acculturation that indicate how well they adapt to a new culture, with integration (i.e., maintaining the identities of both their home and host cultures) as the most positive outcome for psychological well-being, while the process can lead to acculturative stress (e.g., anxiety and depression), in particular in older immigrants and among those with little social support (Sam & Berry, 2010).

Culture and Causal Explanations of Mental Health

Several causal explanations have been put forward for psychosis (Walker & Read, 2002), which include biological, psychosocial and spiritual (Angermeyer, Holzinger, Carta, & Schomerus, 2011). Causal explanations are a set of assumptions that individuals hold about the cause of a particular phenomenon. The way people perceive their mental health problem can influence treatment outcomes and mental health (Petrie, Broadbent, & Kydd, 2008). In particular, a small systematic review of 17 quantitative and four qualitative studies with 1699 people with psychosis (Carter et al., 2018) showed that beliefs about the causes of a mental health problem can significantly influence people's type of help-seeking (e.g., medical, spiritual), treatment outcomes (e.g., attitudes towards treatment, satisfaction with therapeutic relationships), and contribute to the experiences of stigma.

Specifically, there is some preliminary evidence that suggests cultural differences in causal explanations of mental health problems. Qualitative studies have shown that South Asians who experience psychosis explain mental health problems largely by supernatural and spiritual factors, and combine their treatment with religious rituals such as visiting temples or faith healers for a cure (Bhikha, Farooq, Chaudhry, Naeem, & Husain, 2015; Charles, Manoranjitham, & Jacob, 2007; Kulhara, Avasthi, & Sharma, 2000; McCabe & Priebe, 2004;

Somasundaram, 2008). For example, Saravanan, Jacob, Johnson, Prince, Bhugra, and David found (2007) found that 70% of South Asians in India attributed schizophrenia to spiritual and mystical factors. South Asians reported evil spirits, punishment by God or previous deeds as causes for psychosis. There is also qualitative evidence from the general population of South Asians in the United Kingdom that older generations are more likely to endorse religious strategies for treatment than younger generations (Cinnirella & Loewenthal, 1999). In a quantitative study comparing British, Pakistani, and British Pakistani (Furnham, Raja, & Khan, 2008), Pakistanis were more likely than the British and British Pakistanis to believe that people with schizophrenia are dangerous and unpredictable. They also had the greatest tendency to use superstitious beliefs to explain the cause of schizophrenia. Similarly, Jobanaputra and Furnham (2005) found, in a qualitative study, that older and younger Indian immigrants in the United Kingdom were more likely to endorse beliefs about health in relation to supernatural factors than White British. Studies have also found that, when comparing biological and supernatural causes of mental health problems, White British groups mentioned biological causes more frequently than other non-White groups, who endorsed supernatural causes more frequently (Dein & Bhui, 2013).

Causal attributions may also influence professional help-seeking in ethnic minorities. A study by Burns et al. (2011) indicated that South African participants who attributed psychosis to spiritual causes, had a longer period of untreated psychosis. Qualitative studies with service users from the Early Intervention for Psychosis service in the United Kingdom point to the importance of studying ethnic differences in causal explanations as they can impact upon accessing mental health services. For example, British Pakistani caregivers of family members with a first-episode of psychosis point to culture-specific understandings of psychosis and its treatment (Penny, Newton, & Larkin, 2009). Furthermore, Asian service users in the United Kingdom can experience a delay in treatment as a consequence of their

causal explanations, when their first contact for seeking help for a mental health problem is from faith institutions (Islam, Rabiee, & Singh, 2015). Mental health services may not be culturally sensitive, as clinicians report little experience and training in treating different cultures (Islam et al., 2015). The greater use of supernatural and spiritual causes to explain mental health can lead to stigma in some cultures. In cultures with higher emphasis on family and relationships, such as Asian cultures, mental health stigma is likely to be more severe, affecting the whole family (Lauber & Rössler, 2007; Ng, 1997). While there is some preliminary evidence of cross-cultural differences in causal explanations, most of the studies are qualitative and carried out outside the United Kingdom. We do not know whether such cultural differences also exist between White British and South Asians living in a Western culture.

Culture and Stigma towards Psychosis

Not only causal beliefs about psychosis, but also stigma associated with mental health and psychosis, can impact upon service users' wellbeing, and be an obstacle for treatment and recovery. A large body of research has now demonstrated the existence of stigma and its consequences in Western cultures, however, only little research has focused on non-Western cultures such as Asia (Lauber & Rössler, 2007). Little is known whether these findings can be generalized to people from non-Western cultures living in a Western culture, such as South Asians living in the United Kingdom. To our knowledge, this is the first study to compare stigma towards psychosis between White British and South Asians living in the United Kingdom. Stigma has been defined as a discrediting attribute of a person that devalues their social identity (Crocker, Major, & Steele, 1998; Goffman, 1963). It has devastating consequences for the quality of life of people with mental health problems (Corrigan & Watson, 2002; Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001; Perlick et al., 2001; Rosenfield, 1997), and negatively affects family members, friends, caregivers and other people

associated with them (Corrigan & Miller, 2004; Onwumere, Shiers, & Chew-Graham, 2016; Phelan, Bromet, & Link, 1998). Corrigan and Watson (2002) described stigma as having two major dimensions: public stigma and self-stigma. Public stigma comprises of negative attitudes (prejudice), beliefs (stereotypes) and behavior (discrimination) towards the stigmatized person. These public views can be internalized by the stigmatized individual, leading to self-stigma, which has shown to have an impact on a person's self-esteem (Link et al., 2001). Psychosis has some of the most negative stereotypes associated with it, more than any other mental health problem. For example, people with psychosis are seen as a danger to others and as unpredictable in both Western (Crisp et al., 2000; Wood et al., 2014) and non-Western cultures such as Asia (Lauber & Rössler, 2007). This misconception of dangerousness can lead to more social distance by the public (Angermeyer & Matschinger, 2003), ultimately resulting in the social exclusion of people with psychosis (Gaebel et al., 2002; Mueller et al., 2006). Therefore, stigma is a major problem which can lead to isolation from society in both Western and non-Western cultures (Lauber & Rössler, 2007; Rueve & Welton, 2008). In the present study, we measured stigma as the intention to engage in contact with a person with a mental health problem (used in previous research on stigma, e.g., Tam, Hewstone, Kenworthy, & Cairns, 2009). In contrast, prior experiences with mental health, for example in form of contact with a person with a mental health problem or having personally experienced a mental health problem, can reduce stigma (Pettigrew & Tropp, 2006; Rüsç et al., 2005). For this reason, we measured contact towards people with mental health problems more generally, instead of contact specifically towards people with psychosis.

