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Intentions to Quit: Evidence from the British
Nursing Profession**

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ABSTRACT

Racial Harassment, Job Satisfaction and Intentions to Quit: Evidence from the British Nursing Profession*

This paper investigates the determinants of racial harassment at the workplace and its impact, via job satisfaction, on intentions to quit. Using data for ethnic minority nurses in Britain, we find that nearly 40% of nurses have experienced racial harassment from work colleagues, whilst more than 64% have suffered racial harassment from patients. The experience of racial harassment at the workplace leads to a significant reduction in job satisfaction, which, in turn, significantly increases nurses' intentions to quit their job. These findings have important policy implications for retaining qualified nursing staff in the British National Health Service.

JEL Classification: J15, J24, J71

Keywords: Racial harassment, nursing, job satisfaction, intentions to quit

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1. Introduction

For the last fifty years, the National Health Service (NHS) has been the cornerstone of the welfare state in Britain. However, since its inception there have been persistent allegations that racial discrimination is an inherent feature of its internal labor market. These allegations have arguably been strongest in the case of qualified nursing staff who are a key input into the production of health care (see Akinsanya, 1988; Baxter, 1988; Beishon *et al.*, 1995; Department of Health, 1998a; Ellis, 1990; and Pudney and Shields, 1999).¹ As described by Baxter (1988), ‘The endurance of black nurses has been tested more cruelly and far longer, by persistent and systematic racism in the NHS’. This situation is in stark contrast to the ‘marriage of convenience’ arrangement which occurred in the 1960s when the NHS actively recruited ethnic minority nurses from overseas in order to meet the chronic shortage of qualified staff faced by the hospital sector (Thomas and Morton-Williams, 1972). Since that time, members of ethnic minorities have been over-represented in the NHS nursing profession, with 6.3% of female nurses and 14.7% of male nurses coming from such minorities in 1990, compared with 3.6% and 3.9% in all employment in Britain (Beishon *et al.*, 1995). As such, the NHS represents the largest employer of ethnic minority groups in Britain (Department of Health, 1998a). Recent government concern about the extent of discrimination in the nursing labor market has led to ‘a fair process for determining reward’ and ‘equality of opportunity’ being identified as prime objectives in the Department of Health’s recent Consultancy Document ‘Working Together: Securing a Quality Workforce for the NHS’ (Department of Health, 1998b).

Racial discrimination, of course, is not only a characteristic of the nursing profession but also of the British labor market more generally (for recent evidence, see Blackaby *et al.*, 1994, 1997, 1998, 1999; Clark and Drinkwater, 1998; Modood *et al.*, 1997; and Shields and Wheatley Price, 1999). Whilst these studies have focussed on discrimination as the primary explanation for unexplained differences in the labor market outcomes of white and ethnic minority groups, the effect of direct racial harassment at the workplace on the labor market behavior of those affected has been unexplored.² Racial harassment at the

¹ Moreover, the importance of this issue is evident from the pages of the main nursing journals in Britain such as *Nursing Times* and *Nursing Standard*, which frequently contain articles focusing on racism in the nursing profession.

² We have undertaken various searches of the economics literature in both the UK and US, and have been unable to find any published studies that have examined the impact of racial harassment at the workplace on labor market outcomes in the last 15 years. Similarly, there appears to be very little empirical research that has examined the impact of sexual harassment. One

workplace represents the most blatant form of labor market discrimination and apart from being socially unacceptable, has been illegal in Britain since the Race Relations Act of 1976.³ Moreover, since the introduction of the Criminal Justice and Public Order Act in 1994, all forms of harassment, including racial harassment at the workplace, are considered criminal offences punishable by six months imprisonment or a fine of £5000 (Commission for Racial Equality, 1995).

In this paper we provide the first investigation of the determinants of racial harassment at the workplace, and its impact, through its effect on job satisfaction, on intentions to quit for ethnic minority nurses. We use a large national survey of NHS nursing staff collected in 1994. Throughout the study we define racial harassment as behavior towards the individual nurse that is ‘difficult, aggressive or hostile’ on the grounds of race or color. Given the hands-on nature of nursing, we explore the determinants and effects of harassment emanating from two sources: patients and work colleagues. Our working hypotheses are that (i) the probability of experiencing racial harassment is a function of the characteristics of individual nurses, the nursing job and the employer, and (ii) the experience of harassment from either patients or work colleagues leads to a considerable worsening of the work environment for affected nurses, which, in turn, reduces their overall level of job satisfaction (or utility from work) and increases the likelihood of them wanting to quit the NHS. In addition to the large psychological costs, ethnic minority nurses may face long-term economic disadvantage if being racially harassed at the workplace leads them to quit nursing and accept a job with lower pay, become unemployed or even drop out of the labor market.

In addition to the personal costs of quitting, high quit rates in the nursing profession impose substantial costs on society. It costs over £50,000 to train a registered nurse, the vast majority of which is funded by the British taxpayer, and over £5,000 for a NHS hospital trust to replace a core staff nurse (Audit Commission 1997). The social cost is larger for young and newly trained nurses. As we show later it is precisely this group of ethnic minority nurses who are most likely to report experiencing racial

recent exception is Laband and Lentz (1998) who investigate the effects of sexual harassment on job satisfaction, earnings and turnover using a small sample (n=176) of female lawyers in the US.

³ More precisely, whilst the Race Relations Act of 1976 does not use the term ‘racial harassment’, it has been the case that Industrial Tribunals in Britain have become increasingly willing to conclude that this form of labor market behavior represents

harassment at the workplace, are the least likely to be satisfied with their job and are the most likely to indicate an intention to quit. Moreover, in recent years nursing skill shortages have re-emerged in the NHS due to the falling recruitment of school-leavers into the profession and the poor retention of experienced nursing staff.⁴ In 1996, for example, there were over 6,600 full-time equivalent posts for registered nurses vacant, of which 43% were unfilled for at least three months (Seccombe and Smith 1997). As a result, many hospitals have been forced to rely on temporary bank (or agency) nurses, which has led to considerable concern about the quality of patient care. In the worst cases, staffing shortages have led to ward and theatre closures, which have increased the length of waiting lists for many medical procedures (Audit Commission 1997). It is therefore important to examine whether, and to what extent, either form of racial harassment at the workplace increases nurses' quitting intentions.

The paper is organized as follows. In section 2 we introduce our data source, describe the particular characteristics of our sample and discuss the results of simple cross-tabulations between the main variables of interest in this study. Section 3 presents a determinants of racial harassment model and discusses the results from its estimation. The impact of racial harassment on the level of job satisfaction is investigated in section 4. Section 5 discusses the results of our intentions to quit models and Section 6 presents the conclusions of this study.

2. Data, Sample Characteristics and Preliminary Analysis

In order to explore the labor market consequences of racial harassment we use a unique survey of NHS nursing staff undertaken by the Policy Studies Institute and commissioned by the Department of Health (Beishon *et. al.*, 1995). Postal questionnaires were sent to a random sample of one-in-three of the permanent nursing staff of 91 NHS employers in England between February and April 1994. Employers based in areas with a high ethnic minority density (and therefore more likely to have a high proportion of

'less favorable treatment on racial grounds' and therefore constitutes unlawful racial discrimination (Commission for Racial Equality, 1995).

⁴ Between 1987 and 1995 the intake of school-leavers into nurse training fell from 19,600 to 14,200 per annum (Seccombe and Smith, 1997). In terms of retention, a study using 1991 Census data found that only 68% of qualified nurses in England were employed in the profession. The remainder were split between working in other professions (16%) and being economically inactive (15%) (Lader, 1995).

ethnic minority staff) were deliberately over-sampled in order to provide reliable information about the experiences of such groups in the NHS. The response rate to the questionnaire was 62%, which generated a sample of approximately 14,000 nursing staff. The survey presents the most comprehensive source of information regarding the state of the nursing profession in Britain, and contains wide-ranging information about the personal and work-related characteristics of nurses as well as their employers. In this paper, we focus on those 1203 nurses, aged 21 to 60, who reported their ethnicity as being other than White, and who were qualified as either a State Enrolled nurse (which typically requires two years training) or Registered General nurse (which requires three years training).

Sample Characteristics

We now describe the salient features of our sample and begin by considering the individual (or personal) characteristics of ethnic minority nurses in the NHS. Table A1, in the Appendix, provides the descriptive statistics of our sample and also those of white nurses as a point of comparison. Only 16.5% of the sample are male which reflects the female-dominated nature of the nursing profession. The average age of an ethnic minority nurse is 43, with 69% being married and 51% having at least one dependent child under the age of 16. Over 20% of the nurses in our sample have a high level of education ('A' level or degree), with about 56% having a moderate level of education ('O' level or equivalent) and around 23% possessing no formal schooling qualification.

Using the self-reported ethnicity and country of birth information we can distinguish between four ethnic minority groups of nurses. The largest group (comprising 38.3% of our sample) are Black Caribbean, the vast majority of whom (82%) were born in the Caribbean. The remainder were born in the UK. Black Africans are the second largest group (26.9% of the sample). Nearly half of this group was born in one country (Mauritius) although all are immigrants to the UK. Over 75% of South Asian nurses (comprising 15.8% of the sample) were born in the Indian sub-continent whilst the rest are native-born. South East Asian nurses (mainly from Malaysia, the Philippines, Singapore and Hong Kong) account for the remaining 19.0% of ethnic minority nurses in the British NHS.

