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Perceptions of positive treatment and discrimination towards people with mental health problems: findings from the 2017 Attitudes to Mental Illness survey

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Highlights

- 1720 participants were recruited for the 2017 Attitudes to Mental Illness Survey

- 30.1% of participants reported knowing someone with a mental health problem

- 58.1% reported treating this person positively, e.g. providing more support

- Greater knowledge and reported contact are associated with positive treatment

- Lower stigma is associated with reduced avoidance and discrimination

Abstract

Anti-stigma programme evaluations primarily measure knowledge and attitudes, and rarely assess behaviour. This study describes perceived and self-reported avoidance, discrimination and positive treatment using data from the 2017 Attitudes to Mental Illness Survey. A nationally representative quota sample of 1720 English participants were interviewed about mental health-related knowledge and attitudes, reported and intended contact with people with mental health problems, awareness of the Time to Change anti-stigma programme and knowledge of anyone with a mental health problem. Participants who knew someone were asked how they thought the person was treated in different life areas, and whether they had avoided the person, treated them unfairly or treated them more positively. 30.1% of respondents knew someone with a mental health problem. Most believed the person had been treated fairly across various life domains. 5.1% of participants reported avoiding the person, 2.1% reported unfair treatment, and 58.1% reported positive treatment. Less stigmatising attitudes were associated with reduced avoidance and discrimination. Greater knowledge and reported contact were associated with positive treatment. Anti-stigma campaigns can reduce discrimination or increase positive treatment by targeting knowledge, attitudes and awareness of people with mental health problems. Evaluations should measure discrimination and positive treatment to fully assess behavioural change.

1. Introduction

The stigma associated with mental illness can be broadly conceptualised as problems related to knowledge (contributing to ignorance or misinformation), attitudes (contributing to prejudice) and behaviour (contributing to discrimination; Thornicroft et al., 2007). Ignorance, prejudice and discrimination can have far-reaching consequences for people with mental health problems by limiting or precluding opportunities to engage in social relationships (Webber et al., 2014), fulfil educational goals or pursue meaningful work (Brouwers et al., 2016), and receive appropriate healthcare (Corrigan, 2004). Difficulties arising from stigma can carry substantial economic costs for people with mental health problems (Evans-Lacko et al., 2015; Evans-Lacko et al., 2013), which further entrenches population inequalities (Hatzenbuehler et al., 2013) and exacerbates the public health impact of mental illness. There is thus an urgent need to find effective ways of reducing mental health-related stigma.

Research is increasingly focusing on the role of anti-stigma interventions in addressing problems of knowledge, attitudes and behaviour within populations or specific target groups. Evidence suggests that interventions consistently produce short-term improvements in attitudes, but less often achieve positive changes in knowledge (Thornicroft et al., 2016). Education- and contact-based approaches appear to be the most effective types of intervention (Corrigan et al., 2012), however, there is little evidence for the long-term effectiveness of most initiatives, and very few incorporate measures of behaviour change into their evaluations (Thornicroft et al., 2016). This is problematic because improvements in knowledge and attitudes may not necessarily translate into reductions in discrimination. Without measuring actual behaviour (as opposed to intended behaviour), the effectiveness of anti-stigma interventions upon the day-to-day lives of people with mental health problems remains unclear.

One intervention that has assessed long-term changes in stigmatising knowledge, attitudes and behaviours is England's Time to Change (TTC) programme (Henderson et al., 2016; Henderson and

Thornicroft, 2013). Launched in 2008, TTC combines social marketing to the general public, local initiatives promoting contact with people with mental health problems, education programmes for employers, medical students and teachers, and small-scale anti-discrimination projects in a multi-faceted, multi-level approach to stigma reduction (Henderson and Thornicroft, 2009). Comprehensive, long-term evaluations of the TTC programme have included annual surveys of both the English public, using the Attitudes to Mental Illness survey, and mental health service users, using the Viewpoint survey to measure discriminatory behaviour towards people receiving treatment for a diagnosed mental illness. Analyses suggest that TTC has improved knowledge, attitudes and reported contact with people with mental health problems (Henderson et al., 2016) and reduced social distance and discrimination (Corker et al., 2016; Henderson et al., 2016). Despite these positive outcomes, service users have not perceived greater support from social groups such as friends, family, employers or healthcare staff (Corker et al., 2016).

The importance of assessing a range of different behaviours towards people with mental health problems is illustrated by a recent Australian national survey which explored experiences of avoidance, discrimination and positive treatment. A representative sample of 5220 participants, including 1381 people with an in-scope mental health problem and 2703 who reported knowing an adult with a mental health problem in the previous 12 months, were interviewed about their experiences and behaviours (Reavley and Jorm, 2015). Although people with mental health problems most often reported positive treatment from friends, family, employers, educators and healthcare professionals, substantial minorities had experienced avoidance by family and friends (Morgan et al., 2017), and discrimination in work and healthcare settings (Morgan et al., 2016; Reavley et al., 2016). Self-reported behaviour from participants who had interacted with someone with a mental health problem indicated that 73.0% reported treating the person more positively, 19.9% mentioned avoiding the person and 4.7% disclosed discrimination (Reavley et al., 2017). The results of this research imply that only measuring knowledge, attitudes, contact and/or discriminatory behaviours in evaluations of stigma reduction initiatives may omit important findings related to positive

treatment, or underestimate the magnitude and direction of effects on behaviour. Decreases in discriminatory behaviour and increases in positive or supportive actions should both be priorities of anti-stigma interventions, and measures of both should be included in programme evaluations to accurately gauge success (Corrigan and Shapiro, 2010).

