

## Public perceptions of risk in criminality: the effects of mental illness and social disadvantage

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## Abstract

We examined how different types of mental illness elicited varying levels of expected criminality and compared this with factors which might also elicit a negative response, specifically, a criminal history and social disadvantage. A sample of 243 participants undertook an anonymous, online experiment. Each participant was exposed to one of six vignettes: three involved mental illness (schizophrenia, depression/anxiety, or alcohol dependency); two in which socio-economic background was manipulated; and a control. The impact of mental illness, history of criminality and social disadvantage on the likelihood that the character in the vignette would commit future crime, and levels of sympathy, trust and potential for rehabilitation in the character were measured. Age and personal experience of mental illness and/or criminal behaviour in the participants was also examined. The sample were significantly more likely to think that a character would 'possibly' commit future crime if he had mental illness in comparison to the control, but crimes were expected to be minor. Significantly more discriminatory behaviour was reported towards the character with no mental illness but a disadvantaged background. Familiarity ameliorated this effect. Prejudice towards those with a criminal past and a disadvantaged background may be stronger than prejudice against those with mental illnesses.

## Keywords

Mental illness; criminal behaviour; dangerousness; discrimination; rehabilitation; reintegration

## 1. Introduction

The stigma, prejudice and resulting discrimination associated with mental illness are global concepts that are thoroughly researched (e.g. Thornicroft et al., 2009; Hori et al., 2011). Mental illness has been termed the 'ultimate stigma' (Falk, 2001), because despite some positive, local impact from anti-stigma campaigns (e.g. Pinto-Foltz et al., 2011), it remains relatively resistant to change and worsens at times (Pescosolido et al 2010), often as a result of sensationalist media reporting (Mehta et al., 2009). It is reasonable to suggest that

the stigma associated with accruing criminal convictions is likely to be equally debilitating. The notions of labelling and stigma in relation to deviant (criminal) behaviour are well-established (Becker, 1963; Maruna, 2001; Winnick and Bodkin, 2008) and reference to it in the re-entry<sup>i</sup> literature is plentiful (e.g. Clear et al., 2001; Inderbitzin, 2009). Empirical data supports the notion that formally labelling young people as offenders encourages closer association and coherence with delinquent groups (and more offending) and that this is mediated by stigma and the sense of rejection from 'normal' society (see for instance, Bernburg et al, 2006). Yet little research exists which directly measures *public* reaction to those with offending behaviour in their background. The present study goes further to assess more directly how the combination of mental illness and criminality might affect discriminatory behaviour in a sample of the general public.

One idea that consistently emerges from studies of the cognitive and behavioural elements of stigma associated with mental illness is a perceived increased dangerousness in the mentally ill (Link et al., 1999; Pescosolido et al, 1999; Crisp et al., 2000; Hori et al., 2011). Again there is a scarcity of research explicitly examining this perceived link, since the concept of dangerousness is rarely deconstructed. However, two experimental studies (Corrigan et al., 2002; Feldman and Crandall, 2007) found clear links between perceived dangerousness and avoidance of the mentally ill, the mediating factor being fear (Corrigan et al., 2002). No previous work has examined explicitly how members of the public expect those with mental illness to behave in the future and few have looked at the varying impacts of different illnesses. Our study set out to directly measure how members of the general public perceived the likelihood that those with a variety of mental illnesses would commit crime in the future, and the strength of the impact that varying mental illnesses had on these perceptions. We also looked at how this impact was mediated by age and familiarity (with both mental illness *and* crime). Our study represents steps forward in this area by comparing reactions towards mentally ill offenders with other offenders without mental health problems, and by introducing a control condition to ascertain a baseline of discriminatory behaviour.

### **1.1 What evidence is there for a link between mental illness and offending behaviour?**

Many studies over the years have aimed to estimate the incidence of crime, particularly violence, in populations with mental illness in comparison to those without. This has been partly driven by policies in many countries to deinstitutionalise those with severe mental illness over the past three decades. The majority of these studies have found a two to six-fold increase in the likelihood of violence among those with diagnosed severe mental illness (usually psychosis) compared with no psychiatric diagnosis (e.g. Link et al., 1992; Wessely et al., 1994; Mullen et al., 2000). However, two more recent studies using robust data sources and more rigorous methodologies tell a different story. Unlike previous studies, Corrigan and Watson (2005) examined violence in all those in the US National Comorbidity Survey who met the criteria for mental illness but were not necessarily diagnosed or in treatment. Similarly, Fazel and Grann (2006) used highly inclusive national registers of psychiatric history and criminal convictions in Sweden. Using population impact analyses rather than simply the incidence of violence, the studies showed that those with diagnoses of severe mental illness do have a slightly higher rate of conviction, but because the incidence of severe mental illness is relatively rare, it is still a weak predictor of violent behaviour (in Fazel and Grann's study only one in twenty violent crimes could be attributed to those with mental illness). This, at the very least, questions the validity of the widely held view that the mentally ill are more likely to commit crime than others in our society.

### **1.2 What is the impact of stigma on the mentally ill?**

Stigma has both cognitive and behavioural manifestations. Beliefs linked to widely endorsed stereotypes about the mentally ill lead to prejudicial appraisal and attitudes towards this out-group which in turn result in discriminatory behaviours. Substantial research has been conducted on the nature and outcomes of the stigma associated with mental illness, with the work of Corrigan (1998), Link (1999), Thornicroft (2009) and Pescosolido et al (2010) being most prominent. Stigma associated with mental illness is not restricted to Western cultures, with research conducted in Australia (Jorm et al., 1999) China (Furnham and Wong, 2007) and Asia (Ng, 1997) to name a few studies, confirming prejudicial attitudes on several continents. Within this, some of the salient aspects studied include: the ameliorating impact

of familiarity and age (Corrigan, 2001; Quinn et al., 2009); attitudes towards the mentally ill in different types of psychiatric staff and the general population (Lauber et al., 2004; Hori et al., 2011); differing patterns in anticipation of an actual experience of discrimination amongst the mentally ill (Thornicroft et al., 2009); and the extent to which anti-stigma campaigns and education are effective (e.g. Corrigan, 2004; Feldman and Crandall, 2007; Pescosolido et al., 2010; Pinot-Foltz et al., 2011).

