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Stigmatised attitudes towards the 'stressed' or 'ill' models of mental illness

Jason Luty,[1,2] Joby Maducolil Easow,[1] Vania Mendes[3]

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[1]The Taylor Centre, South Essex Partnership University NHS Foundation Trust, Southend on Sea; [2]Cambridge and Peterborough Mental Health NHS Trust; [3]Institute of Psychiatry, King's College London

Correspondence to Jason Luty (jason.luty@yahoo.co.uk)

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Aims and method Tackling discrimination, stigma and inequalities in mental health is a major objective of the UK government. The project aimed to determine the effect of presenting a person with a mental illness as having either a biological illness or a disorder that arose from psychosocial stress to a randomised representative panel of members of the general public. The 20-point Attitude to Mental Illness Questionnaire (AMIQ) was used to assess stigmatised attitudes.

Results Overall, 187 individuals returned their questionnaires (74% response rate). The mean AMIQ stigma score for the 'ill' group was 1.4 (s.e. = 0.3; $n = 94$). The mean AMIQ score for the 'stress' group was 0.5 (s.e. = 0.3; median $n = 106$; $P = 0.0837$, median difference = 1; power (for 5% significance) 81%).

Clinical implications There was no difference in the stigmatised attitudes towards a person with mental illness regardless of whether they were presented as biologically ill or as having an illness that was a response to psychosocial stress.

Declaration of interest None.

An editorial in *The Psychiatrist* was entitled 'Everybody gets stressed…it's just the way we react that differs'.[1] This suggests that the stigma of mental illness may be reduced by encouraging people to think that mental illness is an unusual reaction to stress in otherwise 'normal' people (the 'stress' model of mental illness). This, presumably, contrasts with a biological or 'illness' model which suggests that individuals who have a mental illness have a distinct abnormality of anatomy, physiology or biochemistry that makes them different to normal people and renders them prone to mental disorders. For example, public health messages tend to promote differences, rather than continuities, between those with mental disorders and those without. The 'stress' model also implies that anyone can develop a mental illness when faced with unusual threatening circumstances or demands. It is therefore more socially inclusive ('normalising') and could make mental illness everybody's concern.

The aim of this research was to determine whether there was any difference in stigmatised attitudes towards a

fictitious person with a mental illness who was presented either as biologically 'ill' or 'stressed' to two randomised groups of the British public.

Method

Study sample

A panel of 250 participants from the UK general population were recruited using direct mailshots and adverts in local newspapers, as described in a previous study.[2] Participants for the original study were recruited by sending invitations to adults selected at random throughout the UK using advertisements in regional newspapers and by randomly selecting addresses on streets using the wildcard function of the British Telecom online directory. Four local newspaper syndicates involving several different publications were used from the north and north-west of England, south-east England and central Scotland, with a potential readership estimated at 2 million people. Unfortunately, the sample was necessarily self-selecting. Overall, 125 participants per group were approached in order to generate approximately 100 responses per group.

Procedure

Participants were randomised to two groups using the randomisation function of the Stats Direct Statistical Package (version 2.4) for Windows. The 'stress' and 'ill' group were presented with slightly different vignettes about 'Tim' who had a mental illness (Case vignette 1 and 2 respectively).

Case vignette 1

> 'The following is a fictional account: Tim is depressed and took a paracetamol overdose last month to try and hurt himself. Tim became depressed because of stress – he was overworked, he had a £1000 overdraft at the bank, he had recently had an argument with his wife and his mother had a heart attack.'

Case vignette 2

> 'The following is a fictional account: Tim is depressed and took a paracetamol overdose last month to try and hurt himself. Doctors think that people like Tim become depressed because of a chemical disturbance in their brain. Doctors think that depression is an illness just like diabetes, and people who suffer with depression are different to everyone else.'

Respondents were then asked to complete the Attitude to Mental Illness Questionnaire (AMIQ; Box 1).

The vignettes were devised by a group of six health professionals including three psychiatrists, a nurse, a social worker and a psychologist. They were also validated by interview with 12 members of the general public. Both groups were also asked: 'What do you think has caused Tim's depression? Stress/Chemical imbalance in the brain/ Bad luck/Don't know'. Respondents were asked to underline the response they felt was most appropriate.

Instrument

The 5-item AMIQ is a brief, self-completion questionnaire.[2,3] Respondents read a short vignette describing an imaginary patient and answered five questions (Box 1). Individual questions were scored on a 5-point Likert scale (maximum +2, minimum −2), with blank questions, 'neutral' and 'don't know' scoring zero. The total score for each vignette ranged between −10 and +10. The AMIQ has been shown to have good psychometric properties in a sample of over 800 members of the UK general public (one component accounted for 80.2% of the variance; test–retest reliability was 0.702 (Pearson's correlation coefficient); alternate test reliability *v.* Corrigan's attribution questionnaire was 0.704 (Spearman's rank correlation Rho); Cronbach's α was 0.93).[2] Other research has shown a 2-unit difference between the stigma scores of pharmacists who were prepared to dispense methadone to people with opiate dependence and those who were not – the positive predictive value was 77% using a cut-off AMIQ score of 0.[4] Hence the AMIQ scores are able to predict actual discrimination by people towards those with mental illness in a real-life situation.

