# Student parents, hardship and debt: a qualitative study

Eve Gerrard and Ron Roberts<sup>\*</sup> Kingston University, UK

To date little is known about the effects of financial hardship on student parents, who remain a significant although largely unrecognized proportion of the student population. The objective of this study was to gain an insight into their concerns and illuminate issues which may have farreaching consequences not only for the mental and physical health of student parents but also for their children. Interviews were conducted with 12 women who are parents balancing home life with studies and, in some cases, work. Questions were directed at obtaining information relating to both direct and indirect pressures of financial hardship on home and family life. Questioning covered eight topics: change in lifestyle; financial situation; work; sacrifices—financial or otherwise; financial resources; financial impact on mental or physical health; impact on children; doubts over worth of study. For the majority, financial adversity affected their psychological wellbeing. In many cases parents reported that their own stress adversely affected their children. Quality of home and family life also suffered as a consequence of financial hardship. Students' reflections on their experiences offer a clear insight into the emotional costs of further education exacerbated by financial hardship for both them and their family.

## Introduction

Since the abolition of student grants and the introduction of tuition fees in the 1990s student debt has risen sharply (Callender & Wilkinson, 2003). A survey commissioned by the Department for Education and Skills (DfES) found that between 1998–1999 and 2002–2003 it had more than doubled, with the average debt in 2003 amounting to £9780, with half owing more than £10,395 (Callender & Wilkinson, 2003). More recently the annual *Barclays graduate survey* in 2005 suggested that the typical graduate is now leaving university with debts of £13,501, a rise of 12% on 2004 (Barclays Bank, 2005). When the survey began in 1994 students owed an average of £2212 each on graduating. Debts have thus increased by almost 500%. With the introduction of top-up fees these figures are likely to increase and whilst they demonstrate the average graduate debt, little is known of the

<sup>\*</sup>Corresponding author. School of Arts and Social Sciences, Kingston University, Penrhyn Road, Kingston, Surrey KT1 2EE, UK. Email: r.a.roberts@kingston.ac.uk

financial circumstances of students who are striving to cope with family responsibilities and children.

The DfES survey found that 43% of students now meet government criteria for poverty (Callender & Wilkinson, 2003). While student poverty is nothing new, the widespread take-up of higher education in combination with the cost of learning may be having serious and far-reaching consequences for the growing numbers of student parents and their dependent children. The changing opportunities in further and higher education have resulted in a sharp increase in the numbers of mature students and thus those likely to be parents (DfES, 2003). Between 1994/1995 and 2003/2004 the number of mature students increased by 117,000 to 552,000 and now comprises 60% of all home entrants to higher education in the UK (DfES, 2005). This rapid expansion has been most pronounced amongst women, whose numbers increased by over two-thirds between 1994/1995 and 2001/2002 and comprise nearly three-fifths of further education enrolments (DfES, 2003). Over 90% of part-time students are mature students (DfES, 2005).

The extent of financial hardship for students in general has been documented in several studies. Elevated levels of poorer health as well as financial worries have been found in many of these (Roberts et al., 2000; Stewart-Brown et al., 2000; Roberts & Zelenyanszki, 2002; Jessop et al., 2005). The student living survey, wave 3 (UNITE, 2003a), of whom 6% (n=65) were parents, found that students rated having little money as the worst aspect of university life (51%), closely followed by being in debt (43%). Similarly, the Student living experience (UNITE, 2005) found the pressures of having little money, being in debt and not having a regular income were reported to be the worst aspects of student life. These studies on their own, however, do not provide a detailed picture of the predicament facing female students. Berry (1995) found that 90% of the female students in her sample were unhappy with their financial resources, whilst Roberts et al. (2000) found that 79% of parents who are students reported difficulty in paying bills, with 46.2% being in debt. These data and the plethora of studies linking poor childhood socio-economic conditions with future morbidity (Barker, 1990; Lundberg, 1993; Roberts, 1997) suggest that a potential risk to our future generations may exist (Roberts *et al.*, 2000). Whilst the extent of student debt is now recognized, it has yet to be linked to the welfare of children, almost one in three of whom in the UK are estimated to be living in relative poverty (Wilkinson, 1997). To date, the effects of student debt on student parents and their children is unknown. The present study aims to investigate the consequences of financial hardship on the health, family life and education of student parents and their offspring.