The Present Research

While there is preliminary evidence for cross-cultural differences in perceptions of mental health (casual attributions) and people with mental health problems (stigma), evidence is often qualitative, and carried out with South Asians living in their home countries, or with

adults instead of adolescents. Little quantitative research has been carried out comparing Western cultures and non-Western cultures in causal beliefs and mental health stigma, in particular examining ethnicity-based differences in psychosis for South Asians living in a White dominant culture such as the United Kingdom. Understanding those cultural differences is important in order to design interventions to enhance access to treatment for ethnic minorities and to reduce stigma towards people with psychosis from an early age on.

We conducted this research in a large ethnically diverse city in Northern England. Based on the results of the most recent (2011) national census, the city has a population of 2.7 million, comprised largely of White British (79.8%) and Asian British (10.2%; mainly of Pakistani, 4.8%; Indian, 2%; and Bangladeshi, 1.3% heritage) ethnic groups. The present study had three major aims. Firstly, we examined cultural differences between White British and South Asian young people in their experiences with mental health. Secondly, we investigated cultural differences in stigma towards people with psychosis in form of willingness to engage in future contact with people with psychosis, and thirdly, causal explanations for psychosis. We tested the following hypotheses: White British will report more previous contact with a mental health service as well as with people with mental health problems than South Asians (H1a). White British will disclose more mental health problems and psychotic experiences than South Asians (H1b). White British will report lower stigma towards psychosis than South Asians, i.e., they will be more willing to engage in future contact with a person with a mental health problem (H2). White British will endorse more beliefs in biological or psychosocial causes of psychosis, while South Asians will report more beliefs in supernatural and spiritual causes of psychosis (H3).

Previous experiences with mental health issues, such as psychotic experiences or contact with a person with a mental health problem, are likely associated with people's perceptions of psychosis (Major & O'Brien, 2005; Pettigrew & Tropp, 2006; West, Hewstone,

& Lollot, 2014). Therefore, we included an exploratory analysis, testing whether psychotic experiences moderate the relationship between ethnicity and causal beliefs.

Method

Participants

Participants were 173 young people, 109 White British and 64 South Asians. The students' ethnic identity was determined by participants self-reporting their ethnicity.¹ The exclusion criteria were not speaking or understanding English as all measures used were in English. Of the 205 participants who completed the study, 32 had to be excluded from the analysis as they did not meet our inclusion criterion of identifying themselves as either White British or South Asian. Due to the unequal sample size, an equivalent sample size for both groups was used, and 64 cases were randomly selected from the 109 White British group, resulting in a final sample size of 128 participants included in the analysis. Those included in the study were aged 16-20 years ($SD = 0.86$) (for demographics see Table 1).

Procedure

Head teachers of one secondary school and one college in a city on Northern England were approached via email and telephone, offering their students the opportunity to take part in the study. Participants received a copy of the participant information sheet and consent forms. A week later the researcher collected the consent forms and provided participants with a set of questionnaires. Once they were completed the participants were asked to put the questionnaires in envelopes, seal them and return to the researcher. The study received ethical approval by the local institutional research and ethics committee (Ref: 15173). As the term psychosis may not be a familiar term to young people and its cultural meanings may vary, participants were provided with a brief definition of psychosis from the NHS².

Measures³

Identification with being British. As we tested South Asians who are living in the United Kingdom, we used identification with being British as a proxy measure whether South Asians had adapted to British culture or not. We used a group identification scale (Hornsey & Hogg, 2000) which consisted of five items on a 7-point Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*, for example “I feel British”. A composite score was created by the mean of these items (Cronbach’s $\alpha_{\text{White}} = .90$, Cronbach’s $\alpha_{\text{Asian}} = .90$). This scale is commonly used in research on ingroup identification in the United Kingdom (e.g., Turner & Crisp, 2010).

Experiences with mental health were measured using three items. Participants indicated (1 = *yes*/ 0 = *no*) whether they had any previous contact with a mental health service, with a person with a mental health problem, and past or current mental health problems. Similar scales measuring outgroup contact have been used in research with White British and South Asian samples in the United Kingdom (e.g., Turner et al., 2007).

Psychotic experiences were measured using the Community Assessment of Psychic Experiences CAPE (adapted from Stefanis et al., 2002) with five items, on a 4-point Likert scale ranging from 0 = *never* to 3 = *nearly always*, “Do you ever feel as if you are being persecuted in some way?”, “Do you ever feel as if there is a conspiracy against you?”, “Do you ever feel as if you are destined to be someone very important?”, “Do you ever feel as if the thoughts in your head are not your own?”, “Do you ever feel as if you are under the control of some force or power other than yourself?” A composite score was created by the sum of these items (maximum score = 15, Cronbach’s $\alpha_{\text{White}} = .64$, Cronbach’s $\alpha_{\text{Asian}} = .67$). The original 42-item measure has been validated in a Western context in various samples in Europe, Canada, North America and Australia (for a meta-analysis see Mark & Toulopoulou, 2016) as well as China with 15 items (Mark & Toulopoulou, 2017). Similar instruments have been used

with White British and South Asians in the United Kingdom (e.g., Psychosis Screening Questionnaire: Johns et al., 2004; Psychotic-Like Experiences: Laurens, West, Murray, & Hodgins, 2008).

Contact intentions with people with a mental health problem (Tam et al., 2009) were measured using nine items on a 7-point Likert scale ranging from 1 = *not at all* to 7 = *very much*, for example “I would keep them at a distance”. Items were recoded so that higher values indicate higher intentions. A composite score was created by the mean of these items (Cronbach’s $\alpha_{\text{White}} = .70$, Cronbach’s $\alpha_{\text{Asian}} = .82$). This scale is commonly used in research on stigma in British samples, e.g., towards British non-Muslims (Birtel & Crisp, 2012) and people with schizophrenia (e.g., Stathi, Tsantila, & Crisp, 2012), and in South Asian samples in the United Kingdom (Turner et al., 2007).

Causal beliefs⁴ were measured using two scales: The Beliefs about Mental Health Problems questionnaire (BAMHQ; Carter et al., 2018) consisted of eight items describing possible causes of mental health problems, agreement with a cause was measured on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. A composite score for each of the three subscales was created by the sum of the items – biological (3 items, e.g., “Family history (genes)”, Cronbach’s $\alpha_{\text{White}} = .45$, Cronbach’s $\alpha_{\text{Asian}} = .61$), psychological (4 items, e.g., “Traumatic event in childhood (e.g. loss of a loved one, abuse, neglect)”, Cronbach’s $\alpha_{\text{White}} = .50$, Cronbach’s $\alpha_{\text{Asian}} = .66$), spiritual (1 item, “The result of religious/spiritual forces”). Concurrent validity was established in a clinical British sample, using mainly White British ($n = 246$) and some South Asians ($n = 27$) (Carter et al., 2018).