We now discuss the main job-related characteristics of our sample. Three-quarters of ethnic minority nurses are qualified as Registered General nurses and occupy Staff nurse (grades D and E only), Senior nurse (Charge nurses - grade F - and Ward Managers - grade G) and Nurse Manager (grades H and I) positions. State Enrolled nurses (25.4% of the sample) can occupy grades C – E in the British NHS (grade C is unique to them). Nearly 57% of all ethnic minority nurses are employed as core Staff nurses, whilst 37% are Senior nurses and 6.2% have a Nurse Manager role. Those working part-time (< 35 hours per week) account for 22% of ethnic minority nurses, and the mean gross weekly wage is £279. Nearly 12% of nurses are currently participating in post-basic training. Importantly, over 90% of our sample are members of a trade union or professional organization.

Our survey data also allows us to identify a number of further job-related characteristics concerning the nature of nursing in the NHS that may be important in our subsequent analysis. The most prominent working pattern for ethnic minority nurses (accounting for 45% of our sample) is a mixed shift which includes night duties, with the remaining shift patterns split between working days only (27.1%), a mixed shift with no night duties (22.7%) and other (5.2%). A particular feature of nursing in the NHS, which is likely to lead to dissatisfaction with the job, is that nearly 44% of these nurses are working a shift pattern that is not their preferred choice. However, two-thirds of nurses do report having some degree of control over their exact working shift or hours. Ethnic minority nurses are often required to participate in unpaid overtime (nearly 7%), to undertake tasks that are generally above their grade (51.5%) and undertake nursing tasks below their grade (54.3%). Ethnic minority nurses are spread widely across specialties with 29.2% working in general medicine, 16.6% in primary and community care, 19.8% in mental illness, 14.9% in care of the elderly, 13.7% in midwifery, 7.2% in mental handicap, 4.6% in pediatrics and 2.4% employed in other specialties. A worrying feature of the internal labor market for nurses in the NHS is that nearly 20% of ethnic minority nurses report facing discrimination with regard to gaining promotion or access to training opportunities in their careers.⁵

Finally, in this section we examine the employer-related characteristics of our sample. Since the NHS health care reforms in 1989 most District General Hospitals (DGHs) have converted into independent

NHS Trusts. As a result only 18.2% of our sample are employed in DGHs and 77.5% work in NHS Trusts. A small minority (4.3%) is based in Family Health Service Authorities (FHSAs). The average size of nursing employers (defined by the total number of nursing staff) is 1134. Interestingly, only 33% of nurses report that their employer actively encourages them to participate in human development activities such as further training whilst 76.1% of ethnic minority nurses report being employed at workplaces that have an equal opportunities policy in operation. It is important to note that the average density of ethnic minorities in the employer regions is 11.76% that is roughly double the national average. This reflects the fact that employers in high ethnic minority regions were over-sampled in the survey. The average proportion of ethnic minority nurses, at our 91 employers, is over 26%. This is again far greater than in the whole NHS. Our NHS employers are concentrated in London (50% of ethnic minority nurses in our sample are employed in North and South London), with the remainder spread throughout the English regions.

Preliminary Analysis

Of particular interest in this paper are the two questions asked in the survey that focus specifically on person-to-person racial harassment at the workplace. The first question relates to harassment arising from encounters with work colleagues, whilst the second concerns harassment which occurs as a result of interactions with patients or their families. The questions are as follows:

- 1. Do members of the nursing staff (including supervisors or managers) ever behave towards you in a difficult, aggressive or hostile way for reasons to do with you race or color, and if so how often does this happen?*
- 2. Do patients or their families ever behave towards you in a difficult, aggressive or hostile way for reasons to do with you race or color, and if so how often does this happen?*

Each question was addressed to the nurses in the survey, who could answer 'yes' to one of the following: DAILY, WEEKLY, MONTHLY, LESS OFTEN or NEVER. For ease of exposition, we use the term

⁵ For an extensive investigation of this issue using the same data source see Pudney and Shields (1999).

‘racial harassment’ to cover all acts of ‘difficult, aggressive or hostile behavior’ based on the grounds of race or color. Due to the relatively small number of cases in some of these specific categories, especially when the sample is divided into the four ethnic groups, we gather together those reporting racial harassment on a DAILY, WEEKLY or MONTHLY basis into a FREQUENT category. For clarity we use the term INFREQUENT for those in the LESS OFTEN category.

Table 1 shows the distribution of the answers to these two questions by our four ethnic minority groups. It is immediately clear that the racial harassment of nurses is a sizeable problem in the NHS. Nearly 40% of all ethnic minority nurses in our sample report having experienced some racial harassment from work colleagues in their careers, with 6.5% reporting that this occurs frequently (at least monthly). The incidence of racial harassment from patients, or their families, is even greater. Nearly 65% of these nurses have been racially harassed by those that they are seeking to help at some point in their career, with almost 10% reporting that this is a frequent occurrence. It is notable that the incidence of racial harassment is generally higher for Black nurses compared to Asian nurses.

[TABLE 1 ABOUT HERE]

Black African nurses are the most likely to have ever been racial harassed by work colleagues, with more than 48% of them having suffered such behavior in their careers. South Asian nurses are the most likely to experience such abuse on a frequent basis (8.4%) whilst Southeast Asians have the lowest incidence of frequent or infrequent racial harassment from staff. Given the hands-on nature of nursing, and the high proportion of total work-time typically spent interacting with patients, it is a worrying feature of the British NHS that over two-thirds of Black nurses, and more than half of Asian nurses, report having been the subject of racial harassment by patients or their families in their working lives. Interestingly Black Africans are far more likely to experience harassment from patients on an frequent basis (14.5%) than Black Caribbean nurses, as are South East Asians when compared to South Asians. We now turn to a preliminary investigation of the impact of racial harassment on the job satisfaction of ethnic minority nurses in the British NHS.

It seems reasonable to expect that workplaces characterized by racial harassment would, for ethnic minority workers, be less satisfying environments than those where such abuse does not take place. In turn the frequency of occurrence and the source of the harassment would be expected to effect job satisfaction. Therefore we examine the proportion of nurses who were satisfied with their job according to frequency of our two separate sources of racial harassment. As before this is done for the whole ethnic minority sample and our four separate groups. Our overall job satisfaction measure is defined as follows. In the survey each nurse was asked to rank their overall job satisfaction on the following four-point scale: (1) Very Dissatisfied, (2) Dissatisfied, (3) Neither Satisfied nor Dissatisfied, and (4) Satisfied. In Table 2 we report the proportion satisfied in each cell (i.e. category 4 only) but in our subsequent ordered probit analysis the dependent variable takes the full range of values.

The simple calculations confirm our earlier expectations. The proportion of ethnic minority nurses who are satisfied with their current job is inversely related to the frequency of racial harassment they experience. Interestingly, but perhaps not surprisingly, racial harassment from staff colleagues results in a lower incidence of job satisfaction (12.8% and 30.1%), regardless of frequency, when compared to the more common racial harassment from patients or their families (24.8% and 36.3%, respectively). This finding generally holds for each ethnic group as well. According to the responses in our sample, working as a nurse in the British NHS is not a satisfying experience for most ethnic minority employees in our sample. Even amongst those who have never been racially harassed generally more than 50% are not satisfied in their job.

[TABLE 2 ABOUT HERE]

These findings, when taken together with the fact that the British NHS is having severe recruitment and retention problems in the nursing profession, suggest that it is important to explore the relationship between job satisfaction and intentions to quit in our sample. In order to do this, we use the responses to a question concerning nurses' expectations of their employment status three years after the survey. Fourteen possible responses were available, with three indicating that the nurse expected to remain in the NHS (in a better nursing job, the same job and grade, or the same job but at a lower grade), and the

remainder focusing on activities outside of the NHS (for example, nursing in the private sector, a non-nursing job, in full or part-time education, working overseas or raising a family). One potential problem with this measure of expected employment status is that respondents could provide multiple answers. Therefore, we have defined a 'STAYER' as a nurse who only indicates one or more of the three staying in the NHS options but nothing else, and we define a 'QUITTER' as a nurse who indicates one or more of the non-NHS activities but none of the 'STAYER' categories. The small number of nurses who indicate both a 'STAYER' and 'QUITTER' intention we define as a 'QUITTER', since they have indicated some uncertainty about their future employment status in the NHS.⁶

The relationship between job satisfaction and quitting intentions is summarized in Table 3 for all ethnic minority nurses and by separate ethnic group. These simple cross-tabulations clearly demonstrate the level of job satisfaction is negatively correlated with increased intentions to quit. Nearly two-thirds of dissatisfied or very dissatisfied nurses (63.2%) expressed an expectation of leaving the NHS within three years compared to 54.2% of nurses who were neither satisfied nor dissatisfied and only 47.6% of those reporting job satisfaction. Again this finding generally holds across all ethnic groups. Given the magnitude of the nurse retention problem in the British NHS these figures are alarmingly high. Between 38.9% and 52% of even the most satisfied ethnic minority nurses in the NHS did not expect to working within the organization three years later.

[TABLE 3 ABOUT HERE]

We now turn to a more rigorous investigation of the determinants of racial harassment at the workplace and its impact on intentions to quit, via job satisfaction. If, as our preliminary analysis suggests, the experience of racial harassment at work reduces job satisfaction which, in turn, increases intentions to quit, then the identification of the types of nurses who suffer from racial harassment is crucial to the design of effective industrial relations policies aimed at eliminating this form of labor market discrimination and the subsequent retention of ethnic minority nurses in the British NHS.

⁶ Over 80% of the sample only indicated one future employment intention. We have also re-calculated the figures in Table 4 excluding the small group of nurses who indicated both 'STAYER' and 'QUITTER' intentions, and found that our results are qualitatively unchanged.

