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ORIGINAL PAPER

Psychiatric diagnosis and other predictors of experienced and anticipated workplace discrimination and concealment of mental illness among mental health service users in England

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Abstract

Purpose This study aims to examine whether psychiatric diagnosis is associated with likelihoods of experienced and anticipated workplace discrimination and the concealment of psychiatric diagnoses.

Methods 5924 mental health service users in England were interviewed as part of the Viewpoint survey between 2009 and 2014 using the Discrimination and Stigma Scale. Associations of psychiatric diagnosis with experienced and anticipated work-related discrimination or the concealment of mental illness were examined with the use of logistic regression models.

Results 25.6% of the participants reported experiencing discrimination in at least one work-related domain, contrasting with the 53.7% who anticipated workplace discrimination and the 72.9% who had concealed their mental illness. There was strong evidence that patients with schizophrenia and schizoaffective disorder had a decreased risk of experienced discrimination in keeping a job compared to those with depression, anxiety disorder, bipolar disorder or personality disorder. Furthermore, patients with depression were more likely to report anticipated discrimination in applying for education or training compared to those with schizophrenia and schizoaffective disorder. In addition, patients with depression were more likely to conceal their mental illness compared to those with schizophrenia and schizoaffective disorder and bipolar disorder.

Conclusion This study suggests that psychiatric diagnosis is a predictor of experienced and anticipated workplace discrimination and the concealment of mental illness and that more support is needed for employees with common mental disorders and their employers to enable better workplace outcomes for this group.

Keywords Stigma · Discrimination · Workplace · Mental health service users · Disclosure

Introduction

Mental disorders are significant barriers to workplace participation. Common mental issues such as anxiety and depression accounted for 488,000 cases of work-related ill health in 2015/16, with 224,000 new cases recorded in the UK [1]. Moreover, days lost from work due to common mental issues numbered 11.7 million in total with 23.9 days lost per case. Furthermore, the employment rate for people with mental illness is approximately 50% lower than for those without [2], being a particular problem among patients with severe mental illness (SMI) [3]. For example, the employment rate among people with schizophrenia was only 8% [4], despite the majority of service users desiring to work [5, 6].

These adverse outcomes might be the result of actual experienced discrimination and/or anticipated discrimination [7, 8]. Experienced discrimination is the unequal treatment of individuals based on stigmatised characteristics.

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For instance, people with mental illness might be rejected for employment due to their conditions. Farrelly et al. [9] conducted a cross-sectional study in England and found that 32% of participants with mental disorders including depression, bipolar disorder or schizophrenia had experienced discrimination while seeking employment and 37% while in employment [9]. Similar results were found among patients with depression in international surveys conducted over 35 countries [7, 10]. Anticipated discrimination is the anticipation of discriminatory behaviour from others [11]. The fear of discrimination may stop people from applying for work [12]. Farrelly et al. [9] revealed that more than 70% of mental health service users anticipated discrimination in the workplace.

These results are consistent with employers' attitudes. Employers tend to be concerned about the work performance of people with mental illness and their possibly unpredictable behaviour [13, 14] and less willing to hire such people compared to those with physical disabilities [15]. Moreover, stigma is a barrier to help-seeking [16, 17]. Employees are concerned that managers display critical attitudes towards mental health services [18], resulting in a delay in help-seeking and worse clinical outcomes [19–21].

These problems are further exacerbated by rhetoric used by some public figures and media outlets that contrasts 'strivers' (the employed) with 'skiver' (the unemployed), making deserving and undeserving distinctions that depict people with mental illness as less deserving [22, 23].

In England, a large-scale anti-stigma campaign called Time to Change (TTC) has been running since 2007 to reduce mental health-related stigma [24, 25]. Over the course of TTC, stigma-related knowledge, attitudes and desire for social distance have all improved [26, 27]. However, some questions have been raised about the effect and appropriateness of anti-stigma programmes [28], because of their implicit or explicit messages about the nature and causes of mental illness.