The Supernatural Attitudes Questionnaire (SAQ, adapted from Kulhara et al., 2000) consisted of 27 items on a 7-point Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*, for example “Mental illness can be caused by divine wrath”, “Ghosts/evil spirit can cause mental illness in a person”, “Mental health can be due to retribution of a bad deed in

a previous life". A composite score was created by the sum of these items (maximum score = 189, Cronbach's $\alpha_{\text{White}} = .96$, Cronbach's $\alpha_{\text{Asian}} = .97$). This scale was originally created for a clinical sample in North India by the authors of the scale.

Results

Data were screened for outliers and normality. Z-standardized skewness and kurtosis values suggest that data were normally distributed (cut-off value $z = 3.29$), apart from the skewness scores for the CAPE ($z_{\text{skew}} = 5.08$). Given the only small deviation from normality, parametric tests were used. Means and standard deviations for all measures can be found in Table 4. To test whether the cultural identity of South Asians living in the United Kingdom was different from a British identity, an independent *t*-test was carried out. White British identified stronger with being British ($M = 5.35$, $SD = 1.53$) than South Asians ($M = 4.64$, $SD = 1.51$), $t(126) = 2.64$, $p = .009$, 95% CI [4.73, 5.25], indicating that South Asians had not adapted completely to British culture, and therefore were culturally different.

Experiences with Mental Health

White British and South Asians differed significantly in their experiences with mental health (see Table 2). In line with our hypothesis (H1a) White British reported more previous contact with a mental health service than South Asians, $p < .001$, Fisher's exact test (due to one of the four cell sizes being < 5), 95% CI for odds ratio [0.05, 0.48], and more previous contact with a person with a mental health problem, $\chi^2(1) = 13.44$, $p < .001$, 95% CI [0.12, 0.54]. Furthermore, in line with our hypothesis H1b, South Asians disclosed fewer past or current mental health problems than White British, $p < .001$, Fisher's exact test, 95% CI [0.02, 0.39]. White British and South Asians did not differ in their psychotic experiences, $t(126) = -1.622$, $p = .107$, 95% CI [-1.53, 0.15].

Contact Intentions

Table 3 shows the correlations between experiences with mental health and stigma separately for White British and South Asians. South Asians, but not White British, who reported previous contact with a mental health service and prior mental health problems also reported lower stigma (see Table 3 for correlations). In order to test whether White British and South Asians differed in their stigma towards people with mental health problems (H2), we used the willingness to engage in contact with a person with a mental health problem as an indicator for stigma. A one-way ANCOVA was carried out, controlling for gender. Results revealed a significant difference, $F(1,124) = 9.83, p = .002, 95\% \text{ CI } [5.46, 5.75], \text{ partial } \eta^2 = .07$. White British reported higher contact intentions than South Asians, thus supporting our hypothesis. The covariate was not significant ($p < .05$).

Causal Beliefs

Table 3 shows the correlations between experiences with mental health and causal beliefs separately for White British and South Asians. Among White British, correlations indicated that having experience mental health problems was positively associated with contact with a mental health service and other people with mental health problems. Among South Asians, prior mental health problems were positively associated with contact with a mental health service. Furthermore, for South Asians spiritual and supernatural beliefs were correlated, and higher spiritual beliefs were associated with higher stigma. In order to test whether White British and South Asians differed in their causal beliefs about psychosis (H3), a one-way multivariate analysis of covariance MANCOVA was carried out with the three subscales of BAMHQ (biological, psychological, spiritual belief) and the SAQ (supernatural attitudes) as the dependent measures. Gender was entered as a covariate. Results from this MANCOVA demonstrated a significant multivariate effect, Pillai's Trace $V = 0.129, F(4, 122) = 4.52, p = .002, \text{ partial } \eta^2 = .13$. The covariate was significant, Pillai's Trace $V = 0.234, F(4,$

122) = 9.30, $p < .001$, partial $\eta^2 = .23$. Univariate results showed a significant effect for supernatural attitudes, $F(1, 125) = 16.29$, $p < .001$, 95% CI [70.38, 82.75], partial $\eta^2 = .12$. South Asians reported higher beliefs in supernatural causes of mental illness than White British, supporting our hypothesis. Results for the BAMHQ, i.e., biological beliefs, psychological beliefs, and spiritual beliefs, were non-significant, $ps > .07$.

Moderation Analysis

To assess whether the effect of ethnic group on supernatural beliefs was moderated by previous psychotic experiences, we computed an exploratory moderation analysis (see Table 5). Bootstrapping analyses (1000 subsamples, 95% bias-corrected and accelerated confidence interval) were conducted using the PROCESS macro provided by Hayes (2016, Model 1). Gender was entered as a covariate. There was a significant main effect of ethnicity, with South Asians reporting stronger beliefs in supernatural causes of psychosis than White British, in line with H3. There was no significant main effect of psychotic experiences, indicating that the reported experiences do not differ between White British and South Asians. Importantly, there was a significant interaction between psychotic experiences and ethnicity, i.e., psychotic experiences moderated effect of ethnicity on supernatural beliefs, R square change = .04, $F(1, 123) = 5.95$, $p = .016$ (see Figure 1). Comparing White British and South Asians, at low and moderate levels of psychotic experiences, South Asians reported higher beliefs in supernatural causes of psychosis than White British. At high levels of psychotic experiences, White British and South Asians did not differ significantly in their supernatural beliefs. Comparing the different levels of psychotic experiences within South Asians, the more psychotic experiences they reported, the lower were their beliefs in supernatural causes of psychosis. There was no significant effect for White British.

Discussion

Previous research has mainly examined perceptions of mental health in Western cultures, little research has compared Western and non-Western cultures, in particular in young people. The current study focused on cultural differences in perceptions of psychosis in the United Kingdom, comparing White British and South Asian young people in their experiences with mental health, their beliefs about causal explanations of psychosis and stigma towards people with psychosis.

Firstly, in line with our hypothesis, we found that White British had more experiences with mental health than South Asians, i.e., they reported more previous contact with a mental health service and with people with mental health problems. Official statistics mirror our findings: In the United Kingdom in 2016/17, Asian and Asian British were 30% less likely than average to have accessed an NHS mental health service (excluding IAPT), compared with White British who were 3% more likely than average to have made contact. Within the IAPT, White British were more likely to complete treatment and move to recovery (50%) than Asian or Asian British (44%) (Baker, 2018). White British may be more willing to seek help and attend a mental health service, and more willing to disclose mental health problems for several reasons. First, attributing psychosis to spiritual causes may delay help-seeking (Burns et al., 2011). Qualitative research in the United Kingdom indicates that ethnic minorities such as South Asians may turn to faith services first before turning to services providing medication and therapy (Islam et al., 2015; Penny et al., 2009). This preference for spiritual over biological and psychosocial causes may result in South Asians having less contact with mental health services. Second, stigma associated with psychosis is greater among South Asians than White British, and may prevent self-disclosure of a mental health problem and help-seeking. Stigma towards mental health, which is a barrier towards help-seeking (Schulze & Angermeyer, 2003), appears to be less severe in Western cultures (Bhugra, 2006; Cauce et al.,

2002; Lauber & Rössler, 2007). Third, it is also possible that mental health services may not be culturally sensitive and hence do not reach ethnic minorities. Clinicians report little experience and training in culture-specific treatment, therefore mental health services may not be sensitive enough to reach South Asians (Islam et al., 2015). Future research will need to establish the underlying processes that prevent South Asians from making contact with mental health services and people with mental health problems.