3. The Determinants of Racial Harassment at the Workplace

Model and Explanatory Variables

Given the ordinal nature of our two racial harassment questions we estimate ordered probit models to determine the frequency of racial harassment experienced by individual nurses' in terms of a latent variable (r^*) that drives the observed racial harassment frequency (r). For each individual,

$$r^* = \alpha_1'IND1 + \alpha_2'JOB1 + \alpha_3'EMP1 + \varepsilon \quad (1)$$

$$r = g \text{ if } M_{g-1} < r^* < M_g \quad g = I, \dots, G - I \quad \varepsilon \sim N(0,1)$$

where α_1 , α_2 and α_3 are vectors of parameters, g denotes the frequency of racial harassment and r is coded as: (1) NEVER, (2) INFREQUENT and (3) FREQUENT. Equation (1) describes the individual's unobserved propensity to experience racial harassment, r^* , given vectors of exogenous individual (IND1), job-related (JOB1) and employer characteristics (EMP1). The thresholds (M_0 to M_{g-1}) provide the values of r^* required for a given frequency of racial harassment to be experienced, with a value of $r^* < M_0$ placing an individual at the lowest frequency of racial harassment. As r^* increases one or more harassment thresholds are crossed and the individual's frequency of racial harassment episodes increase. The model is estimated by Maximum Likelihood and identification is achieved by setting $M_0 = 0$ (See Greene, 1993 or Davidson and MacKinnon, 1993, for additional details).

The individual covariates included in the vector IND1 are those that work colleagues or patients with the potential for racial harassment could use to differentiate between nurses at the workplace. Firstly, to avoid the imposition of any particular function form we enter age as 5 spline dummy variables. Our expectation is that young nurses, recently recruited to the profession, will be more vulnerable to episodes of racial harassment than more experienced nursing staff. We also include dichotomous variables for gender and marital status, as well as indicators of general educational attainment in the models. Given the likelihood that person-to-person racial harassment for ethnic minority nurses will be partly determined by

characteristics associated with specific ethnic groups we include our four ethnic minority group dummy variables in the model. We anticipate that those nurses who appear to be the most different from the indigenous white population will be subjected to the greatest frequency of racial harassment.

The second vector of explanatory variables, JOB1, includes a number of distinctive characteristics of the nursing job. To broadly capture the type of nursing tasks undertaken by various nurses we include variables for seniority in our models. We expect that Senior nurses and Nurse Managers from ethnic minorities would be subjected to significantly less racial harassment emanating from fellow work colleagues than nurses at Staff nurse grades (C - E) considering the greater likelihood of the incident(s) being reported and disciplinary action taken. The expected relationship, however, is not so clear when considering patient-led episodes of racial harassment. It may be the case that the nurses most likely to be abused are those with whom the patients and their families have the most contact (i.e. Staff nurses). Alternatively, racial harassment by patients or their families may occur more often in more stressful situations, such as when the patient is very ill and the family are extremely concerned about the patients' well being. If this is the case Senior Nurses are more likely to be involved in their care and therefore subjected to such abuse.

The frequency of racial harassment is likely to be related to time spent at work. We would anticipate that part-time nurses might be subject to less abuse. In addition, the shift pattern worked by nurses may make them more vulnerable to racial harassment. In particular, those working night shifts might be more exposed to difficult or aggressive patients and their families. The smaller number of staff working during night shifts, and especially the lower levels of supervision, might be contributory factors. The particular medical specialty is more likely to affect the frequency of racial harassment by patients than that from staff. For instance, patients on the pediatrics wards might be less likely to racially harass nurses, whilst patients and relatives attending accident and emergency departments (part of the general medical specialty) might be the most aggressive and likely to be abusive.

Employer-related characteristics (contained in the vector EMP1) may also play an important part in determining the frequency of racial harassment that occurs. Nurses working for Family Health Service

Authorities are more likely to work alone amongst patients in their own homes than those based in hospitals. Here patients are less likely to be restrained in their behavior or to have been witnessed actually racially harassing nurses. The expected penalty from racial harassment is thus reduced and this may increase the frequency of such abuse. In addition, the presence of an equal opportunities policy at the workplace is likely to deter staff from racially harassing nurses due to the increased probability of being reported and heightened awareness of the punishments that would result. Lastly, the ethnic minority density in the workplace may be related to staff-based racial harassment. The perceived threats to other nurses' job security, and the intensity of racial prejudice, are likely to be heightened when ethnic minority nurses are more visible in the workplace. This may well lead to increased occurrences of racial harassment by staff. Similarly, the greater the ethnic minority density in the area that the hospital serves, the more frequent racial harassment episodes by patients are likely to be.

Empirical Results

Table 4 reports the coefficient estimates from the two ordered probit determinants of racial harassment models. To a large extent these estimates confirm our prior expectations. Nurses in the prime age ranges of 35-39 and 40-44 years old are significantly more likely to report frequent racial harassment by fellow staff members, than those over the age of 49. Nurses in all age ranges younger than 50 are significantly more likely to report frequent episodes of racial harassment by patients and their families, than those in the base category. The magnitude of the coefficients generally decline with age suggesting that younger nurses are more vulnerable to frequent racial harassment than older nurses. Male nurses, those who are married and those possessing higher qualifications are significantly more likely to report frequent racial harassment by staff compared to their respective base groups.

[TABLE 4 ABOUT HERE]

Regardless of the source of racial harassment, Black African nurses have the highest probability of experiencing frequent episodes of abuse. Black Caribbeans are also found to be significantly associated with frequent racial harassment from both staff and patients, compared to the base group South East

Asians. However, only in the case of abuse from work colleagues are South Asians more likely to report frequent episodes than South East Asians. Abuse from staff is significantly less frequent amongst Senior nurse and State Enrolled Staff nurses than for Registered General Staff nurses whilst tenure in current post (and at current grade) is related to the reporting of racial harassment from either source with an inverse U-shaped pattern.

As expected, working a shift pattern with no nights is statistically associated (in two out of the three categories) with the frequency of racial harassment from patients, compared to those working some night shifts, as are the medical specialties of pediatrics, midwifery, mental handicap, primary and community (all negatively related) and care of the elderly (positively related), in comparison with the general medical specialty. In the case of racial harassment by staff, only those ethnic minority nurses working amongst the mentally ill are less vulnerable than those in the base category. Nurses employed by General District Hospitals are less likely to experience frequent episodes of racial harassment from staff, and those employed by Family Health Service Authorities are significantly associated with frequent abuse from patients, compared to nurses in NHS Hospital Trusts. Interestingly, the presence of an equal opportunities policy, which implies regular training and monitoring of these issues, significantly reduces the frequency of racial harassment by staff. Evidently, the awareness of the legal situation that this brings, in combination with the deterrent affect of knowing the penalties for such illegal activity, act to reduce the incidence and frequency of racial harassment by staff. Requiring the implementation of equal opportunities policies by all nursing employers and increasing the level of equal opportunities training may go some way towards combating this form of racial harassment. Frequent racial harassment by work colleagues (patients) is statistically associated with increased ethnic minority density at the workplace (in the region). Evidently the majority population in each case are more likely react in this way the greater is the perceived threat from ethnic minorities.

4. The Impact of Racial Harassment on Job Satisfaction

Model and Explanatory Variables

Since the seminal work of Hamermesh (1977) and Freeman (1978), there has been a growing literature by economists concerned with estimating the determinants of job satisfaction. Much of this work has been motivated by the psychology literature, which has resulted in considerable agreement over the explanatory variables that are the most important. Whilst there are a few general studies by economists of these determinants (e.g. Freeman, 1978; Clark, 1996), most research has been directed at explaining the relationship between one particular individual or employer characteristic and job satisfaction. For example, recent studies have focused on the marginal effect of individual characteristics such as gender (Clark, 1997; Ward and Sloane, 1999), age (Clark *et al.*, 1996), race (Bartel, 1981) and education (Tsang *et al.*, 1991) on job satisfaction. Other studies have concentrated on job and employer characteristics, identifying the effect of absolute wages and ‘comparison’ or ‘relative wages’ (Cappelli and Sherer, 1988; Clark and Oswald, 1996; Hampton and Heywood, 1999; Sloan and Williams, 1996), trade union status (Bender and Sloan, 1998; Gordon and Denisi, 1995; Meng, 1990), self-employment (Blanchflower and Oswald, 1998) and firm size (Idson, 1990) on reported job satisfaction levels.

The general framework adopted is to define an individual’s utility from working as:⁷

$$U = u(Y, H, RY, IND, JOB, EMP) \quad (2)$$

where Y is the absolute wage and H is the number of hours worked. Utility from work is assumed to be positively related to wages and negatively related to working hours. RY is the wage which the worker believes she could earn if employed elsewhere (termed the ‘relative’ or ‘comparison’ wage). It is expected that the higher RY relative to Y , the lower will be U , and captures an effect that can be described as relative deprivation, envy, jealousy or inequity (Clark and Oswald, 1996). Variations in work based utility are additionally explained by differences in individual specific characteristics, IND , job

⁷ This is nested in the ‘total’ utility function, $TU = tu(u(Y, H, RY, IND, JOB, EMP), v)$, where u is utility from work and v is utility from other sources and spheres of life (Clark and Oswald, 1996).

characteristics, *JOB*, and employer characteristics, *EMP* (the later two vectors characterizing the general work environment).⁸

In this paper we extend the elements in (2) as follows:

$$U = u(Y, H, RY, IND, JOB, EMP, HARASS) \quad (3)$$

where *HARASS* is the experience of racial harassment at work, assumed to be negatively related to *U*.