## Method

#### Design

Following piloting, an interview schedule was constructed incorporating areas of concern identified by Roberts *et al.* (2000) and Berry (1995) addressing both the direct and indirect impact of financial hardship. The final schedule included questions covering eight topics: change in lifestyle; financial situation; work;

sacrifices—financial or otherwise; financial resources; financial impact on health; impact on children; doubts over whether sacrifices made were worthwhile. In view of the many potential variables involved and the limited time that parents could give, the schedule followed a combination of structured (yes/no) and open-ended questions. The study was designed to encourage student parents to elaborate on key issues that quantitative research has not addressed. Interviews were conducted in a relaxed manner in consideration of the sensitive nature of the study while allowing for prompts and probes to elicit personal experiences and their interpretations. A phenomenological approach was thus adopted (Patton, 1990).

## Setting

Interviews were conducted in a private room at Kingston University and appointments made at the convenience of the participant. Consent was formally obtained from all participants. Ethical approval was obtained from Kingston University.

# Participants

A purposeful sample of 12 women undergraduate student parents from Kingston University, obtained through snowballing, was invited to participate. No men were recruited through this procedure. This is not surprising since cultural norms dictate that women on the whole are the primary caregivers and it is reflected in the growing trend for women to return to education in order to return to work. The mean age of the women who took part was 39.58 (range 29–45) years. All participants were mature student parents who had returned to education with the intention of using their degree to either return to work or as a career move.

# Data collection

An information sheet was handed out to all participants. Of the twelve student mothers who took part ten had two children, one had three children and one had one child. Eight participants were married or with a partner (participants C, N, T, R, J, O, Y and L) and four were lone parents, divorced or separated (A, S, M and D). Interviews were recorded as case numbers 1–12, representing C, N, A, T, R, S, J, M, D, O, Y and L, respectively. One of the authors (E.G.) conducted all the interviews between February and March 2004. All respondents were interviewed individually and privacy was maintained throughout. Transcripts of interviews were anonymized with only the interviewer retaining access to the respondents' names. Participants were told they could stop the interview at any time and decline to answer questions without giving a reason. Interviews lasted between 30 and 50 minutes and were audio-taped and transcribed verbatim.

## Analysis

The transcripts were content analysed, including searches for anticipated and emergent themes (Banister et al., 1994). An interpretative approach sought to

understand the underlying issues of women's experiences of financial strain and how it impacts on students' life, work and parenthood. Transcripts were checked by R.R. Major themes and minor categories were identified within all transcripts through a process of colour coding and a codebook was constructed. Following discussion between the authors, agreement was reached on a list of themes and coding (for example, financial pressures, family outings and guilt). Additional major themes were identified based on specific experiences of hardship (for example, impact on health, sacrifices in family life and depression). The transcripts were read several times, the data reviewed, with categories compared and contrasted in a process of 'immersion and crystallization', and passages relating to each theme collected together (Crabtree & Miller, 1999). Finally, categories were condensed into five major themes identified as illuminating the effects of financial hardship experienced by the students. These were direct financial pressures, impact on mood and mental health, impact on physical health, effects on family and self and doubts over whether the sacrifices were on reflection worthwhile. The extracts provided below are representative of these key themes and reflect the range of accounts.

## Results

Three participants in particular stood out as experiencing particularly serious problems (A, S and T), of whom two (A and S), both single mothers, were the only two within the sample on benefits. A number of themes were identified from the full series of interviews and are discussed below. For all but one of the participants (11/12, 91.66%) financial pressures affected their lives both directly and indirectly. The extent of this can be seen in accounts of their personal experiences.

## Direct financial pressures

We have had the experience at times, you know, were the bailiffs were knocking at the door. (L101, case 1)

Immensely, its very hard for us at the moment. ... I re-mortgaged ... we were on the breadline. With my studies, part-time work and children it was quite hard period. ... When under financial pressure I am *so* stressed out. (L11, case 5) (emphasis added)

The summer gap is always a nightmare as it is hard to find work to fit in with the children and I got virtually nothing to keep me going which was where (shaky) most of my stress, additional debt, apart from the student loan has come from ... the summer months. (L12, case 8)

I need to start earning money ... and we need a new car. (L39, case 2)

Money for food is the big issue. (L60) The children know we struggle financially and there was a time when I couldn't give the children any allowance and they actually gave me money out of their bank account to get the food. (L69, case 3)

Big difficulties making income last all week. (L51, case 3)

#### Indirect financial pressures

*Impact on mood and mental health.* Seven participants (58.33%) reported suffering depression, with a majority also indicating that they were under considerable stress. Three participants (25%) reported receiving counselling for depression, two being the single mothers on benefits.