People with mental disorders tend to have difficulty deciding whether or not to disclose their diagnosis, especially in the workplace [29]. Disclosure can lead to better work adjustment. Under the Equality Act 2010, the discriminatory treatment of employees with mental disabilities is prohibited and reasonable workplace adjustments are legally required [30]. Nevertheless, many such people choose to either conceal their diagnoses or avoid applying initially [7, 15, 31]. Concealment can be a psychological stressor leading to a preoccupation with one's secret, anxiety and social isolation [32, 33]. Thus, workplace stigma makes disclosure decisions complicated [4, 34].

A decision aid for mental illness disclosure called COnceal or ReveAL (CORAL) has been developed helping service users make informed decisions regarding when and to whom to disclose [35, 36]. CORAL is shown to reduce decisional conflict, defined as experiencing uncertainty and dissatisfaction when making a choice among competing options [35].

There is evidence that the extent of different aspects of stigma vary across different psychiatric diagnoses. A systematic review of 25 studies indicates that the public's view of schizophrenia is more negative than those of bipolar disorder or depression [37], with a similar perception also held among college students [38]. Regarding UK newspaper coverage, the proportion of negative reports about mental disorders fell between 1992 and 2008 [39]. However, coverage of schizophrenia remained blatantly stigmatising, compared to the significant improvements made for depression [39, 40]. As members of the public, employers may, therefore, have more negative attitudes towards employees with schizophrenia.

Regarding experienced and anticipated discrimination, a cross-sectional study conducted in England found no significant difference between schizophrenia, bipolar disorder and depression [9]. Whereas, Angermeyer et al. [41] revealed that people with schizophrenia more often experienced discrimination compared to those with depression. However, people with depression anticipated discrimination as much as those with schizophrenia. They suggest that the inconsistent results between experienced and anticipated discrimination may be due to the impact of depressive symptoms on anticipated discrimination.

Depressive symptoms are found to be associated with perceived stigma among people with depression [42] and somatoform disorder [43], with anticipated discrimination among people with schizophrenia [44]. Perceived stigma is an individual's awareness of negative public attitudes towards themselves and a fear of discriminatory behaviour [45]. People with depressive symptoms often have cognitive distortions and think negatively about themselves which may result in increased perceived stigma and anticipated discrimination [42, 43].

The evidence regarding the association of psychiatric diagnoses with experienced and anticipated workplace discrimination or mental illness concealment is sparse. Given the higher level of public stigma and discrimination towards people with schizophrenia [38, 41, 46], their experienced workplace discrimination may also be more prevalent. Whereas, anticipated workplace discrimination among people with depression might be more frequent considering the impact that depressive symptoms have on the fear of discrimination [44, 47]. Given a noticeably higher level of anticipated discrimination among depressive patients compared to their experienced discrimination [41], people with depression might have more concerns regarding disclosing their mental illness.

In this paper, we tested the following three hypotheses:

1. A diagnosis of schizophrenia is associated with a higher likelihood of experienced workplace discrimination compared to diagnoses of depression, anxiety disorder, bipolar disorder or personality disorder.
2. A diagnosis of depression is associated with a higher likelihood of avoiding seeking work due to anticipated work-related discrimination compared to diagnoses of schizophrenia, anxiety disorder, bipolar disorder or personality disorder.
3. A diagnosis of depression is associated with a higher likelihood of the concealment of mental illness compared to diagnoses of schizophrenia, anxiety disorder, bipolar disorder or personality disorder.

Methods

Design

This study used data from the Viewpoint survey, a cross-sectional survey conducted to evaluate the effects of Time to Change through annual telephone interviews with mental health service users in England between 2008 and 2014 [48–50]. Details regarding the Viewpoint survey are described elsewhere [48–50].

Participants

Annually, five mental health National Health Service (NHS) trusts were recruited using a socioeconomic deprivation score to gain representative samples of service users in England [51]. Patients were randomly selected using electronic healthcare records. Inclusion criteria were: aged 18–65, any mental illness except dementia, utilised mental health services in the previous 6 months, and currently living in the community. The clinical diagnosis recorded in the electronic records according to the International Classification of Diseases, tenth revision was used by clinical staff to determine eligibility in terms of diagnosis. The sample size was targeted at 1000 annually. In 2008, 2000 patients per trust were invited to participate, estimating a response rate of 25%. However, from 2009 to 2014, up to 4000 patients per trust were offered participation because of the low previous rate. Selected patient records were clinically screened to assess their eligibility and exclude those vulnerable to distress [52]. Information sheets and consent forms were dispatched and non-respondents received a follow-up reminder after 2 weeks. A £10 voucher was offered from 2011 to 2014.

