

THE UNIVERSITY OF WARWICK

Original citation:

Lloyd-Evans, B. et al. (forthcoming). The nature and correlates of paid and unpaid work among service users of London Community Mental Health Teams. *Epidemiology and Psychiatric Sciences*

Permanent WRAP url:

<http://wrap.warwick.ac.uk/49261>

Copyright and reuse:

The Warwick Research Archive Portal (WRAP) makes the work of researchers of the University of Warwick available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

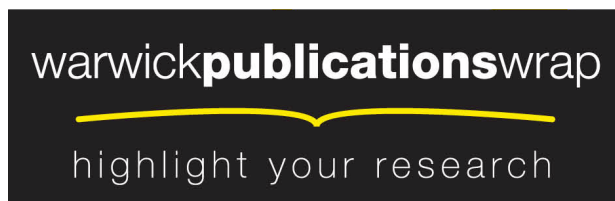
Publisher's statement:

This article has been accepted for publication and will appear in a revised form, subsequent to peer review and/or editorial input by Cambridge University Press, in *Epidemiology and Psychiatric Sciences* published by Cambridge University Press © Cambridge University Press

A note on versions:

The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher's version. Please see the 'permanent WRAP url' above for details on accessing the published version and note that access may require a subscription.

For more information, please contact the WRAP Team at: wrap@warwick.ac.uk



<http://go.warwick.ac.uk/lib-publications>

The nature and correlates of paid and unpaid work among service users of London Community Mental Health Teams

Short title: Paid and unpaid work among UK mental health service users

Brynmor Lloyd-Evans¹, Steven Marwaha², Tom Burns³, Jenny Secker⁴, Eric Latimer⁵, Robert Blizard¹, Helen Killaspy¹, Jonathan Totman⁶, Sanna Tanskanen⁶, Sonia Johnson^{1,6}

- 1.** Mental Health Sciences Unit - University College London, Charles Bell House, 67-73 Riding House Street, London W1W 7EJ
- 2.** Division of Mental Health and Wellbeing, Warwick Medical School, University of Warwick, Coventry, CV47AL
- 3.** Department of Psychiatry, University of Oxford, Warneford Hospital, Oxford OX3 7JX
- 4.** Faculty of Health, Social Care & Education, Anglia Ruskin University, 2nd Floor William Harvey Building, 1 Bishop Hall Lane, Chelmsford Essex, CM1 1SQ
- 5.** Department of Psychiatry, McGill University, 1033 Pine Avenue West, Montreal, QC H3A 1A1
- 6.** Camden and Islington Early Intervention Service - Camden and Islington NHS Foundation Trust, 4 Greenland Road, London NW1 0AS

Word count: 4,281

Declaration of interests: This paper relates to independent work commissioned by the National Institute for Health Research (NIHR) Research for Patient Benefit Programme (study ref: PB-PG-1207-15143).

Abstract

Aims Little is known about how the rates and characteristics of mental health service users in unpaid work, training and study compare with those in paid employment.

Methods: From staff report and patient records, 1353 mental health service users of seven Community Mental Health Teams in two London boroughs were categorised as in paid work, unpaid vocational activity or no vocational activity. Types of work were described using Standard Occupational Classifications. The characteristics of each group were reported and associations with vocational status were explored.

Results: Of the sample, 5.5% were in paid work and 12.7% were in unpaid vocational activity, (including 5.3% in voluntary work and 8.1% in study or training). People in paid work were engaged in a broader range of occupations than those in voluntary work and most in paid work (58.5%) worked part-time. Younger age and high educational attainment characterised both groups. Having sustained previous employment was most strongly associated with being in paid work.

Conclusions: Rates of vocational activity were very low. Results did not suggest a clear clinical distinction between those in paid and unpaid activity. The motivations for and functions of unpaid work need further research.

Background

Most mental health service users say they would like to work (Se-SURG 2006). In the UK, mental health services are directed by government guidance to support service users in finding desired paid work (DH 2009, DH 2011) and voluntary work or education (DH 2006). Trials of supported employment suggest about 60% of those motivated to find work can be helped into paid employment (Crowther et al. 2001, Burns et al. 2007, Bond et al. 2008). However, paid work is unlikely to be achievable for all (Strickler et al. 2009). Many service users experience doubt and ambivalence about seeking open market employment (Honey 2004, Marwaha and Johnson 2005). Welfare benefits systems can limit rewards or produce disincentives from taking up paid work: these barriers are particularly marked in the UK system (Leff and Warner 2006). A range of international studies reporting employment rates in those with severe mental health problems suggest that employment levels rarely exceed 30% and have been reported to be as low as 4% (Marwaha and Johnson 2004).

Work history and educational attainment have been consistently identified in the literature as associated with paid employment: a meta-analysis of predominantly American studies additionally identified youth, Caucasian ethnicity and not having a diagnosis of schizophrenia as predictors of employment among mental health service users (Wewiorski and Fabian 2004). Evidence regarding associations between employment and symptom severity or other clinical characteristics is more equivocal (Marwaha and Johnson 2004, Catty et al. 2008, Campbell et al. 2010). Definitions of employment however are inconsistent between studies, which often exclude part-time or unpaid work from reported outcomes. A significant gap in the literature is regarding the extent to which service users are doing unpaid vocational activity (voluntary work, training or study) and how far they resemble those in paid work. Establishing and comparing the factors associated with these different types of work in those with mental health problems may be important in understanding barriers to vocational activity, vocational pathways for service users and any inequities in access to paid and unpaid work.

This study describes all vocational activity in a sample of Community Mental Health Team (CMHT) service users. It aims to address a gap in knowledge by identifying and comparing factors independently associated with being in paid and unpaid vocational activity, rather than no vocational activity.

