



Journal of Public Mental Health

Financial difficulties and psychosis risk in British undergraduate students: a longitudinal analysis
Thomas Richardson, Mma Yeebo, Megan Jansen, Peter Elliott, Ron Roberts,

Article information:

To cite this document:

Thomas Richardson, Mma Yeebo, Megan Jansen, Peter Elliott, Ron Roberts, (2018) "Financial difficulties and psychosis risk in British undergraduate students: a longitudinal analysis", Journal of Public Mental Health, <https://doi.org/10.1108/JPMH-12-2016-0056>

Permanent link to this document:

<https://doi.org/10.1108/JPMH-12-2016-0056>

Downloaded on: 09 May 2018, At: 07:17 (PT)

References: this document contains references to 34 other documents.

To copy this document: permissions@emeraldinsight.com

The fulltext of this document has been downloaded 11 times since 2018*

Access to this document was granted through an Emerald subscription provided by

Token:Eprints:CUWIUMCSROH5FNWVUAEX:

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Financial difficulties and psychosis risk in British undergraduate students: a longitudinal analysis

Thomas Richardson, Mma Yeebo, Megan Jansen, Peter Elliott and Ron Roberts

Abstract

Purpose – The purpose of this paper is to examine whether financial variables impact psychosis risk over time in students.

Design/methodology/approach – In total, 408 first-year British undergraduate students completed measures assessing psychosis risk and finances at three time points.

Findings – Greater financial difficulties increased psychosis risk cross sectionally both in terms of symptoms and distress. Other financial variables such as student loan amount were not significant. In longitudinal analysis financial difficulties increase psychotic symptoms and distress over time, but there was no impact of psychotic symptoms on later financial difficulties.

Research limitations/implications – The study used a relatively small and heavily female sample. Future research is needed to confirm the findings.

Practical implications – Whilst amount of debt does not appear to impact psychotic symptoms in students, greater financial difficulties appear to increase the risk of psychosis over time. Professionals working with students should be aware of this potential link.

Originality/value – This is the first time a longitudinal study has examined the effect of finances on psychosis symptoms.

Keywords Student, Psychosis, Debt, Financial, Psychotic

Paper type Research paper

Thomas Richardson is a Principal Clinical Psychologist at Mental Health Recovery Team North, Solent NHS Trust, Portsmouth, UK; and School of Psychology, University of Southampton, Southampton, UK.

Mma Yeebo is an Assistant Psychologist at Mental Health Recovery Team North, Solent NHS Trust, Portsmouth, UK.

Megan Jansen is an Assistant Psychologist at Mental Health Recovery Team North, Solent NHS Trust, Portsmouth, UK; and School of Psychology, University of Southampton, Southampton, UK.

Peter Elliott is based at School of Psychology, University of Southampton, Southampton, UK.

Ron Roberts is based at Department of Psychology, Kingston University, Kingston, UK.

Received 16 December 2016

Revised 26 January 2018

Accepted 26 January 2018

The authors would like to thank all those who helped with recruitment for the study. This work was funded by Doctorate in Clinical Psychology funding through the UK National Health Service and Research Capability Funding from the UK National Institute for Health Research.

The authors declare no conflicts of interest.

Introduction

Psychosis is a significant public health issue, costing £11.8 billion a year to the UK economy (Schizophrenia Commission, 2012). Incidence rates for schizophrenia peak between the ages of 20–24 for men and 25–29 for women (Kirkbride *et al.*, 2006) with prevalence estimates in the UK ranging from 32 to 50 per 100,000 in rural areas (Cheng *et al.*, 2011) to 74 per 100,000 in South London (Kirkbride *et al.*, 2012). Epidemiological research has shown a number of risk factors implicated in the onset of psychosis. These include urbanity (Krabbendam and Van Os, 2005), gender (Kirkbride *et al.*, 2006), ethnicity (Pinto *et al.*, 2008) and low socio-economic status (SES) (Harrison *et al.*, 2001; Werner *et al.*, 2007). Studies have shown that those with the lowest SES have eight times the relative risk of developing schizophrenia, compared to those in the highest social class (Holzer *et al.*, 1986). Birth studies and longitudinal research have found that individuals with schizophrenia are more likely to reside in areas with higher social deprivation and occupy positions of lower SES (Holzer *et al.*, 1986; Harrison *et al.*, 2001; Werner *et al.*, 2007).