These attitudes result in discriminatory behaviour which is wide-ranging and destructive. Thornicroft et al. (2009) surveyed 27 countries and 732 participants with schizophrenia and looked at both experienced and anticipated discrimination. Negative experiences were reported in: making and maintaining friendships, intimate relationships and relationships with neighbours; and in finding and maintaining accommodation and employment. Other notable findings indicated that respondents did not think that items relating to buying insurance, borrowing money and parenting experiences were applicable to them, reflecting the (at least perceived) reduced life opportunities available to this population. Other personal outcomes of discrimination were significantly lower self-esteem and sense of agency (Corrigan and Watson, 2002; Moses 2010) which led to even greater anticipated (expected) acts of social exclusion in the mentally ill than actual experienced ones (Thornicroft et al., 2009). Arguably the most concerning finding is the clear correlation between the behavioural manifestations of stigma and the reduction in those seeking treatment or prematurely terminating it (U.S. Department of Health and Human Services, 1999, 2000; Corrigan, 2004; Pinto-Foltz et al., 2011). Fear of criminality (especially violence) in the mentally ill is likely to be a significant factor in the social exclusion and discrimination against this group. And there is evidence that those with mental illness and criminal convictions have even greater barriers to social re-integration (Barker, 2012). It is therefore vital that we understand the issue in more depth in order to ultimately reduce prejudice and discrimination.

Our study set out to examine varying levels of stereotypical and discriminatory attitudes towards a variety of mental illnesses and to compare this with public perceptions of criminal propensity and other potentially stigmatising features (socio-economic background) in those without mental illness. A flaw in earlier questionnaire studies has been the lack of discrimination between different types of mental illness and we adopted an experimental

approach to overcome this (e.g. Crisp et al., 2000; Feldman and Crandall, 2007). People's attitudes may vary noticeably in relation to, for instance, a common illness such as depression in comparison to schizophrenia (Feldman and Crandall, 2007) and these variations need further examination. We included three better known and more common mental illnesses with which the general public were likely to have some knowledge and would have views on (schizophrenia, depression and anxiety, and alcohol dependency). Moreover, we wanted to measure the strength of the impact of mental illness in relation to other potentially stigmatising conditions such as social circumstances (i.e. socio-economic background). These were included in two further comparison vignettes, plus a control vignette. No prior experimental research in the area has included such comparisons.

Familiarity with different types of circumstance has also been shown to ameliorate prejudice and stigma (Angermeyer et al., 2004; Corrigan et al., 2001; Moon et al., 2008) and to this end we looked at the impact on stigma of participants' familiarity with mental illness and for the first time, criminal behaviour. Finally, Quinn et al. (2009), noted that older members of the public were more sympathetic to those with mental health problems. Given an overall aim was to improve our understanding of what might reduce discrimination, we felt it important to examine this in relation to offending behaviour also.

We predicted that: (i) those with mental health problems would be seen as more likely to commit crime; (ii) participants' own familiarity with mental health problems and/or criminal behaviour would result in a less negative, stereotypical response towards individuals with mental health problems. Participants with familiarity were expected to be more sympathetic towards these individuals, see them as more trustworthy and open to rehabilitation, and less likely to commit future crime than those without familiarity. (iii) Increased participant age will result in a less negative, stereotypical response to individuals with mental health problems. As participant age increased we expected more sympathetic responses from participants towards these individuals, that they would be seen as more trustworthy and open to rehabilitation, and less likely to commit future crime than younger participants.

We chose a web-based survey because it is reasonable to assume that participants will feel an increased sense of anonymity during data collection<sup>ii</sup> which was important given the

sensitive issues involved. It is also a convenient way to reach a relatively large number of participants in a short time.

## **2. Method**

### *2.1 Design, materials and procedure*

An independent groups, experimental design was employed involving six conditions. Six written vignettes were developed, one for each condition. To improve ecological validity, the vignettes were based on an anonymous case used as part of the researcher's training as a youth justice professional and were similar to the summary of a court report. Three 'mental illness' vignettes were developed involving: schizophrenia; depression and anxiety; and alcohol dependency. The main aim of this study was to examine how different types of mental illness might elicit varying levels of expected criminality and to compare this with other background factors which might also elicit a discriminatory response. It was therefore of paramount importance to us that we chose very common or high profile mental illnesses that the general public would be familiar with, would have opinions on, and may know someone close to them who might have suffered with one or more of these illnesses (if not indeed themselves). Depression/anxiety and alcohol dependency were therefore chosen as very common disorders, and Schizophrenia as the literature suggests it is often associated with dangerousness by the general public (Angermeyer et al., 2004). These illnesses have also been chosen for other nationally representative vignette studies on stigma, mental illness and dangerousness (see Crisp et al, 2000 in the UK, and Pescosolido et al, 2010, in the US) which lent further support to our choice.

Each involved an A4 page of information about a young man named Sam, similar to the summary of a court report, which outlined: current living conditions; current relationships and general behaviour including areas of concern; family background and education; mental health diagnosis (depending on vignette); previous problems with aggressive behaviour, involvement in petty theft and neighbourhood disturbances when off medication (or drinking alcohol). Condition 1's vignette is appended at the end of this article and others can be provided on request. In all three vignettes Sam came from a neutral socio-economic background, neither deprived nor affluent. Aside from mental health details, all other details were kept identical (word count ranged from 362-366 in the three vignettes). A

fourth condition was identical in detail but with no mention of mental illness in order to compare the impact of the three mental illnesses in the other vignettes (word count 305). A fifth condition characterised Sam with no mental illness and a disadvantaged background, to see how public perceptions compared here with the mental illness/crime vignettes. All other aspects including level of anti-social/criminal behaviour were identical in Condition five and word length for the analogous parts (i.e. without the mental illness details) were comparable (Condition 1: 305; Condition 5: 320) to ensure similar levels of detail. Finally a control condition was included containing no mental illness, no crime and a neutral background (word count 208). Table 1 summarises each condition.

**Table 1 around here**

Participants were recruited via email and social networking sites Facebook and Twitter and were presented with a list of six links (one to each survey) and asked to choose one. The survey was accessed using 'Survey Monkey'. Participants were instructed to complete one survey only<sup>iii</sup>. Quota sampling was used for each condition i.e. each condition (vignette plus questionnaires) remained open until a satisfactory spread of ages and gender had completed it.