I do wake in the middle of the night and lay awake wondering how I am going to cope so it probably makes me feel anxious and tired. (L119, case 4)

Yes I have suffered depression and yes I feel anxious and tired a lot of the time, and uhm sometimes I have to work really hard not to let it affect me deeply. (L129, case 4)

Damned depressing ... makes you feel you are at the bottom of a deep well and you've got to climb that wall [extreme despair]. (L68–72, case 6)

I see loads of counsellors for my health  $\dots$  and all the problems surrounding that  $\dots$  depression. (L90, case 6)

This time last year I was on antidepressants as a result of the degree. I stopped this time last year ... and this year, just a skin rash. (L81, case 8)

Almost all participants (11/12, 91.66%) felt that financial pressures had adversely affected their mood. In addition to depression, many of the women drew attention to anxiety and feelings of guilt (9/12) that emanated from feelings of not contributing enough financially or of perceived inadequacy as a parent.

Anxiety, anxiety as the bills come in, and you know ... that general panic like I've lost my purse. (L222, case 1)

I owe a lot more money. (L5) I owe thousands now ... the more I think about it the more I get stressed out. (L18) I can't drink, can't smoke—socializing. (L37) Feel restricted, alienated if you can't go out with your friends. (L41, case 6)

Always at the back of my mind and wakes me middle of the night—put it to the back of my mind and try not to think about it. (L20, case 4)

Fed up, stressed, concerned for the future. (L64, case 10)

I feel guilty that I am not contributing as a family. (L52, case 5)

A good deal of guilt ... it feels slightly luxurious not to contribute to all the bills ... when other people are going away at half term and we can't, then I feel bad. (L20, case 7)

I do find I don't take them out anywhere because there is not enough money for that. (L31, case 3)

Thus general financial pressures were seen as a cause of considerable stress for these women, in particular for the single parents. Unlike younger students, mature students often do not have the safety net of parents to fall back on. This leaves them feeling vulnerable, especially with children to support.

*Impact on physical health.* Minor ailments were reported by a few participants, ranging from skin rashes to headaches to stomach upsets. Disrupted sleep and poor eating habits were reported in a few cases, although problems with physical health related to stress were reported in only two cases.

I get lots of headaches and I have had colitis as well, which flares up and I believe is stress related. (L145, case 4)

Yes, I have had a lot of problems eating ... they found it was an ulcer ... erm ... lost a lot of weight ... about  $\frac{3}{4}$  of a stone ... could have been due to stress. (L71, case 12)

*Effects on family and self.* An interpretative approach was necessary in analysing data relating to perceived effects on children. For example, one parent argued 'I have tried not to have this encroaching on family life' (L6, case 2). Parents often don't like to admit that their children are deprived, which led to a degree of ambiguity in some of the responses (see underlining) (cases 1, 2, 5, 7 and 11). For example:

On the money side—not <u>really</u>. They haven't been affected <u>really</u>. Only put more pressure on Paul to find the fees. Its not <u>really</u> affected the kids. (L44, case 2)

It doesn't <u>really</u> affect the children—they are fine, but then it is the guilt thing—when other people are going away at half term and we can't then I feel bad. (L40, case 7)

A hesitant response was given by one participant;

No ... uhm. ... [long pause] ... <u>not directly</u> I don't think but then to be honest I think when the business has not been too good we say we have to be a bit careful. (L212, case 1)

One single mother (on benefits) said she had been open with her children.

The children know that we struggle financially and there was a time when I couldn't give my children allowance and they actually gave me money out of their bank account to get the food. (L69, case 3)

For the majority, family outings and holidays seemed to be a major source of cutbacks.

I do find I don't take them out anywhere-not enough money for that. (L31, case 3)

I try to keep a bit for the children ... do a bit with the children ... but of course you can't do everything they like to because everything is so expensive ... day trips ... cinema ... can work out expensive ... you don't want your children to be deprived and you don't want them to do without. (L93, case 4)

Big family outings are out of the question ... its too costly. (L93) ... we've had to cut back on everything. (L40, case 12)

The effects on children were predominantly related to time, as increasing financial pressures force students into working part-time. Half of the participants said their children reacted to their stress.