Data collection

Data collection was conducted by trained telephone interviewers, the majority of whom had experience of mental health problems. Interviewers were assigned to participants and up to three attempts were made to schedule an interview.

Measures

The Discrimination and Stigma Scale 12 (DISC-12) was used to measure service users' reports of experienced discrimination and avoidance due to anticipated discrimination [31]. DISC-12 is an interviewer-administered scale containing the unfair treatment and stopping yourself subscales [53]. The unfair treatment subscale covers 22 items for mental health-related experienced discrimination in different life areas. The stopping yourself subscale covers three items for anticipated discrimination and one item for general concealment of mental illness. All items are assessed using a four-point scale from 0 ('not at all') to 3 ('a lot'). A 'not applicable' answer is also available for items not relevant to a respondent for the previous 12 months. Respondents are asked to give an example of how they experienced or anticipated discrimination for each item. In 2008, one item was used to assess anticipated work-related discrimination (i.e. work, education or training). From 2009, the item was sub-divided into two settings: (1) work, (2) education or training. Therefore, in this study, only the 2009–2014 data were included.

For experienced discrimination, the following two items were analysed: 'Have you been treated unfairly in finding a job?' and 'Have you been treated unfairly in keeping a job?' For anticipated discrimination and the concealment of mental illness, the items analysed were: 'Have you stopped yourself from applying for work?', 'Have you stopped yourself from applying for education and training?' and 'Have you concealed or hidden your mental health problem from others?' The item for the concealment asks about general concealment of mental illness, rather than specifically in the workplace.

The answers to the items were binarised into 'no discrimination' (any situation without discrimination or concealment) and 'any discrimination' (any situation with discrimination or concealment to some extent) following the Henderson et al. method [48]. This approach can be justified because the distribution of answers to these items has two peaks at 0 and 3. A 'not applicable' response was recorded as 'no discrimination', because participants who choose 'not applicable' have not experienced any discrimination in this life area.

Participants were asked what diagnosis they had been given, and whether they agreed with it. Demographic and mental health service use information was also collected.

Statistical analysis

All analyses were conducted using IBM SPSS Statistics 24. First, univariate logistic regression analyses were performed with the dichotomised outcomes (experienced and anticipated workplace discrimination and the concealment of mental illness) as the dependent variable and psychiatric diagnosis as the independent variable. Schizophrenia or schizoaffective disorder or depression was chosen as the reference category. Subsequently, multivariate logistic regression analyses were conducted to control for relevant sociodemographic and clinical characteristics identified from the literature in the field (age, study year, employment, length of time in mental health services, previous involuntary hospitalisation, agreement with the diagnosis, gender, education level, ethnicity and type of current care) [49]. Cases with missing data on any of the included variables were omitted from the analysis. Additionally, sensitivity analyses were conducted excluding participants who found the outcome items 'not applicable' to assess the robustness of the findings.

Ethics

The Viewpoint survey was approved by the Riverside Research Ethics Committee (07/H0706/72).

Results

5924 participants between 2009 and 2014 were included. The complete response rates of the surveys in 2009, 2010, 2011, 2012, 2013 and 2014 were 7, 8, 11, 10, 10 and 8%, respectively. Sample characteristics are presented in Table 1. White and female participants were overrepresented compared to the NHS Information Centre data [54].

Responses to items for workplace discrimination and concealment of mental illness are presented in Table 2. For seeking employment, 16.2% reported experiencing discrimination, while 15.3% reported discrimination in keeping work. Whereas, 45.0 and 30.7% reported stopping themselves from applying for work and in applying for education and training due to anticipated discrimination, respectively. Mental illness concealment was reported by 72.9%. 25.6% of participants experienced discrimination in at least one work-related domain. While 53.7% of participants reported anticipated discrimination in at least one work-related domain, and 66.0% of participants reporting anticipated workplace discrimination had not actually experienced discrimination.

Results of univariate and multivariate analyses are shown in Table 3 (more detailed results are available in Online Appendices A, B and C).