TTC evaluations to date have quantified the amount of reported and intended contact with people with mental health problems, but have not explored the quality of these interactions. To address this limitation, the 2017 Attitudes to Mental Illness survey included questions pertaining to the public's awareness and treatment of people with mental health problems. These were added to better understand people's perceptions and behaviour, and establish a baseline from which to assess subsequent behavioural changes. This paper therefore reports on findings from the 2017 Attitudes to Mental Illness survey that relate to participants' personal experiences of knowing someone with a mental health problem. It aims to: a) describe how participants perceive people with mental health problems to be treated by others in particular areas of their lives; b) describe how members of the UK public characterise their treatment of people with mental health problems (as avoidance, discrimination or positive treatment); and c) explore whether knowledge, attitudes, intended contact or reported contact are associated with avoidance, discrimination or positive treatment.

2. Methods

2.1. Data source

The 2017 Attitudes to Mental Illness Survey was conducted by the social research agency Kantar TNS as part of an Omnibus Survey associated with the evaluation of the TTC programme. Although these surveys have been conducted annually since 2008, 2017 was the first year in which questions on respondents' experiences with people with mental health problems were included. As in previous years, the 2017 survey employed a quota sample, with interview locations within the sampling frame of England selected using a random location methodology. Data from the UK Census small area statistics and the Postcode Address File were used to define interview locations. These were

stratified by Government Office Region and social status, and checked to ensure their representativeness by an urban and rural classification. Each week, blocks containing approximately 150 addresses were sampled from interview locations within the Postcode Address File and issued to interviewers. Interview quotas were set by gender, working status and presence of children in the household to ensure a balanced sample of adults within contacted addresses. Participants were eligible to be interviewed if they resided in a private dwelling, were aged 16 and over and provided informed consent to be interviewed.

A nationally representative sample of 1720 respondents were interviewed in December 2016. Trained Kantar TNS interviewers conducted face-to-face interviews in English in participants' homes using computer-assisted personal interviewing. Interviews were conducted in the afternoons and evenings, and on weekends. One person per household was interviewed, based on whether they met the eligibility criteria and overall progress towards achieving the prespecified interview quotas. Interviewers were instructed to leave three doors between each successful interview. Further details on the survey methodology, and the full interview schedule, can be found in the TNS BMRB 2014 report (TNS BMRB, 2015). As this research involves secondary analysis of an anonymised dataset, it is classified as exempt from ethics approval by the King's College London's Psychiatry, Nursing and Midwifery Research Ethics Subcommittee.

2.2. Measures

Respondents' knowledge of mental health was measured by the Mental Health Knowledge Schedule (MAKS; Evans-Lacko et al., 2010). The instrument consists of six statements related to help-seeking, recognition of mental illness, support, employment, treatment and recovery, and six questions about whether respondents consider particular conditions to be mental illnesses. Respondents rated their agreement with each item on a scale from 1 ('agree strongly') to 5 ('disagree strongly'). Total scores are calculated such that higher values reflect greater knowledge.

Mental health-related attitudes were measured using the UK Department of Health's Attitudes to Mental Illness questionnaire, which comprises 26 items from the Community Attitudes Towards the Mentally Ill scale (CAMI; Taylor and Dear, 1981) and an additional item about employment-related attitudes. This version of the CAMI demonstrates good reliability using a two-factor solution comprised of a prejudice and exclusion subscale and a tolerance and support subscale (Rüsch et al., 2011). Participants rated their agreement with statements related to social exclusion, benevolence, tolerance and support for community mental health care on a scale from 1 ('agree strongly') to 5 ('disagree strongly'). Total scores for the CAMI are calculated so that higher values reflect less stigmatising attitudes.

Respondents' level of contact (reported behaviour) and desire for social distance (intended behaviour) towards people with mental health problems was assessed with the Reported and Intended Behaviour Scale (RIBS; Evans-Lacko et al., 2011). Four items, representing intended behaviour, asked respondents to rate their willingness to live with, work with, live nearby to and continue a relationship with someone with a mental health problem on a scale from 1 ('agree strongly') to 5 ('disagree strongly'). Reported behaviour was assessed with four yes/no questions asking respondents about past and current contacts in the same contexts. Total scores were calculated such that higher scores represented more intended and reported contact with people with mental health problems.