Methods

Setting: Data were collected from seven Community Mental Health Teams, each being the main secondary mental health service within its catchment area for adults with severe and enduring mental health problems. The services were located in two ethnically diverse, inner London boroughs within a single overall management structure (a National Health Service Mental Health Trust). Although containing some areas of considerable affluence, both boroughs have high levels of deprivation, falling within the most deprived quartile for employment and overall deprivation in the most recent UK government tally (Dept. Communities and Local Government 2010). Nationally, 72.5% of the working age population were in paid employment, with an unemployment rate of 7.9% at the time that data collection for this study occurred (Office for National Statistics 2009).

The mental health services in our study did not offer a supported employment service providing high-fidelity Individual Placement and Support, the most evidence-based form of vocational help (Bond et al. 2008). A variety of forms of employment support were available to service users, including voluntary sector employment support services, a Clubhouse sheltered employment service and disability advisors within government employment agencies or associated services.

Sample: Data presented in this paper were collected at the baseline stage of an ongoing implementation study of a supported employment programme. Ethical and local approvals were obtained to collect anonymised data about service users' characteristics and vocational status without seeking their consent, allowing data for a complete cohort of service users to be obtained.

We sought information regarding all service users who had an allocated mental health professional in the team acting as their care coordinator, reflecting a perceived need for a higher level of care and support than can be provided through occasional appointments with an out-patient psychiatrist.

Procedures: Data for participants' characteristics and work status at a set baseline date were collected six months retrospectively in each team by researchers. The baseline date for all teams was within the latter half of 2009. Three data sources were used: a) electronic patient records; b) interviews with care coordinators within the participating teams; c) interviews and reference to case records of employment specialists working within the teams (in the five teams in which a dedicated employment service was provided). In the event of conflicting data, the care coordinator was asked to confirm the information. Care coordinators typically saw service users every one to three weeks, with their daily activities a common focus for these contacts.

Measures: Participants' work status was coded as: a) in open market employment; b) in paid, sheltered work, c) in non-sheltered, Permitted Work (a UK scheme, similar to those in a number of northern European countries, whereby people with mental or physical disabilities can be paid for working limited hours while retaining welfare benefits (DWP 2010)); d) doing unpaid voluntary work; e) in education or training; or f) not in any vocational activity. For people recorded as doing any vocational activity, additional information was sought regarding hours worked or studied per week, the job or course title, place of work or study and a brief description of the nature of vocational activity.

Details of participants' socio-demographic characteristics, social circumstances, work history and their use of mental health services were also collected. Care coordinators were asked to rate whether they thought their client was capable of open market, paid employment at the baseline date.

Participants' employment was categorised using Standard Occupational Classification 2010 (SOC10) categories (Office for National Statistics 2010). The academic level of study or training was also reported. SOC10 categorisations were made by one author (BLE) and discussed with a second author (SM) in cases with any ambiguity.

Analysis: Different types of vocational activity were recoded into three categories: in any paid work; in unpaid voluntary work, training or study; or in no vocational activity. Two other variables were collapsed into broader categories to facilitate data analysis. Care coordinators initially rated participants' drug or alcohol use using item three from the Health of the Nation Outcome Scale (HoNOS) (Wing et al. 1998): these data were grouped as 'no problem' score 0 or 1, 'moderately problematic' score of 2, and 'very problematic' score of 3 or 4. Participants' ethnicity was initially recorded in 16 categories used by the UK national census (Office for National Statistics 2001): all categories containing fewer than 5% of our sample were then combined within the broader ethnic groups used by the national census, as presented in Table 1.

Descriptive and bivariate analyses were undertaken using SPSS for Windows version 17. The characteristics of service users in each vocational category and the proportion of those within each vocational category rated by a clinician as capable of paid work were assessed. Comparisons of participants' characteristics were conducted for the three groups: a) in paid work; b) in unpaid vocational activity; and c) no vocational activity. Basic demographic data (age, gender and ethnicity) and any variable significant in any of the bivariate comparisons at $p < 0.1$ level were then selected for inclusion in a multivariate analysis.

Multivariate analyses were conducted using Stata version 10 for Windows. Less than 5% of the data were missing overall, but exclusion of all cases with any missing data would nonetheless have resulted in substantial loss of data from regression analyses. To avoid this, we used multiple imputation, which repeatedly fills in the missing data based on values of other variables and a

missing at random assumption (Little and Rubin 2002). Imputed datasets are analysed separately and the results are combined in a way that adjusts standard errors for uncertainty about the missing values (Schafer 1997). We generated five imputed data sets using the ice command in Stata (Royston 2004), and used the imputed data in the subsequent regression using the micombine command.

A multinomial logistic regression was carried out with work status (paid work; unpaid vocational activity; no vocational activity) as the dependent variable. Independent variables were entered in blocks: first, major demographic characteristics; second, past work history and educational attainment; third, variables describing current social circumstances, clinical status and service use.

Results

Data, including employment status, were obtained for 1353 (97.8%) of the 1384 people who met the study inclusion criteria.

Demographic characteristics: Participants had a mean age of 45 years and just over half (51.8%) were male. A total of 40.6% were White British, with Black African being the next most numerous ethnic group (14.1%). Just under two thirds of participants were UK born (64.1%); most (69.1%) lived alone. Over 40% of participants (40.7%) had no educational qualifications; 11.6% were graduates. A majority (61.3%) had sustained open market employment for at least a year at some point in their lives. Nearly two thirds of the sample (65.7%) had a diagnosis of schizophrenia or other non-affective psychosis and 10.8% were diagnosed with bipolar disorder. Most (78.3%) had been in contact with mental health services for more than five years. Over 20% (22.1%) had been in hospital during the six months prior to the study baseline and 22.1% had a moderate or severe drug or alcohol problem. The characteristics of study participants and the characteristics of those in each vocational group (paid work, unpaid vocational activity or no vocational activity) are reported fully in Table 1.