Experienced discrimination in seeking employment

Although in the univariate analysis, a diagnosis of schizophrenia or schizoaffective disorder was associated with a higher likelihood of experienced discrimination in seeking employment compared to that for depression (OR 0.67, 95% CI 0.55–0.84), after adjustment for potential confounders, this association became non-significant. Likewise, in the sensitivity analysis excluding 'not applicable' participants, diagnosis was not associated with experienced discrimination in seeking employment.

The odds of reporting discrimination decreased with age in years (OR 0.97, 95% CI 0.96–0.98). Women were less likely to report experienced discrimination in seeking employment than men (OR 0.79, 95% CI 0.67–0.94). Non-white participants were more likely to report discrimination compared to white participants (OR 1.57, 95% CI 1.23–2.01). Unemployed participants were more likely (OR 1.55, 95% CI 1.26–1.91) and retired participants were less likely to experience discrimination (OR 0.42, 95% CI 0.25–0.72) compared to those in employment. Participants with O-Level qualifications were less likely to report discrimination compared to those possessing A-Levels (OR 1.59, 95% CI 1.27–1.98), an undergraduate degree (OR 1.76, 95% CI 1.38–2.24), a postgraduate degree (OR 2.18, 95% CI 1.65–2.87) or professional training (OR 1.65, 95% CI 1.13–2.40). The odds of reporting discrimination among participants in 2009 were lower than those in 2011 (OR 1.44 95% CI 1.05–1.99) and in 2012 (OR 1.43, 95% CI 1.04–1.96).

Experienced discrimination while in employment

The multivariate analysis found that participants with schizophrenia or schizoaffective disorder were less likely to experience discrimination while employed compared to those with depression (OR 1.56, 95% CI 1.16–2.10), anxiety disorder (OR 1.51, 95% CI 1.06–2.15), bipolar disorder (OR 1.41, 95% CI 1.05–1.90) or personality disorder (OR 1.76, 95% CI 1.22–2.54). In the sensitivity analysis, the variation in the associations was not large and those with schizophrenia or schizoaffective disorder were still less likely to experience discrimination while in employment compared to those with depression (OR 1.48, 95% CI 1.05–2.08), anxiety disorder (OR 1.50, 95% CI 0.99–2.26) or personality disorder (OR 2.04, 95% CI 1.30–3.22).

The odds of reporting discrimination decreased with age in years (OR 0.99, 95% CI 0.98–0.99). Employed participants experienced more discrimination compared to those who

Table 1 Sociodemographic and clinical characteristics

Year of data collection	*N* (%)
2009	1039 (17.5)
2010	979 (16.5)
2011	1015 (17.1)
2012	1004 (16.9)
2013	985 (16.6)
2014	902 (15.2)
Age	Years
Mean (SD)	44.7 (11.2)
Missing	501
Gender	*N* (%)
Male	2224 (37.5)
Female	3684 (62.2)
Transgender	15 (0.3)
Missing	1 (0.0)
Ethnicity	*N* (%)
White	5387 (90.9)
Non-white	500 (8.4)
Missing	37 (0.6)
Employment	*N* (%)
Employed	1511 (25.5)
Retired	496 (8.4)
Unemployed	2644 (44.6)
Volunteering/studying/training or other	1265 (21.4)
Missing	8 (0.1)
Active in religion	*N* (%)
Yes	2063 (34.8)
No	3846 (64.9)
Missing	15 (0.3)
Highest level of education	*N* (%)
Professional training	345 (5.8)
Postgraduate	665 (11.2)
Undergraduate	1136 (19.2)
College/A levels	1574 (26.6)
School/O levels	1803 (30.4)
Other	353 (6.0)
Missing	48 (0.8)
TTC programme awareness	*N* (%)
Not aware of any aspects	4362 (73.6)
I have seen publicity for the campaign	1375 (23.2)
I have participated in the activities	155 (2.6)
Missing	32 (0.54)
Diagnosis	*N* (%)
Depression	1681 (28.4)
Schizophrenia and schizoaffective disorder	915 (15.4)
Anxiety disorder	547 (9.2)
Bipolar disorder	1185 (20.0)
Personality disorder	430 (7.3)
Other	678 (11.4)
Missing	488 (8.2)
Diagnosis known	*N* (%)
Yes	5449 (92.0)
No	449 (7.6)
Missing	26 (0.4)
Agree with diagnosis	*N* (%)
Agree	4861 (82.1)
Disagree	218 (3.7)
Unsure	335 (5.7)
Missing	510 (8.6)
Find diagnosis an advantage	*N* (%)
Advantage	3009 (50.8)
No difference	713 (12.0)
Disadvantage	1081 (18.2)
Missing	1121 (18.9)
Previous involuntary hospitalisation	*N* (%)
Yes	2139 (36.1)
No	3774 (63.7)
Missing	11 (0.2)
Years in MH services	Mean (SD)
	14.1 (11.1)
Missing, *N* (%)	541 (9.1)
Current type of MH care	*N* (%)
Outpatient/ambulatory	4877 (82.3)
Treatment at home	585 (9.9)
Day care	113 (1.9)
Other	333 (5.6)
Missing	16 (0.27)
DISC score	Mean (SD)
	31.0 (22.9)
Missing, *N* (%)	1 (0.0)