Respondents were asked whether they knew anyone aged 16 and over with a mental health problem in the last 12 months, excluding themselves. Those who answered yes were asked whether they knew one or more than one person, and asked to think about the person they knew best when answering subsequent questions. Respondents were asked what they thought the person's mental health problem was, their age, gender and relationship to the respondent, and how they knew the person had a mental health problem. They indicated whether they perceived the person to have been treated unfairly, fairly or more positively because of their mental health problems over the last 12

months in making or keeping friends, by people in their neighbourhood, in dating or intimate relationships, in education, in marriage or divorce, by their family, in finding or keeping a job, in their social life, when getting help for physical health problems, by mental health staff, in their role as a parent, and in any other life areas. Respondents did not have to provide answers to questions that were not relevant or applicable to the person's situation (e.g., if the person was unmarried or had not been looking for a job). Participants were asked whether they themselves had avoided the person or anyone else with mental health problems in the last 12 months. Those who responded 'yes' were asked an open-ended question about why they avoided the person. Respondents were also asked whether they had treated the person or anyone else with mental health problems more unfairly or more positively in the last 12 months and, if so, to describe what happened in each instance.

To assess awareness of the TTC programme, participants were shown material from all of TTC's promotional activities and asked whether they had seen any of it and, if so, how many times. Participants' demographic information, including age, gender, ethnicity and socioeconomic status, was collected last.

2.3. Statistical analysis

Descriptive statistics and percent frequencies were calculated, with respondents' gender, age and ethnicity weighted using data from the UK Government's Office for National Statistics (www.ons.gov.uk) to adjust for differences between the survey sample and the population of England. Responses to the avoidance, unfair treatment (discrimination) and positive treatment questions were dichotomised into 'yes' and 'no' for subsequent analyses. Similarly, campaign awareness was dichotomised into 'none' and 'any.' Chi-squared tests assessed whether TTC campaign awareness was associated with avoidance, discrimination or positive treatment. Logistic regressions explored whether participants' knowledge (measured by total score on the first six items of the MAKS), attitudes (measured by total score on the CAMI) and reported and intended behaviour (measured by the two scales of the RIBS, with reported contact dichotomised into 'none' and 'any' contact) were

associated with avoidance, discrimination and positive treatment of people with mental health problems. Each regression controlled for respondents' gender, age, ethnicity and socioeconomic status. Statistical tests were performed on total scores or subscales, rather than individual items, to avoid inflating the Type I error rate. Open-ended responses to the questions of why the respondent avoided the person, and what happened in instances of unfair or positive treatment, were analysed via content analysis, using the same coding systems developed by Reavley and colleagues (Reavley et al., 2017). All responses were initially coded by Kantar TNS, and then independently checked against the relevant coding system by one author (A.R.). Discrepancies were resolved through discussion with other authors (E.R. and C.H.). Some categories from the existing coding systems were not used, and no new codes were required.

3. Results

As the survey involved a quota sample, it was not possible to determine a response rate. On average, 12 interviews were achieved per interview location. Table 1 presents the demographic characteristics of respondents to the 2017 survey. Males, people aged between 16 and 24, and Black, Asian and other ethnicities were under-represented; sample weighting has adjusted for this. Of the 1720 respondents, 517 (30.1%) reported that they knew a person aged 16 or over with a mental health problem over the preceding 12 months. The following descriptive statistics pertain to this sub-sample.

Of the respondents knowing someone with a mental health problem, 52.0% knew one person, and 48.0% knew more than one person. The person respondents knew best was most often female (*n*=250, 57.5%), aged between 25 and 44 (*n*=166, 38.5%), and a family member (*n*=195, 44.6%), friend (*n*=165, 37.8%) or spouse (*n*=25, 5.7%). Participants most commonly named the problem as depression (*n*=229, 44.3%), anxiety/anxiety disorder (*n*=127, 24.6%), bipolar disorder (*n*=90, 17.4%) or attempted suicide or self-harm (*n*=52, 10.1%). Respondents were told of the problem by the person in 226 cases (51.6%), recognised the problem themselves in 161 cases (36.8%) and were told by someone else about the person's problem in 86 cases (19.6%).

Table 2 presents respondents' perceptions of how the person they knew best had been treated in different areas of their life, stratified by closeness of relationship (family member, friend or spouse vs other type of relationship, such as colleague or neighbour). In every domain, the majority of respondents believed the person had been treated fairly. The person was most often perceived to have been treated more positively by their family (32.8%), by mental health staff (26.1%) and in their role as a parent (23.4%). The person was most frequently perceived to have been treated unfairly in finding a job (29.7%), keeping a job (24.8%) and in marriage or divorce (22.4%). The person was least often perceived to have been treated unfairly by mental health staff (8.1%).

Twenty-two respondents (5.1%) reported that they had avoided the person, or anyone else, because of their mental health problems in the previous 12 months. Nine participants (2.1%) reported that they had treated the person or someone else unfairly. These very low response rates precluded any in-depth analysis of the open-ended questions associated with these questions, although the more common reasons for avoidance appeared to relate to difficulty managing or tolerating the person's symptoms or behaviour, and concern that the person was dangerous or aggressive. In contrast, 244 respondents (58.1%) reported treating people with mental health problems more positively. The main types of positive treatment reported included: emotional support, such as maintaining or increasing contact, listening more, and being more empathetic, sympathetic, positive or encouraging; offering information and advice; and practical support such as helping with appointments, assisting with errands or household tasks, and having the person stay over.