Table 1 about here

Vocational activity: Overall, 172 participants (12.7%) were in unpaid work, training or study, and 75 (5.5%) were in paid work; 1106 (81.7%) participants were not involved in any vocational activity. The nature of paid work undertaken is shown in Table 2. People in paid work were engaged in a broad range of occupations. Most (58.5%) worked part-time and just over half (54.1%) were in regular employment acquired through a competitive open market process (rather than in occasional, casual work, family firms, sheltered work or Permitted Work for people with disabilities). Thirteen participants were in paid work roles specifically designed to accommodate people with disabilities; these comprised seven people in Permitted Work and six in paid, sheltered work schemes.

Table 2 about here

The nature of unpaid vocational activity undertaken is shown in Table 3. The range of occupations for people in voluntary work was comparatively narrow, with over two thirds (69.8%) involved in retail or administrative occupations, commonly working in not-for-profit shops. A minority of those in education or training were involved in training for a specific occupation (31.8%) or for an academic or professional qualification (38.5%). The most common types of education undertaken were English language or basic computer skills classes.

Table 3 about here

Bivariate tests of associations between employment status and other study variables are presented in Table 1. A difference between groups at a significance level of $p < 0.1$ was found for the following variables: age, educational attainment, previous work history, type of accommodation, years since first contact with mental health service, number of previous hospital admissions, inpatient admission in the previous six months and drug or alcohol use.

Table 4 presents a multinomial logistic regression of factors associated with work status. Younger age and higher educational attainment (degree level) were independently associated with being in paid work and with doing other vocational activity, compared to doing no vocational activity. Having ever sustained paid work for at least a year, not living in supported accommodation and having a diagnosis of bipolar disorder were also associated with doing paid work. People doing unpaid vocational activity were less likely than those doing no activity to have had a hospital admission in the last six months and to have a severe drug or alcohol problem.

Table 4 about here

Ratings of whether service users were capable of open market employment were obtained from involved clinicians for 1267 service users. Table 5 reports the proportion of service users within each vocational category rated capable of open market employment by clinicians.

Table 5 about here

Overall, 240 (18.9%) were rated by clinicians as capable of open market employment. Only 22.9% of those rated capable were in paid work. More than half (55.4%) of those rated capable of open-market, paid work by clinicians were not engaged in any vocational activity.

Discussion

Main findings

Rates of vocational activity: Despite our broad definition of paid work, in our study the proportion of service users in paid employment (5.5%) was at the low end of the range of 4%-27% suggested previously (Marwaha and Johnson 2004) and similar to figures from a study of service users with a diagnosis of schizophrenia from the same catchment area conducted eight years previously (Marwaha et al. 2007). This suggests the downward trend in

UK rates of employment among mental health service users identified a decade ago (Perkins and Rinaldi 2002) may not have improved, despite local and national policies focused on employment for this group. However, we found that more service users were doing some form of unpaid work, training or study than paid work (12.7% vs. 5.5%), with similar numbers doing paid and voluntary work (5.5% vs. 5.3%).

Mental health staff in our study rated 18.9% of their clients as capable of open market employment, somewhat lower than a recent UK study of community mental health professionals' attitudes (Marwaha et al. 2009), but still much higher than the numbers who were actually in work. Our findings that 81.7% of CMHT service users were doing no vocational activity at all, including the majority (55.4%) of those rated capable of open market employment, therefore suggests a large mismatch regarding levels of vocational activity between clinicians' already modest expectations, policy aspirations to increase access to work for people with mental health problems (DH 2011) and the reality for those receiving services from the CMHTs studied.

Nature of vocational activity: The jobs held by people in paid work included all categories of the SOC10 typology (Office for National Statistics 2010). Although nearly half the people doing paid work in our cohort had basic school-leaving or no qualifications, less than a third were employed in jobs classed as elementary occupations by SOC10 categorisation (Office for National Statistics 2010). These results therefore do not suggest that CMHT service users in paid work were disproportionately engaged in unskilled, low-paid jobs. Most people (58.5%) in paid work were working part-time, compared to 26.5% of the national workforce (Office for National Statistics 2009). Part-time work thus appears to be more attainable or attractive for many mental health service users in comparison to the general population

The range of voluntary jobs service users were engaged in was strikingly narrower than the range of paid employment, with nearly half of all voluntary jobs being in sales/customer service. For example, 35% of those doing

voluntary work were retail assistants in not-for-profit shops. The types of voluntary vocational roles accessed by service users may therefore not reflect their full range of skills and interests. A possible explanation for this finding is that providers of vocational services may have long-standing relationships with particular charity companies. Thus the voluntary work mental health service users do may reflect the nature of provision rather than individual vocational needs and preferences.

Study or training which service users were engaged in was also typically not specifically related to a particular job or an obvious vocational pathway (for 68.2% of participants in study or training). This, coupled with the apparently narrow range of voluntary work roles, may be one reason why pre-vocational training has been found to be of limited effectiveness in helping mental health service users move into paid work (Bond et al. 2008).

Associations with paid and unpaid vocational activity: The factors associated with being in paid work in our study cohort were consistent with several previous studies (Mowbray et al. 1995, Goldberg et al. 2001, Wewiorski and Fabian 2004) in that demographic characteristics and work experience were more strongly associated with work status than clinical and service use characteristics. Unlike a meta-analysis of predominantly US studies (Wewiorski and Fabian 2004), but consistent with a recent European study (Catty et al. 2008), our results did not show any association between ethnicity and employment status. This could suggest minority ethnic status may be less of a barrier to employment for people with mental health problems in Europe compared to North America

Previous reviews (Marwaha and Johnson 2004, Wewiorski and Fabian 2004) have found that having a diagnosis other than schizophrenia is associated with better work outcomes. We found more specifically that a diagnosis of bipolar disorder was associated with being in paid work. This is notable on two counts: first, because, although household surveys suggest that those with bipolar disorder have higher rates of work than those with schizophrenia (Waghorn et al. 2007), investigations of this in samples from secondary care

are scarce; and second because a recent literature review suggests inter-episode morbidity in bipolar disorder is severely disabling (Sanchez-Moreno et al. 2009), with persistence of affective symptoms (Furukawa et al. 2000) and medical co-morbidity (Dittmann et al. 2002) common. Our findings suggest that, nevertheless, the level of disability is not as severe as for people with a diagnosis of schizophrenia, in terms of engagement in vocational activity.