SD standard deviation, *TTC* time to change, *MH* mental health

were unemployed (OR 0.44, 95% CI 0.36–0.53), volunteering, studying, or training (OR 0.39, 95% CI 0.30–0.49) and the retired (OR 0.32, 95% CI 0.21–0.48). Participants with O-Level qualifications were less likely to report discrimination than those with A-Levels (OR 1.51, 95% CI 1.20–1.90), an undergraduate degree (OR 1.62, 95% CI 1.27–2.07), a postgraduate degree (OR 1.81, 95% CI 1.37–2.38) or professional training (OR 2.12, 95% CI 1.51–2.98). Participants in 2009 were less likely to report discrimination than those

Table 2 Responses to the DISC-12 items related to workplace discrimination and concealment of mental illness

	N (%)
Experienced workplace discrimination	
'Have you been treated unfairly in finding a job?'	
Not at all	1490 (25.2)
A little	208 (3.5)
Moderately	272 (4.6)
A lot	480 (8.1)
Not applicable	3466 (58.5)
'Have you been treated unfairly in keeping a job?'	
Not at all	1673 (28.2)
A little	178 (3.0)
Moderately	258 (4.4)
A lot	472 (8.0)
Not applicable	3337 (56.3)
Anticipated workplace discrimination	
'Have you stopped yourself from applying for work?'	
Not at all	1643 (27.7)
A little	440 (7.4)
Moderately	758 (12.8)
A lot	1468 (24.8)
Not applicable	1606 (27.1)
'Have you stopped yourself from applying for education and training?'	
Not at all	2760 (46.6)
A little	369 (6.2)
Moderately	588 (9.9)
A lot	861 (14.5)
Not applicable	1338 (22.6)
Concealment of mental illness	
'Have you concealed or hidden your MH problem from others?'	
Not at all	1497 (25.3)
A little	629 (10.6)
Moderately	1175 (19.8)
A lot	2512 (42.4)
Not applicable	101 (1.7)

in 2011 (OR 1.61, 95% CI 1.15–2.25) and in 2012 (OR 1.63, 95% CI 1.17–2.28).

Anticipated discrimination in applying for work

In the univariate analysis, a diagnosis of personality disorder was associated with a higher likelihood of avoiding applying for work due to anticipated discrimination compared to that for depression (OR 1.54, 95% CI 1.24–1.90). However, in the multivariate analysis, this association was no longer significant and diagnosis was not associated with anticipated discrimination in applying for work. In the sensitivity analysis excluding 'not applicable' participants, participants with personality disorder were more likely to report avoidance compared to those with depression (OR 1.40, 95% CI 1.03–1.91).

The odds of avoiding applying for work decreased with age in years (OR 0.98, 95% CI 0.98–0.99). Employed participants were more likely to avoid applying for work compared to retirees (OR 0.68, 95% CI 0.52–0.90), yet less likely to report stopping themselves from doing so compared to those who were unemployed (OR 1.85, 95% CI 1.58–2.15) or those who were volunteering, studying, or in training (OR 1.38, 95% CI 1.15–1.64). Participants with a postgraduate degree more often avoided applying for work compared to those with O-Level qualifications (OR 1.24, 95% CI 1.01–1.52). Those who had not experienced involuntary hospitalisation were more likely to avoid applying for work than those with experience (OR 1.24, 95% CI 1.09–1.42).