Chi-squared tests to assess whether TTC campaign awareness was associated with respondents avoiding the person, treating them unfairly, or treating them more positively were all non-significant at the $p < 0.05$ level. The power of the test to detect significant differences is likely affected by the small numbers of people endorsing avoidance and unfair treatment, and so these results should be interpreted as tentative. This is also the case for the results of the logistic regressions exploring associations between knowledge, attitudes and contact. Table 3 shows the results for

predictors of avoidance. Higher total scores on the CAMI are associated with significantly reduced odds of avoiding someone with a mental health problem (odds ratio (OR) = 0.95, 95% CI 0.91 – 0.99, p = 0.009). Table 4, which presents logistic regression results for predictors of discrimination, shows a similar relationship between attitudes and discrimination (OR = 0.91, 95% CI 0.85 – 0.97, p = 0.006). Table 5 provides the results for predictors of positive treatment. Greater mental health-related knowledge, and reported contact with people with mental health problems, are associated with significantly greater odds of positive treatment (OR = 1.10, 95% CI 1.02 – 1.19, p = 0.13, and OR = 4.55, 95% CI 1.74 – 11.88, p = 0.002, respectively). Overall, regardless of significance, the regression results trended towards greater knowledge, reported and intended contact, and more positive attitudes being associated with reduced avoidance and discrimination and increased positive treatment.

4. Discussion

This paper describes perceptions of avoidance, discrimination and positive treatment, and associated characteristics, in a nationally representative sample of English participants who knew someone with a mental health problem. The results provide valuable insights into the general public's awareness of other people's mental health problems, their perceived and reported treatment of people with mental health problems, and the effects of knowledge, attitudes and contact on discrimination and positive treatment.

Approximately 30% of the sample reported knowing someone with a mental health problem in the preceding 12 months. This proportion is smaller than that reported in the Australian national survey sample, where 51.0% of participants knew of another person's mental health problem (Reavley and Jorm, 2015). This difference may be due to different data collection methods: unlike the Attitudes to Mental Illness survey, the Australian research used telephone interviews, which could offer participants an increased sense of anonymity and facilitate mental health-related disclosures. It is also possible that levels of awareness of others' mental health problems differ between the two countries. Several factors may influence awareness, including whether and to whom the problem is disclosed

(Henderson et al., 2017), and the ability to recognise a developing mental disorder (Jorm, 2012). In this research, 51.6% of respondents were told of the problem by the person, and 36.8% recognised the problem themselves. Both figures are noticeably lower than the corresponding percentages in the Australian survey (61.6% and 50.1% respectively; Reavley and Jorm, 2015), which may reflect cultural differences in comfort with disclosing mental health problems, or differing levels of mental health literacy. Establishing whether members of the public are aware of mental health problems in others, and how they have acquired this knowledge, can contribute to the development of targeted campaign messages for anti-stigma programmes that focus on improving symptom recognition, or appropriate responses to the disclosure of a mental health problem.

Participants in this research believed that people with mental health problems were treated fairly in most aspects of their lives, although they perceived more discrimination towards the person in employment matters, and more positive treatment by family. Interestingly, in the 2014 Viewpoint survey, people receiving treatment for mental health problems reported the reverse pattern of results: comparatively more discrimination from friends (43% vs 16.5% in the current study) and family (47% vs 13.1%), and less discrimination in finding a job (17% vs 29.7%) and keeping a job (16% vs 24.8%; Corker et al., 2016). These discrepant findings highlight the difficulties associated with characterising another person's actions as discrimination or positive treatment. For example, individuals may inadvertently under- or over-estimate the capacities of people with mental health problems, which could be perceived as discrimination by one person, but not another. Similarly, most participants in this survey were family members or friends, and they may have incorporated perceptions of their own behaviour into their responses, for example, by characterising their actions as fair or more positive treatment. Research suggests that the family members of people with depression can be an important source of both support and discrimination (Lasalvia et al., 2013), which may reflect differences in how particular actions are interpreted or responded to at any given time. Individuals who have themselves experienced mental illness may also interpret others' actions towards someone they know as more or less discriminatory, based on their own experiences. Future

research could explore how various behaviours are perceived by different groups, such as people with mental health problems, families, employers and healthcare staff, and the results used to inform anti-stigma efforts that aim to reduce discrimination or increase positive treatment.