The similarities in our sample between those engaged in paid work and in unpaid vocational activities are consistent with a study of people with first episode psychosis (Turner et al. 2009). Thus findings do not suggest that a stepped recovery pathway to open employment is typical, with more disabled service users embarking on unpaid activities and then moving on to paid work as they stabilise clinically; other determinants of why people are engaged in unpaid rather than paid work need to be established. The clearest difference in our study between those in paid and unpaid vocational activity was whether they had ever worked and had sustained paid work for at least a year. This may reflect both the importance for finding work of being able to demonstrate previous employment and the effect of previous work experience on people's vocational aspirations.

Limitations

Three limitations to this study can be identified. First, we relied on reports from mental health professionals, directly and via electronic records. This enabled us to obtain data on almost the entire population of service users in two large catchment areas. However, the absence of any self-report data may have led to some types of work such as undeclared work not being reported.

Second, the data were gathered six months retrospectively. This led to service users who were discharged from or admitted to the service in the period between the study baseline and data collection dates being excluded from the sample, reducing its representativeness of all CMHT service users.

As with any retrospective data, possible confounding factors may not have been accounted for.

Third, the results from this study reflect vocational activity among mental health service users in two diverse, inner-city London boroughs with high levels of deprivation alongside some areas of extreme wealth: their generalisability across the UK is unknown.

Research implications

Lack of confidence in their ability to find or sustain work and benefits-related financial disincentives have been frequently found as barriers for mental health service users in seeking paid work (Secker et al. 2001, Honey 2004, Marwaha and Johnson 2005, SE-SURG 2006). In our study, the low rates of service users in paid work, the low rates of work among those rated capable of work by clinicians and the lack of clear clinical differences between those in paid, unpaid or no vocational activity all suggest these barriers may apply for our study population.

Three areas for future research could help understand our findings and identify more precisely barriers to employment for people for mental health problems and how they might be reduced.

What rates of employment can be achieved by mental health service users in normal clinical settings? The low rates of paid employment in our study were found in the absence of a high-fidelity supported employment programme. This raises the question of what proportion of mental health service users might be helped to achieve paid employment. Trials of Individual Placement and Support employment services have found employment rates of about 60% can be achieved for selected samples of service users; however Burns and colleagues (Burns et al. 2008) found less willingness to take up IPS in countries with obvious benefits traps associated with working, while Howard and colleagues (Howard et al. 2010) have argued that the inclusion criterion for many trials of employment support services, that participants want competitive employment, may mask lack of motivation to

work among many service users. A naturalistic investigation of a high quality supported employment service is required to demonstrate what rates of vocational activity may be achievable throughout a community mental health service.

The functions of unpaid vocational activity for mental health service

users: Our finding that those doing paid and unpaid vocational activity are not vastly different suggests that many of those in voluntary work study or training might be capable of paid work. The extent to which service users are choosing unpaid activity in preference to paid work and the reasons for this are therefore important to understand. Our study does not establish to what extent those in unpaid activity see voluntary work or study as a desired goal in itself, valued for latent functions such as greater self-esteem and social contact (Jahoda et al. 1933), or as a substitute for or stepping stone to desired paid work. It does not establish to what extent the limited range of voluntary work undertaken by service users meets their needs and aspirations. Qualitative interviews with service users could usefully explore motivations and wishes for unpaid vocational activity, to help assess the extent of need for support with unpaid vocational activity and to inform efforts to increase access to a range of voluntary work which meets service users' skills and interests. A study of pathways between vocational activity and paid work could help identify types of unpaid vocational activity which may lead to paid work for those who want it.

The nature of welfare-related disincentives to work: Permitted Work (DWP 2010) is a major UK government scheme with equivalents in Northern Europe which targets people receiving incapacity-based benefits. It is designed to alleviate barriers to people with disabilities undertaking any paid work by allowing them to work up to limited weekly earnings and hours thresholds without affecting receipt of welfare benefits. The low take up of Permitted Work (DWP 2010) among service users of secondary mental health services found in our study our study requires corroboration from future studies. Welfare-related barriers and disincentives to paid work may be complex. Regarding Permitted Work, Seebohm and Scott (2004) identify as potential

problems: the permitted levels of earnings (for some, only £20 per week) may at times be too low to incentivise people; where higher levels of earnings are permitted (up to £95 per week), effects on secondary benefits such as housing allowances may reduce the attractiveness of the scheme; service users may fear triggering a new assessment of their capacity for work by the benefits agency, they may also fear consequent withdrawal of benefits in the future. The UK government requirement for claimants of incapacity-based benefits to report all voluntary work to benefits agencies (DWP 2012) may similarly deter people from taking up voluntary work. Lack of awareness among service users or clinicians may also have limited take-up of Permitted Work. An in-depth understanding is required of service users' and clinicians' knowledge and beliefs regarding welfare arrangements for incapacity-related benefits, to help identify the most pertinent real and perceived welfare-related barriers to employment for mental health service users and inform efforts to mitigate these barriers. Evaluation of the impact for people with severe and enduring mental health problems of changes to welfare benefits systems and schemes to reduce welfare-related barriers to employment are also required.

Implications for policy and practice

Our study found very low rates of employment and vocational activity among CMHT service users, compared to previous surveys (Marwaha and Johnson 2004), rates of employment achieved in studies of supported employment (Bond et al. 2008) and local rates of unemployment (Office for National Statistics 2009) This suggests that CMHTs should provide resources for and prioritise vocational support for service users to help achieve a key goal for mental health services (DH 2002, 2006) and broader UK (DH 2011) and European (European Commission 2008) public policy of improving access to employment for people with mental health problems.