In this context, our self-reported measure of overall job satisfaction is taken to represent a direct proxy for *U*. Consequently, we estimate ordered probit models to determine the level of job satisfaction reported by individual nurses in terms of a latent variable (s^*) and the observed job satisfaction level (s) as follows:

$$s^* = \beta'_1 \ln Y + \beta'_2 H + \beta'_3 \ln RY + \beta'_4 IND2 + \beta'_5 JOB2 + \beta'_6 EMP2 + \beta'_7 HARASS + v \quad (4)$$

$$s = h \text{ if } T_{h-1} < s^* < T_h \quad h = 1, \dots, H-1 \quad v \sim N(0, 1)$$

where β_i ($i = 1 \dots 7$) are vectors of parameters and h denotes the level of job satisfaction. We code s as: (1) VERY DISSATISFIED, (2) DISSATISFIED, (3) NEITHER SATISFIED NOR DISSATISFIED and (4) SATISFIED. Equation (4) then describes the individual's unobserved propensity for job satisfaction (utility from work), s^* , given the seven vectors of exogenous variables. T_0 to T_{h-1} are estimated constant thresholds governing the movement along the job satisfaction index.

We estimate two versions of the model. In the BASIC model we restrict the elements in vectors β_3 , β_5 and β_6 to be zero and following previous studies include controls for age, gender, marital status, ethnic minority background and level of education in the individual characteristics vector *IND2*. The coefficient estimates associated with the frequency of work colleague and patient-led racial harassment (*HARASS*) therefore provide a benchmark effect of racial harassment on job satisfaction. If, however, the occurrence of frequent racial harassment is indicative of a workplace which offers employees a poor work environment in other respects, then this simple model will provide biased (upwards) estimates of the

⁸ The impact of relative wages on job satisfaction is comparatively unexplored by economists compared to the other elements in (2). This is probably due to the difficulty in deriving a relative wage measure. A discussion of the various psychological theories that provide the justification for including relative wages in job satisfaction models can be found in Clark and Oswald (1996).

effect of racial harassment on job satisfaction.⁹ Thus in our EXTENDED model we relax these restrictions and additionally control for other important aspects of the nursing working environment which are likely to impact on job satisfaction. The elements in vector JOB2 are being employed in a shift pattern which is not equal to the preferred pattern, having a degree of control over working hours, participating in unpaid overtime, undertaking work tasks above and below nursing grade, having experienced discrimination with regards to promotion or training, nursing specialty, past and present human development activities, tenure in current post and trade union membership. The type and size of employer, whether the employer encourages human capital activities and the percentage of ethnic minority staff at the workplace constitute EMP2.

Finally, a continuous relative wages variable is included in log form (RY). This relative wage measure is analogous to that of Clark and Oswald (1996), but in our case is based on the wages of other public sector employees in Britain rather than the entire employee labor force, conditional on observable human capital characteristics. It was constructed using data from the UK's Quarterly labor Force Survey (see Appendix A2 for details). The comparison with other public sector professions is pertinent since the whole debate about the relative pay of NHS is typically positioned with respect to the pay of public sector employees such as teachers, police and social workers.

Empirical Results

The coefficient estimates for the BASIC and EXTENDED models of job satisfaction are provided in Table 5. A likelihood ratio test indicates that the EXTENDED model is a significant improvement over the BASIC model ($\chi^2(25) = 161.56$; 1% critical value = 44.3) hence we focus our discussion on these results. As expected from theory, the lower the (log) weekly wage and the higher the (log) comparison weekly wage, the lower is the reported level of job satisfaction. Low rates of pay may signal to the nurse that they are not highly valued by employers which leads to reduced levels of job satisfaction. The second

⁹ This is akin to the debate about the effect of trade union membership on job satisfaction. If workplaces characterized by high levels of trade union membership also have better general work environments, then the exclusion of variables describing other aspects of the work environment will give biased (upwards) estimates of the effect of union membership on job satisfaction. For example, Gordon and Denisi (1995) find that once controls are made for working conditions in job satisfaction models no significant effect of union membership on job satisfaction is found.

effect is related to expectations of worth. The greater is the difference between a nurse's pay and others in comparable jobs then the less satisfied the nurse is likely to be. This effect is quantitatively more important than actual wages.

In contrast to the U-shaped relationship found for studies of the wider workforce, our results suggest that job satisfaction levels increase progressively with age amongst ethnic minority nurses in the British NHS. Those aged less than 35 years old are significantly less likely to be more satisfied with their job than nurses over the age of 49. The coefficients indicate a declining disparity from the base group with increasing age. Interestingly neither the sex of the nurse nor their marital status or ethnic group (except South Asians) significantly improve their levels of job satisfaction. Higher levels of qualifications also appear to be significantly associated with higher levels of job satisfaction amongst ethnic minority nurses in Britain.

Several job-related characteristics are statistically associated with reduced levels of job satisfaction. Specifically, ethnic minority nurses with a number of completed post-basic training spells, those required to work sub-optimal shift patterns, unpaid overtime and undertake tasks inappropriate to their grade and those working in the mental handicap specialty report lower levels of job satisfaction. In contrast, those nurses who have some control over their work patterns are significantly more likely to be more satisfied than those who do not.

Furthermore, ethnic minority nurses who have faced discrimination with regard to promotion and training are, not surprisingly, significantly less satisfied with their job than others who have not had such experiences. The magnitude of this coefficient indicates that this is the second most important determinant of job satisfaction. Nurses who work for a District General Hospital and those who have an employer who encourages human development activities are significantly more likely to report increased levels of job satisfaction.

[TABLE 5 ABOUT HERE]

It is clear from our multivariate analysis that the experience of racial harassment significantly reduces job satisfaction and frequent episodes of abuse imply a much lower level of job satisfaction than

infrequent occurrences. The strongest effects are due to racial harassment emanating from work colleagues, rather than from the more common source of patients and their families. Indeed, the coefficient on frequent racial harassment from work colleagues has the largest magnitude of all the estimated coefficients in the model, suggesting that it is the most important determinant.

Table 6 illustrates the strength of this effect by providing the predicted probability of reporting job satisfaction by source and frequency of racial harassment. Nurses who report frequent harassment from work colleagues (patients), holding other characteristics at their sample mean values, have a probability of being satisfied of .124 (.238) which compares to a probability of .456 (.470) for nurses experiencing no harassment. They are also more than seven (four) times as likely to report being very dissatisfied with their job, and nearly three times (more than twice) as likely to be dissatisfied than those who have never been racially harassed.

[TABLE 6 ABOUT HERE]

5. The Impact of Job Satisfaction on Intentions to Quit

Model and Explanatory Variables

There are now a large number of studies that have estimated the effect of wages and other work-related characteristics (e.g. marital status, education) on labor market turnover. Nursing represents perhaps the most researched profession in this regard (recent examples include, Ahlburg and Brown Mahoney, 1996; Parker and Rickman, 1995; Phillips, 1996; Schumacher, 1997).¹⁰ In contrast, there have been very few studies which have examined the role played by job satisfaction in quitting decisions (Brown and McIntosh, 1998; Clark *et al.*, 1999). One obvious reason for this is the lack of large-sample longitudinal data which can be used to identify both job satisfaction at wave t-1 and job turnover between waves t-1 and t. The most notable exception is Freeman (1978), who used panel data from the US National Longitudinal Survey (NLS, 1966-1971) and the Michigan Panel Survey of Income Dynamics (PSID, 1972-73). He found that reported job satisfaction was a significant determinant of quitting and quantitatively more important than wages. This relationship was confirmed by Akerlof *et al.* (1988) using

the NLS Older Men Survey, and more recently, by Clark *et al.* (1999) using data from the first ten waves of the German Socio-Economic Panel (1984-93).¹¹

An alternative approach to examining the relationship between job satisfaction and quitting behavior has been to use the responses from cross-sectional survey questions asking participants about their future employment expectations or intentions (i.e. ‘latent’ turnover). Gordon and Denisi (1995) use data from three public sector organizations in the US primarily to investigate the relationship between trade union membership and reported job satisfaction. They found, using one of their samples (721 full-time assistant, associate and full professors from Rutgers University collected in 1989-90) that job satisfaction was negatively and significantly related to intentions to quit the university faculty. Their estimates suggest that increasing the job satisfaction index by one standard deviation reduces the average probability of intending to quit from 0.27 to 0.19, whilst a one standard deviation decrease in job satisfaction increased the quitting probability to 0.38.

Laband and Lentz (1998) confirmed the significance of job satisfaction as a determinant of intentions to quit using a sample of 176 female lawyers collected by the American Bar Association’s Young Lawyers Division in 1990. Interestingly, and closely related to the issues addressed in this paper, Laband and Lentz (1998) also provide an insight into the impact of sexual harassment on the labor market outcomes for this group of female employees. In particular, they found strong evidence linking the experience of sexual harassment at the workplace (by supervisors, work colleagues and clients) to reduced job satisfaction and an increased probability of intending to quit the law firm.

Given the cross-sectional nature of our data, the model of quitting behavior we estimate is similar to Laband and Lentz (1998). Since we are not able to track nurses over a period of time and observe their actual quitting behavior, we use information on nurses’ intentions to quit in the three years following interview. The question which then arises is ‘How good a predictor of actual quitting is intended

¹⁰ Reviews of the literature on nurse turnover can be found for Britain in Gray and Phillips (1992) and for the US in Tai *et al.* (1998).

¹¹ Of course, economists are by no means the only group to study this relationship. We can also point to a substantial literature by psychologists, which has found a negative relationship between reported job satisfaction and quitting. Many of these studies, however, have been based on very small samples of employees with little conformity in the control variables used (Clark *et al.*, 1999). McEvoy and Cascio (1985) and Carsten and Spector (1987) provide evidence from meta-analyses, and Steel and Ovalle (1984), Hom *et al.* (1992) and Warr (1998) review the literature.

quitting"? To answer this question we rely on a small longitudinal study of NHS nurses conducted by Mercer (1979). Although dated, Mercer found that quitting intentions were the strongest predictor of actual turnover, with over 83% of the 17% of nurses reporting an intention to quit having done so within the following year. Steel and Ovalle (1984) also provide some confirmation of this evidence more generally, using a meta-analysis of the large number of psychology studies that have examined the relationship between behavioral intentions and employee turnover.