Stresses him more. Yes, he gets depressed. He is sensitive. (L141, case 6)

I think he picks up on it and he does get more tantrumy—more clingy and whingey ... I try not to show it but its impossible ... you can't help it. (L113, case 11)

Oh yes, when I'm stressed I think they feel it and they squabble a lot more. They can be very nasty with each other. (L170, case 4)

Rubs off on them-they pick up on my emotions and also my behaviour is more negative and less patient. (L94, case 5)

Although parents may be reluctant to do so, several admitted receiving complaints from their children. One recalled her daughter remarking 'I'll be glad when we have got you back' (L6, case 2). Another, that her children would often say 'why are you doing this?' (L109, case 7). One participant said her children 'never suffer directly' because she studies at night, but went on to say that she would never let her husband take the children out for the day to allow her to study as she said other mothers did (L194, case 1). This same participant, whilst protective of her children, was aware of the adverse effects on her partner: 'when I'm tired I'm more irritable ... and more grouchy'. Several participants also reported cutting back on clothes and socializing for financial reasons.

Well I don't buy any new clothes for myself really-I don't go out. (L62, case 4)

My individual social life—because money is so limited that's the first thing that goes anything social for me. (L92, case 4)

I have to watch my money more and erm ... and I socialize less ... its more limiting. ... I just can't do all the things I used to so my life is more restricted. (L13, case 6)

The last participant reported feeling 'restricted, alienated if you can't go out with friends' and was seeing a counsellor for depression (L41, case 6). Given the toll on mental and physical health, children and family relationships it is not surprising that many came to reflect on whether the sacrifices being made were really worth it.

#### Doubts

Three-quarters of the sample had not fully appreciated the consequences of financial hardship when embarking on their studies. The majority expressed doubt as to whether the sacrifices would be worthwhile, arguing that the cost of obtaining a further education qualification may be too great.

The financial rewards do not balance to make it ... the sacrifice you are making in your family, your personal life, your well being—*its not worth it.* (L294, case 1) (emphasis added)

I could say *why am I doing this* because I'm not going to get any financial benefits at the end whereas at the beginning ... I was convinced, it has gone on for so long I don't think I will have the stamina ... its just wearing me down and I don't think its sustainable. (L272, case 1) (emphasis added)

I underestimated the importance of my income. (L144, case 12)

Seven participants (58.33%) had felt like giving up the course at some time, while five (41.66%) suggested that financial pressures would prevent them from continuing their education after the course ended. They simply could not justify spending more money.

You know you would have to work another 4 years to get that money back—that's the trouble. I can't justify it financially. (L180, case 1)

One student spoke of her frustration at being unable to justify continuing her masters course, arguing that 'the amount of effort does not equate to what you put

into it' (L72, case 2). In offering advice and reflecting on her own experience one student commented:

Make sure you are fully aware of all the implications—the sacrifices you may have to make and have plenty of support—back up—help with the kids. Uhm. ... Consider the timing and above all your finances—it could be a struggle—harder than you think. (L136, case 11)

#### **Discussion and implications**

Previous studies have identified lack of financial resources as a source of difficulty for both women students and students with children (Berry, 1995; Roberts *et al.*, 2000). The present study supports these findings, but goes further in identifying specific areas for concern, both directly and indirectly stemming from their financial commitment to further education and relating these to parenthood.

Evidence of financial hardship in the present study was found in 11 of the 12 interviews. Lack of resources was expressed in a number of ways, associated with making personal sacrifices on spending, having to work and socializing, which for some resulted in feeling isolated and alienated. Others reported credit card debts. Some very serious incidences were reported: having a bailiff come to the house, living on the breadline and borrowing money from children for food. Furthermore, widespread emotional strain, depression, guilt, exhaustion and lack of sleep were reported. Considered with epidemiological evidence, the likelihood is that these problems arise from the economic circumstances in which our participants found themselves.