Each vignette was embedded within a larger questionnaire including: informed consent; biometric data; familiarity with mental illness and of engaging in criminal behaviour (both of the latter were measured in terms of personal experience and/or experience of close family members or close friends). Participants were allocated to one of the six vignettes and answered several questions on 10 point Likert scales<sup>iv</sup> rating: the trustworthiness of Sam (0% trustworthy/100% trustworthy); how sympathetic they felt towards Sam (0% sympathetic/100% sympathetic) ; how likely he was to commit crime in the future (definitely/definitely not); how serious this might be (life threatening/trivial) and whether Sam could be rehabilitated (definitely not/definitely). Next participants completed the Paulhus Deception Scale (1998) (entitled 'Personality Scale' in the study) which is an established measure of impression management and identifies participants whose responses have an over-emphasis on social desirability, in order to remove them from analysis. Participants were thanked and debriefed and asked to forward the message with



the survey links on to their own networks with the aim being to increase the heterogeneity of the sample in terms of age, education, gender and socio-economic background.

There are recognised advantages and disadvantages to using an internet survey to gather data such as ours. Two clear advantages are the anonymity of participants' responses, increasing the validity of data gathered, especially when exploring sensitive issues such as mental health and criminal activity, and the ability to reach relatively large samples much more quickly and economically than in conventional surveys. There are, however, some recognised limitations in relation to age, gender and education which can be quantified. First, online surveys tend to under-sample the less well off in any society. That said, at the time of data collection, 84% of the UK population used the internet (Office for National Statistics (ONS) in the UK Statistical Bulletin, 2012).

Data from ONS also indicates that internet usage declines after 45 years of age, is used more by men than women (by up to 25%) and is used substantially less by those without formal qualifications (ONS, 2012). We recognise the limitations of our sample which essentially reflects broad 'middle-class' views. The survey was publicised through email and social networking sites such as Twitter and Facebook, effectively forming a 'snowball' sample from the female researchers' (aged 33 and 51) own social networks, (though participants were asked to forward the request to complete questionnaires to their own networks). This ensured that most participants would have at least been educated to secondary level. An advantage of the latter, is that it is likely to have ensured an adequate reading age and understanding of the concepts in participants.

An acceptable number of participants, spread of ages, and familiarity with mental illness and criminality was achieved in each condition as is noted in the participants' section below. We also managed to counteract the male bias in internet surveys. Although women were therefore over-represented or 'boosted', this factor was equivalent in each condition. These are common issues in internet surveys (see Hori et al's 2009 sample sizes, and Blasius & Brandt, 2010) but they are nonetheless published in peer reviewed journals when their findings are innovative and contribute new information. In our view, it is also increasingly more representative than relying on student samples which is common in psychological research. In sum, while it is true that the sample is valid mainly for middle class views,

particularly in terms of income and education, we believe our findings represent a valuable new insight into an under-researched area which may contribute to understanding prejudice and discrimination towards those with mental illness and previous criminal convictions. We hope this research will establish a platform for further, funded research that will allow for wider sampling.

## *2.2 Participants*

A power calculation indicated that a minimum number of 35 participants per condition were required to avoid a type 2 error. In total a sample of 340 participants completed the study, though 59 were discounted due to incomplete responses and 38 due to a high Impression Management scores. This left a total of 243 participants (Male = 73, Female = 170<sup>v</sup>). Age ranged between 18 and 76 years ( $M$  35,  $SD$  13.18). There was an approximately equal spread of numbers across conditions, satisfying the required statistical power and there was no significant difference between the average age in any of the six conditions ( $F_{(5,237)} = 1.19$ , n.s.). Twenty-eight per cent of the sample ( $n=67$ ) reported that they had been diagnosed with a mental illness (depression being the modal illness noted accounting for 22% of the sample) and this rose to 71 % ( $n=173$ ) when diagnoses of close family members and/or close friends were also included. Fifty-nine per cent of the sample ( $n=144$ ) admitted to some form of offending behaviour in the past, by themselves ( $n=102$ ) or a close family member ( $n=42$ ). For half the most common crime was theft, but other more serious crime was noted by the remainder, ranging from driving under the influence of alcohol and drugs, assault, fraud, drug dealing and even arms trafficking ( $n=1$ ). Participants with personal experience of mental illness or offending behaviour were evenly distributed across the six conditions.

## *2.3 Statistical analysis*

General linear model was applied to perform a 6 (Vignette) x 2 (Familiarity with Mental Illness) x 2 (Familiarity with Criminal Behaviour) x 4 (Age Group) MANOVA examining main and interactive effects in responses to: likelihood of the character depicted to commit future crime; seriousness of future crime; and sympathy and trust towards the character. Significant main effects were examined using univariate methods. Responses towards potential rehabilitation were analysed separately in a univariate ANOVA as only 171 of the 243 participants responded to this question, though there was equality of variance across

the six vignettes. Responses to the seriousness of future crime were also analysed in this way as not all participants (n=167) thought the character would commit crime in the future. Hypotheses were one-tailed and an alpha level of .05 was adopted unless the Levene's test<sup>vi</sup> was significant in which case  $p < 0.01$  was used (as noted in the text). Multiple comparisons were corrected using the Bonferroni method. Due to the large number of variables in the design, results in relation to each hypothesis are examined consecutively, rather than summarising all findings at the start of the results section.

### 3. Results

#### *3.1 Perceptions of an individual's propensity to commit crime will be negatively affected by that individual's history of mental health*

For this hypothesis, we examined responses to 'How likely do you think this person is to commit crime in the future?' were examined in relation to Vignette. Table 2 indicates the descriptive statistics. The MANOVA indicated a significant main effect of Vignette ( $F_{5,157} = 5.17, p < .0001$ ). A significant interaction was found between Vignette and Familiarity with Criminal Behaviour which is dealt with in 3.2 below. No other interactions in relation to Vignette were found, with all  $F$ 's  $< (2.08)$  and all  $p$ 's  $> (0.12)$ . As a result of the significant main effect of Vignette a univariate ANOVA was performed and significant between subjects effects were found ( $F_{5,84} = 7.22, p < .0001$ ). Pairwise comparisons revealed that participants in all three mental illness vignettes were significantly more likely to think that Sam would commit crime in the future than those in the control group (Schizophrenia,  $p = 0.002$ ; Depression,  $p < 0.0001$ ; Alcohol Dependency,  $p < 0.0001$ ). As seen in Table 2, the Alcohol Dependency vignette received the highest average response, followed by Depression and lastly Schizophrenia. However, the vignette depicting Sam with no history of mental illness but a disadvantaged background received the strongest average response which was also significantly different from the control ( $p < 0.0001$ ). All ratings from 5 upwards on the scale indicated possible to certain criminal behaviour.