A recent meta-analysis by Richardson *et al.* (2013) found that a significant relationship between mental health and debt existed. However, it also elucidated that only two previous studies (Jenkins *et al.*, 2008, 2009) had been conducted examining the relationship between debt and psychosis, both of which were cross-sectional in nature limiting the ability to ascertain the temporality of the relationship.

The age of onset of mental health disorders including schizophrenia frequently co-occurs with the start of university, indicating a high risk time for many students (Reavley *et al.*, 2012; Royal College of Psychiatrists, 2011). Factors such as poor sleep may also be relevant to the risk of psychosis in this population: CBT for insomnia reduces paranoia in students (Freeman *et al.*, 2007).

One factor that seems to contribute to poorer mental health in students is financial difficulties (Jessop *et al.*, 2005; Carney *et al.*, 2005; Cooke *et al.*, 2004; Andrew and Wilding, 2004; Roberts *et al.*, 2000; Roberts *et al.*, 1999). One recent survey showed that 84 per cent of British students worry about having enough money to pay the bills, 72 per cent believe they will never pay off their student loan and 50 per cent believe their financial difficulties impact their mental health (Save the Students, 2018). The average British student is more than £25k in debt (MAT, 2016).

A number of studies in students have shown a relationship between debt and financial difficulties and symptoms of depression, anxiety, alcohol dependency and eating disorder risk (Richardson *et al.*, 2013, 2015, 2017). However, no study to the best of the author's knowledge has examined the impact that financial difficulties and debt has on psychosis risk in students. This study therefore aimed to use a longitudinal design to examine the relationship between financial difficulties and psychosis in British undergraduate students.

Methods

Design and procedure

A longitudinal design using data from a cohort study was used (Richardson *et al.*, 2015). A national sample of British first-year undergraduate students was recruited through student unions. International students were excluded as the original study was about tuition fees increases for British students. Every student union in the country was contacted and invited to advertise the survey as a "Student Mental Health Survey" looking at whether variables such as "finances, demographics and alcohol use" were related to mental health. Participants completed an online survey at baseline and at least at one other follow-up point at time 2 (3-4 months) and/or time 3 (6-8 months). Those who did not complete multiple time points were excluded as they could not be included in any longitudinal analysis. Ethical approval was obtained by the University Of Southampton School Of Psychology Ethics Committee.

Standardised measures

The Prodromal Questionnaire-Brief Version (PQB) (Loewy *et al.*, 2011), measures psychosis risk using 21 questions answered Yes/No such as "Do you feel that other people are watching you or talking about you?" and "Have you seen things that other people can't see or don't seem to see?" producing a total for positive symptoms. Participants are also asked to rate how distressing these experiences were (When this happens, I feel frightened, concerned, or it causes problems for me: strongly disagree, disagree, neutral, agree, strongly agree), which leads to a distress scale. In the current sample α was 0.82 for positive symptoms and 0.82 for distress. This was completed at all time points.

The Family Affluence Scale (FAS) (Currie *et al.*, 1997) measures SES of the home environment of adolescents using questions such as "During the past 12 months, how many times did you travel away on holiday with your family?" (Not at all, once, twice, more than twice) and "Does your family own a car, van or truck?" (No, Yes one or Yes two or more). This was completed only at the start of the study.

The Index of Financial Stress (IFS) (Siahpush and Carlin, 2006) measures financial difficulties over the past six months using questions such as "Was unable to heat home" and "Went without meals" answered "Yes" or "No" $\alpha = 0.72$. This was completed at all time points.

Questions were developed to ask about age, gender and ethnicity. The following questions were also developed to ask about financial variables:

- Approximately how much do you currently owe overall for your student loan? (Entered as a free text number and then converted into categorical based on the median).

- Approximately how much money do you owe apart from student loan, i.e. overdraft, credit card, other loans, borrowing from friends, etc? (Entered as a free text number and then converted into categorical based on the median).
- How stressed to do you feel about your level of debt? (Not stressed, a little stressed, quite stressed, very stressed).
- Have you seriously considered abandoning your course because of financial difficulties (For example talking to your tutor about doing so, looking into career options, etc.) (Yes/No).