Table 3 Associations of psychiatric diagnosis with experienced and anticipated workplace discrimination and concealment of mental health problems in univariate and multivariate models

	Finding a job		Keeping a job	
	Unadjusted OR (95% CI) ($N=5428$)	Adjusted OR (95% CI)[a] ($N=4813$)	Unadjusted OR (95% CI) ($N=5430$)	Adjusted OR (95% CI)[a] ($N=4813$)
Diagnosis				
Schizophrenia and schizoaffective disorder	Reference	Reference	Reference	Reference
Depression	**0.67 (0.55–0.84)**	0.90 (0.70–1.18)	**1.80 (1.41–2.31)**	**1.56 (1.16–2.10)**
Anxiety disorder	0.96 (0.73–1.26)	1.26 (0.92–1.73)	**1.93 (1.42–2.62)**	**1.51 (1.06–2.15)**
Bipolar disorder	0.81 (0.65–1.02)	1.03 (0.79–1.34)	**1.70 (1.31–2.21)**	**1.41 (1.05–1.90)**
Personality disorder	0.91 (0.68–1.23)	0.97 (0.69–1.37)	**1.87 (1.35–2.59)**	**1.76 (1.22–2.54)**
Other	0.67 (0.51–0.88)	0.76 (0.55–1.05)	**1.37 (1.01–1.86)**	0.97 (0.68–1.39)
	Applying for work		Applying for education or training	
	Unadjusted OR (95% CI) ($N=5428$)	Adjusted OR (95% CI)[a] ($N=4913$)	Unadjusted OR (95% CI) ($N=5429$)	Adjusted OR (95% CI)[a] ($N=4914$)
Diagnosis				
Depression	Reference	Reference	Reference	Reference
Schizophrenia and schizoaffective disorder	0.99 (0.84–1.17)	0.93 (0.77–1.14)	0.93 (0.78–1.11)	**0.78 (0.63–0.97)**
Anxiety disorder	1.17 (0.96–1.42)	1.11 (0.90–1.36)	1.20 (0.98–1.47)	1.10 (0.88–1.37)
Bipolar disorder	1.13 (0.97–1.31)	1.17 (0.99–1.38)	0.88 (0.75–1.04)	0.84 (0.70–1.01)
Personality disorder	**1.54 (1.24–1.90)**	1.16 (0.92–1.48)	**1.68 (1.35–2.09)**	1.24 (0.97–1.58)
Other	0.90 (0.75–1.08)	0.84 (0.68–1.02)	0.92 (0.75–1.12)	0.84 (0.67–1.04)
	Concealment of MH problems			
	Unadjusted OR (95% CI) ($N=5429$)	Adjusted OR (95% CI)[a] ($N=4911$)		
Diagnosis				
Depression	Reference	Reference		
Schizophrenia and schizoaffective disorder	**0.57 (0.48–0.68)**	**0.65 (0.53–0.81)**		
Anxiety disorder	1.07 (0.85–1.36)	1.00 (0.77–1.28)		
Bipolar disorder	**0.64 (0.54–0.76)**	**0.64 (0.53–0.77)**		
Personality disorder	**1.35 (1.03–1.77)**	1.10 (0.81–1.48)		
Other	**0.79 (0.64–0.96)**	**0.73 (0.58–0.91)**		

Statistically significant results are displayed in bold ($p < 0.05$)

[a]After adjustment for potential confounders (age, gender, ethnicity, employment, education level, study year, agreeing with the diagnosis, length of time in mental health services, previous involuntary hospitalisation, and type of current care)

Anticipated discrimination in applying for education or training

The multivariate analysis showed that participants with schizophrenia or schizoaffective disorder were less likely to avoid applying for education or training compared to those with depression (OR 0.78, 95% CI 0.63–0.97). Similarly, in the sensitivity analysis, participants with schizophrenia or schizoaffective were less likely to report avoidance than those with depression (OR 0.72, 95% CI 0.57–1.02).