Perhaps the more worrying aspects of our findings concern the plight of single mothers. Three of the four single mothers in the study were in profound financial difficulties and the fact that one woman described her situation as a nightmare is disquieting. While it may seem that getting mothers back to work may reduce the number on welfare and thus bring them out of poverty, further consideration is required at the policy level of the possible detrimental effects that pursuing the further education dream as a route back to work may have on children's development. As noted earlier, the effects of poverty on the health and well-being of children are well documented (Roberts, 1997; Costello & White, 2001; Davey Smith et al., 2002). The financial strain that the student parents report in this study may produce a future generation with a wide range of social problems. With parents too busy to be involved in their children's lives a range of adverse effects may manifest in later behaviour. The strain of juggling work with studies and childcare could lead to poor parental support, which in turn may lead to developmental problems (Duncan et al., 1994; Wickrama et al., 1997). Equally, lack of emotional support early in life may lead to depression and chronic conditions in adulthood (Shaw et al., 2004). It is clear that further urgent study is required into the financial situation facing lone parents.

Although most participants reported regular eating times with their children, a true assessment of their actual diet is unknown. As one participant reported 'money

for food as the big issue' and another had 'virtually nothing to live on' over the summer period, the situation raises concern. Diet has been found to affect the health of the socially disadvantaged, leading to a spiral of ill health (Roberts, 1997; Department for Environment, Food and Rural Affairs, 2001; Davey Smith *et al.*, 2002). Poor diet is associated with diseases such as diabetes, heart disease and stroke (Osmond *et al.*, 1993; Fall *et al.*, 1995; James *et al.*, 1997). The risk factors for healthy development are endless, as diets high in fat and low in minerals and vitamins may lead to problems such as anaemia, obesity, osteoporosis and poor immune function (James *et al.*, 1997). The current findings reiterate the urgent need for further longitudinal study of the well-being of the children of today's student parents.

## Limitations

The present study gives a vivid description of financial hardship in the lives of student parents. It is necessary that we place a number of caveats on this research. We make no claims about the representativeness of our sample. The numbers interviewed were low and may not be typical of all student parents. They were also sampled from a relatively higher socio-economic area. However, the fact that such problems were manifest in a group in relatively favourable socio-economic circumstances serves only to highlight the potential problems we have drawn attention to. Equally, the sample did not include ethnic minorities, for which the problem of surviving economic hardship may be worse, considering cultural problems such as isolation and alienation.

We do not claim to have exhaustively surveyed either in breadth or depth all areas of personal and family life that may be influenced by financial circumstances. As we have indicated, further investigation regarding the diets of student parents and their children is needed. Interviews were limited in time, as student parents were quick to point out the pressures and time restrictions they themselves were under. We concur with the position of The Royal College of Psychiatrists (2003), that comparative studies involving students are difficult. They differ in many respects: age, type of course, vocational or academic study, length of course, full- or part-time. Most of the major statistical figures on student debt have been based on full-time undergraduates and postgraduates (UNITE, 2003a, b, 2005; DfES 2003, 2005) and for this reason are not necessarily helpful in identifying the problems of particular subgroups within the student body. Furthermore, a good deal of research comes from abroad and is therefore questionable in its applicability to the UK (Royal College of Psychiatrists, 2003).

Questions could be raised about the 'measures' of distress we have employed in the current study—as indicated above, we do not claim to have exhaustively assessed these. Again, however, we might counter this by suggesting that the actual level of distress amongst our participants is probably a good deal worse than indicated. This is because parents may be reluctant to admit that their children could be suffering adversely as a result of the pressures they have brought on themselves in pursuing

#### 402 E. Gerrard and R. Roberts

higher education. Our parents seemed to play down the real effects on their children. This was clearly demonstrated by the hesitancy and defensiveness of some of their replies.

#### Conclusions

Widening access to higher education without real spending increases has led to a proportion of students facing greater challenges than any students have ever had to face before. Widening access without sufficient resourcing has led to greater debts. The landscape of the student population has changed, with greater numbers of mature students, many of whom are facing the added burden of family responsibilities, including large financial commitments such as mortgages. The findings from the current study suggest that financial hardship for the majority of student parents was associated with severe levels of stress, with adverse consequences on family life and children's well-being. It is therefore imperative that policy makers do not rely on data that come only from students from higher socio-economic groups.