Statistical analyses

Hierarchical multiple linear regression was used to see whether IFS, FAS, demographic and financial variables predicted PQB scores at baseline. Significant financial variables were then entered into a regression to see whether these variables remained significant predictors of PQB scores over time.

Variables were considered outside of normal distribution if skewness and kurtosis were outside of $-2/+2$. The FAS and PQB positive symptoms were normally distributed. The PQB Distress scale had high kurtosis (3.96) though skewness was in normal range (1.78). The IFS similarly had normal skewness (1.4) but kurtosis just outside of the normal range (2.1). Data of high kurtosis cannot be transformed, the data can be transformed into categorical variables, however logistic regression should not be used to examine the same participant (Field, 2009, p. 273), and both the IFS and PQB symptoms were required to be continuous variables as they were dependent variables. Thus they were kept as a continuous variable both as a DV and an IV, acknowledging the limitations of doing a linear regression analysis with non-normally distributed data.

Results

Participant characteristics

A total of 408 participants took part in the study; Figure 1 shows a flow diagram of their participation in the study. The larger cohort study from which this data are drawn only introduced the PQB as a measure after its initial time point, as this measure had not yet been published: hence the sample size here is smaller than for the larger study (Richardson *et al.*, 2015). Table I displays the demographic characteristics of the sample.

Figure 1 Flow diagram of participant inclusion in study

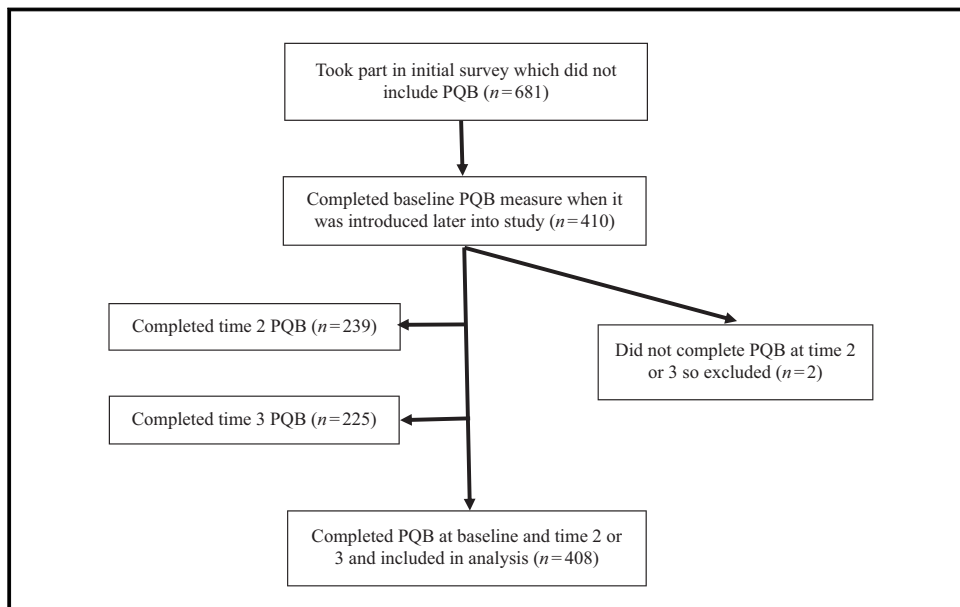


Table 1 Participant characteristics

<i>Characteristics</i>	<i>% (n)</i>
<i>Gender</i>	
Female	78.1 (318)
Male	21.9 (89)
<i>Age (years)</i>	
Mean (SD)	19.9 (4.68)
Range	17-57
<i>Ethnicity</i>	
White British or white other	90.4 (368)
Asian/Asian British	1.5 (6)
Black British/Black other	1.2 (5)
Mixed ethnicity	5.4 (22)
Other ethnicity	1 (4)
Do not state	0.5 (2)
<i>Self-report disability</i>	
Yes	9.8 (40)
No	90.2 (367)
<i>Mature student</i>	
Mature student	11.1 (45)
Not a mature student	88.9 (362)
<i>Park of UK live in prior to university</i>	
England	73.5 (299)
Wales	2.9 (12)
Scotland	21.6 (88)
Northern Ireland	2 (8)
<i>Area of degree</i>	
Business or Law	7.1 (29)
Humanities	24.8 (101)
Medicine	4.4 (18)
Nursing	1.5 (6)
Other health professions	1.7 (7)
Maths/Economics	5.9 (24)
Sciences	17.4 (71)
Human/Social sciences	22.9 (93)
Engineering	3.7 (15)
Other	10.6 (43)
Note: Please note not all numbers will add up to 408 as data were missing for a small number of participants	