Secondly, because of prior experiences with mental health services and contact with people with mental health problems, White British may be less stigmatizing towards people with psychosis, and therefore report greater willingness to engage in future contact with people with mental health problems than South Asians (Angermeyer & Matschinger, 2003). In fact, this is what we found. White British reported being more willing to engage in future contact with people with psychosis than South Asians. This is in line with intergroup contact theory (Allport, 1954) which suggests that contact with stigmatized group members (e.g., people with mental health problems) can reduce stigma towards those groups (Pettigrew & Tropp, 2006). For example, West et al. (2014) have shown that contact with people with schizophrenia is associated with more positive attitudes, and in turn less avoidance. This finding could also be explained by early studies which have suggested that because people from South Asian communities tend to view mental health problems and psychosis as a taboo subject something to be ashamed of or hidden; those with mental health problems may isolate themselves from others (Rathod, Kingdon, Phiri, & Gobbi, 2010). Research also suggests that in some South Asian communities people felt that social relationships with those who had mental health problems should be restricted and children were warned by parents of the dangers of people who were mentally unwell (Salve, Goswami, Sagar, Nongkynrih, & Sreenivas, 2013).

Thirdly, South Asians were more likely to indicate supernatural factors as causes for psychosis than White British. Our findings are in line with the preliminary studies on cultural differences (McCabe & Priebe, 2004; Bhikha, et al., 2012; Bhugra, 2006) which found that South Asians were more likely to endorse supernatural and or spiritual causes for mental health difficulties than White British. It is possible this may be explained by factors such as South Asians being more religious, and more familiar with different types of supernatural beliefs than the White British group. Future research will need to establish whether the degree of religiosity could be associated with causal attributions. Fourthly, we demonstrated that the effect of ethnicity on supernatural beliefs is moderated by psychotic experiences. For South Asians, but not White British, their belief in supernatural causes was higher at lower to moderate levels of psychotic experiences. Having had experiences with mental health problems can change people's perceptions of mental health (Major & O'Brien, 2005). The type of causal explanations people adapt for psychosis may also change. In particular, depending on the amount of personal psychotic experiences, South Asians may attribute psychosis more or less to supernatural causes. At lower levels of experiences with mental health, such as psychotic experiences, South Asians and White British may hold beliefs in line with their culture and the respective culturally normative beliefs. However, the more psychotic experiences South Asians have, the lower may such spiritual beliefs be, and the more they may adapt a Western model of mental health. However, future research will need to examine whether and how psychosis is experienced differently in non-Western cultures, and how this relates to causal beliefs. It would be interesting to see if a more severe mental health experience could lead to an adaption of Western models.

We did not find any differences on the three subscales of the BAMHQ – biological, psychosocial, spiritual causes (Carter et al., 2018). This may be due to the novelty of the scale and the low reliability of the subscales. As this is a recently developed scale and developed in

the United Kingdom, there may be problems with it that led to our lower reliability as well as the inability to capture cultural differences. Furthermore, no study has been conducted yet using or validating the CAPE in South Asians living in the United Kingdom. South Asians in the United Kingdom may be different to South Asians living in their home countries (Berry, 1997, 2003). Longer versions have been validated in Western (Mark & Toulopoulou, 2016) and non-Western (Mark & Toulopoulou, 2017) cultures, indicating that it is a robust instrument capturing psychotic experiences across cultures, and similar questionnaires have been used to capture symptoms of South Asians in the United Kingdom. A fruitful avenue for future research would be the development of scales that are able to capture the culture-specific experiences of mental health, and that are developed with researchers and service-users from non-Western cultures. Another limitation of the study is the lack of distinction between the subgroups of South Asians. As this group includes people with several cultural and religious backgrounds, there may be differences within this group. Furthermore, we did not collect information about social class, strength of religiosity or the type of generation of immigration. Future research should examine whether and how these factors play a role.

Implications

Our study examines, for the first time, cross-cultural differences in causal attributions of and stigma towards psychosis in young people in the United Kingdom. The findings on differences between White British and South Asians have implications for developing interventions to both engage ethnic minorities with mental health services and to reduce mental health stigma. Firstly, people with mental health problems not only delay help-seeking due to fear of the social consequences (Schulze & Angermeyer, 2003) but also face fear of rejection from society, friends, families and partners, which frequently results in lowered self-esteem (Wright, Gronfein, & Owens, 2000.). Various stigma interventions based on education or intergroup contact theory have been shown to reduce prejudice and discrimination towards

people with mental health problems (Rüsch et al., 2005; West et al., 2014). If implemented at a young age, those interventions could counteract the stigma towards psychosis specifically and mental health problems more generally. Understanding the culture-specific stigma, to which our study contributes to, will help in designing effective stigma interventions. Secondly, in the United Kingdom, ethnic minorities not only are least likely to access mental health services (McManus, et al., 2016), they also frequently receive inadequate mental health service provision when they do, and services fail to reach or engage with communities where there is a need (Knifton, 2012). If causal beliefs about mental health are a relevant cultural dimension, as suggested by our study, then mental health services that are sensitive to different cultures and their beliefs may be important in order to improve access for diverse ethnic groups. Culture-specific training for health professionals and mental health education for diverse ethnic groups could become relevant. Furthermore, research suggests that clinicians tend to prefer biological explanations to a greater extent than service users and the general public which might influence service users' own causal beliefs (Lebowitz & Ahn, 2014; Rüsch, Todd, Bodenhausen, & Corrigan, 2010). If holding specific causal beliefs add to the negative effects of stigma, and if ethnic minorities experience stronger inhibiting beliefs, then understanding those cultural differences can help to make services more accessible and successful.

Conclusion

The present study illustrates the importance of understanding and addressing beliefs about mental health (causal attributions) and people with mental health problems (stigma) in its socio-cultural context, such as South Asians living in a White dominant culture in the United Kingdom. This may allow mental health service providers to develop more culturally sensitive approaches to reach South Asians with psychosis, and inform educators and policy

makers about interventions to reduce stigma towards those that have mental health problems in South Asian communities.