Self-reported rates of avoidance and discrimination in this survey were lower than anticipated, based on data from Australia (Reavley et al., 2017), and evidence that up to 61% of mental health service users report being shunned or discriminated against (Corker et al., 2016). Social desirability may have influenced responses to these questions, with participants less willing to disclose their own avoidant or discriminatory actions. Henderson and colleagues (2012) found a greater prevalence of socially desirable responses when assessing contact with people with mental health problems in face to face interviews compared to online surveys. As this survey collected data in face to face interviews, future iterations could consider using methodologies that confer greater anonymity, such as online questionnaires or telephone interviews, to reduce participants' reluctance to report avoidance and discrimination and potentially elicit more accurate figures.

The small numbers of respondents reporting avoidance and discrimination prevented robust statistical analyses of predictors of these actions. However, the logistic regression results appear to indicate that less stigmatising attitudes are associated with reduced avoidance and discrimination, while greater knowledge and reported contact are associated with positive treatment. Although causality cannot be established from these cross-sectional data, it is possible that attitudes and knowledge have different effects on behaviour: more tolerant attitudes may mean people refrain from discriminatory behaviour, while accurate knowledge about mental health problems may facilitate the provision of appropriate support. Anti-stigma campaigns could therefore elicit less discrimination, or more positive treatment, depending on which aspect of stigma they target. As most stigma reduction strategies only assess changes in knowledge and attitudes (Thornicroft et al., 2016), and rarely assess changes in behaviour, particularly positive treatment (Corrigan and Shapiro, 2010; Thornicroft et al., 2007), the range of benefits that anti-stigma interventions could produce is currently unclear.

Interestingly, in this research, the relationship between campaign awareness and positive treatment was non-significant. However, trends from the contingency table indicated that campaign-aware respondents tended to treat the person they knew more positively compared to respondents who were not campaign aware (data available from the authors). Several factors may have influenced this finding, including low reported numbers of both campaign awareness and positive treatment, different understandings of positive treatment (e.g., as opposed to fair or usual treatment), and campaign messages with inadequate reach, clarity or resonance. Additional research is needed to better understand this finding and the reasons for it. Nonetheless, it is clear that, to fully assess the effectiveness of anti-stigma campaigns, their evaluations should attempt to capture different types of behaviour change through appropriate, robust study designs that incorporate measures of both discrimination and positive treatment.

This research is some of the first to assess the perceived and self-reported treatment of people with mental health problems in a nationally representative sample of participants in England. The results also offer insights into how anti-stigma campaigns can be designed to reduce discrimination or increase supportive treatment by targeting the public's knowledge, attitudes and awareness of people with mental health problems. There are nevertheless several limitations to this study. The survey is cross-sectional, so causal relationships between knowledge, attitude, contact and demographic variables and different types of behaviour cannot be ascertained. Much of these data are based on the perceptions or recollections of people who may not have experienced mental health problems themselves, which may not accurately reflect how people with mental health problems are treated in different life areas. However, inconsistencies in how people with and without mental health problems report such treatment can highlight where more work is needed to increase awareness of the impact of mental illness. Social desirability and the face to face method of data collection may have increased participants' reluctance to disclose avoidant or discriminatory behaviour. The low numbers of reported avoidance or discrimination severely limited the analyses associated with this data, and so the results related to associations between attitudes and avoidance and discrimination are

underpowered and should be interpreted with caution. <mark>Analyses are also limited by the small numbers respondents of Asian, Black and Other ethnicities, making it difficult to generalise the results of this research to non-White samples.</mark> Attempts to replicate the results with a larger representative sample, or one which oversamples minority groups, would help to verify the findings.

This research provides useful baseline data for future evaluations of the TTC programme, particularly with regards to assessing its impact on rates of perceived and actual discrimination and positive treatment. Evaluations of TTC find that it has positive effects on knowledge, attitudes, social distance and reported contact (Henderson et al., 2016). However, further research is needed to better understand which components of the programme are most effective at reducing stigma and how they act to produce behavioural change. Future studies could replicate the results of this research to determine their validity and reliability, and investigate which types of messages or interventions contribute to the reduction of discrimination and the promotion of supportive actions. Both outcomes are likely to lead to meaningful improvements in the lives of people with mental health problems.

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Table 1. Participant characteristics for 2017 Attitudes to Mental Illness survey, un-weighted frequency and weighted percentages.

Demographic characteristic	N (%)
Gender	
Female	938 (50.8)
Male	782 (49.2)
Age in years: mean (SD)	43.7 (20.0)
Age group	
16-24	220 (17.8)
25-44	491 (37.4)
45-64	507 (27.7)
65+	502 (17.1)
Ethnicity	
Asian	76 (5.5)
Black	61 (4.5)
Other	41 (3.1)
White	1529 (87.0)
Socio-economic status	
AB (professional/managerial occupation)	350 (22.4)
C1 (other non-manual occupation)	501 (35.3)
C2 (skilled manual occupation)	296 (15.4)
DE (semi-skilled or unskilled manual occupation, people dependent on state benefits)	573 (26.9)
Respondent has personal experience of mental illness	143 (9.2)

Table 2. Respondents' views of the treatment of people with mental health problems in various life areas, stratified by closeness of relationship.