The low-take up of Permitted Work and low employment rates in our study suggest disincentives to paid work in the UK welfare system may remain substantial despite current initiatives to mitigate them. Seebohm and Scott (2004) provide a set of recommendations which remain pertinent for how financial disincentives to paid work could be reduced by raising earnings

thresholds and reducing the impact of earnings on secondary benefits. There is a need to monitor the effect of tax and welfare policies for people with severe mental health problems, if the government's stated aims of increasing access to employment for people with mental health problems and reducing costs associated with low productivity are to be met (DH 2011).

In addition to a focus on paid work, for those who are unable or unwilling to find competitive employment, there is a need for mental health services to help increase awareness of and access to a wider range of unpaid vocational activity than is currently available, which can meet people's skills and interests. In the UK, CMHTs have been guided to do this by the government (DH 2006) and help finding rewarding unpaid work or study may be especially important in a time of economic hardship when paid work is harder to achieve.

List of abbreviations

CMHT – Community Mental Health Team

HoNOS – Health of the Nation Outcomes Scale

SOC 10 – Standard Occupational Classifications 2010

Declaration of interest

This paper relates to independent work commissioned by the National Institute for Health Research (NIHR) Research for Patient Benefit Programme (study ref: PB-PG-1207-15143). The views expressed in this presentation are those of the authors and not necessarily those of the National Health Service, the NIHR or the Department of Health.

Acknowledgements

We are grateful to the staff of Community Mental Health Teams in Camden and Islington NHS Foundation Trust, the St James House Jobs In Mind service and the Mental Health Research Network North London Hub for their help with collecting data for this study.

Corresponding author

Dr. Brynmor Lloyd-Evans,

Mental Health Sciences Unit UCL, Charles Bell House, 67-73 Riding House
Street, London W1W 7EJ

tel: 020 7679 9428 email: b.lloyd-evans@ucl.ac.uk

References

Bond,G. Drake,RE Becker,D. (2008) "An update on randomised controlled trials of evidence-based supported employment" *Psychiatric Rehabilitation Journal* **31**: 280-289

Burns T, Catty J, Becker,T. Drake,RE, Fioritti,A Knapp,M. et al. (2007) "The effectiveness of supported employment for people with severe mental illness: a randomised controlled trial" *The Lancet* **370**: 1146-52

Campbell,K. Bond,G. Drake,R. McHugo,G. Xie,H. (2010) "Client predictors of employment outcomes in high-fidelity supported employment: a regression analysis" *Journal of Nervous and Mental Disease* **198(8)** pp 556-63

Catty,J. Lissouba,P. White,S. Becker,T. Drake,R. Fioritti,A. Knapp,M. Lauber,C. Rossler,W. Tomov,T. van Busschbach,J. Wiersma,D. Burns,T. (2008) "Predictors of employment for people with severe mental illness: results of an international six-centre randomised controlled trial" *British Journal of Psychiatry* **192** pp224-231

Crowther,R. Marshall,M. Bond,G. Huxley,P. (2001) "Helping people with severe mental illness to obtain work: systematic review" *British Medical Journal* **322**: 204-208

Department of Communities and Local Government (2011) "*English indices of deprivation 2010*" Department of Communities and Local Government

Department of Health (2002) "*Mental Health Policy Implementation Guide: Community Mental Health Teams*" Department of Health

Department of Health (2006) "*Vocational services for people with severe mental health problems: commissioning guidance*": Department of Health

Department of Health (2009) "*Working our way to better mental health: a framework for action*": Department of Health

Department of Health (2011) "*No health without mental health*": Department of Health

Department of Health (2012) Web resource
http://www.direct.gov.uk/en/MoneyTaxAndBenefits/BenefitsTaxCreditsAndOtherSupport/illorinjured/DG_1001891

Department of Work and Pensions (2010) *“Permitted Work: work you can do while getting benefits because of an illness or disability”* Job Centre Plus <http://www.dwp.gov.uk/docs/dwp1019.pdf>

Dittmann,S. Biedermann,N. Grunzer,H. Hummel,B. Scharer,L. Kleindienst,N et al. (2002) “The Stanley Foundation Bipolar Network: results of the naturalistic follow-up study after 2.5 years of follow-up in the German centres” *Neuropsychobiology* **46 Suppl 1**: 2-9.

European Commission (2008) “Commission Recommendation of 3 October 2008 on the active inclusion of people excluded from the labour market (notified under document number C(2008) 5737)” web resource: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008H0867:EN:NOT>

Furukawa, T. Konno,W. Monnibu,S. Harai,H. Kitamura,T. Takahashi,K. (2000)“Course and outcome of depressive episodes: comparison between bipolar, unipolar and subthreshold depression” *Psychiatry Research* **96(3)**: 211-20

Goldberg,R. Luckstead,A. McNary,S. Gold,J. Dixon,L. Lehman,A. (2001) “Correlates of unemployment among inner-city adults with serious and persistent mental illness” *Psychiatric Services* **52**:101-103

Honey, A. (2004) “Benefits and drawbacks of employment: perspectives of people with mental illness” *Qualitative Health Research* **14**: 381-395.

Howard,L. Heslin,M. Leese,M. McCrone,P. Rice,C. Jarrett,M. et al. (2010) “Supported employment: randomised controlled trial” *British Journal of Psychiatry* **196(5)**: 404-411

Jahoda, M., Lazarsfeld, P. & Zeisl, H. (1933) *“Morienthal: The Sociography of an Unemployed Community”* London: Tavistock Publications.