Given the dichotomous nature of our intention to quit variable (i.e. STAYER = 0, QUITTER = 1) we use a binary probit model in order to estimate the probability of leaving the NHS, conditional on reported job satisfaction and other relevant individual and work-related characteristics. Nurses are assumed to acquire information about their current job (such as the propensity to experience racial harassment) as well as outside employment and non-labor market opportunities (i.e. child-rearing, full-time education). If they maximize their expected lifetime utility the probability of quitting will be inversely related to the levels of satisfaction in the current job (indicative of utility gained from work) and positively associated with the expected utility derived from engaging in other opportunities outside the current work environment.

Let U_C be the utility derived from current employment, and $E(U_{OUT})$ be the expected utility gained from the most favorable opportunity outside of the NHS. An intention to quit will be recorded in the survey if $E(U_{OUT}) > U_C$. Therefore, the model can be denoted by:

$$Q^* = A + \alpha'_1 IND3 + \alpha'_2 JOB3 + \alpha'_3 EMP3 + \alpha'_4 SAT + v \quad v \sim N(0,1) \quad (5)$$

$$Q^p = 1 \text{ iff } E(U_{OUT}) > U_C$$

$$Q^p = 0 \text{ iff } E(U_{OUT}) \leq U_C$$

where Q^p is a binary variable indicating an intention to quit, and v is an error term that is standard normally distributed.

In order to gain a baseline estimate of the effect of job satisfaction on intentions to quit, we begin by estimating a BASIC model that restricts the coefficients associated with the vectors JOB3 and EMP3 to be zero. IND3 includes dummy variables for age, gender, marital status, ethnicity and highest

qualification, and the continuous variable number of children (and its square). We might expect that younger nurses and the more educated would have the greatest labor market opportunities outside of the NHS. The vector of characteristics SAT comprises dummy variables for the four levels of reported job satisfaction, with very dissatisfied acting as the comparison category.

In order to capture as much variation in intentions to quit as possible, the EXTENDED model includes dichotomous variables for nursing seniority or grade, part-time work status, tenure in current grade and post, trade union membership and nursing specialty (JOB3).¹² Since senior and manager nursing grades require a considerable amount of nursing-specific human capital investment (on-the-job experience and post-basic training), which would be lost in professions outside of nursing, then we might expect that highly trained nurses would be less likely to quit the NHS than more junior nurses. However, it is also the case that a substantial component of senior nurses' job tasks are management and human resource management related, which are general skills applicable to many areas of the labor market and hence potentially increasing their likelihood of quitting the NHS. The vector EMP3 includes controls for the type and size of employer, whether there is an equal opportunities policy at the workplace and ethnic minority density. Finally, eight regional dummy variables are also included in the EXTENDED model in order to capture regional differences in labor market opportunities.

Empirical Results

The estimates from the BASIC and EXTENDED binary probit models are shown in Table 7. However, a likelihood ratio test indicates that the inclusion of the job and employer-related variables (in the EXTENDED model is not significant improvement over the BASIC model ($\chi^2(25) = 28.37$; 10%

¹² Model (5) assumes that the $\text{COV}(\varepsilon, \nu) = 0$. In other words we assume that no unobservable individual heterogeneity exists which simultaneously determines job satisfaction and intentions to quit. For example, nurses who are experiencing poor physical or mental health, which is unobserved in the survey, may have both a low propensity for job satisfaction and a high likelihood of intending to quit. In this case, the coefficients on the job satisfaction indicators in the quitting model would capture not only the effect of job satisfaction on quitting intentions but also the negative impact of poor health. In order to investigate this possibility we estimated a bivariate probit model which jointly estimates job satisfaction and quitting intentions, allowing for correlation in the error terms of (4) and (5). Since this model requires two binary outcomes, we collapsed our ordered job satisfaction measure into a SATISFIED variable that takes the value 1 if a nurse reports satisfaction with her job, and 0 otherwise. Using number of children (and squared) and eight regional dummy variables as identification restrictions, we found an insignificant correlation between the two error terms which suggests that unobservable heterogeneity is not statistically important in this model. Results are available from the authors on request.

critical value = 34.38). However, the full model results are presented so that it can be clearly seen which job or employer-related characteristics are significantly associated with quitting intentions and which are not.¹³ The mean probability of quitting for an ethnic minority nurse (using the EXTENDED model estimates evaluated at average characteristic values) is 0.534.

In both sets of estimates nurses aged less than 30 and 30-34 are significantly more likely to indicate an intention to leave nursing in the NHS than nurses over the age of 50. This suggests that the NHS is at a greater risk of losing newly qualified nurses than those approaching retirement. Indeed nurses aged less than 30 (aged 30-34) have a 0.274 (0.172) increased average quitting probability compared to the base category.¹⁴ Nurses aged 45-49 are significantly less likely to indicate an intention to quit than those over 50 years old.

[TABLE 7 ABOUT HERE]

Quitting intentions are significantly related to the number of children with a U-shaped pattern. Having a few children decreases, but having many children increases the likelihood of a nurse intending to leave the NHS in the near future. The sex, ethnic group and level of qualifications of these nurses are statistically unrelated to their intentions to quit. However, being married is significantly associated with a reduced probability of leaving.

The EXTENDED model estimates indicate that Nurse Managers and Senior Nurses are significantly more likely to intend leaving the NHS than Registered General Staff nurses. Their marginal increases in quitting probabilities are 0.126 and 0.128, respectively, over that of an otherwise average Registered General Staff nurse. This is a cause for considerable concern since these individuals are the most experienced and highly qualified nurses, and therefore the most difficult to replace. Pediatric nurses are significantly less likely to quit (marginal effect on mean quitting probability = - 0.188) than those in the general medical specialty. The only other statistically significant individual, job or employer-related

¹³ If the EXTENDED model is estimated without vector EMP3, it is a significant improvement over the BASIC model.

¹⁴ This finding is not only due to nurses intending to leave for child rearing, despite the female-dominated nature of nursing. When the model is estimated for male nurses alone, younger nurses are still significantly more likely to intend quitting the NHS.

characteristics in the EXTENDED model are for nurses aged 35-39, tenure in current post and for some regional dummies (all at the 10% level only).

Importantly, increased levels of job satisfaction are significantly associated with reductions in intentions to quit amongst ethnic minority nurses in the NHS. The effects are quantitatively large with nurses who are satisfied (neither satisfied nor dissatisfied) overall with their job having a probability of quitting 0.227 (0.155) lower than those who are very dissatisfied.¹⁵ Given the low levels of job satisfaction amongst ethnic minority nurses (see Table 2) and the nurse retention problems in the NHS these findings provide considerable cause for concern.

6. Concluding Remarks

This paper provides some of the first evidence on the incidence and determinants of racial harassment at the workplace and, through its association with reduced levels of job satisfaction, its impact on intentions to quit. We have used a large and informative survey of British NHS nurses collected in 1994, which over-samples those from ethnic minority backgrounds. Our results indicate that racial harassment is a considerable problem in the NHS. Nearly 40% of all ethnic minority nurses in our sample report having experienced some racial harassment from work colleagues in their careers. This is a frequent occurrence for 6.5% of nurses. Patients and their families have racially harassed nearly 65% of ethnic minority nurses at some point in their careers with almost 10% reporting that such abuse is a regular occurrence. Blacks (especially Black Africans) are more likely to report having been racially harassed than Asian nurses.

Frequent racial harassment by staff is the most severe problem for nurses aged 35-44 years old, male, married with higher general qualifications. Registered General Staff nurses, those who work for NHS hospital trusts or employers who do not have an equal opportunities policy, and where there is a high

¹⁵ In this paper, we have modelled the impact of racial harassment on quitting behavior as operating through a reduction in reported job satisfaction (interpreted as a loss of utility from work). An alternative approach, would be to include both job satisfaction and racial harassment measures directly into the quitting model (See Laband and Lentz, 1998). When the model is estimated as such, the marginal effect of job satisfaction on quitting intentions is slightly reduced. However, the marginal effect of racial harassment, holding constant job satisfaction, becomes insignificant in the case of harassment from patients whilst the probability of intending to quit increases by 0.093 for frequent racial harassment from staff and by 0.055 in the case of infrequent harassment from this source. These results provide some justification for our modelling framework.

percentage of ethnic minority staff at the workplace, are also more likely to experience this form of harassment. Clearly NHS employers should pay particular attention to these groups of nurses in their monitoring of the working environment and should implement equal opportunities policies and training as a priority.

Racial harassment by patients or their families is experienced more frequently by younger ethnic minority nurses, those working some night shifts, those in the care of the elderly or general medical specialties, those employed by Family Health Service Authorities and those who work in high ethnic minority density regions. These groups of nurses should be provided with training in how to handle such difficult encounters with patients. Furthermore, employers should be required to identify and implement measures to protect vulnerable employees and reduce the frequency of such episodes immediately.

According to our estimates, the most important determinants of job satisfaction are the experience of racial harassment at work and having faced discrimination in promotion and training. Frequent episodes of racial harassment from work colleagues have the largest detrimental effect on job satisfaction levels. Ethnic minority nurses who report frequent racial harassment by staff are seven times as likely to be very dissatisfied with their job, and nearly three times as likely to be dissatisfied, than those who have never suffered such abuse (for whom job satisfaction levels are strikingly low in any case).

Nurses who are very dissatisfied with their job also have an increased probability of intending to quit the NHS of 0.222, compared to nurses who are satisfied. They also have a 0.151 higher probability of leaving than nurses who are neither satisfied nor dissatisfied. Since racial harassment is the quantitatively largest determinant of levels of job satisfaction, these figures suggest that reducing the frequency of such attacks, particularly from work colleagues, may play an important part in the struggle to retain nurses in the British NHS.