**Table 2 around here**

The vignette which elicited the lowest average response aside from the control was Vignette 4 in which Sam was depicted with no mental illness, from a neutral background, but with a criminal past. This received an average of 4, 'somewhat unlikely' and this was not

significantly different from the control group. Vignettes 3 and 5, having the highest mean responses, were significantly different from this vignette ( $p=0.05$ ; and  $p=0.017$  respectively) as well as from the control.

Linked to this was how serious participants thought Sam's future crime would be (How serious do you think the crime they will commit might be?). For participants who reported that they thought Sam would commit crime in the future ( $n=167$ ) a univariate ANOVA found a significant main effect for Vignette ( $F_{5,161} = 3.671, p=0.004$ ). Pairwise comparisons indicated that responses to Vignette 5 were significantly different from the control vignette ( $p=0.30$ ) and Vignette 4 ( $p=0.003$ ). Table 3 below indicates that for all three mental illness vignettes, Sam's crimes would on average be minor (up to 4 on the scale), though scores in these vignettes were higher than for the no illness, neutral background vignette (4) and the control vignette. In all vignettes bar Vignette 5, no participants scored higher than moderately serious future crime. In Vignette 5 however, only 40% on average rated Sam's future crime as minor, 46% rated it a moderately serious and 14% as serious or very serious, making it the only vignette in which the latter two categories were used.

**Table 3 around here**

### *3.2 Participants' own experiences of mental health problems or criminal behaviour will result in a less negative, stereotypical response in relation to perceived criminal propensity and to greater sympathy and tolerance towards individuals with mental health problems*

For this hypothesis we examined responses to the questionnaire items which we felt most directly measured stereotypical behaviour towards Sam, i.e. Sam's future criminal behaviour (see above), sympathy for Sam (How sympathetic do you feel towards the character described?), Sam' trustworthiness (How trustworthy do you think the person described is?), and the extent to which Sam could be rehabilitated (How likely do you think it is this person could be rehabilitated back into a normal life if they commit crime?) These were examined in relation to participants' own experience of mental illness and/or criminal behaviour. The MANOVA indicated significant main effects for Vignette ( $F_{15,471}=5.17, p <0.0001$ ) and Familiarity with both Criminal Behaviour ( $F_{3,155}=6.10, p=0.001$ ) and Mental Illness ( $F_{3,217}=$

4.29,  $p=.006$ ). A significant interaction was found between Vignette and Familiarity with Criminal Behaviour ( $F_{5,177}= 1.88$ ,  $p=0.02$ ). No other significant main effects or interactions were found in relation to familiarity (all  $F$ 's  $< (1.43)$  and all  $p$ 's  $> (0.12)$ ). For rehabilitation ( $n=171$ ), an ANOVA indicated a significant main effect of Vignette ( $F_{5,148} = 2.48$ ,  $p = 0.034$ ) and Familiarity with Criminal Behaviour ( $F_{5,148} = 5.45$ ,  $p=0.02$ ) and a significant interaction between Familiarity with Mental Illness and Criminal Behaviour ( $F_{1,148} = 5.25$ ,  $p=0.02$ ).

### 3.2.1 Impact of Vignette

The Levene's test was significant for both sympathy and trustworthiness so for this outcome an alpha level of .01 was chosen over .05. Between subject's effects indicated that Vignette had a significant impact on sympathy ( $F_{5,157} = 5.58$ ,  $p<.0001$ ) and trustworthiness ( $F_{5,157} = 5.17$ ,  $p<.0001$ ). Table 4 sets out the average responses in each vignette.

**Table 4 around here**

Pairwise comparisons indicated there was significantly less sympathy for Sam in Vignette 4 than any other vignette bar the control group (Schizophrenia,  $p<0.0001$ ; Depression,  $p<0.0001$ ; Alcohol dependency,  $p=0.008$ , No illness, disadvantaged background,  $p<0.0001$ ). However, with regard to trustworthiness, it was in Vignette 5 that Sam was considered significantly less trustworthy in comparison to all other vignettes bar alcohol dependency (Schizophrenia,  $p<0.0001$ ; Depression,  $p= .002$ ; No illness, neutral background,  $p=0.01$ ; Control,  $p <0.0001$ ). A significant interaction ( $p=0.027$ ) between Familiarity with Criminal Behaviour and Vignette indicated that in relation to Vignette 5, those with familiarity with crime saw Sam as significantly more trustworthy ( $M= 52.31$ ,  $SD 26.12$ ) than those without ( $M= 37.86$ ,  $SD 13.69$ ) albeit still not to a high level.

In terms of rehabilitation, Sam was seen as significantly less likely to be rehabilitated in Vignette 5 in comparison to Vignette 1 ( $p=0.003$ ), Vignette 4 ( $p=0.001$ ) and the control vignette ( $p=0.012$ ). Table 5 indicates that on average participants thought Sam's prospects in Vignette 5 were only just above chance level.

**Table 5 around here**

### *3.2.2 Impact of participants' own criminal behaviour and mental illness*

The MANOVA indicated that experience of criminal behaviour in the participants had a significant impact on Sam's trustworthiness ( $F_{4,145} = 4.89$ ,  $p=0.028$ ) with means indicating that those with familiarity ( $M=64.31$ ,  $SD20.54$ ) felt Sam was more trustworthy overall than those without ( $M=59.09$ ,  $SD 22.33$ ). Familiarity with Mental Illness had a significant impact on sympathy ( $F_{4,145} = 8.94$ ,  $p=0.003$ ). Those with familiarity ( $M=66.07$ ,  $SD25.21$ ) felt considerably more sympathy for Sam than those without ( $M=54.14$ ,  $SD 24.28$ ).