Leff,J. and Warner,R. (2006) *“Social Inclusion of people with mental illness”* Cambridge University Press

Little,R. & Rubin,D. (2002) *“Statistical analysis with missing data”* Wiley;

Marwaha,S. and Johnson,S. (2004) “Schizophrenia and employment: a review” *Social Psychiatry and Psychiatric Epidemiology* **39**: 337-349

Marwaha,S. and Johnson,S. (2005) “Views and experiences of work among the seriously mentally ill: a qualitative descriptive study” *International Journal of Social Psychiatry* **51**: 302-315

Marwaha,S. Johnson,S. Bebbington,P. Stafford,M. Angermeyer,M. Brugha,T. et al. (2007) “Rates and correlates of employment in people with

schizophrenia in the UK, France and Germany" *British Journal of Psychiatry* **191**: 30-37

Marwaha,S. Balachandra,S and Johnson,S. (2009) "Clinicians' attitudes to the employment of people with psychosis" *Social Psychiatry and Psychiatric Epidemiology* **44**: 349-360

Mowbray,C. Bybee,T. Harris,S. McCrohan,N. (1995) "Predictors of work status and future work orientation in people with a psychiatric disability" *Psychiatric Rehabilitation Journal* **53**: 31-42

Office for National Statistics (2001) "*National Census – England Household Form*" www.census.ac.uk/CensusForms/2001_England_Household

Office for National Statistics (2009) "*Labour market statistics November 2009*" Office for National Statistics
<http://www.statistics.gov.uk/pdfdir/lmsuk1109.pdf>

Office for National Statistics (2010) "*Standard Occupational Classification 2010: Volume 1: structure and descriptions of unit groups*" Palgrave MacMillan

Perkins,R. and Rinaldi,M. (2002) "Unemployment rates among patients with long-term mental health problems: a decade of rising unemployment" *Psychiatric Bulletin* **26**: 295-298

Royston,P. (2004) "Multiple imputation of missing values" *Stata Journal* **4**: 227-241

Sanchez-Moreno,J. Martinez-Aran,A. Tabares-Seseidos,R. Torrent,C. Vieta,E. Ayuso-Mateos,J. (2009) "Functioning and disability in bipolar disorder: an extensive review" *Psychotherapy & Psychosomatics* **78**: 285-97

Schafer,J. (1997) "*Analysis of incomplete multivariate data*" Chapman and Hall

Seebohm,P. and Scott,J. (2004) "*Addressing disincentives to work associated with the welfare benefits system in the UK and abroad*" Sainsbury Centre for Mental Health, London

Secker,J. Grove,B. Seebohm,P. (2001) "Challenging barriers to employment, education and training for mental health service users: the service user's perspective" *Journal of Mental Health* **10(4)**: 95-404

SE-SURG (South Essex Service User Research Group), Secker,J. Gelling,L. (2006) "Still dreaming: service users' employment, education and training goals" *Journal of Mental Health* **15(1)**: 103-111

Strickler, DC., Whitley,R Becker,D Drake,RE (2009) "First person accounts of long-term employment activity among people with dual diagnosis." *Psychiatric Rehabilitation Journal* **32(4)**: 261-8.

Turner,N. Browne,S. Clarke,M. Gervin,M. Larkin,C. Waddington,J. O'Callaghan,E. (2009) "Employment status amongst those with psychosis at first presentation." *Social Psychiatry and Psychiatric Epidemiology* **44(10)**: 863-869

Waghorn,G. Chant,D. Jaeger,J. (2007) "Employment functioning and disability among community residents with bipolar affective disorder: results from an Australian community survey" *Bipolar Disorders* **9**: 166-182

Wewiorski,N. and Fabian,E. (2004) "Association between demographic and diagnostic factors and employment outcomes for people with psychiatric disabilities: a synthesis of recent research" *Mental Health Services Research* **6(1)**: 9-21

Wing,J. Beevor,A. Curtis,R. Park,S. Hadden,S. Burns,A. (1998) "Health of the Nation Outcome scales (HoNOS): Research and Development" *British Journal of Psychiatry* **172**: 11-18

Table 1: Characteristics of CMHT service users, categorised by employment status

	Whole sample	Doing no vocational activity	Doing some paid work	Unpaid vocational activity.	Univariate test
N	1353	1106	75	172	
Mean age (years) (N=1353)	44.5 (s.d.=12.2)	45.5 (s.d.=12.4)	41.2 (s.d.=10.3)	39.6 (s.d.=10.8)	Anova: F=20.47, p<0.001 Tukey's post hoc test: No activity vs. paid work: p=0.008 No activity vs. unpaid activity: p<0.001 Paid work vs. unpaid activity: p=0.62
Gender (N=1353)					Chi ²
Male	701 (51.8%)	581 (52.5%)	42 (56%)	78 (45.3%)	χ ² =3.63, p=0.16
Female	652 (48.2%)	525 (47.5%)	33 (44%)	94 (54.7%)	
Ethnicity (N=1345)					Chi ²
White British	546 (40.6%)	457 (41.6%)	30 (40.5%)	59 (34.3%)	χ ² =16.82, p = 0.16
White Irish	89 (6.6%)	79 (7.2%)	2 (2.7%)	8 (4.7%)	
White Other	169 (12.6%)	137 (12.5%)	8 (10.8%)	24 (14.0%)	
Black Caribbean	117 (8.6%)	95 (8.6%)	9 (12.2%)	13 (7.6%)	
Black African	189 (14.1%)	146 (13.3%)	11 (14.9%)	32 (18.6%)	
Asian	94 (7.1%)	74 (6.7%)	9 (12.2%)	11 (6.4%)	
Mixed or other ethnic groups	141 (10.5%)	111 (10.1%)	5 (6.8%)	25 (14.5%)	
Born in the UK (N=1291)	827 (64.1%)	684 (64.9%)	46 (63.9%)	97 (58.8%)	
Permanent UK residence (N=1292)	1258 (97.3%)	1025 (97.5%)	71 (97.3%)	162 (95.9%)	Chi ² χ ² = 1.54, p = 0.46
Marital status (N=1331)					Chi ²
Single	941 (70.7%)	767 (70.5%)	52 (71.2%)	122 (71.8%)	χ ² = 1.95, p = 0.74
Married or cohabiting	134 (10.1%)	109 (10.0%)	10 (13.7%)	15 (8.8%)	
Separated, divorced or widowed	256 (19.2%)	212 (19.5%)	11 (15.1%)	33 (19.4%)	
Lives alone (N=1302)	900 (69.1%)	741 (69.8%)	46 (63.9%)	113 (67.3%)	Chi ² χ ² = 1.43, p = 0.49