Baseline predictors

Table II displays the baseline linear regressions at baseline for PQB positive symptoms and distress total. The only variable which was a significant predictor on its own was scores on the IFS scale: higher scores on this predicted higher score on both PQB distress and PQB positive symptoms after controlling for demographic variables.

Baseline finances predicting later psychotic symptoms

As IFS was the only significant predictor at baseline this was entered along with baseline PQB scores and demographic variables of age, gender and ethnicity, to see whether baseline financial stress predicted time 2 psychotic symptoms after controlling for baseline psychotic symptoms. Higher IFS scores at baseline significantly predicted higher scores on PQB positive symptoms: $\beta = 0.10$, $p < 0.05$ and PQB distress $\beta = 0.12$, $p < 0.05$ at time 2.

The IFS was then entered into a regression along with demographic variables to see whether this predicted time 3 psychotic symptoms. Higher IFS scores at time 2 did not significantly

Table II Individual predictors from baseline regression models

	PQB positive Symptoms	PQB distress Total
Overall model		
<i>n</i>	354	330
<i>F</i>	3.0*	4.0**
<i>df</i>	9,344	9,320
<i>R</i> ²	0.07	0.10
Individual predictors (β)		
Gender (female)	0.05	-0.20
Age (17/18 vs 19+)	-0.04	-0.02
Ethnicity: (white) vs BME	-0.04	-0.04
Family affluence scale	-0.06	-0.10
Index financial stress	0.26**	0.31**
(No non-student loan debt) vs Any non-student loan debt	0.01	-0.05
(Total student loan currently < £7,500) vs Total student loan currently £7500+	0.00	-0.02
(Have not considered abandoning university for financial reasons) vs Considered abandoning university for financial reasons	-0.02	-0.05
(Not stressed about debt) vs A little, quite or very stressed about debt	-0.02	0.0

Notes: Dummy variables are shown in parenthesis. Where β values are + the comparison variable predicts a higher score, where β is -, the dummy variable predicts a higher score. Please also note the sample sizes are smaller than in the flow diagram as participants were excluded if they had any missing data. * $p < 0.01$; ** $p < 0.001$

predict higher scores on PQB positive symptoms at time 3: $\beta = 0.10$, $p > 0.05$. However, higher IFS scores at time 2 did significantly predict higher scores on PQB distress at time 3 $\beta = 0.13$, $p < 0.05$.

Baseline psychotic symptoms predicting later finances

In order to examine whether baseline psychotic symptoms increased the risk of later financial difficulties, baseline PQB scores were entered into a model with demographics and baseline IFS to predict time 2 IFS scores. Higher IFS at baseline were significantly predicted by IFS at baseline: $\beta = 0.67$, $p < 0.001$, but not by baseline PQB positive symptoms ($\beta = 0.15$, $p > 0.05$) or distress total ($\beta = 0.02$, $p > 0.05$).

A regression was conducted to see whether time 3 IFS was predicted by demographics, time 2 PQB scores and time 2 IFS. Higher IFS at time 3 was significantly predicted by being aged 19 or older compared to those aged 17/18: $\beta = 0.19$, $p < 0.05$, non-white ethnicity: $\beta = 0.14$, $p < 0.01$ and time 3 IFS score: $\beta = 0.47$, $p < 0.001$. There was no impact of time 2 PQB positive symptoms ($\beta = -0.07$, $p > 0.05$) or distress total ($\beta = 0.22$, $p > 0.05$).