Table 1. The Incidence of Racial Harassment at the Workplace by Source and Ethnic Minority Group

Percentage	Racial Harassment from Staff			Racial Harassment from Patients			Sample Size
	Frequent	Infrequent	Never	Frequent	Infrequent	Never	
Black African	8.3 (1.5)	40.1 (2.7)	51.5 (2.8)	14.5 (2.0)	54.9 (2.8)	30.6 (2.6)	324
Black Caribbean	5.6 (1.1)	29.7 (2.1)	64.6 (2.2)	9.1 (1.3)	58.8 (2.3)	32.1 (2.2)	461
South Asian	8.4 (2.0)	30.5 (3.4)	61.1 (3.6)	5.8 (1.7)	50.5 (3.6)	43.7 (3.6)	190
South East Asian	4.0 (1.3)	28.1 (3.0)	68.0 (3.1)	7.5 (1.7)	48.7 (3.3)	43.9 (3.3)	228
<i>Total Sample</i>	6.5 (0.7)	32.3 (1.4)	61.2 (1.4)	9.7 (0.9)	54.5 (1.4)	35.7 (1.4)	1203

Note: Standard errors in parenthesis

Table 2. Percentage of Ethnic Minority Nurses Reporting Job Satisfaction by Source and Frequency of Racial Harassment

Percentage	Racial Harassment from Staff			Racial Harassment from Patients			Sample Size
	Frequent	Infrequent	Never	Frequent	Infrequent	Never	
Black African	14.8 (7.0)	24.6 (3.8)	47.9 (3.9)	10.6 (4.6)	38.8 (3.7)	42.4 (5.0)	324
Black Caribbean	11.5 (6.4)	27.7 (3.8)	44.9 (2.9)	28.6 (7.1)	36.2 (2.9)	43.9 (4.1)	461
South Asian	12.5 (8.5)	31.0 (6.1)	51.7 (4.7)	36.4 (15.2)	36.5 (4.9)	49.4 (5.5)	190
South East Asian	11.1 (11.1)	45.3 (6.3)	41.9 (4.0)	47.1 (12.5)	32.4 (4.5)	51.1 (5.0)	228
<i>Total Sample</i>	12.8 (3.8)	30.1 (2.3)	46.1 (1.8)	24.8 (4.0)	36.3 (1.9)	46.3 (2.4)	1203

Note: Standard errors in parenthesis

Table 3. Percentage of Ethnic Minority Nurses Reporting an Intention to Quit by Job Satisfaction

Percentage	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied or Very Dissatisfied	Sample Size
Black African	45.7 (4.7)	54.3 (3.5)	61.2 (5.9)	324
Black Caribbean	52.0 (3.8)	58.4 (2.9)	58.1 (5.1)	461
South Asian	51.3 (5.6)	56.4 (4.8)	66.7 (8.8)	190
South East Asian	38.9 (5.0)	51.6 (5.2)	75.0 (6.9)	228
<i>Total Sample</i>	47.6 (2.3)	54.2 (2.2)	63.2 (3.2)	1203

Note: Standard errors in parenthesis

Table 4. Ordered Probit Estimates of the Determinants of Racial Harassment at the NHS Workplace

Explanatory Variable	RACIAL HARASSMENT FROM STAFF		RACIAL HARASSMENT FROM PATIENTS	
	Coefficient	Std. Error	Coefficient	Std. Error
Individual characteristics				
Age < 30	0.193	0.177	0.655	0.169***
Age 30-34	-0.001	0.157	0.543	0.147***
Age 35-39	0.274	0.136**	0.565	0.130***
Age 40-44	0.246	0.112**	0.333	0.107***
Age 45-49	-0.008	0.107	0.239	0.101**
Male	0.218	0.121*	0.019	0.114
Married	0.137	0.081*	-0.045	0.076
Black African	0.418	0.113***	0.406	0.106***
Black Caribbean	0.194	0.108*	0.296	0.099***
South Asian	0.304	0.129**	-0.023	0.122
Higher qualification ('A' level or degree)	0.359	0.123***	0.134	0.116
Middle qualification ('O' level or equivalent)	0.151	0.101	0.132	0.093
Job-related characteristics				
Nurse manager (grades H and I)	-0.003	0.172	-0.111	0.170
Senior nurse (grades F and G)	-0.239	0.098**	0.099	0.093
State Enrolled Staff nurse (grades C, D, and E)	-0.255	0.106**	0.021	0.100
Current employed part-time (< 35 hours)	-0.111	0.096	-0.051	0.090
Tenure in current post (in months)	0.003	0.002*	0.003	0.002**
Tenure in current post squared / 100	-0.001	0.001*	-0.001	0.000*
Member of a trade union or professional body	0.041	0.145	0.073	0.135
Day shift pattern only	-0.043	0.113	-0.196	0.106*
Mixed shift pattern but with no nights	0.125	0.093	-0.152	0.089*
Other shift pattern but with no nights	-0.056	0.174	-0.166	0.160
Pediatrics specialty	-0.113	0.175	-0.483	0.170***
Midwifery specialty	-0.095	0.119	-0.234	0.112**
Mental illness specialty	-0.329	0.111***	0.005	0.102
Mental handicap specialty	-0.101	0.152	-0.610	0.149***
Care of the elderly specialty	-0.069	0.108	0.178	0.099*
Primary and community specialty	-0.145	0.143	-0.221	0.134*
Other specialty	0.049	0.235	0.124	0.224
Employer-related characteristics				
Employed by a General District Hospital	-0.224	0.097**	-0.004	0.069
Employed by a Family Health Service Authority	-0.081	0.217	0.485	0.205**
Size of employer / 100 (in terms of nursing staff)	-0.001	0.000*	-0.001	0.001
Equal opportunities policy at workplace	-0.151	0.086*	0.099	0.082
Percentage of ethnic minorities in region	-	-	0.007	0.002***
Percentage of ethnic minority staff at workplace	0.012	0.005***	-	-
Sample	1203		1203	
Log Likelihood	-1054.07		-1182.74	
Model χ^2	90.23***		115.70***	
Degrees of freedom (χ^2 test)	34		34	

Notes: * Statistically significant at the .10 level; ** at the .05 level; *** at the .01 level. – indicates that the variable is not included in the model. Four constant thresholds were also estimated. Our base categories are: age 50+; female; single; South East Asian; no general qualifications; Registered General Staff nurse (grades D and E); currently employed full-time, not a member of a trade or professional body, mixed shift pattern with nights; general medical specialty; employed by a NHS Hospital Trust; no equal opportunities policy at workplace.

Table 5. Ordered Probit Estimates of the Determinants of Job Satisfaction for Nurses

Explanatory Variables	BASIC MODEL		EXTENDED MODEL	
	<i>Coefficient</i>	<i>Std. Error</i>	<i>Coefficient</i>	<i>Std. Error</i>
Log weekly wage (£)	0.476	0.186***	0.409	0.225*
Currently employed part-time (< 35 hours)	0.373	0.164**	0.375	0.217*
Log comparison weekly wage (£)	-	-	-0.534	0.225**
<i>Individual characteristics</i>				
Age < 30	-0.317	0.151**	-0.440	0.176**
Age 30-34	-0.263	0.132**	-0.260	0.145*
Age 35-39	-0.223	0.120*	-0.172	0.129
Age 40-44	-0.161	0.097*	-0.086	0.107
Age 45-49	-0.061	0.095	-0.018	0.100
Male	-0.095	0.097	0.068	0.127
Married	0.019	0.073	0.023	0.075
Black African	-0.015	0.101	0.087	0.114
Black Caribbean	-0.043	0.095	0.018	0.108
South Asian	0.142	0.116	0.221	0.128*
Higher qualification ('A' level or degree)	-0.028	0.106	0.419	0.208**
Middle qualification ('O' level or equivalent)	-0.004	0.086	0.180	0.105*
<i>Job-related characteristics</i>				
Currently undertaking post-basic training	-	-	0.068	0.107
Number of completed post-basic training spells	-	-	-0.067	0.031**
Tenure in current post (in months)	-	-	-0.001	0.002
Tenure in current post squared / 100	-	-	0.000	0.001
Member of a trade union or professional body	-	-	-0.197	0.135
Actual work shift pattern is not equal to preferred	-	-	-0.286	0.069***
Has some control over working shifts and hours	-	-	0.115	0.070*
Often participates in unpaid overtime	-	-	-0.243	0.135*
Often undertakes nursing tasks above grade	-	-	-0.215	0.069***
Often undertakes nursing tasks below grade	-	-	-0.266	0.071***
Faced discrimination in promotion and training	-	-	-0.536	0.091***
Pediatrics specialty	-	-	0.178	0.163
Midwifery specialty	-	-	-0.147	0.107
Mental illness specialty	-	-	0.072	0.102
Mental handicap specialty	-	-	-0.251	0.142*
Care of the elderly specialty	-	-	-0.136	0.098
Primary and community specialty	-	-	0.141	0.119
Other specialty	-	-	0.016	0.224
<i>Employer-related characteristics</i>				
Employed by a General District Hospital	-	-	0.174	0.088**
Employed by a Family Health Service Authority	-	-	0.225	0.208
Size of employer / 100 (in terms of nursing staff)	-	-	-0.000	0.000
Employer encourages human development activities	-	-	0.295	0.076***
Equal opportunities policy at workplace	-	-	0.020	0.080
Percentage of ethnic minority staff at workplace	-	-	0.002	0.002

Table 5 (Continued)

<i>Racial harassment characteristics</i>				
Frequent racial harassment from work colleagues	-0.955	0.140***	-0.589	0.147***
Infrequent racial harassment from work colleagues	-0.339	0.074***	-0.174	0.078**
Frequent racial harassment from patients	-0.263	0.125**	-0.228	0.115*
Infrequent racial harassment from patients	-0.142	0.073*	-0.131	0.077*
Sample		1203		1203
Log Likelihood		-1340.30		-1260.54
Model χ^2		120.31***		279.84***
Degrees of freedom (χ^2 test)		18		43

Notes: * Statistically significant at the .10 level; ** at the .05 level; *** at the .01 level. – indicates that the variable is not included in the model. Three constant thresholds were also estimated. Our base categories are: age 50+; female; single; South East Asian; no general qualifications; currently employed full-time; not currently training; not a member of trade union of professional body; actual shift pattern is equal to preferred; has no control over working shifts and hours; does not often participate in unpaid overtime; does not often undertake nursing tasks above grade; does not often undertake nursing tasks below grade; has not faced discrimination in promotion or training; general medical specialty; employed by a NHS Hospital Trust; employer does not encourage human development activities; no equal opportunities policy at workplace; never been racially harassed by work colleagues and never been racially harassed by patients.