	Whole sample	Doing no vocational activity	Doing some paid work	Unpaid vocational activity.	Univariate test
Has children under 18 (N=1243)	244 (19.6%)	191 (18.9%)	17 (23.3%)	36 (22.9%)	Chi ² $\chi^2 = 2.09, p = 0.352$
Educational attainment (N=1220)					Kruskal-Wallis test $\chi^2 = 46.36, p < 0.001$
No qualifications	456 (40.7%)	407 (45.1%)	12 (18.5%)	37 (24.2%)	
GCSE, NVQ or equivalent	253 (22.6%)	202 (22.4%)	15 (23.1%)	36 (23.5%)	
A level, HND or equivalent	254 (22.7%)	183 (20.3%)	17 (26.2%)	54 (35.3%)	
Graduate	157 (11.6%)	110 (12.2%)	21 (32.3%)	26 (17.0%)	
Ever been in open market employment (N=1224)	908 (74.2%)	728 (73.5%)	69 (93.2%)	111 (69.4%)	Chi ² $\chi^2 = 16.19, p < 0.001$
Ever been in open market employment for > 1 year (N=1164)	714 (61.3%)	559 (59.7%)	65 (89.0%)	90 (58.4%)	Chi ² $\chi^2 = 25.29, p < 0.001$
Type of accommodation (N=1305)					Chi ² $\chi^2 = 26.20, p < 0.001$
Independent accommodation	934 (71.6%)	730 (68.7%)	69 (92.0%)	135 (80.4%)	
Supported accommodation	302 (23.1%)	271 (25.5%)	4 (5.3%)	27 (16.1%)	
Other (prison, hospital, NFA)	69 (5.3%)	61 (5.7%)	2 (2.7%)	6 (3.6%)	
Diagnosis (N=1310)					Chi ² $\chi^2 = 31.68, p < 0.001$
Schizophrenia and other non-affective psychoses	861 (65.7%)	724 (67.8%)	37 (52.1%)	100 (58.5%)	
Bi-polar Disorder	142 (10.8%)	99 (9.3%)	17 (23.9%)	26 (15.2%)	
Depression	101 (7.7%)	84 (7.9%)	7 (9.9%)	10 (5.8%)	
Personality Disorder	110 (8.4%)	86 (8.1%)	9 (12.7%)	15 (8.8%)	
Other	96 (7.3%)	75 (7.0%)	1 (1.4%)	20 (11.7%)	
Years since first contact with mental health services (N=1344)					Kruskal-Wallis test $\chi^2 = 14.26, p = 0.001$
<2 years	70 (5.2%)	53 (4.8%)	8 (10.7%)	9 (5.3%)	
2-5 years	221 (16.4%)	165 (15.0%)	19 (25.3%)	37 (21.8%)	
>5 years	1053 (78.3%)	881 (80.2%)	48 (64%)	124 (72.9%)	

	Whole sample	Doing no vocational activity	Doing some paid work	Unpaid vocational activity.	Univariate test
Number of previous admissions to hospital (N=1273)					Kruskal-Wallis test $\chi^2 = 10.03, p = 0.007$
None	206 (16.2%)	161 (15.5%)	15 (21.1%)	30 (18.2%)	
One	173 (13.6%)	132 (12.7%)	14 (19.7%)	27 (16.4%)	
2-5	477 (37.5%)	388 (37.4%)	27 (38.0%)	62 (37.6%)	
6-10	261 (20.6%)	219 (21.1%)	11 (15.5%)	31 (18.8%)	
>10	156 (12.3%)	137 (13.2%)	4 (5.6%)	15 (9.1%)	
Any inpatient admission in previous 6 months (N=1350)	298 (22.1%)	261 (23.7%)	16 (21.3%)	21 (12.2%)	Chi ² $\chi^2 = 11.37, p = 0.003$
Suicide attempt in previous 6 months (N=1290)	76 (5.9%)	64 (6.1%)	4 (5.7%)	8 (4.7%)	Chi ² $\chi^2 = 0.514, p = 0.77$
Physical aggression to others in previous 6 months (N=1285)	98 (7.6%)	85 (8.1%)	5 (7.0%)	8 (4.7%)	Chi ² $\chi^2 = 2.42, p = 0.30$
Drug or alcohol use (N=1231)					Kruskal-Wallis test $\chi^2 = 7.17, p = 0.028$
No problematic use	959 (77.9%)	765 (76.5%)	59 (85.5%)	135 (83.3%)	
Moderately problematic use	106 (8.6%)	86 (8.6%)	4 (5.8%)	16 (9.9%)	
Very problematic use	166 (13.5%)	149 (14.9%)	6 (8.7%)	11 (6.8%)	
Rated capable of open market employment by care coordinator (N=1267)	240 (18.9%)	133 (12.9%)	52 (71.2%)	55 (33.3%)	Chi ² $\chi^2 = 176.51, p < 0.001$

Table 2: Paid work among CMHT service users

In paid work	N =75
Working more than 16 hrs per week (N=65)	49 (75.4%)
Working more than 35 hrs per week (N=65)	27 (41.5%)
Mean hours worked per week (N=65)	24.3 (s.d. = 13.4)
Type of employment (N=74)	
Sheltered or Permitted Work	13 (17.6%)
Employed in family firm	5 (6.8%)
Casual employment (occasional and/or undeclared)	8 (10.8%)
Self-employed	8 (10.8%)
Open market employment	40 (54.1%)
Type of occupation (SOC 10 categories) (N=74)	
Elementary occupations	24 (32.4%)
Process, plant and machine operatives	1 (1.4%)
Sales and customer service	10 (13.5%)
Caring, leisure and other customer service	5 (6.8%)
Skilled trades	7 (9.5%)
Administrative and secretarial	7 (9.5%)
Associate professional and technical	10 (13.5%)
Professional occupations	8 (10.8%)
Managers, directors and senior officials	2 (2.7%)