Discussion

This paper examined whether financial difficulties exacerbated psychosis risk in British undergraduate students. Lower family affluence did not appear to have an impact, against previous findings on greater likelihood of low SES in psychosis (Werner *et al.*, 2007). There was also no impact of student loan amount or amount of other debt. This is surprising as previous studies have shown higher total debt is related to poor mental health in students (Richardson *et al.*, 2013), however this is the first study to examine the impact on psychosis.

How stressed individuals were about debt and whether they had considered abandoning university due to financial reasons were also not related to psychosis risk. Previous research using this cohort found that considering dropping out for financial reasons increased depression (Richardson *et al.*, 2017), and other studies have shown that worry and concern about debt impacts general mental health in students (Cooke *et al.*, 2004). Broader stress has also been considered to increase the vulnerability to psychosis in those who are vulnerable (Corcoran *et al.*, 2002). It may be that different financial variables impact different mental health issues in unique ways within this population,

with financial stress not being linked to mental health as strongly as broader stress levels. However, it could be that the one item question about stress about finances used in the current study was not sensitive enough, and using a standardised measure such as the Perceived Financial Wellness Scale (Prawitz *et al.*, 2006), might have shown an impact of about stress and worry about finances.

Greater financial difficulties such as being unable to pay the bills predicted greater positive symptoms and distress. This held after controlling for demographic variables and baseline psychotic symptoms suggesting that financial difficulties in students exacerbate the risk of psychosis over time. There was no evidence of reverse causality: demographic variables predicted worsening of finances over time but there was no impact of psychotic symptoms. Thus, it does not appear that those who are at higher risk for psychosis are poorer at financial management or less likely to earn to support themselves than other students.

Financial difficulties were a predictor of psychosis risk, in line with previous studies from this cohort showing that financial difficulties impacted eating disorder risk, anxiety, global mental health and alcohol problems over time (Richardson *et al.*, 2017). The finding that financial difficulties are more important than amount of debt is in line with wider findings outside of student populations: Selenko and Batinic (2011) found that financial strain rather than amount of debt predicted worse global mental health. Surveys of students have also found that students are more likely to worry about short-term finances such as being able to pay bills than longer term finances such as student loan (NASMA, 2016).

Limitations

A number of limitations in this study need to be acknowledged. First the study is limited by a predominately white and female sample, which may not be representative of the UK student population as a whole. The longitudinal nature of the study could have resulted in a potential selection bias. This will be predominately due to attrition at each measure's time point. The time period of follow-up is also relatively short so the longer term impact of finances on student's mental health is not known. Next several regressions were run increasing the risk of developing a type I error, and some data are not normally distributed so not ideal for a linear regression. The IFS asks about the past six months thus there is a potential overlap between time points. There is a relatively low sample size for the follow-up analyses which may reduce statistical power. Lastly, these findings do not necessarily apply to those with established psychosis.

Conclusions

Financial difficulties appear to increase psychosis risk over time in a student population, with no evidence of psychosis risk worsening financial situation over time. Other financial variables previously shown to be important for other mental health issues such as amount of debt do not appear to be important for psychotic symptoms. Future research is needed to confirm this finding in light of the limitations stated above. In particular a larger sample size with a longer follow-up period is required. Health professionals as well as financial advisors working with students should be aware of the potential link between financial difficulties and psychosis risk. Budgeting interventions which help students live within their means might help reduce risk of psychosis in some students.

References

- Andrews, B. and Wilding, J.M. (2004), "The relation of depression and anxiety to life-stress and achievement in students", *British Journal of Psychology*, Vol. 95 No. 4, pp. 509-21.
- Carney, C., McNeish, S. and McColl, J. (2005), "The impact of part time employment on students' health and academic performance: a Scottish perspective", *Journal of Further and Higher Education*, Vol. 29 No. 4, pp. 307-19.
- Cheng, F., Kirkbride, J.B., Lennox, B.R., Perez, J., Masson, K., Lawrence, K., Hill, K., Feeley, L., Painter, M., Murray, G.K., Gallager, O., Bullmore, E.T. and Jones, P.B. (2011), "Administrative incidence of psychosis assessed in an early intervention service in England: first epidemiological evidence from a diverse, rural and urban setting", *Psychological Medicine*, Vol. 41 No. 5, pp. 949-58.