Table 6. The Predicted Impact of Racial Harassment on the Probability of Reporting Job Satisfaction by the Source of Racial Harassment

Probability	Satisfied	Neither	Dissatisfied	Very Dissatisfied
Frequent harassment from work colleagues	0.124	0.387	0.272	0.218
Infrequent harassment from work colleagues	0.310	0.448	0.170	0.072
No harassment from work colleagues	0.456	0.410	0.104	0.030
Frequent harassment from patients	0.238	0.429	0.206	0.126
Infrequent harassment from patients	0.360	0.437	0.146	0.057
No harassment from patients	0.470	0.394	0.102	0.034
<i>Total Sample</i>	0.387	0.421	0.136	0.056

Note: Calculated holding all other explanatory variables at their sample mean value.

Table 7. Binary Probit Estimates of Intentions to Quit

Explanatory Variables	BASIC MODEL		EXTENDED MODEL	
	Coefficient	Std. Error	Coefficient	Std. Error
Individual characteristics				
Age < 30	0.580	0.178***	0.770	0.198***
Age 30-34	0.328	0.153**	0.453	0.169***
Age 35-39	0.144	0.143	0.282	0.153*
Age 40-44	-0.168	0.119	-0.120	0.125
Age 45-49	-0.240	0.109**	-0.207	0.113*
Male	-0.009	0.110	-0.031	0.128
Married	-0.137	0.083*	-0.148	0.088*
Number of children	-0.173	0.100*	-0.189	0.103*
Number of children squared	0.069	0.033**	0.074	0.034**
Black African	-0.056	0.116	-0.009	0.121
Black Caribbean	0.024	0.108	0.023	0.112
South Asian	-0.097	0.131	-0.088	0.136
Higher qualification ('A' level or degree)	0.037	0.116	-0.081	0.130
Middle qualification ('O' level or equivalent)	0.118	0.096	0.066	0.103
Job-related characteristics				
Nurse manager (grades H and I)	-	-	0.326	0.182*
Senior nurse (grades F and G)	-	-	0.328	0.103***
State Enrolled Staff nurse (Grade C, D, and E)	-	-	0.028	0.112
Currently employed part-time (< 35 hours)	-	-	0.110	0.103
Tenure in current post and grade (in months)	-	-	0.001	0.000*
Member of a trade union or professional body	-	-	0.131	0.152
Pediatrics specialty	-	-	-0.478	0.185***
Midwifery specialty	-	-	-0.083	0.124
Mental illness specialty	-	-	-0.026	0.117
Mental handicap specialty	-	-	-0.104	0.169
Care of the elderly specialty	-	-	-0.074	0.112
Primary and community specialty	-	-	-0.068	0.137
Other specialty	-	-	0.193	0.250
Employer-related characteristics				
Employed by a General District Hospital	-	-	0.025	0.105
Employed by a Family Health Service Authority	-	-	-0.017	0.227
Size of employer / 100 (in terms of nursing staff)	-	-	0.001	0.001
Equal opportunities policy at workplace	-	-	-0.032	0.091
Percentage of ethnic minorities in region	-	-	0.006	0.006
Regional dummy variables (8)	-	-	YES	YES
Job satisfaction characteristics				
Satisfied overall with job	-0.526	0.176***	-0.577	0.180***
Neither satisfied or dissatisfied overall with job	-0.379	0.175**	-0.392	0.178**
Dissatisfied overall with job	-0.253	0.194	-0.303	0.198
Constant	0.574	0.212	0.209	0.210
Sample	1203		1203	
Log Likelihood	-795.22		-781.03	
Model χ^2	71.81		100.18	
Degrees of freedom (χ^2 test)	17		42	

Notes: * Statistically significant at the .10 level; ** at the .05 level; *** at the .01 level. – indicates that the variable is not included in the model. Our base categories are: age 50+; female; single; South East Asian; no general qualifications; Registered General Staff nurse (grades D and E); currently employed full-time; not a member of a trade union or professional body; general medical specialty; employed by a NHS Hospital Trust; no equal opportunities policy at workplace and very dissatisfied with job.

APPENDIX A – Sample Characteristics

Table A1. Sample Characteristics

Explanatory Variable	<i>ETHNIC MINORITY</i>		<i>WHITE</i>			
	<i>Mean</i>	<i>Std. Error</i>	<i>Mean</i>	<i>Std. Error</i>	<i>Min.</i>	<i>Max.</i>
<i>Individual characteristics</i>						
Age < 30	0.067	0.007	0.206	0.004	0	1
Age 30-34	0.088	0.008	0.214	0.004	0	1
Age 35-39	0.116	0.009	0.165	0.004	0	1
Age 40-44	0.244	0.012	0.120	0.003	0	1
Age 45-49	0.253	0.013	0.121	0.003	0	1
Age 50+	0.232	0.012	0.168	0.004	0	1
Married	0.690	0.013	0.752	0.005	0	1
Male	0.165	0.011	0.066	0.003	0	1
Number of dependent child(ren) under 16 years	0.893	0.031	0.697	0.010	0	7
Black African	0.269	0.013	-	-	0	1
Black Caribbean	0.383	0.014	-	-	0	1
South Asian	0.158	0.011	-	-	0	1
South East Asian	0.190	0.013	-	-	0	1
Higher qualification ('A' level or degree)	0.204	0.012	0.206	0.004	0	1
Middle qualification ('O' level or equivalent)	0.564	0.014	0.643	0.005	0	1
No qualification	0.232	0.013	0.151	0.004	0	1
<i>Job-related characteristics</i>						
Weekly (gross) wage (£)	278.56	2.593	304.91	0.651	96.40	463.77
Nurse Manager (grades H and I)	0.062	0.007	0.063	0.003	0	1
Senior nurse (grades F and G)	0.370	0.014	0.373	0.005	0	1
Registered General Staff nurse (grades D and E)	0.314	0.013	0.370	0.005	0	1
State Enrolled Staff nurse (grades C, D, and E)	0.254	0.013	0.212	0.004	0	1
Currently employed part-time (< 35 hours)	0.219	0.012	0.380	0.005	0	1
Currently undertaking post-basic training	0.115	0.009	0.125	0.003	0	1
Number of completed post-basic training spells	0.954	0.034	0.895	0.012	0	12
Tenure in current post at current grade (in months)	113.36	2.380	77.34	0.781	0	396
Member of a trade union or professional body	0.934	0.007	0.938	0.003	0	1
Day shift pattern only	0.271	0.013	0.298	0.004	0	1
Mixed shift pattern with nights	0.450	0.012	0.344	0.005	0	1
Mixed shift pattern but with no nights	0.227	0.012	0.289	0.005	0	1
Other shift pattern but with no nights	0.052	0.007	0.069	0.003	0	1
Actual work shift pattern is not equal to preferred	0.438	0.014	0.387	0.005	0	1
Has some control over working shift and hours	0.647	0.013	0.776	0.004	0	1
Often participates in unpaid overtime	0.067	0.007	0.101	0.003	0	1
Often undertakes nursing tasks above grade	0.515	0.014	0.470	0.005	0	1
Often undertakes nursing tasks below grade	0.543	0.013	0.536	0.005	0	1
Faced discrimination in promotion and training	0.180	0.011	0.005	0.001	0	1
General medicine specialty	0.292	0.013	0.420	0.005	0	1
Pediatrics specialty	0.046	0.006	0.071	0.003	0	1
Midwifery specialty	0.137	0.010	0.127	0.003	0	1
Mental illness specialty	0.198	0.011	0.069	0.003	0	1
Mental handicap specialty	0.072	0.007	0.021	0.002	0	1
Care of the elderly specialty	0.149	0.010	0.095	0.003	0	1
Primary and community specialty	0.166	0.011	0.200	0.004	0	1
Other specialty	0.024	0.004	0.036	0.002	0	1
<i>Employer-related characteristics</i>						
Employed by a General District Hospital	0.182	0.011	0.207	0.004	0	1
Employed by a Family Health Service Authority	0.043	0.006	0.080	0.003	0	1
Employed by a NHS Hospital Trust	0.775	0.012	0.713	0.005	0	1
Size of employer (in terms of nursing staff)	1134.01	19.30	1071.64	8.34	44	2915
Employer encourages human development activities	0.331	0.012	0.418	0.005	0	1
Equal opportunities policy at workplace	0.761	0.012	0.764	0.004	0	1

Table A1. Sample Characteristics (Continued)

Percentage of ethnic minorities in region	11.76	0.247	-	-	0.43	25.64
Percentage of ethnic minority staff at workplace	26.31	0.511	-	-	1.1	65.4
South London	0.203	0.012	0.159	0.003	0	1
North London	0.300	0.013	0.148	0.004	0	1
East Anglia and Oxford	0.096	0.009	0.098	0.003	0	1
West Midlands	0.105	0.009	0.141	0.004	0	1
Trent	0.040	0.006	0.085	0.003	0	1
North West	0.063	0.007	0.130	0.004	0	1
North and Yorkshire	0.072	0.008	0.091	0.003	0	1
Other	0.121	0.009	0.155	0.004	0	1
Sample	1203		9220			