For rehabilitation, means indicated that those with familiarity with criminal behaviour were significantly more likely to think Sam would be rehabilitated in the future ( $M=69.38$ ,  $SD21.53$ ) than those who did not ( $M=64.58$ ,  $SD21.76$ )  $p=0.026$ . Indeed, those with familiarity with both criminal behaviour and mental illness were also very likely to think Sam could be rehabilitated ( $M= 67.56$ ,  $SD 22.64$ ). However, the interaction indicated a significant difference ( $p=0.007$ ) between those with familiarity with criminal behaviour only ( $M=75.38$ ,  $SD16.30$ ) and those with familiarity with neither experience ( $M=58.24$ ,  $SD18.78$ ) with the latter being notably less likely to think Sam could be rehabilitated.

### *3.3 Increased participant age will result in a less negative, stereotypical response in relation to criminal propensity and to greater sympathy and tolerance towards individuals with mental health problems*

Age was broken down into: 18-25; 26-35; 36-45; and 46+ with equal distribution across categories. Dependent variables were identical to 3.2 above. The MANOVA indicated a main effect for Age Group ( $F_{9,471} = 3.03$ ,  $p=0.002$ ) and an interaction effect for Age Group and Familiarity with Criminal Behaviour ( $F_{9,471} = 2.08$ ,  $p=0.029$ ). No other significant main effects or interactions were found in relation to Age Group (all  $F$ 's < (1.36) and all  $p$ 's > (0.18)). Levene's test was significant for all dependent variables so an alpha level of .01 was adopted for the between subjects effects. These indicated significant findings in relation to sympathy only ( $F_{3,157} = 6.37$ ,  $p<0.0001$ ) and pairwise comparisons indicated a significant difference between the oldest group (46+) and all others bar the 25-35-year-olds with the former being more sympathetic ( $p=0.001$ ). Table 6 indicates the means for each group.

Table 6. around here

For the 36-45-year-old age group those with familiarity with criminal behaviour were significantly more sympathetic to Sam ( $M=64.21$ ,  $SD 27.17$ ) than those without ( $M= 47.83$ ,  $SD 27.12$ ,  $p=0.018$ ).

#### **4. Limitations**

The study could be improved in terms of ecological validity, either by the use of video vignettes or ideally by involving participants in experimentally controlled real vignettes and observing the outcomes. While reaching levels of required statistical power, with greater resources, the sample size could be larger and more representative of the general public especially in terms of gender, socio-economic background and education. Ethnicity of participants was not examined in this study and this is also an important area of further enquiry.

#### **5. Discussion**

The results suggest that perceptions of an individual's propensity to commit crime continue to be somewhat negatively affected by that individual's history of mental illness. Given the tenuous evidence of the link between mental illness and criminal behaviour, this could be described as a stereotypical, discriminatory response. Findings were, however, more positive than expected towards those with mental illness, with crime expected to be minor; sympathy and trust relatively high for these groups; and positive findings regarding rehabilitation, especially for schizophrenia. Our findings in a UK sample of the general public supported those found in a US sample of students (Feldman and Crandell, 2007) who also demonstrated rejecting attitudes to most mental illnesses, but whose responses to schizophrenia and depression were relatively mild.

Unexpectedly, the over-riding message from our study was that coming from a disadvantaged background was deemed far more negative than having mental illness by participants in terms of who they thought would commit serious crime in the future and lack of trust towards Sam. This depiction of Sam was also seen as dramatically less likely to respond to rehabilitation.

These new findings have important implications for social distance and help-seeking. It is known that the stigma of mental illness reduces both initial help-seeking and continuation of treatment in the mentally ill (Pinto-Foltz et al., 2011), and that this reduced sense of agency occurs even when discrimination and prejudice are expected rather than actually experienced (Thorncroft et al., 2009). Our current study indicates that, as well as for those with mental illness, these issues are highly likely to apply to the thousands of individuals with a criminal past who are trying to re-establish a life for themselves in mainstream society.

It is well known that the strongest predictor of future offending is prior offending (e.g. Howard et al., 2009), suggesting that forces other than discrimination may have a greater impact on whether a person reoffends. However, if most attempts at pro-social behaviour by an ex-offender are met with obstacles, hostility and rejection by mainstream society, this must surely have a considerable negative impact on the motivations to 'go straight' and 'keep straight', and doubtlessly supports the notion within the individual of their permanently 'spoiled identity' (Goffman, 1963). Future research must directly address the nature of discrimination towards those with criminal convictions. This needs to be done from the point of view of the general public and from the actual experience of those with convictions (such as the study by Thorncroft et al., 2009, for mental illness), in order to enhance successful rehabilitation and reintegration of this large group (Clear et al., 2009) and to truly understand the process of the redemption of self-identity (Wainwright and Nee, in press). A rare example of this kind of work in the criminological field is that of Winnick and Bodkin (2008) though this focuses on anticipated stigma in those shortly to be released, rather than actual experiences following release. It nevertheless gives clues as to what factors might be involved in strategies that promote social inclusion rather than exclusion on release, such as the conditions which encourage ex-offenders to be open about their past rather than secretive.

One explanation for our results may centre on perceived personal responsibility for (anti-social) behaviour in individuals. In other words, it is possible that a hierarchy of 'blame' could explain our findings. The characterisations with more serious mental illnesses received less negative responses (schizophrenia, followed by depression and anxiety) than an addictive illness (alcohol dependency) perhaps because these former characters were seen



as less responsible for their actions, consequently arousing less anger in our participants and were therefore seen as more deserving of help (as has been seen in Martin et al, 2000; Feather and Johnstone, 2001; Corrigan et al., 2002; and Feldman and Crandall, 2007 in other studies of mental illness). Our study extends these findings by indicating that the offending individual with no diagnosis and a criminogenic background received the most negative response of all. He was viewed as the most untrustworthy, the most untreatable and the only characterisation of Sam likely to commit serious crime in the future, perhaps because he had no 'excuse' or alternative explanation for his behaviour which would reduce his culpability. This response to Sam as most blameworthy may change in the future as a consequence of the strong, current drive to geneticise and medicate criminality alongside all types of illness and behavioural disorder (see Singh and Rose, 2009 on bio-marker research), but for now Sam was seen as beyond reach in Condition 5.