As a result of their mental health problems, how has this person been treated…	More positively n (%)	Fairly n (%)	Unfairly n (%)	Total n
In making or keeping friends	61 (17.0)	238 (66.5)	59 (16.5)	358
Family member, friend or spouse	*52 (85.2)*	*216 (90.8)*	*54 (91.5)*	*322*
Other (e.g., colleague, neighbour)	*9 (14.8)*	*22 (9.2)*	*5 (8.5)*	*36*
By people in their neighbourhood	36 (13.7)	185 (70.6)	41 (15.7)	262
Family member, friend or spouse	*34 (94.4)*	*166 (89.7)*	*37 (90.2)*	*237*
Other (e.g., colleague, neighbour)	*2 (5.6)*	*19 (10.3)*	*4 (9.8)*	*25*
In dating or relationships	56 (18.9)	182 (61.3)	59 (19.9)	297
Family member, friend or spouse	*50 (89.3)*	*164 (90.1)*	*54 (91.5)*	*268*
Other (e.g., colleague, neighbour)	*6 (10.7)*	*18 (9.9)*	*5 (8.5)*	*29*
In education	28 (16.0)	112 (64.0)	35 (20.0)	175
Family member, friend or spouse	*24 (85.7)*	*100 (89.3)*	*33 (94.3)*	*157*
Other (e.g., colleague, neighbour)	*4 (14.3)*	*12 (10.7)*	*2 (5.7)*	*18*
In marriage or divorce	33 (20.5)	92 (57.1)	36 (22.4)	161
Family member, friend or spouse	*30 (90.9)*	*83 (90.2)*	*34 (94.4)*	*147*
Other (e.g., colleague, neighbour)	*3 (9.1)*	*9 (9.8)*	*2 (5.6)*	*14*
By their family	130 (32.8)	214 (54.0)	52 (13.1)	396
Family member, friend or spouse	*121 (93.1)*	*191 (89.3)*	*45 (86.5)*	*357*
Other (e.g., colleague, neighbour)	*9 (6.9)*	*23 (10.7)*	*7 (13.5)*	*39*
In finding a job	31 (14.2)	123 (56.2)	65 (29.7)	219
Family member, friend or spouse	*26 (83.9)*	*113 (91.9)*	*60 (92.3)*	*199*
Other (e.g., colleague, neighbour)	*5 (16.1)*	*10 (8.1)*	*5 (7.7)*	*20*
In keeping a job	30 (12.8)	146 (62.4)	58 (24.8)	234
Family member, friend or spouse	*25 (83.3)*	*126 (86.3)*	*55 (94.8)*	*206*
Other (e.g., colleague, neighbour)	*5 (16.7)*	*20 (13.7)*	*3 (5.2)*	*28*
In their social life	54 (15.3)	247 (70.2)	51 (14.5)	352

Family member, friend or spouse	*49 (90.7)*	*224 (90.7)*	*45 (88.2)*	*318*
Other (e.g., colleague, neighbour)	*5 (9.3)*	*23 (9.3)*	*6 (11.8)*	*34*
When getting help for physical health	60 (19.7)	201 (65.9)	44 (14.4)	305
Family member, friend or spouse	*52 (86.7)*	*185 (92.0)*	*38 (86.4)*	*275*
Other (e.g., colleague, neighbour)	*8 (13.3)*	*16 (8.0)*	*6 (13.6)*	*30*
By mental health staff	80 (26.1)	202 (65.8)	25 (8.1)	307
Family member, friend or spouse	*69 (86.3)*	*182 (90.1)*	*24 (96.0)*	*275*
Other (e.g., colleague, neighbour)	*11 (13.8)*	*20 (9.9)*	*1 (4.0)*	*32*
In their role as a parent	45 (23.4)	119 (62.0)	28 (14.6)	192
Family member, friend or spouse	*39 (86.7)*	*113 (95.0)*	*27 (96.4)*	*179*
Other (e.g., colleague, neighbour)	*6 (13.3)*	*6 (5.0)*	*1 (3.6)*	*13*
In other areas of life	37 (12.1)	228 (74.5)	41 (13.4)	306
Family member, friend or spouse	*35 (94.6)*	*201 (88.2)*	*38 (92.7)*	*274*
Other (e.g., colleague, neighbour)	*2 (5.4)*	*27 (11.8)*	*3 (7.3)*	*32*

Note. The number of responses to each question varied according to whether the respondent believed it was relevant or applicable to the person they knew best (e.g., they did not have to answer questions about marriage or employment if the person was not married or employed).

Table 3. Logistic regression analyses of predictors of avoidance.