References

- Allport, G. W. (1954). *The nature of prejudice*. New York, NY: Addison-Wesley.
- Angermeyer, M. C., Holzinger, A., Carta, M. G., & Schomerus, G. (2011). Biogenetic explanations and public acceptance of mental illness: systematic review of population studies. *The British Journal of Psychiatry, 199*, 367-372.
doi:10.1192/bjp.bp.110.085563
- Angermeyer, M. C., & Matschinger, H. (2003). The stigma of mental illness: effects of labelling on public attitudes towards people with mental disorder. *Acta Psychiatrica Scandinavica, 108*, 304-309. doi: 10.1034/j.1600-0447.2003.00150.x
- Baker, C. (2018). *Mental health statistics for England: prevalence, services and funding*. House of Commons Library. Retrieved from:
<https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN06988>
- Barry, C. L., McGinty, E. E., Pescosolido, B. A., & Goldman, H. H. (2014). Stigma, discrimination, treatment effectiveness, and policy: public views about drug addiction and mental illness. *Psychiatric Services, 65*, 1269-1272.
doi:10.1176/appi.ps.201400140
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology, 46*, 5-34.
doi:10.1111/j.1464-0597.1997.tb01087.x
- Berry, J.W. (2003). Conceptual approaches to acculturation. In K. Chun, P. Balls-Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement and applied research* (pp. 17–37). Washington, DC: American Psychological Association.
- Bertolote, J., & McGorry, P. (2005). Early intervention and recovery for young people with early psychosis: consensus statement. *The British Journal of Psychiatry, 187*, s116-s119. doi:10.1192/bjp.187.48.s116

- Bhikha, A., Farooq, S., Chaudhry, N., Naeem, F., & Husain, N. (2015). Explanatory models of psychosis amongst British South Asians. *Asian Journal of Psychiatry, 16*, 48-54.
doi:10.1016/j.ajp.2015.05.042
- Bhugra, D. (2006), Severe mental illness across cultures. *Acta Psychiatrica Scandinavica, 113*, 17–23. doi:10.1111/j.1600-0447.2005.00712.x
- Birtel, M. D., & Crisp, R. J. (2012). "Treating" prejudice: An exposure therapy approach to reducing negative reactions to stigmatized groups. *Psychological Science, 23*, 1379-1386. doi:10.1177/0956797612443838
- Burns, J. K., Jhazbhay, K., & Emsley, R. (2011). Causal attributions, pathway to care and clinical features of first-episode psychosis: A South African perspective. *International Journal of Social Psychiatry, 57*, 538–544.
doi:10.1177/0020764010390199
- Carter, L., Read, J., Pyle, M., Law, H., Emsley, R., & Morrison, A. (2018). Causal beliefs in people experiencing psychosis: The relationship to treatment accessed and the perceived helpfulness of treatment. *Psychology and Psychotherapy: Theory, Research and Practice, 91*, 332-344. doi: 10.1111/papt.12163
- Cauce, A. M., Domenech-Rodríguez, M., Paradise, M., Cochran, B. N., Shea, J. M., Srebnik, D., & Baydar, N. (2002). Cultural and contextual influences in mental health help seeking: A focus on ethnic minority youth. *Journal of Consulting and Clinical Psychology, 70*, 44-55. doi:10.1037/0022-006X.70.1.44
- Charles, H., Manoranjitham, S. D., & Jacob, K. S. (2007). Stigma and explanatory models among people with schizophrenia and their relatives in Vellore, South India. *International Journal of Social Psychiatry, 53*, 325-332.
doi:10.1177/0020764006074538

- Children's Society (2008) *The Good Childhood Inquiry: Health research evidence*. London: Children's Society.
- Cinnirella, M., & Loewenthal, K. M. (1999). Religious and ethnic group influences on beliefs about mental illness: A qualitative interview study. *British Journal of Medical Psychology, 72*, 505-524. doi:10.1348/000711299160202
- Corrigan, P. W., & Miller, F. E. (2004). Shame, blame, and contamination: A review of the impact of mental illness stigma on family members. *Journal of Mental Health, 13*, 537-548. doi:10.1080/09638230400017004
- Corrigan, P. W., & Watson, A. C. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry, 1*, 16-20.
- 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*, 162-179.
- Crisp, A. H., Gelder, M. G., Rix, S., Meltzer, H. I., & Rowlands, O. J. (2000). Stigmatisation of people with mental illnesses. *The British Journal of Psychiatry, 177*, 4-7. doi:10.1192/bjp.177.1.4
- Crocker J., Major B., & Steele C. (1998). Social stigma. In S. Fiske, D. Gilbert, & G. Lindzey (Eds.), *Handbook of Social Psychology* (pp. 504–53). Boston, MA: McGraw-Hill.
- Goffman, E. (1963). *Stigma: Notes on a spoiled identity*. Englewood Cliffs (NJ): Prentice-Hall.
- Dein, S., & Bhui, K. S. (2013). At the crossroads of anthropology and epidemiology: Current research in cultural psychiatry in the UK. *Transcultural Psychiatry, 50*, 769-791. doi:10.1177/1363461513498618

- Furnham, A., Raja, N., & Khan, U. A. (2008). A cross-cultural comparison of British and Pakistani medical students' understanding of schizophrenia. *Psychiatry Research, 159*, 308-319. doi:10.1016/j.psychres.2007.08.019
- Gaebel, W., Baumann, A., Witte, A. M., & Zaeske, H. (2002). Public attitudes towards people with mental illness in six German cities. *European Archives of Psychiatry and Clinical Neuroscience, 252*, 278-287. doi:10.1007/s00406-002-0393-2
- Gardener, D., & Connolly, H. (2005). *Who are the 'Other' ethnic groups?* Office for National Statistics. Retrieved from: <https://www.ons.gov.uk/ons/rel/ethnicity/focus-on-ethnicity-and-identity/who-are-the--other--ethnic-groups-/who-are-the--other--ethnic-groups--article.pdf>
- Goffman, E. (1963). *Stigma: Notes on a spoiled identity*. Englewood Cliffs (NJ): Prentice-Hall.
- Hayes, A. F. (2016). *The PROCESS macro for SPSS and SAS*. Retrieved from <http://processmacro.org/download.html>
- Huggett, C., Birtel, M. D., Awenat, Y. F., Fleming, P., Wilkes, S., Williams, S., & Haddock, G. (2018). A qualitative study: experiences of stigma by people with mental health problems. *Psychology and Psychotherapy: Theory, Research and Practice, 91*, 380-397. doi:10.1111/papt.12167
- Hornsey, M. J., & Hogg, M. A. (2000). Subgroup relations: A comparison of mutual intergroup differentiation and common ingroup identity models of prejudice reduction. *Personality and Social Psychology Bulletin, 26*, 242-256. doi:10.1177/0146167200264010
- Islam, Z., Rabiee, F., & Singh, S. P. (2015). Black and minority ethnic groups' perception and experience of early intervention in psychosis services in the United Kingdom. *Journal of Cross-Cultural Psychology, 46*, 737-753. doi:10.1177/0022022115575737