The odds of stopping themselves from applying decreased with age in years (OR 0.99, 95% CI 0.98–0.99). Women were more likely to avoid applying for education or training than men (OR 1.21, 95% CI 1.05–1.38). Employed participants were less likely to report avoidance than those unemployed (OR 1.85, 95% CI 1.56–2.19) and those who were volunteering, studying, or in training (OR 1.39, 95% CI 1.14–1.69). The odds of avoiding applying for education or training were greater for participants with an undergraduate degree compared to those with O-Level qualifications (OR 0.80,

95% CI 0.66–0.97). Participants in 2009 were less likely to report avoidance compared to those in 2011 (OR 1.42, 95% CI 1.10–1.83) and in 2012 (OR 1.74, 95% CI 1.35–2.24). Participants receiving outpatient care reported avoidance more frequently than those receiving day care (OR 0.38, 95% CI 0.19–0.74).

Concealment of mental illness

The multivariate analysis found that participants with depression were more likely to conceal their diagnoses than those with schizophrenia or schizoaffective disorder (OR 0.65, 95% CI 0.53–0.81) or bipolar disorder (OR 0.64, 95% CI 0.53–0.77). In the sensitivity analysis, the variation in the associations was not large and those with depression were still less likely to report concealment compared to those with schizophrenia or schizoaffective disorder (OR 0.69, 95% CI 0.55–0.86) or bipolar disorder (OR 0.66, 95% CI 0.54–0.80).

The odds of reporting concealment decreased with age in years (OR 0.98, 95% CI 0.97–0.99). Women had 1.54 times the odds of concealment than men (OR 1.54, 95% CI 1.34–1.76). Employed participants were more likely to report concealment than those who were volunteering, studying, or in training (OR 0.75, 95% CI 0.62–0.92). For participants with an undergraduate degree, the odds of concealment were higher compared to those with O-Level qualifications (OR 1.38, 95% CI 1.13–1.68). Participants in 2013 were less likely to report concealment compared to those in 2009 (OR 0.77, 95% CI 0.59–0.99). Those who had not experienced involuntary hospitalisation were more likely to report concealment than those with experience (OR 1.36, 95% CI 1.17–1.57).

Discussion

Anticipated workplace discrimination was more prevalent than experienced workplace discrimination and the majority of participants who reported anticipated workplace discrimination had not actually experienced workplace discrimination. These results are consistent with previous findings [7, 31] and may be explained by withdrawal from occupational and educational situations through low self-esteem (the so-called "why try" effect [55]). Alternatively, anticipated discrimination might reflect the awareness of discrimination that occurs to others.

Our first hypothesis, that a diagnosis of schizophrenia is associated with a higher likelihood of experienced workplace discrimination, was not confirmed. Diagnosis was not associated with a higher likelihood of experienced discrimination in seeking employment. These results suggest that discrimination during the recruitment processes is a reaction to psychiatric disorders in general rather than to any one specific disorder. Diagnosis of schizophrenia or schizoaffective disorder was associated with a lower likelihood of experienced discrimination in keeping a job. These results are the opposite of the hypothesis and not consistent with previous findings which revealed more stigmatising attitudes towards people with schizophrenia [37, 38].

One possible explanation is that people with schizophrenia tend to work in a more supportive environment. For example, in the UK, individual placement and support (IPS), a work scheme assisting people with SMI including schizophrenia [56] gain employment has been implemented [57, 58]. People with schizophrenia in supported employment might be less unfairly treated. Further, people with schizophrenia tend to work part-time in lower paid roles [59], which might explain the reduced workplace discrimination.

Our second hypothesis, that a diagnosis of depression is associated with a higher likelihood of anticipated work-related discrimination, was partly confirmed. A diagnosis of depression was associated with a higher likelihood of avoidance due to anticipated discrimination in applying for education or training compared to schizophrenia or schizoaffective disorder. It might be partly explained by the impact of depressive symptoms on anticipated discrimination. However, participants with schizophrenia or schizoaffective disorders were the least likely to report avoidance. Again, if those with schizophrenia were more often assisted by employment support workers, this may lead to reduced avoidance.