Box 1 Attitude to Mental Illness Questionnaire (scoring is shown in superscript)

1. Do you think that this would damage Tim's career?

Strongly agree^{-2} / Agree^{-1}/ Neutral^{0} / Disagree^{+1} / Strongly disagree^{+2} /Don't know^{0}

2. I would be comfortable if Tim was my colleague at work.

Strongly agree^{+2} / Agree^{+1}/ Neutral^{0} / Disagree^{-1} / Strongly disagree^{-2} / Don't know^{0}

3. I would be comfortable about invitingTim to a dinner party.

Strongly agree^{+2} / Agree^{+1}/ Neutral^{0} / Disagree^{-1} / Strongly disagree^{-2} / Don't know^{0}

4. How likely do you think it would be forTim's wife to leave him?

Very likely^{-2} / Quite likely^{-1}/ Neutral^{0} / Unlikely^{+1} / Very unlikely^{+2} / Don't know^{0}

5. How likely do you think it would be forTim to get in trouble with the law?

Very likely^{-2} / Quite likely^{-1}/ Neutral^{0} / Unlikely^{+1} / Very unlikely^{+2} / Don't know^{0}

Data analysis

Randomisation, correlation coefficients and non-parametric (Mann–Whitney) tests were used to generate and compare differences in subgroups using the Stats Direct package.

Results

We received questionnaires from 187 individuals (response rate 74%). Both groups were closely comparable on demographic data. For the 'ill' group ($n = 94$), the mean age was 51 years (s.e. = 1.8), 46% were male and 59% in paid employment. For the 'stress' group ($n = 106$), the mean age was 54 years (s.e. = 1.5), 40% were male and 56% in paid

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employment. Over 90% of both groups described their ethnic origin as White British.

The mean AMIQ stigma score for the 'ill' group was 1.4 (s.e. = 0.3; median 2; interquartile range −1 to 3). The mean AMIQ score for the 'stress' group was 0.5 (s.e. = 0.3; median 1; interquartile range −1 to 3). There was no significant difference in the AMIQ stigma scores between the vignettes that presented the person as biologically ill or stressed (two-sided $P = 0.0837$; power (for 5% significance) = 81%). However, the vignettes did significantly influence the perceived aetiology of the conditions: when asked 'What do you think has caused Tim's depression?', the proportion of respondents who endorsed stress almost trebled from 28 to 73% ($P < 0.0001$). By contrast, the proportion of those who endorsed 'chemical imbalance in the brain' fell from 41 to 11%.

Discussion

Main findings

The report shows that there was no statistical difference between stigmatised attitudes towards a person with a mental illness whether he was presented as ill or stressed. The medial difference of 1 unit is also unlikely to be of any practical significance as, in practice, the AMIQ scores range from −5 to +5 and a difference of less than 10% is unlikely to be meaningful.[2] It is also clear that the vignette was able to convince participants that the illness did or did not arise from stress. (Presenting the individual as 'stressed' trebled the number of participants who endorsed this as the principle cause of his illness.)

One of the principle problems in interpreting these results is the vagueness of the concept of illness and stress. In his editorial,[1] David Kingdon attempts to grapple with this. The impression is given that mental illness is a reaction to stressful events in essentially normal ('healthy') people. By implication, the illness model would suggest that people who have a mental illness have a persistent defect of anatomy, physiology or biochemistry that is quantitatively different to normal (e.g., people with diabetes do not produce enough insulin). However, one problem with the stress model remains, and that is why do 'normal' mentally ill people react differently to stressful events that the majority of people can deal with? Perhaps they do have some underlying biological defect that only reveals itself under stress?

Although the project attempted to devise vignettes that were worded to coincide with the illness and stress models of mental disorder, there remains some controversy regarding this partly because there is no strictly accepted definition of these two models. Furthermore, both vignettes use the term 'depressed'. It is likely that most participants regard the term 'depression' as synonymous with 'miserable' rather than a more restricted psychiatric diagnosis such as 'major depressive illness'. The vignettes were devised by a group of health professionals and were also validated by interview with members of the general public. It was difficult to devise a suitable wording for any of the vignettes that present mental illness without using phrases that have psychological connotations. However, the effect of labelling is a subject that could be addressed in further research.

It is widely held that one reason for stigmatised attitudes towards people with mental illness is that they are 'blameworthy'.[5,6] For example, patients are not blamed for biological or organic disorders such as diabetes, but they may be held responsible for psychological disorders such as mental illness. However, the research does not consider the ethical dimension to the aetiology of mental illness. In particular, it would be unethical to publicise the view that some patients had a biological cause to their mental illness, if the evidence was scanty or speculative. Of course, the aetiology of many psychiatric disorders remains uncertain. Ultimately, ethical questions are seldom amenable to experimental research as reported in the present study.