Table 3: Unpaid vocational activity among CMHT service users

In unpaid vocational activity	N=172
In voluntary or unpaid work	N = 72
Mean hours per week in voluntary work (N=57)	9.5 (s.d.=7.6)
Type of occupation (SOC 10 categories) (N=63)	
Elementary occupations	7 (11.1%)
Sales and customer service	29 (46.0%)
Caring, leisure and other customer service	7 (11.1%)
Administrative and secretarial	15 (23.8%)
Associate professional and technical	5 (7.9%)
Setting of voluntary work (N=65)	
Mental health service	8 (12.3%)
Voluntary/charity organisation	41 (63.1%)
Statutory organisation	7 (10.8%)
Private sector organisation	9 (13.8%)
In study or training	N = 110 *
Mean hours per week in study/training (N=85)	12.7 (s.d.=10.6)
Type of study (N=107)	
Training course for a specific occupation	34 (31.8%)
Other education/study	73 (68.2%)
Level of study (N=91)	
No formal qualification	56 (61.5%)
GCSE, NVQ or equivalent	11 (12.1%)
A level, HND or equivalent	8 (8.8%)
Degree or equivalent professional qualification	16 (17.6%)

* 10 people were doing voluntary work and study or training

Table 4: Multivariate comparison of factors associated with being in paid work or unpaid vocational activity compared to no vocational activity: results from a multinomial logistic regression

Independent variable	In paid work				In unpaid vocational activity			
	Regression coefficient*	Confidence intervals	t	p	Regression coefficient*	Confidence intervals	t	p
Age	-0.038	-0.064, -0.013	-2.96	0.003	-0.424	-0.560, -0.253	-4.86	<0.001
Gender (female – reference category=male)	-0.520	-1.063, 0.022	-1.88	0.060	0.196	-0.158, 0.549	1.08	0.278
Ethnicity (reference category - White British)								
White Irish	-1.058	-2.578, 0.463	-1.36	0.173	-0.329	-0.841, 0.775	-0.08	0.936
White Other	-0.356	-1.206, 0.494	-0.82	0.412	0.167	-0.373, 0.708	0.61	0.544
Black Caribbean	0.378	-0.479, 1.235	0.86	0.387	0.019	-0.655, 0.693	0.06	0.955
Black African	0.076	-0.724, 0.877	0.19	0.851	0.256	-0.254, 0.766	0.98	0.325
Asian	0.099	-0.805, 1.004	0.22	0.830	-0.298	-1.026, 0.430	-0.80	0.422
Other	-0.802	-1.835, 0.231	-1.52	0.128	0.232	-0.322, 0.787	0.82	0.412
Educational attainment (reference category: no qualifications)								
GCSE or equivalent	0.519	0.0278, 1.317	1.28	0.202	0.471	-0.655, 1.008	1.74	0.085
A levels or equivalent	0.659	-0.197, 1.515	1.53	0.129	0.699	0.131, 1.266	2.42	0.016
Degree or equivalent	1.282	0.447, 2.117	3.04	0.003	0.804	0.313, 1.295	3.23	0.001
Ever sustained open market employment for at least a year**	1.707	0.921, 2.492	4.26	<0.001	0.082	-0.327, 0.491	0.40	0.692
Accommodation status (reference category: living independently)								
Supported accommodation	-1.273	-2.342, -0.204	-2.33	0.020	-0.285	-0.756, 0.186	-1.19	0.236
Other accommodation	-0.782	-2.311, 0.746	-1.00	0.316	-0.241	-1.197, 0.715	-0.49	0.621
Diagnosis (reference category: schizophrenia or other psychosis)								
Bipolar disorder	0.926	0.230, 1.613	2.64	0.008	0.499	-0.034, 1.031	1.84	0.066
Depression	-0.057	-0.973, 0.858	-0.12	0.902	-0.309	-1.058, 0.440	-0.81	0.419
Personality Disorder	0.593	-0.344, 1.530	1.25	0.214	-0.045	-0.690, 0.600	-0.14	0.892
Other diagnosis	-2.009	-4.086, 0.067	-1.90	0.058	0.401	-0.208, 1.010	1.29	0.196
Years since first contact with mental health services (reference category: less than 2 years)								
2-5 years	-0.168	-1.229, 0.893	-0.31	0.213	0.354	-0.502, 1.210	0.81	0.418
>5 years	-0.658	-1.696, 0.379	-1.24	0.602	0.257	-0.565, 1.080	0.61	0.540

	In paid work				In unpaid vocational activity			
Number of previous inpatient admissions (reference category: none)								
One	0.238	-0.660, 1.136	0.52	0.602	0.256	-0.347, 0.859	0.83	0.405
2-5	-0.106	-0.922, 0.711	-0.26	0.799	0.101	-0.438, 0.641	0.37	0.713
6-10	-0.374	-1.346, 0.599	-0.75	0.451	0.134	-0.504, 0.772	0.41	0.681
>10	-0.427	-1.734, 0.881	-0.64	0.522	0.175	-0.586, 0.936	0.45	0.653
Psychiatric hospital admission in the last 6 months	-0.278	-0.966, 0.410	-0.79	0.429	-0.869	-1.395, -0.342	-3.23	0.001
Drug or alcohol use (reference category: no problem)								
Moderately problematic use	-0.727	-1.862, 0.409	-1.26	0.209	-0.007	-0.593, 0.579	-0.02	0.981
Very problematic use	-0.551	-1.444, 0.343	-1.21	0.227	-0.767	-1.454, -0.080	-2.2	0.029

Table 5: Clinicians' assessment of service users' capacity for paid work

	Rated by clinicians as capable of open market employment		
	No	Yes	Total
In no vocational activity	896 (87.1%)	133 (12.9%)	1029
In unpaid activity	110 (66.7%)	55 (33.3%)	165
In paid work	21 (28.8%)	51 (71.2%)	73
Total	1027 (81.1%)	240 (18.9%)	1267