- Jobanputra, R., & Furnham, A. F. (2005). British Gujarati Indian immigrants' and British Caucasians' beliefs about health and illness. *International Journal of Social Psychiatry, 51*, 350-364. doi:10.1177/0020764005060851
- Johns, L. C., Cannon, M., Singleton, N., Murray, R. M., Farrell, M., Brugha, T., ... & Meltzer, H. (2004). Prevalence and correlates of self-reported psychotic symptoms in the British population. *The British Journal of Psychiatry, 185*, 298-305.
doi:10.1192/bjp.185.4.298
- Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Ustun, T. B. (2007). Age of onset of mental disorders: a review of recent literature. *Current opinion in Psychiatry, 20*, 359-364. doi:10.1097/YCO.0b013e32816ebc8c
- Knifton, L. (2012). Understanding and addressing the stigma of mental illness with ethnic minority communities. *Health Sociology Review, 21*, 287-298.
doi:10.5172/hesr.2012.21.3.287
- Kreyenbuhl, J., Nossel, I. R., & Dixon, L. B. (2009). Disengagement from mental health treatment among individuals with schizophrenia and strategies for facilitating connections to care: a review of the literature. *Schizophrenia Bulletin, 35*, 696-703.
doi:10.1093/schbul/sbp046
- Kulhara, P., Avasthi, A., & Sharma, A. (2000). Magico-religious beliefs in schizophrenia: A study from North India. *Psychopathology, 33*, 62-68. doi:10.1159/000029122
- Lauber, C., & Rössler, W. (2007). Stigma towards people with mental illness in developing countries in Asia. *International Review of Psychiatry, 19*, 157-178.
doi:10.5463/SRA.v1i1.13
- Laurens, K. R., West, S. A., Murray, R. M., & Hodgins, S. (2008). Psychotic-like experiences and other antecedents of schizophrenia in children aged 9–12 years: a comparison of

- ethnic and migrant groups in the United Kingdom. *Psychological Medicine*, 38, 1103-1111. doi:10.1017/S0033291707001845
- Larøi, F., Luhrmann, T. M., Bell, V., Christian Jr, W. A., Deshpande, S., Fernyhough, C., ... & Woods, A. (2014). Culture and hallucinations: overview and future directions. *Schizophrenia Bulletin*, 40(Suppl_4), S213-S220. doi:10.1093/schbul/sbu012
- Lebowitz, M. S., & Ahn, W. K. (2014). Effects of biological explanations for mental disorders on clinicians' empathy. *Proceedings of the National Academy of Sciences*, 111, 17786-17790. doi:10.1073/pnas.1414058111
- 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. doi:10.1176/appi.ps.52.12.1621
- Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology*, 56, 393-421. doi: 10.1146/annurev.psych.56.091103.070137
- Mark, W., & Toulopoulou, T. (2016). Psychometric properties of "community assessment of psychic experiences": review and meta-analyses. *Schizophrenia Bulletin*, 42, 34-44. doi:10.1093/schbul/sbv088
- Mark, W., & Toulopoulou, T. (2017). Validation of the Chinese version of Community Assessment of Psychic Experiences (CAPE) in an adolescent general population. *Asian Journal of Psychiatry*, 26, 58-65. doi:10.1016/j.ajp.2017.01.012
- McCabe, R., & Priebe, S. (2004). Explanatory models of illness in schizophrenia: comparison of four ethnic groups. *The British Journal of Psychiatry*, 185, 25-30. doi:10.1192/bjp.185.1.25
- McManus S, Bebbington P, Jenkins R, Brugha T. (eds.) (2016). *Mental health and wellbeing in England: Adult psychiatric morbidity survey 2014*. Leeds: NHS digital.

- Mueller, B., Nordt, C., Lauber, C., Ruesch, P., Meyer, P. C., & Roessler, W. (2006). Social support modifies perceived stigmatization in the first years of mental illness: a longitudinal approach. *Social Science & Medicine*, *62*, 39-49.
doi:10.1016/j.socscimed.2005.05.014
- Ng, C. H. (1997). The stigma of mental illness in Asian cultures. *Australian and New Zealand Journal of Psychiatry*, *31*, 382-390. doi:10.3109/00048679709073848
- NHS (2016). *Implementing the Early Intervention in Psychosis Access and Waiting Time Standard: Guidance*. NHS England, National Collaborating Centre for Mental Health, and NICE National Institute for Health and Care Excellence. Retrieved from: <https://www.england.nhs.uk/mentalhealth/wp-content/uploads/sites/29/2016/04/eip-guidance.pdf>
- NHS (2018). *Psychosis*. Retrieved from: <https://www.nhs.uk/conditions/psychosis/>
- NICE (2014). *Psychosis and schizophrenia in adults: prevention and management*. Retrieved from <https://www.nice.org.uk/guidance/cg178/chapter/1-Recommendations#first-episode-psychosis-2>
- Office for National Statistics, (2011). *Census: Ethnic group, local authorities in the United Kingdom, 2011*. London: Office for National statistics.
- Onwumere, J., Shiers, D., & Chew-Graham, C. (2016). Understanding the needs of carers of people with psychosis in primary care. *British Journal of General Practice*, *66*, 400-401. doi:10.3399/bjgp16X686209
- Penny, E., Newton, E., & Larkin, M. (2009). Whispering on the Water British Pakistani families' experiences of support from an Early Intervention Service for first-episode psychosis. *Journal of Cross-Cultural Psychology*, *40*, 969-987.
doi:10.1177/0022022109347967

Perlick, D. A., Rosenheck, R. A., Clarkin, J. F., Sirey, J. A., Salahi, J., Struening, E. L., &

Link, B. G. (2001). Stigma as a barrier to recovery: adverse effects of perceived stigma on social adaptation of persons diagnosed with bipolar affective

disorder. *Psychiatric Services*, *52*, 1627-1632. doi:10.1176/appi.ps.52.12.1627

Petrie, K. J., Broadbent, E., & Kydd, R. (2008). Illness perceptions in mental health: Issues and potential applications. *Journal of Mental Health*, *17*, 559-564.

doi:10.1080/09638230802523047

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory.

Journal of Personality and Social Psychology, *90*, 751-783. doi:10.1037/0022-3514.90.5.751

Phelan, J. C., Bromet, E. J., & Link, B. G. (1998). Psychiatric illness and family

stigma. *Schizophrenia Bulletin*, *24*, 115-126. doi:10.1192/bjp.183.2.173-a.

Phelan, J. C., Link, B. G., Stueve, A., & Pescosolido, B. A. (2000). Public conceptions of mental illness in 1950 and 1996: What is mental illness and is it to be feared?.

Journal of Health and Social Behavior, *41*, 188-207.

Rathod, S., Kingdon, D., Phiri, P., & Gobbi, M. (2010). Developing culturally sensitive

cognitive behaviour therapy for psychosis for ethnic minority patients by exploration and incorporation of service users' and health professionals' views and opinions.