Predictors	Adjusted OR (95% CI) *n* = 431	*p*	Adjusted OR (95% CI) *n* = 431	*p*	Adjusted OR (95% CI) *n* = 404	*p*	Adjusted OR (95% CI) *n* = 431	*p*
Total MAKS score	0.99 (0.84 – 1.16)	0.870	-	-	-	-	-	-
Total CAMI score	-	-	0.95 (0.91 – 0.99)	0.009	-	-	-	-
RIBS reported contact subscale score	-	-	-	-	1.00	-	-	-
RIBS intended contact subscale score	-	-	-	-	-	-	0.89 (0.72 – 1.10)	0.272
Gender								
Male (ref)	-	-	-	-	-	-	-	-
Female	0.65 (0.26 – 1.61)	0.352	0.63 (0.24 – 1.62)	0.335	0.63 (0.25 – 1.58)	0.322	0.62 (0.24 – 1.61)	0.327
Age								
16-24 (ref)	-	-	-	-	-	-	-	-
25-44	0.44 (0.14 – 1.37)	0.156	0.51 (0.16 – 1.67)	0.268	0.47 (0.15 – 1.46)	0.191	0.41 (0.13 – 1.31)	0.132
45-64	0.71 (0.22 – 2.28)	0.566	0.80 (0.24 – 2.62)	0.706	0.71 (0.22 – 2.29)	0.564	0.67 (0.21 – 2.15)	0.501
65+	0.32 (0.06 – 1.67)	0.175	0.24 (0.04 – 1.26)	0.092	0.35 (0.06 – 1.88)	0.219	0.24 (0.05 – 1.20)	0.082
Ethnicity								
White (ref)	-	-	-	-	-	-	-	-
Asian	2.87 (0.30 – 27.64)	0.362	2.02 (0.15 – 26.64)	0.594	2.97 (0.32 – 27.82)	0.340	2.29 (0.17 – 31.66)	0.535
Black	6.26 (0.65 – 60.21)	0.112	6.04 (0.50 – 73.54)	0.158	5.81 (0.62 - 54.00)	0.122	5.84 (0.60 – 56.77)	0.128
Other	4.99 (0.87 – 28.71)	0.071	5.65 (1.02 – 31.41)	0.048	4.85 (0.83 – 28.23)	0.079	5.45 (0.93 – 32.06)	0.061
Socio-economic status								
AB (ref)	-	-	-	-	-	-	-	-
C1	0.97 (0.29 – 3.20)	0.958	0.87 (0.27 – 2.84)	0.818	0.98 (0.29 – 3.35)	0.974	0.98 (0.29 – 3.31)	0.968
C2	0.68 (0.10 – 4.46)	0.689	0.44 (0.05 – 3.91)	0.460	0.74 (0.11 – 4.79)	0.749	0.59 (0.08 – 4.11)	0.593
DE	0.88 (0.24 – 3.26)	0.845	0.69 (0.18 – 2.65)	0.589	0.91 (0.25 – 3.30)	0.890	0.84 (0.23 – 3.08)	0.789

Note. Ref = reference category. MAKS = Mental Health Knowledge Schedule, CAMI = Community Attitudes Towards the Mentally Ill scale, RIBS = Reported and Intended Behaviour Scale, AB = professional/managerial occupation, C1 = other non-manual occupation, C2 = skilled manual occupation, DE = semi-skilled or unskilled manual occupation, people dependent on state benefits. The reported contact regression is affected by the fact the reported contact subscale has no avoidance observations recorded; the scale's predicted probability in the regressions is therefore 0.

Table 4. Logistic regression analyses of predictors of discrimination.

	n = 372		*n* = 372		*n* = 352		*n* = 372	
Predictors	**Adjusted OR (95% CI)**	*p*	**Adjusted OR (95% CI)**	*p*	**Adjusted OR (95% CI)**	*p*	**Adjusted OR (95% CI)**	*p*
Total MAKS score	0.80 (0.61 – 1.05)	0.105	-	-	-	-	-	-
Total CAMI score	-	-	0.91 (0.85 – 0.97)	0.006	-	-	-	-
RIBS reported contact subscale score	-	-	-	-	1.00	-	-	-
RIBS intended contact subscale score	-	-	-	-	-	-	0.88 (0.64 – 1.22)	0.453
Gender								
Male (ref)	-	-	-	-	-	-	-	-
Female	0.77 (0.15 – 3.97)	0.752	0.76 (0.13 – 4.49)	0.761	0.77 (0.17 – 3.56)	0.737	0.74 (0.17 – 3.30)	0.692
Age								
16-24 (ref)	-	-	-	-	-	-	-	-
25-44	0.20 (0.04 – 1.08)	0.062	0.30 (0.06 - 1.49)	0.139	0.25 (0.06 – 1.12)	0.070	0.22 (0.05 – 1.04)	0.056
45-64	0.12 (0.01 – 1.46)	0.097	0.13 (0.02 – 1.06)	0.057	0.13 (0.12 – 1.55)	0.107	0.13 (0.01 – 1.31)	0.083
65+	0.29 (0.03 – 2.53)	0.265	0.17 (0.01 – 2.17)	0.170	0.33 (0.04 – 2.97)	0.323	0.23 (0.02 – 3.04)	0.262
Ethnicity								
White (ref)	-	-	-	-	-	-	-	-
Asian	1.00	-	1.00	-	1.00	-	1.00	-
Black	24.22 (1.57 – 374.66)	0.023	14.76 (0.56 - 385.91)	0.106	12.39 (0.87 – 176.11)	0.063	12.42 (0.78 – 198.99)	0.075
Other	3.93 (0.40 – 39.08)	0.242	4.77 (0.50 – 45-66)	0.175	3.27 (0.30 – 35.67)	0.330	3.67 (0.35 – 39.01)	0.280
Socio-economic status								
AB (ref)	-	-	-	-	-	-	-	-
C1	1.34 (0.23 – 7.65)	0.743	1.28 (0.20 – 8.15)	0.793	1.52 (0.25 – 9.13)	0.646	1.53 (0.26 – 9.06)	0.640
C2	1.00		1.00		1.00	-	1.00	-
DE	0.58 (0.08 – 4.43)	0.597	0.54 (0.07 – 4.34)	0.563	0.84 (0.12 – 6.14)	0.864	0.79 (0.10 – 6.06)	0.821