Tackling stigma and inequalities in health is a major UK government objective.[7,8] Stigma is a social construction that devalues people due to a distinguishing characteristic or mark.[9] The World Health Organization and the World Psychiatric Association recognise that the stigma attached to mental disorders is strongly associated with suffering, disability and poverty.[5] Stigma is also a major barrier to treatment-seeking.[10] Many studies show that negative attitudes towards individuals who have a mental illness are widespread.[6] The media generally depicts such people as violent, erratic and dangerous.[11] There have been several attempts to reduce the stigma of mental illness, including the Royal College of Psychiatrists' Changing Minds campaign, the Scottish See Me campaign and Time to Change campaign in England. Unfortunately, there have been reports that national anti-stigma campaigns are not particularly effective.[12–14] These reports discuss the disappointing results to date from the Defeat Depression, Changing Minds and See Me campaigns.

Our report suggests that participants were prepared to accept that a mental illness such as depression may be caused by a chemical imbalance in the brain or stress in an otherwise healthy individual. However, these different presentations had no effect on stigmatised attitudes towards the fictitious patient. Consequently, this research suggests that anti-stigma campaigns are not likely to benefit by reframing mental illness as either biological or due to stress (indeed, the stress model actually elicited more stigmatised attitudes than the biological model). This contrasts with other research which suggests that stigma and social distance is greater when members of the public suspect that there may be a biological cause for mental illness.[15] In their survey of over 5000 German adults on the presentation of schizophrenia, Angermeyer *et al*[16] reported that, 'Endorsing biological factors as a cause was associated with increased social distance'. The desire for social distance was also predicted more strongly by other factors including perceived dangerousness, unpredictability, poor prognosis and, paradoxically, blame for causing their own illness. Angermeyer *et al*'s report sought to determine which preconceptions predicted stigmatised attitudes, rather than attempting to challenge these.[9,16] Life events, psychosocial stress and biological factors (such as brain disease) were each considered major aetiological factors for schizophrenia by over half of the sample. The difficulty in interpreting this study is the problem in separating

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stigmatising factors that may be interrelated. For example, one interpretation of Angermeyer *et al*'s results is that people with a stigmatised view of schizophrenia may, coincidentally, have the view that schizophrenia is both untreatable and has a biological cause. These participants may be more sympathetic to people with a biological illness than those with a psychological disorder but this is overwhelmed by the perceived dangerousness and untreatability of the condition. Hence Angermeyer *et al*'s report cannot be used to conclusively suggest that members of the public have more stigmatised attitudes towards people with mental illness that has a biological cause. The authors' concern about perceived biological causes of mental illness also contrasts with much other work on attributions theory which supports the view that stigmatised attitudes may be reduced in cases where the disorder has a biological cause.[9,16]

Strengths and limitations

The AMIQ tool was used in this project as it is convenient and has been well validated.[2,4,17] Other instruments are available, although these tend to be much longer, involve interviews or tend to address the experience of stigma by people with mental illness.

Although there was an excess of female respondents and people not working, age and employment status of participants were reasonably matched to that from UK census surveys. Hence the sample appears to be a reasonable cross-section of the British public. However, it is self-selecting and may not generalise across the whole population. Ideally, interviews could be conducted using a quota survey of households with repeat visits for non-responders.[6] Unfortunately, this is prohibitively expensive. The report is actually a randomised controlled trial. Hence, if the research was repeated with other samples from the general public the AMIQ stigma scores may be different but the overall results are likely to be the same – that stigmatised attitudes are similar regardless of whether patients are presented as having a biological illness or experiencing stress.

The study presented a hypothetical person with mental illness. This is less accurate than real experience – it was not possible to measure stigmatised behaviour towards real patients. Moreover, the written views and expressed attitudes may not translate into any enduring behavioural change. Although there was no direct contact between participants and researchers, participants are likely to make some assumptions about the potentially liberal beliefs of researchers. Hence social desirability bias may affect the results. However, the results from other similar studies show a negative view of people with active substance use disorder and suggest that participants had little reservation about indicating their disapproval of these disorders.[4,17] This is confirmed in other reports.[6] This would indicate that social desirability bias had only a modest effect and it would affect both groups equally.

About the authors

Jason Luty, consultant in addictions psychiatry, South Essex Partnership University NHS Foundation Trust, The Taylor Centre, Queensway House, Southend on Sea, honorary consultant in addictions psychiatry, Cambridge and Peterborough Mental Health NHS Trust; **Joby Maducolil Easow**, registrar in psychiatry, The Taylor Centre; **Vania Mendes**, student psychologist, Institute of Psychiatry, King's College London, UK.

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