Behavioural and Cognitive Psychotherapy, *38*, 511-533.

doi:10.1017/S1352465810000378

Rosenfield, S. (1997). Labeling mental illness: The effects of received services and perceived stigma on life satisfaction. *American Sociological Review*, *62*, 660-672.

doi:10.2307/2657432

- Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: concepts, consequences, and initiatives to reduce stigma. *European Psychiatry, 20*, 529-539. doi:10.1016/j.eurpsy.2005.04.004
- Rüsch, N., Todd, A. R., Bodenhausen, G. V., & Corrigan, P. W. (2010). Biogenetic models of psychopathology, implicit guilt, and mental illness stigma. *Psychiatry Research, 179*, 328-332. doi: 10.1016/j.psychres.2009.09.010
- Rueve, M. E., & Welton, R. S. (2008). Violence and mental illness. *Psychiatry (Edgmont), 5*, 34-48.
- Salve, H., Goswami, K., Sagar, R., Nongkynrih, B., & Sreenivas, V. (2013). Perception and attitude towards Mental Illness in an Urban Community in South Delhi—A Community Based Study. *Indian Journal of Psychological Medicine, 35*, 154-158. doi:10.4103/0253-7176.116244
- Sam, D. L., & Berry, J. W. (2010). Acculturation: When individuals and groups of different cultural backgrounds meet. *Perspectives on Psychological Science, 5*, 472-481. doi:10.1177/1745691610373075
- Saravanan, B., Jacob, K. S., Johnson, S., Prince, M., Bhugra, D., & David, A. S. (2007). Belief models in first episode schizophrenia in South India. *Social Psychiatry and Psychiatric Epidemiology, 42*, 446-451. doi:10.1007/s00127-007-0186-z
- Sartorius, N. (2007). Stigma and mental health. *The Lancet, 370*, 810-811. doi:10.1016/S0140-6736(07)61245-8
- Schulze, B., & Angermeyer, M. C. (2003). Subjective experiences of stigma. A focus group study of schizophrenic patients, their relatives and mental health professionals. *Social Science & Medicine, 56*, 299-312. doi:10.1016/S0277-9536(02)00028-X
- Somasundaram, D., Thivakaran, T., & Bhugra, D. (2008). Possession states in northern Sri Lanka. *Psychopathology, 41*, 245-253. doi:10.1159/000125558

- Stathi, S., Tsantila, K., & Crisp, R. J. (2012). Imagining intergroup contact can combat mental health stigma by reducing anxiety, avoidance and negative stereotyping. *The Journal of Social Psychology, 152*, 746-757. doi:10.1080/00224545.2014.888327
- Stefanis, N., Hanssen, M., Smirnis, N., Avramopoulos, D., Evdokimidis, I., Stefanis, C., Van, Os, J. (2002). Evidence that three dimensions of psychosis have a distribution in the general population. *Psychological Medicine, 32*, 347-358.
doi:10.1017/S0033291701005141
- Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin, 35*, 45–59.
doi:10.1177/0146167208325004
- Turner, R. N., & Crisp, R. J. (2010). Explaining the relationship between ingroup identification and intergroup bias following recategorization: A self-regulation theory analysis. *Group Processes & Intergroup Relations, 13*, 251-261.
doi:10.1177/1368430209351702
- Turner, R. N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit outgroup prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology, 93*, 369-388.
doi:10.1037/0022-3514.93.3.369
- Walker, I., & Read, J. (2002). The differential effectiveness of psychosocial and biogenetic causal explanations in reducing negative attitudes toward “mental illness”. *Psychiatry, 65*, 313-325. doi:10.1521/psyc.65.4.313.20238
- West, K., Hewstone, M., & Lolliot, S. (2014). Intergroup contact and prejudice against people with schizophrenia. *The Journal of Social Psychology, 154*, 217-232.
doi:10.1080/00224545.2014.888327

Wood, L., Birtel, M., Alsawy, S., Pyle, M., & Morrison, A. (2014). Public perceptions of stigma towards people with schizophrenia, depression, and anxiety. *Psychiatry Research, 220*, 604-608. doi:10.1016/j.psychres.2014.07.012

WHO (2018). *Mental disorders*. Retrieved from: <http://www.who.int/news-room/factsheets/detail/mental-disorders>

Wright, E.R., Gronfein, W.P., Owens T.J. (2000): Deinstitutionalization, social rejection, and the self-esteem of former mental patients. *Journal of Health and Social Behavior, 41*, 68–90.

Footnotes

¹ Although participants had the option to identify themselves as mixed or even White British, they chose to report their ethnicity as Asian/Asian British, which indicates that psychologically, they feel closer to the Asian culture than the British culture. Additionally, the scale on identification with being British also indicates the ethnicity they identify with most. With regards to religiosity, participants had the option to choose between reporting a religion or indicating whether they are not religious.

² The following text was used: "Psychosis is a mental health problem that can cause people to see or understand things differently from those around them. Someone who develops Psychosis will experience a unique set of symptoms according to their particular circumstances. Some common experiences linked with Psychosis are hallucinations, delusions, confusion and intrusive thoughts. A delusion is a false belief that is strongly believed and based on incorrect conclusions about reality. This belief is held despite evidence against it and is not accounted for by the person's culture or religion. A hallucination can be described as a sensory perception which is experienced despite there being no external stimulus. Hallucinations can occur with any sense where you can see, hear, smell, taste or touch. Intrusive thoughts are unwelcome involuntary thoughts, images, or unpleasant ideas that may become obsessions, are upsetting or distressing, and can be difficult to manage or get rid of."

³ This study, a student project, was part of a larger research project that involved two students with different research questions and different dependent measures. Therefore, other measures were administered which were not part of the present investigation.

⁴ The supernatural questionnaire asked about a range of supernatural causes including God, higher power, witchcraft and ghosts. The spiritual item asked about religious/spiritual forces in general.

Table 1

Participant Demographics (frequencies)

	White British	South Asians
Gender M:F	14:50	50:14
Ethnicity		
White British	64	
Asian Pakistani		39
Asian Indian		19
Asian Bangladeshi		5
Asian Sri Lankan		1
Religion		
No religion	33	18
Christian	28	2
Muslim	0	33
Buddhist	0	0
Sikh	0	2
Hindu	1	6
Other	1	1
First Language		
English	64	49
Urdu		9
Punjabi		3
Arabic		1
Malayam		1

Table 2

Frequency of Experiences with Mental Health

		White British	South Asians
		(<i>n</i> = 64)	(<i>n</i> = 64)
Previous contact with a mental health service	Yes	19	4
	No	43	60
Prior contact with a person with a mental health problem	Yes	45	25
	No	18	39
Prior mental health problems	Yes	16	2
	No	38	56

Note. No response: previous contact with a mental health service = 2 White British, prior contact with a person with a mental health problem = 1 White British, prior mental health problem: 10 White British, 6 South Asians.