Note. Ref = reference category. MAKS = Mental Health Knowledge Schedule, CAMI = Community Attitudes Towards the Mentally Ill scale, RIBS = Reported and Intended Behaviour Scale, AB = professional/managerial occupation, C1 = other non-manual occupation, C2 = skilled manual occupation, DE = semi-skilled or unskilled manual occupation, people dependent on state benefits. These regressions are affected by the fact that Asian ethnicity and C2 socioeconomic class have no treated unfairly observations recorded; their predicted probabilities in the regressions are therefore 0. The reported contact regression is affected by the fact the reported contact subscale has no treated unfairly observations recorded; the scale's predicted probability in the regressions is therefore 0.

Table 5. Logistic regression analyses of predictors of positive treatment.

Predictors	n = 417 Adjusted OR (95% CI)	p	n = 417 Adjusted OR (95% CI)	p	n = 417 Adjusted OR (95% CI)	p	n = 417 Adjusted OR (95% CI)	p
Total MAKS score	1.10 (1.02 – 1.19)	0.013	-	-	-	-	-	-
Total CAMI score	-	-	1.01 (0.99 – 1.03)	0.180	-	-	-	-
RIBS reported contact subscale score	-	-	-	-	4.55 (1.74 – 11.88)	0.002	-	-
RIBS intended contact subscale score	-	-	-	-	-	-	1.07 (0.97 – 1.18)	0.197
Gender								
Male (ref)	-	-	-	-	-	-	-	-
Female	1.23 (0.79 - 1.90)	0.366	1.24 (0.80 – 1.92)	0.335	1.19 (0.76 – 1.84)	0.455	1.27 (0.82 – 1.97)	0.278
Age								
16-24 (ref)	-	-	-	-	-	-	-	-
25-44	0.97 (0.51 – 1.82)	0.912	0.94 (0.50 – 1.75)	0.841	1.05 (0.55 – 1.99)	0.890	0.98 (0.53 – 1.82)	0.948
45-64	1.71 (0.89 – 3.30)	0.107	1.71 (0.89 – 3.27)	0.108	1.74 (0.90 – 3.38)	0.099	1.78 (0.93 – 3.39)	0.081
65+	0.99 (0.47 – 2.08)	0.974	0.98 (0.46 – 2.05)	0.948	1.05 (0.49 – 2.24)	0.910	1.07 (0.50 – 2.29)	0.870
Ethnicity								
White (ref)	-	-	-	-	-	-	-	-
Asian	1.22 (0.33 - 4.57)	0.765	1.22 (0.33 – 4.55)	0.771	1.14 (0.28 – 4.64)	0.853	1.25 (0.34 – 4.67)	0.738
Black	1.22 (0.19 – 7.85)	0.835	1.44 (0.23 – 9.04)	0.694	1.26 (0.19 – 8.39)	0.809	1.48 (0.23 – 9.40)	0.677
Other	8.19 (0.97 – 69.42)	0.054	8.09 (0.94 – 69.33)	0.056	7.63 (0.91 – 63.83)	0.061	7.67 (0.91 – 64.58)	0.061
Socio-economic status								
AB (ref)	-	-	-	-	-	-	-	-
C1	0.79 (0.44 – 1.41)	0.428	0.73 (0.41 – 1.30)	0.288	0.73 (0.41 – 1.32)	0.303	0.72 (0.40 – 1.27)	0.253
C2	1.23 (0.58 – 2.63)	0.589	1.14 (0.54 – 2.41)	0.735	1.21 (0.54 – 2.71)	0.640	1.12 (0.53 – 2.38)	0.761
DE	0.78 (0.43 – 1.43)	0.428	0.73 (0.40 – 1.32)	0.294	0.72 (0.40 – 1.32)	0.292	0.71 (0.39 – 1.28)	0.254

Note. Ref = reference category. MAKS = Mental Health Knowledge Schedule, CAMI = Community Attitudes Towards the Mentally Ill scale, RIBS = Reported and Intended Behaviour Scale, AB = professional/managerial occupation, C1 = other non-manual occupation, C2 = skilled manual occupation, DE = semi-skilled or unskilled manual occupation, people dependent on state benefits.