- Cooke, R., Barkham, M., Audin, K., Bradley, M. and Davy, J. (2004), "Student debt and its relation to student mental health", *Journal of Further and Higher Education*, Vol. 28 No. 1, pp. 53-66.
- Corcoran, C., Mujica-Parodi, L., Yale, S., Leitman, D. and Malaspina, D. (2002), "Could stress cause psychosis in individuals vulnerable to schizophrenia?", *CNS Spectrums*, Vol. 7 No. 1, pp. 33-42.
- Currie, C.E., Elton, R.A., Todd, J. and Platt, S. (1997), "Indicators of socioeconomic status for adolescents: the WHO health behaviour in school-aged children survey", *Health Education Research*, Vol. 12 No. 3, pp. 385-97.
- Field, A.P. (2009), *Discovering Statistics Using SPSS*, SAGE, London.
- Freeman, D., Sheaves, B.K., Goodwin, G.M., Yu, L.-M., Nickless, A., Harrison, P.J., Emsley, R., Luik, A.I., Foster, R.G., Wadekar, V., Hinds, C., Gumley, A., Jones, R., Lightman, S., Jones, S., Bentall, R., Kinderman, P., Rowse, G., Brugha, T., Blagrove, M., Gregory, A.M., Fleming, L., Walklet, E., Glazebrook, C., Davies, E.B., Hollis, C., Haddock, G., John, B., Coulson, M., Fowler, D., Pugh, K., Cape, J., Moseley, P., Brown, G., Hughes, C., Obonsawin, M., Coker, S., Watkins, E., Schwannauer, M., MacMahon, K., Siriwardena, A.N. and Espie, C.A. (2007), "The effects of improving sleep on mental health (OASIS): a randomised controlled trial with mediation analysis", *Lancet Psychiatry*, Vol. 4 No. 10, pp. 749-58.
- Harrison, G., Gunnell, D., Glazebrook, C., Page, K. and Kwiecinski, R. (2001), "Association between schizophrenia and social inequality at birth: case-control study", *British Journal of Psychiatry*, Vol. 179 No. 4, pp. 346-50.
- Holzer, C.E., Shea, B.M., Swanson, J.W. and Leaf, P.J. (1986), "The increased risk for specific psychiatric disorders among persons of low socioeconomic status", *American Journal of Social Psychiatry*, Vol. 6 No. 4, pp. 259-71.
- Jenkins, R., Bebbington, P., Brugha, T., Bhugra, D., Farrell, M., Coid, J., Singleton, N. and Meltzer, H. (2009), "Mental disorder in people with debt in the general population", *Public Health Medicine*, Vol. 6 No. 3, pp. 88-92.
- Jenkins, R., Bhugra, D., Bebbington, P., Brugha, T., Farrell, M., Coid, J., Fryers, T., Weich, S., Singleton, N. and Meltzer, H. (2008), "Debt, income and mental disorder in the general population", *Psychological Medicine*, Vol. 38 No. 10, pp. 1485-93.
- Jessop, D.C., Herberts, C. and Solomon, L. (2005), "The impact of financial circumstances on student health", *British Journal of Health Psychology*, Vol. 10 No. 3, pp. 421-39.
- Kirkbride, J.B., Stubbs, C. and Jones, P.B. (2012), "Psychosis incidence through the prism of early intervention services", *British Journal of Psychiatry*, Vol. 200 No. 2, pp. 156-7.
- Kirkbride, J.B., Fearon, P., Morgan, C., Dazzan, P., Morgan, K., Tarrant, J., Lloyd, T., Holloway, J., Hutchinson, G., Leff, J.P., Mallett, R.M., Harrison, G.L., Murray, R.M. and Jones, P.B. (2006), "Heterogeneity in incidence rates of schizophrenia and other psychotic syndromes: findings from the 3-center AeSOP study", *Archives of General Psychiatry*, Vol. 63 No. 3, pp. 250-8.
- Krabbendam, L. and Van Os, J. (2005), "Schizophrenia and urbanicity: a major environmental influence-conditional on genetic risk", *Schizophrenia Bulletin*, Vol. 31 No. 4, pp. 795-9.
- Loewy, R.L., Pearson, R., Vinogradov, S., Bearden, C. and Cannon, T.D. (2011), "Psychosis risk screening with the Prodromal Questionnaire – brief version (PQ-B)", *Schizophrenia Research*, Vol. 129 No. 1, pp. 42-6.
- Money Advice Trust (2016), "Borrowed years: a spotlight briefing on young people, credit and debt", Money Advice Trust and National Debtline, London.
- National Association of Student Money Advisors (2016), "National student money week 2016: students, money & mental health survey the full results", NASMA, available at: www.nasma.org.uk/uploads/public/NSMW_SMMH_report_FINAL_002.pdf (accessed 19 January 2018).
- Pinto, R., Ashworth, M. and Jones, R. (2008), "Schizophrenia in black caribbeans living in the UK: an exploration of underlying causes of the high incidence rate", *British Journal of General Practice*, Vol. 58 No. 551, pp. 429-34.
- Prawitz, A.D., Garman, E.T., Sorhaindo, B., O'Neill, B., Kim, J. and Drentea, P. (2006), "Incharge financial distress/financial well-being scale: development, administration, and score interpretation", *Journal of Financial Counseling and Planning*, Vol. 17 No. 1, pp. 34-50.
- Reavley, N.J., McCann, T.V. and Jorm, A.F. (2012), "Actions taken to deal with mental health problems in Australian higher education students", *Early Intervention in Psychiatry*, Vol. 6 No. 2, pp. 159-65.