### References

- Banister, P., Burman, E., Parker, I., Taylor, M. & Tindall, C. (1994) Qualitative methods in psychology: a research guide (Buckingham, UK, Open University Press).
- Barclays Bank (2005) Barclays annual graduate survey (London, Barclays Bank).
- Barker, D. J. (1990) The fetal and infant origins of adult disease, *British Medical Journal*, 301, 1111.
- Berry, M. (1995) The experience of being a woman student, British Journal of Guidance and Counselling, 23, 211–218.
- Callender, C. & Wilkinson, D. (2003) Student's income, expenditure and debt in 2002/03 and changes since 1998/99, Student income and expenditure survey (London, DfES).
- Costello, A. & White, H. (2001) Reducing global inequalities in child health, *Archives of Disease in Childhood*, 84, 98–102.
- Crabtree, M. & Miller, W. (Eds) (1999) Doing qualitative research (2nd edn) (London, Sage).
- Davey Smith, G., Dorling, D., Mitchell, R. & Shaw, M. (2002) Health inequalities in Britain: continuing increases up to the end of the 20th century, *Journal of Epidemiology and Community Health*, 56, 434–435.

Department for Education and Skills (DfES) (2003) Trends in education and skills (London, DfES).

- Department for Education and Skills (DfES) (2005) Trends in education and skills (London, DfES).
- Department for Environment, Food & Rural Affairs (2001) Annual report on food expenditure, consumption and nutrient intakes (London, The Stationary Office).
- Duncan, G. J., Brooks-Gunn, J. & Klebanov, P. K. (1994) Economic deprivation and early childhood development, *Child Development*, 65, 296–318.
- Fall, C. H. D., Vijayakumar, M., Barker, D. J. P., Osmond, C. & Duggleby, S. (1995) Weight in infancy and prevalence of coronary heart disease in adult life, *British Medical Journal*, 310, 17–20.
- James, W. P. T., Nelson, M., Ralph, A. & Leather, S. (1997) Socioeconomic determinants of health: the contribution of nutrition to inequalities in health, *British Medical Journal*, 314, 1545–1549.
- Jessop, D. C., Herberts, C. & Solomon, L. (2005) The impact of financial circumstances on student health, *British Journal of Health Psychology*, 10(3), 421–439.

- Lundberg, O. (1993) The impact of childhood living conditions on illness and mortality in adulthood, *Social Science and Medicine*, 36, 1047–1052.
- Osmond, C. B. D., Barker, D. J. P., Winter, P. D., Fall, C. H. D. & Simmonds, S. J. (1993) Early growth and death from cardiovascular disease in women, *British Medical Journal*, 307, 1519–1524.
- Patton, M. (1990) Qualitative evaluation and research methods (London, Sage).
- Roberts, H. (1997) Children inequalities and health, British Medical Journal, 314, 1122-1125.
- Roberts, R. & Zelenyanszki, C. (2002) Degrees of debt, in: N. Stanley & J. Manthorpe (Eds) Students' mental health needs. Problems and responses (London, Jessica Kingsley), 107–120.
- Roberts, R., Golding, J., Towell, T., Reid, S., Woodford, S., Vetere, A. & Weinreb, I. (2000) Mental and physical health in students: the role of economic circumstances, *British Journal of Health and Psychology*, 5, 289–297.
- Royal College of Psychiatrists (2003) The mental health of students in higher education (London, Royal College of Psychiatrists).
- Shaw, B. A., Krause, N., Chatters, L. M., Connell, C. M. & Ingersoll-Dayton, B. (2004) Emotional support from parents early in life, aging, and health, *Psychology and Aging*, 19(1), 4–12.
- Stewart-Brown, S., Vans, J., Patterson, J., Peterson, S., Doll, H., Balding, J. & Regis, D. (2000) The health of students in institutes of higher education: an important and neglected public health problem?, *Journal of Public Health Medicine*, 22(4), 492–499.
- UNITE (2003a) Student living survey 2003 (London, MORI).
- UNITE (2003b) Student living report 2003 (London, MORI).
- UNITE (2005) Student living experience 2005 (London, MORI).
- Wickrama, K. A. S., Lorenze, F. O. & Conger, R. D. (1997) Parental support and adolescent physical health status: a latent growth curve analysis, *Journal of Health and Social Behaviour*, 38, 149–163.
- Wilkinson, R. G. (1997) Health inequalities: relative or absolute material standards?, British Medical Journal, 314, 591–594.