Dorkins and Adshead (2011) have highlighted some of the extra issues faced by individuals who have both serious crime and mental illness in their background, many of which will apply to offenders without diagnoses also. They have thought-provokingly exposed the uncomfortable fit of the forensic service user within the mental health system and its 'recovery agenda'. As they put it, 'madness gets therapeutic help and badness does not' (p.180). Within the recovery agenda the mental health patient, at least in the therapeutic setting, is afforded respect and agency in decisions about his/her treatment and future, with service provider and user expected to work together on shared goals and values. The forensic mental health client, however, is less likely to be trusted, is more likely to live with permanent exile from his/her community and has to cope with the challenges of what could be seen as a permanently damaged identity (Dorkins and Adshead, 2011). Drennan and Aldred (2012) importantly point out how a sense of personal recovery in the forensic mental health setting rarely goes hand-in-hand 'social recovery' (i.e. social reintegration) and that social capital lost through these issues is extremely hard to regain.

Given these extra hurdles for ex-offenders with mental health problems, it is encouraging that the movement towards altering the balance of power and priorities in the mental health field has also recently been reflected in mainstream offender rehabilitation in the form of the Good Lives Model (GLM, Ward and Stewart, 2003; Ward et al., 2012). Building on the traditional risk focussed model (Andrews and Bonta, 2003), the GLM favours a focus

on human dignity, human rights, autonomy and agency, and a collaborative, goal-oriented approach between client and therapist, alongside risk assessment. The fundamental aim is to motivate and coach the offender to achieve access to the basic human goods we all seek, in a pro-social way. While influential in many recent offender programmes, it is also controversial in our fundamentally punitive society (see Ward et al., 2012). Barker (2012) notes an analogy between recent changes in the mental health and correctional services. On the one hand, a more traditional relapse prevention approach used in mental health has moved towards the more empowering recovery agenda and on the other hand in correctional services, risk reduction approaches have moved towards integrating a strength's-based approach.

Our research suggests that offenders with no mental health problems, but disadvantaged by their socio-economic background are likely to meet the strongest force of discrimination from the public, and these punitive attitudes may partly account for resistance to a more human rights based approach to rehabilitation in the offender world (see Andrews, Bonta and Wormith, 2011). However, if our aim is to re-integrate the socially excluded i.e. to reduce stigma, disorder and to support those who wish to stop offending (among others), perhaps renewed focus on a human rights agenda and an acknowledgement that few of us do not have experience of these issues, will fuel a more tolerant and nurturing society (Maruna, 2009).

It is worth cautioning that the deterministic underpinnings of the recent genomic approach to prevention and treatment from some quarters (Singh and Rose, 2009) may be in direct contrast to the human rights-based models. It is likely to lead to a sense of disenfranchisement in young people with risk profiles, from investment in their own future – a central tenet of the Good Lives Model. In a rare example of research on child offenders' own views of the genomic approach, they were cautious about the stigmatisation and labelling of 'at-risk' children who had done nothing wrong; thought records of such children should be highly restricted; thought parents should be allowed to try and help their child before formal treatment should begin; and thought testing and medication would interfere with the child's natural development. Ultimately, they thought their antisocial behaviour was much more to do with socio-environmental causes than genetics (Horstkotter et al, 2012).

Familiarity with mental illness and crime had a positive effect on sympathy, perceived trustworthiness and potential rehabilitation of 'Sam' in our study. Familiarity with criminal behaviour had a greater impact than that with mental illness which is important given it is the first time it has been studied directly and this may have implications for rehabilitation and reintegration. The findings support the weight of evidence that familiarity results in greater leniency towards those in the 'in-group' (Angermeyer et al., 2004; Corrigan et al., 2001; Moon et al., 2009) which in turn fits with the similarity-leniency effect (Tajfel and Turner, 1986). One explanation of this is that similarity fosters a greater sense of empathy with particular social groups which in turn has been seen to reduce punitiveness (Unnever and Cullen, 2009). The obvious implication here would be to increase awareness in the public that the vast majority have some level of familiarity with either mental illness or criminal behaviour (as is clearly reflected in our sample). However, this is not a straightforward matter.

Previous studies have noted that familiarity with schizophrenia and addictive illnesses slightly increased respondent's beliefs that the mentally ill were dangerous and noted that the quality of experience/familiarity is important (Crisp et al., 2000). Angermeyer et al (2009) noted a significant improvement in 'mental health literacy' over an eight year period in Germany, but desire for social distance remained the same or worsened. In the past decade two noteworthy studies in the US indicate how carefully anti-stigma campaigns about marginalised groups must be handled. The development of genetic explanations for behaviour over recent years has supported large-scale campaigns to educate the general public in the U.S. away from the predominant socio-moral explanations of mental illnesses (as resulting from individual weakness) and towards neurobiological explanations during the early 2000's. Pescosolido et al (2010) compared responses to the MacArthur Mental Health Module in the 1996 and 2006 sweeps of the General Social Survey and found an increased acceptance of a neurobiological model of illness in the later sweep that was accompanied by a greater endorsement for treatment (rather than punishment) but a similar or heightened desire for social distance.

An explanation for this can be found in Phelan's (2005) experimental study in the U.S. which had similar findings. These respondents favoured a 'genetic essentialist' explanation which, while reducing blame towards the ill individual, saw the illness as more permanent, more

serious and more heritable, resulting in a kind of helplessness in relation to the treatment of mental illness. Singh and Rose (2009) have also cautioned against the unintended social and ethical consequences of increasingly genomic explanations of behaviour and the negative impact this is likely to have on stigma.

Other experimental research has suggested that contact with out-groups is more effective than education (Corrigan et al., 2001; Corrigan et al., 2002) but action research in the community is needed to understand the optimum way in which the similarity-leniency effect can be put to the greatest good in terms of reducing discrimination and sustaining support for vulnerable groups. Understanding, for instance, what type and extent of familiarity with criminal behaviour or mental illness will have optimum effects on the behaviour of individuals and crucially, in what format, is a high priority.

The increased sympathy in older age-groups of those with familiarity with criminal behaviour was perhaps not surprising in that the longer one's life, the greater the chance of having had illegal activity in one's past<sup>vii</sup>. This finding could again be harnessed in terms of reducing social distance and sustaining support by engaging older age-groups with criminal backgrounds when increasing contact with 'out-groups' but we need to know more about how to effectively do this in real world settings.