Richardson, T., Elliott, P. and Roberts, R. (2013), "The relationship between personal unsecured debt and mental and physical health: a systematic review and meta-analysis", *Clinical Psychology Review*, Vol. 33 No. 8, pp. 1148-62.

Richardson, T., Elliott, P. and Roberts, R. (2015), "The impact of tuition fees amount on mental health over time in British students", *Journal of Public Health*, Vol. 37 No. 3, pp. 412-18.

Richardson, T., Elliott, P., Roberts, R. and Jansen, M. (2017), "A longitudinal study of financial difficulties and mental health in a national sample of British undergraduate students", *Community Mental Health Journal*, Vol. 53 No. 3, pp. 344-52.

Roberts, R., Golding, J., Towell, T. and Weinreb, I. (1999), "The effects of economic circumstances on British students' mental and physical health", *Journal of American College Health*, Vol. 48 No. 3, pp. 103-09.

Roberts, R., Golding, J., Towell, T., Reid, S., Woodford, S., Vetere, A. and Weinreb, I. (2000), "Mental and physical health in students: the role of economic circumstances", *British Journal of Health Psychology*, Vol. 5 No. 3, pp. 289-97.

Royal College of Psychiatrists (2011), "Mental health of students in higher education", College report CR166, Royal College of Psychiatrists, London, available at: www.rcpsych.ac.uk/publications/collegereports/cr/cr166.aspx (accessed 19 January 2018).

Save the Student (2018), "Student money survey 2017", available at: www.savethestudent.org/money/student-money-survey-2017.html (accessed 19 January 2018).

Schizophrenia Commission (2012), *The Abandoned Illness: A Report from the Schizophrenia Commission*, Rethink Mental Illness, London.

Selenko, E. and Batinic, B. (2011), "Beyond debt: a moderator analysis of the relationship between perceived financial strain and mental health", *Social Science & Medicine*, Vol. 73 No. 12, pp. 1725-32.

Siahpush, M. and Carlin, J.B. (2006), "Financial stress, smoking cessation and relapse: results from a prospective study of an Australian national sample", *Addiction*, Vol. 101 No. 1, pp. 121-7.

Werner, S., Malaspina, D. and Rabinowitz, J. (2007), "Socioeconomic status at birth is associated with risk of schizophrenia: population-based multilevel study", *Schizophrenia Bulletin*, Vol. 33 No. 6, pp. 1373-8.

Further reading

Ross, S., Cleland, J. and Macleod, M.J. (2006), "Stress, debt and undergraduate medical student performance", *Medical Education*, Vol. 40 No. 6, pp. 584-9.

Corresponding author

Thomas Richardson can be contacted at: Thomas.Richardson@solent.nhs.uk

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com