Table 3

Point-Biserial Correlation Matrix for Experiences with Mental Health, Causal Attributions and Stigma; for White British (below the diagonal, N = 64) and for South Asians (above the diagonal, N = 64)

Measure	1	2	3	4	5	6	7	8
1. Previous contact with a mental health service	–	.19	.45**	-.03	.09	.21	.21	.43**
2. Prior contact with a person with a mental health problem	.26*	–	-.03	.04	-.04	-.13	-.19	.20
3. Prior mental health problems	.61**	.28**	–	-.04	.17	.07	-.02	.31*
BAMHQ								
4. Psychological	-.04	.12	.11	–	.21	.07	-.13	-.16
5. Biological	-.03	.03	-.06	.51**	–	.01	-.31**	-.08
6. Spiritual	.01	.03	.01	.24	.29	–	.39**	-.29*
7. SAQ	-.06	.17	-.15	-.05	-.07	.11	–	.17
8. Contact intentions	.13	.20	.07	-.12	.10	-.11	-.03	–

Note: * $p < .05$; ** $p < .01$ (two-tailed). Measures 1-3 were categorical and coded as 0 = no experience and 1 = experience. BAMHQ = Beliefs about Mental Health Problems Questionnaire, SAQ = Supernatural Attitudes Questionnaire.

Table 4

Means (Standard Deviations) for All Measures

	White British	South Asian
Group identification	5.35 (1.53)	4.64 (1.51)
CAPE	2.19 (2.30)	2.88 (2.49)
Contact intentions	5.92 (0.75)	5.28 (0.88)
BAMHQ		
Psychological	16.67 (2.12)	16.48 (2.34)
Biological	7.45 (1.80)	7.19 (1.79)
Spiritual	2.42 (1.23)	2.38 (1.39)
SAQ	73.08 (34.18)	80.05 (43.82)

Note. CAPE = Community Assessment of Psychic Experiences, BAMHQ = Beliefs about Mental Health Problems Questionnaire, SAQ = Supernatural Attitudes Questionnaire.

Table 5

Results of the Moderation Analysis Examining the Interaction between CAPE and Ethnicity on SAQ

	<i>B</i>	<i>SE (B)</i>	<i>t</i>	<i>p</i>	<i>LL</i>	<i>UL</i>
Main Analysis						
Constant	77.99	3.40	22.91	<.0001	71.26	84.73
CAPE	-1.29	1.42	-0.91	.365	-4.10	1.52
Ethnicity	-3.93	3.40	-1.15	.251	-10.67	2.81
Ethnicity X CAPE	4.16	1.42	2.93	.004	1.35	6.98
Simple Slopes						
Low CAPE	-22.37	4.67	-4.79	<.0001	-31.61	-13.13
Moderate CAPE	-14.67	3.74	-3.92	.0001	-22.97	-7.27
High CAPE	-6.97	5.10	-1.37	.175	-17.07	3.13
South Asian	-4.04	1.77	-2.28	.025	-7.56	-0.53
White British	2.34	1.90	1.23	.221	-1.43	6.10

Note. CAPE = Community Assessment of Psychic Experiences, SAQ = Supernatural

Attitudes Questionnaire. Predictor variables are centred, *B* = unstandardized coefficient, *SE* = standard error, *p* reported two-tailed, 95% bias-corrected and accelerated confidence interval, *LL* = lower limit, *UL* = upper limit.

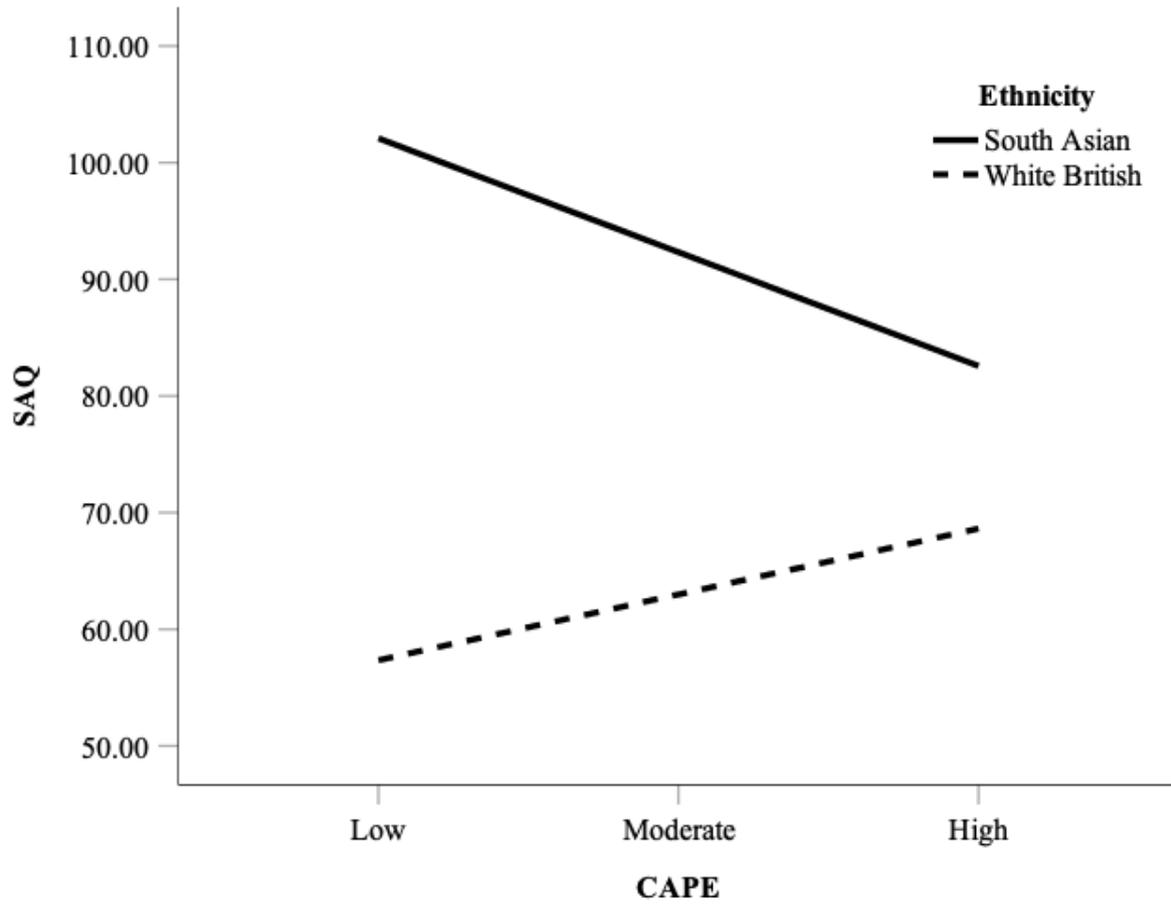


Figure 1. CAPE as a moderator of the relationship between ethnicity and SAQ. CAPE = Community Assessment of Psychic Experiences, SAQ = Supernatural Attitudes Questionnaire.