Attempting to scrutinise the link between mental illness and perceived dangerousness has produced some unexpected findings and generated many research questions. Future research needs to unpick the nuances of stigmatisation towards different types of social background, different types of mental illness and different types of criminal convictions in order to uncover the potential hierarchy of stigma and resulting discrimination towards these concepts. A closer look at the effects of attributions of blame and personal responsibility is recommended, using more ecologically valid methods and larger, stratified samples. It could be that the egalitarian principles promoted by the recovery agenda in mental health and the Good Lives Model in addressing criminality will offer us greater success in reintegrating the socially excluded from our society, as they are inherently more meaningful and motivating to service users than a purely risk reduction approach. To support this we need a more detailed understanding of what it is about different mental illnesses and different criminal behaviours that strike fear and rejection in the general

public. This in turn should aid anti-stigma policy and help the formerly rejected person to live a good and fulfilling life. As it stands, our results suggest that those with a criminal past are among the most rejected in our society and will face significant obstacles in trying to lead a crime-free life.

***Vignette for Condition 1 – Typical background with schizophrenia***

*Sam is 26 years old. He has had issues with mental health for several years and was diagnosed with schizophrenia after leaving college. Sam's symptoms are controlled by the medication but, once feeling better, Sam has been known to stop taking the medication without doctor's approval. When off medication, Sam has been known to commit petty theft and cause disturbances in the neighbourhood by playing loud music late at night and being aggressive to neighbours. Sam's behaviour when off medication is described as manic and unpredictable. In addition, Sam can suffer from hallucinations which adversely affect behaviour and increase paranoia.*

*Sam is currently living alone in a rented bedsit within the local area, but continues to have regular contact with his immediate family. Sam has close relationships with an older brother and a younger sister, and often stays overnight at his brother's home during the week. Sam's parents have been married for twenty seven years and still live in the family home, which is located three miles away from Sam's bedsit. He has close relationships with both his mother and father. Although Sam has had the usual kind of arguments that a teenager has with their family, on the whole memories of childhood are good.*

*Sam's education was completed at a comprehensive school and Sam left college with 3 'A' levels. Sam also obtained a degree at university before starting a job in computing.*

*Sam finds it easier to talk to other people when on medication, and likes to be around company whenever possible. Sam has a positive attitude towards relationships with peers. He has a number of stable relationships which have been kept from childhood. These relationships positively affect Sam's self esteem and the sense of identity that Sam experiences. Sam has a history of good experiences both with family members and personal relationships, which shapes behaviour both when on medication but in particular when it has been stopped.*

*Sam's friends are aware of his diagnosis and are genuinely supportive. They advise Sam's parents of any adverse behaviour observed which is a sign of stopping the medication. At the times when the medication has been stopped Sam's network usually ensures that Sam gets the attention needed to get back on track.*

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<sup>i</sup> Resettlement into the community post-custody, including finding accommodation and employment.

<sup>ii</sup> Compared to pencil and paper tests

<sup>iii</sup> IP addresses were collected by Survey Monkey and indicated that no IP address was used more than once.

<sup>iv</sup> Ten points were used to increase the sensitivity of the measure

<sup>v</sup> Unfortunately most of those excluded were male, leaving a gender imbalance, but males were equally distributed across conditions.

<sup>vi</sup> The Levene's test is an inferential statistic used to assess the equality of variances in our case in samples from each condition. If the output of the test is less than .05, there may be less than equal variance in each condition, so a more conservative alpha level is recommended when interpreting the output of the MANOVA

<sup>vii</sup> One in three men will have a criminal conviction by the age of 40 (Home Office Digest 4, 1999).

Tables for:

**Public perceptions of risk in criminality: the effects of mental illness and social disadvantage**

**Table 1 Descriptions of the six conditions.**

Vignette 1.	Vignette 2.	Vignette 3.	Vignette 4.	Vignette 5.	Vignette 6.
Schizophrenia, neutral background, past criminal behaviour	Depression/anxiety, neutral background, past criminal behaviour	Alcohol dependency, neutral background, past criminal behaviour	No illness, neutral background, past criminal behaviour	No illness, disadvantaged background, past criminal behaviour	No illness, neutral background, no crime (Control)

**Table 2 Responses to the question ‘How likely is it that Sam will commit crime in the future’ by vignette. N=243.**

Vignette	1. Schizophrenia + past criminal behaviour (n=37)	2. Depression + past criminal behaviour (n=44)	3. Alcohol Dependency + past criminal behaviour (n=43)	4. No illness, neutral background + past criminal behaviour (n=36)	5. No illness, Disadvantaged background + past criminal behaviour (n=40)	6. No illness, neutral background, no crime (Control) (n=43)
Mean response (SD)	4.81 <sup>b</sup> (2.95)	5.02 <sup>b</sup> (2.61)	5.67 <sup>c</sup> (2.24)	4.00 <sup>ab</sup> (2.50)	5.90 <sup>c</sup> (2.4)	2.65 <sup>a</sup> (2.70)
% response rate in ‘possibly’ to ‘definitely commit crime’ categories	62%	73%	79%	53%	80%	32%

NB If two cells share a letter they are not significantly different.

**Table 3 Responses to ‘How serious would Sam’s future crime would be?’ N=167.**

Vignette	1. Schizophrenia + past criminal behaviour (n=24)	2. Depression + past criminal behaviour (n=32)	3. Alcohol Dependency + past criminal behaviour (n=36)	4. No illness, neutral background + past criminal behaviour (n=24)	5. No illness, Disadvantaged background + past criminal behaviour (n=35)	6. No illness, neutral background, no crime (Control) (n=16)
Mean (SD)	4.12 <sup>ab</sup> (1.91)	4.21 <sup>ab</sup> (1.86)	4.13 <sup>ab</sup> (1.84)	3.25 <sup>ac</sup> (1.93)	5.17 <sup>b</sup> (2.05)	3.38 <sup>ac</sup> (1.54)
% response rate in ‘minor crime’ categories	71	66	75	83	40	88

NB If two cells share a letter they are not significantly different.

**Table 4. Mean scores indicating effect of participant vignette on sympathy and trustworthiness of Sam. N=243.**

Vignette	1.Schizophrenia crime (n=37)	2.Depression, anxiety, crime (n=44)	3.Alcohol dependency, crime (n=43)	4.No illness, neutral background, Crime (n=36)	5. No Illness, disadvantaged background, crime (n=40)	6. No illness, neutral background, no crime (Control) (n=43)
Dependent Variable	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD
Sympathy	74.59 <sup>a</sup> 23.99	72.27 <sup>a</sup> 16.82	61.86 <sup>a</sup> 25.19	44.17 <sup>b</sup> 29.60	68.75 <sup>a</sup> 22.09	53.02 <sup>b</sup> 22.20
Trustworthiness	69.46 <sup>a</sup> 15.47	65.00 <sup>a</sup> 17.85	57.21 <sup>b</sup> 15.30	63.33 <sup>a</sup> 22.92	47.25 <sup>b</sup> 23.42	72.79 <sup>a</sup> 16.52

NB If two cells share a letter they are not significantly different.