Participants with personality disorder were the most likely to report avoidance for both items. This is consistent with the high likelihood of them experiencing discrimination while in employment. These results might be related to their high level of internalised stigma and low self-esteem. Internalised stigma is the application of public stigma and negative attitudes to oneself, thus leading to low self-esteem and social withdrawal [60–62]. Grambal et al. [63] report that patients with borderline personality disorder tend to have a higher level of internalised stigma compared to those with other mental disorders. A high level of internalised stigma may increase avoidance in seeking employment.

Our third hypothesis, that a diagnosis of depression is associated with a higher likelihood of the concealment of mental illness, was confirmed. Participants with depression, anxiety disorder or personality disorder were more likely to conceal their diagnosis compared to those with schizophrenia or schizoaffective disorder or bipolar disorder. It is possible that depressive symptoms, anxiety and personality traits might be related to disclosure decisions and that fear of discrimination might mediate this relationship. Another plausible explanation would be that severe and impairing illnesses such as schizophrenia and bipolar disorder make concealment difficult because of their severe symptoms and the visible side effects of antipsychotic treatment [64].

Participants in 2011 and 2012 had higher likelihoods of experiencing and anticipating work-related discrimination compared to those in 2009. These results may reflect the UK's economic recession and austerity policies since 2010 [65]. The unemployment rate began to rise in 2009, peaking in 2011–2012, then decreased steadily [66]. It is shown that the employment gap between people with and without mental illness widen during an economic recession [67] and that austerity policies disproportionately affect people with disabilities [68].

Strengths and limitations

This is the first study to analyse experienced and anticipated workplace discrimination and concealment of mental illness using a diverse and large sample in England. Wide-ranging information about clinical and sociodemographic profiles enabled the exploration of factors associated with the outcomes.

One limitation of this study is the low response rate. Participants were first required to return written consent by mail, then contacted by phone for the interview, a process which may have missed many potential participants. The assessment of patient records took a long time and potential participants may have moved during this period. Those with severe symptomatology and those experiencing or anticipating discrimination may have been less likely to participate. Moreover, white and female participants were over-represented in the sample. This bias could affect the results. Another limitation is that psychiatric diagnosis in this study was based on respondents' self-report of their clinical diagnosis. This creates two possible sources of error in terms of accuracy, namely, coding errors and respondent error. However, anticipated discrimination on the part of respondents is based on what they believe to be their diagnosis, and in this sense the self-reported diagnosis is the most relevant. Likewise, many experiences of discrimination are based on what diagnosis the target of discrimination has reported to the source. Furthermore, the total variance explained by the multivariate models was low, suggesting that important predictors were not identified. Finally, the study data were collected between 2009 and 2014. Our finding should be confirmed with more recent data.

Implications and further research

First, stopping oneself from seeking employment or education as a result of anticipated discrimination was more prevalent than experienced discrimination. This may reflect service users' responses due to internalised stigma and disempowerment [55]. Along with anti-stigma interventions, empowering service users through interventions such as psychoeducation and peer support may be beneficial for their increased social participation [69, 70]. Given the high likelihood of mental illness concealment and its adverse effects on psychological well-being [33, 71], peer support programmes providing opportunities for safe disclosure and sharing positive experiences may be effective in improving self-esteem and empowerment, leading to reduced self-stigma and avoidance [72].

Second, psychiatric diagnosis was associated with work-related discrimination and mental illness concealment. These results may be explained by differences in types of employment they are seeking or engaged in. Further, psychiatric symptoms and personality traits may mediate this association. Future research should explore the association of these variables with workplace discrimination and mental illness concealment to better understand the causal mechanisms.

Finally, assuming that the use of supported employment can lead to reduced workplace discrimination, individualised employment support may be beneficial for people with common mental disorders as well as those with SMI. For instance, IPS for people with common mental illness may be an area of future research [73, 74]. However, the higher prevalence of common mental disorder means that less intensive and costly forms support should be considered. For example, in England, there are now around 77 recovery colleges, many of which run workshops on the subject of disclosure of illness; some local mental health charities also address this issue [75]. These organisations could develop more links with trade unions and employers to consider how they can provide more help to employees with mental illness, and with job centres to address experiences of workplace discrimination and its anticipation with people who are out of work.

Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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