**Table 5. Mean scores indicating effect of participant vignette on rehabilitation of Sam. N=171.**

Vignette	1.Schizophrenia crime (n=26)	2.Depression, anxiety, crime (n=32)	3.Alcohol dependency, crime (n=36)	4.No illness, neutral background, Crime (n=24)	5. No Illness, disadvantaged background, crime (n=36)	6. No illness, neutral background, no crime (Control) (n=17)
Dependent Variable	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD
Rehabilitation	75.00 <sup>a</sup> 16.55	67.81 <sup>b</sup> 19.13	65.83 <sup>b</sup> 22.85	76.67 <sup>a</sup> 20.14	54.72 <sup>b</sup> 21.84	75.29 <sup>a</sup> 20.65

NB If two cells share a letter they are not significantly different.

**Table 6. Average scores of sympathy towards Sam by age group. N=243.**

Age group	18-25 (n=75)	26-35 (n=56)	36-45 (n=61)	46+ (n=51)
	Mean SD	Mean SD	Mean SD	Mean SD
	57.60 <sup>a</sup> (25.88)	63.93 <sup>b</sup> (21.63)	58.03 <sup>a</sup> (28.62)	74.12 <sup>b</sup> (22.48)

NB If two cells share a letter they are not significantly different.

**Table 1 Descriptions of the six conditions.**

Vignette 1.	Vignette 2.	Vignette 3.	Vignette 4.	Vignette 5.	Vignette 6.
Schizophrenia, neutral background, past criminal behaviour	Depression/anxiety, neutral background, past criminal behaviour	Alcohol dependency, neutral background, past criminal behaviour	No illness, neutral background, past criminal behaviour	No illness, disadvantaged background, past criminal behaviour	No illness, neutral background, no crime (Control)

**Table 2 Responses to the question ‘How likely is it that Sam will commit crime in the future’ by vignette. N=243.**

Vignette	1. Schizophrenia + past criminal behaviour (n=37)	2. Depression + past criminal behaviour (n=44)	3. Alcohol Dependency + past criminal behaviour (n=43)	4. No illness, neutral background + past criminal behaviour (n=36)	5. No Illness, Disadvantaged background + past criminal behaviour (n=40)	6. No illness, neutral background, no crime (Control) (n=43)
Mean response (SD)	4.81 <sup>b</sup> (2.95)	5.02 <sup>b</sup> (2.61)	5.67 <sup>c</sup> (2.24)	4.00 <sup>ab</sup> (2.50)	5.90 <sup>c</sup> (2.4)	2.65 <sup>a</sup> (2.70)
% response rate in ‘possibly’ to ‘definitely commit crime’ categories	62%	73%	79%	53%	80%	32%

NB If two cells share a letter they are not significantly different.

**Table 3 Responses to ‘How serious would Sam’s future crime would be?’ N=167.**

Vignette	1. Schizophrenia + past criminal behaviour (n=24)	2. Depression + past criminal behaviour (n=32)	3. Alcohol Dependency + past criminal behaviour (n=36)	4. No illness, neutral background + past criminal behaviour (n=24)	5. No Illness, Disadvantaged background + past criminal behaviour (n=35)	6. No illness, neutral background, no crime (Control) (n=16)
	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD
	4.12 <sup>ab</sup> (1.91)	4.21 <sup>ab</sup> (1.86)	4.13 <sup>ab</sup> (1.84)	3.25 <sup>ac</sup> (1.93)	5.17 <sup>b</sup> (2.05)	3.38 <sup>ac</sup> (1.54)
% response rate in ‘minor crime’ categories	71	66	75	83	40	88

NB If two cells share a letter they are not significantly different.

**Table 4. Mean scores indicating effect of participant vignette on sympathy and trustworthiness of Sam. N=243.**

Vignette	1.Schizophrenia crime (n=37)	2.Depression, anxiety, crime (n=44)	3.Alcohol dependency, crime (n=43)	4.No illness, neutral background, Crime (n=36)	5. No Illness, disadvantaged background, crime (n=40)	6. No illness, neutral background, no crime (Control) (n=43)
Dependent Variable	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD
Sympathy	74.59 <sup>a</sup> 23.99	72.27 <sup>a</sup> 16.82	61.86 <sup>a</sup> 25.19	44.17 <sup>b</sup> 29.60	68.75 <sup>a</sup> 22.09	53.02 <sup>b</sup> 22.20
Trustworthiness	69.46 <sup>a</sup> 15.47	65.00 <sup>a</sup> 17.85	57.21 <sup>b</sup> 15.30	63.33 <sup>a</sup> 22.92	47.25 <sup>b</sup> 23.42	72.79 <sup>a</sup> 16.52

NB If two cells share a letter they are not significantly different.

**Table 5. Mean scores indicating effect of participant vignette on rehabilitation of Sam. N=171.**

Vignette	1.Schizophrenia crime (n=26)	2.Depression, anxiety, crime (n=32)	3.Alcohol dependency, crime (n=36)	4.No illness, neutral background, Crime (n=24)	5. No Illness, disadvantaged background, crime (n=36)	6. No illness, neutral background, no crime (Control) (n=17)
Dependent Variable	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD	Mean SD
Rehabilitation	75.00 <sup>a</sup> 16.55	67.81 <sup>b</sup> 19.13	65.83 <sup>b</sup> 22.85	76.67 <sup>a</sup> 20.14	54.72 <sup>b</sup> 21.84	75.29 <sup>a</sup> 20.65

NB If two cells share a letter they are not significantly different.

**Table 6. Average scores of sympathy towards Sam by age group. N=243.**

Age group	18-25 (n=75)	26-35 (n=56)	36-45 (n=61)	46+ (n=51)
	Mean SD	Mean SD	Mean SD	Mean SD
	57.60 <sup>a</sup> (25.88)	63.93 <sup>b</sup> (21.63)	58.03 <sup>a</sup> (28.62)	74.12 <sup>b</sup> (22.48)

NB If two cells share a letter they are not significantly different.