APPENDIX B – Derivation of Comparison Wage Measure

In order to calculate our measure of the ‘comparison’ wage for NHS nurses (i.e. what a ethnic minority nurse might expect to earn, on average, if employed in a comparable public sector profession) we have used data from the Quarterly Labour Force Survey (QLFS) of the United Kingdom undertaken in the Spring of 1994 (matching the date of the nursing survey). The QLFS, introduced in 1992, is a nationally representative survey whose principal aim is to produce a set of national (and regional) labor market statistics (mainly unemployment figures) for use by government departments. Each quarter approximately 64,000 households are surveyed eliciting information on some 160,000 individuals over the age of 16. A panel element is incorporated into the QLFS with each individual being interviewed over five successive quarters. Information on wages is only obtained from those about to leave the survey (or 20% of each quarters’ sample). Selecting individuals in aged 21 to 60, in public sector employment (PUBLIC=2), in wave 5 (THISWV = 5), we obtained a sample of 1876 individuals. A comparison wage measure was constructed by estimating a simple log weekly wage regression for our sample of public sector employees, controlling for age (and age squared), gender, ethnicity, marital status and highest qualification and part-time status. Using the estimated parameters from this model, we mapped the predicted weekly wage, conditional on the same set of individual characteristics, into the nursing sample. This provides us with a continuous measure of the ‘comparison wage’, which we include as an additional covariate in the ordered probit job satisfaction models.

References

- Ahlburg, D., and C. Brown Mahoney. 1996. "The Effects of Wages on the Retention of Nurses." *Canadian Journal of Economics* 29: S126-S129.
- Akerlof, G., A. Rose and J. Yellen. 1988. "Job Switching and Job Satisfaction in the US Labor Market." *Brookings Papers on Economics Activity*, 2: 495-582.
- Akinsanya, J. 1988. "Ethnic Minority Nurses, Midwives and Health Visitors: What role for them in the National Health Services?" *New Community* 14: 444-50.
- Audit Commission. 1997. *Finders, Keepers. The Management of Staff Turnover in the NHS Trusts*. London, Audit Commission.
- Bartel, A. 1981. "Race Differences in Job Satisfaction: A Reappraisal." *Journal of Human Resources* 16: 294-303.
- Baxter, C. 1988. *The Black Nurse: An Endangered Species*. Cambridge, Training in Health and Race, UK.
- Beacon, S., S. Virdee, and A. Hagell. 1995. *Nursing in a Multi-Ethnic NHS*. London, Policy Studies Institute.
- Bender, K., and P. Sloan. 1998. "Job Satisfaction, Trade Unions, and Exit-Voice Revisited." *Industrial and Labor Relations Review* 51: 222-40.
- Blackaby, D., K. Clark, D. Leslie and P. Murphy. 1994. "Black-White Male Earnings and Employment Prospects in the 1970s and 1980s." *Economics Letters* 46: 273-79.
- Blackaby, D., S. Drinkwater, D. Leslie and P. Murphy. 1997. "A Picture of Male and Female Unemployment among Britain's Ethnic Minorities." *Scottish Journal of Political Economy* 44: 182-97.
- Blackaby, D., D. Leslie, P. Murphy and N. O'Leary. 1998. "The Ethnic Wage Gap and Employment Differentials in the 1990s: Evidence for Britain." *Economics Letters* 58: 97-103.
- Blackaby, D., D. Leslie, P. Murphy and N. O'Leary. 1999. "Unemployment amongst Britain's Ethnic Minorities." *Manchester School* 97: 1-20.
- Blanchflower, D., and A. Oswald. 1998. "What makes an Entrepreneur?" *Journal of Labor Economics* 16: 26-60.
- Brown, D., and S. McIntosh. 1998. "If you're Happy and you know it ... Job Satisfaction in the Low Wage Service Sector." Discussion Paper 405, CEPR, London.
- Cappelli, P., and P. Sherer. 1988. "Satisfaction, Market Wages, and Labor Relations: An Airline Study." *Industrial Relations* 27: 56-73.
- Carsten, J., and P. Spector. 1987. "Unemployment, Job Satisfaction, and Employee Turnover: A Meta-Analytic Test of the Muchinsky Model." *Journal of Applied Psychology* 72: 374-381.

- Clark, A. 1996. "Job Satisfaction in Britain." *British Journal of Industrial Relations* 34: 189-217.
- Clark, A. 1997. "Job Satisfaction and Gender: Why are Women so Happy at Work?" *Labour Economics* 4: 341-72.
- Clark, A., and A. Oswald. 1996. "Satisfaction and Comparison Income." *Journal of Public Economics* 61: 359-381.
- Clark, A., A. Oswald and P. Warr. 1996. "Is Job Satisfaction U-Shaped in Age?" *Journal of Occupational and Organizational Psychology* 69: 57-81.
- Clark, A., Y. Georgellis and P. Sanfey. 1999. "Job Satisfaction, Wage Changes and Quits: Evidence from Germany." *Research in Labor Economics* 17 (forthcoming).
- Clark, K., and S. Drinkwater. 1998. "Ethnicity and Self-Employment in Britain." *Oxford Bulletin of Economics and Statistics* 60: 383-407.
- Commission for Racial Equality. 1995. *Racial Harassment at Work: What Employers can do about it.* London, Commission for Racial Equality.
- Davidson, R., and J. MacKinnon. 1993. *Estimation and Inference in Econometrics*. New York, Oxford University Press.
- Department of Health. 1998a. *Tackling Racial Harassment in the NHS a Plan for Action*. London.
- Department of Health. 1998b. *Working Together: Securing a Quality Workforce for the NHS*. London.
- Ellis, B. 1990. *Racial Equality: The Nursing Profession*. London, Kings Fund Equal Opportunities Task Force.
- Freeman, R. 1978. "Job Satisfaction as an Economic Variable." *American Economic Review* 68: 135-41.
- Gordon, M., and A. Denisi. 1995. "A Re-examination of the Relationship between Union Membership and Job Satisfaction." *Industrial and Labor Relations Review* 48: 222-36.
- Gray, A., and V. Phillips. 1992. "Explaining NHS Staff Turnover: A Local Labour Market Approach." London, London School of Hygiene and Tropical Medicine (final report from the Department of Health).
- Greene, W. 1993. *Econometric Analysis*. 2nd Edition, Macmillan.
- Hammermesh, D. 1977. "Economic Aspects of Job Satisfaction." In O. Ashenfelter and W. Oates (eds.) *Essays in Labor Market Analysis*, New York, John Wiley.
- Hampton, M. and J. Heywood. 1999. "The Determinants of Perceived Underpayment: the role of racial comparisons", *Review of Social Economy* 57: 141-155.
- Hom, P., and F. Caranikas-Walder, G. Prussia and R. Griffeth. 1992. "A Meta-Analytic Structural Equations Analysis of a Model of Employee Turnover." *Journal of Applied Psychology* 77: 890-909.
- Idson, T. 1990. "Establishment Size, Job Satisfaction and the Structure of Work." *Applied Economics* 22: 1007-18.
- Laband, D., and B. Lentz. 1998. "The Effects of Sexual Harassment on Job Satisfaction, Earnings, and Turnover among Female Lawyers." *Industrial and Labor Relations Review* 51: 594-607.

- Lader, D. 1995. *Qualified Nurses, Midwives and Health Visitors*. London, Department of Health.
- McEvoy, G., and W. Cascio. 1985. "Strategies for Reducing Employee Turnover: A Meta-Analysis." *Journal of Applied Psychology* 70: 342-53.
- Meng, R. 1990. "The Relationship between Unions and Job Satisfaction." *Applied Economics* 22: 1635-48.
- Mercer, G. 1979. *The Employment of Nurses: Nursing Labour Turnover in the NHS*. London, Croom Helm.
- Modood, T., R. Berthoud *et al.* 1997. *Ethnic Minorities in Britain*. London, Policy Studies Institute.
- Parker, C., and B. Rickman. 1995. "Economic Determinants of the Labour Force Withdrawal of Registered Nurses." *Journal of Economics and Finance* 19: 17-26.
- Phillips, V. 1996. "Nurses' Labour Supply: Participation, Hours of Work, and Discontinuities in the Supply Function." *Journal of Health Economics* 14: 567-82.
- Pudney, S., and M. Shields. 1999. "Gender, Race, Pay and Promotion in the British Nursing Profession: Estimation of a Generalised Ordered Probit Model." *Journal of Applied Econometrics*, forthcoming.
- Secombe, I. and G. Smith. 1997. *Taking Part: Registered Nurses and the Labour Market in 1997*. University of Sussex, Institute for Employment Studies.
- Shields, M. and S. Wheatley Price. 1999. "Ethnic Differences in the Incidence and Determinants of Employer-Funded Training in Britain." *Scottish Journal of Political Economy*, forthcoming.
- Schumacher, E. 1997. "Relative Wages and Exit Behaviour among Registered Nurses." *Journal of Labor Research* 18: 581-91.
- Sloan, P., and H. Williams. 1996. "Are 'Overpaid' Workers Really Unhappy? A Test of the Theory of Cognitive Dissonance." *Labour* 10: 3-15.
- Steel, R., and N. Ovalle. 1984. "A Review and Meta-Analysis of Research on the Relationship between Behavioural Intentions and Employer Turnover." *Journal of Applied Psychology* 69: 673-86.
- Tai, T., S. Bame and C. Robinson. 1998. "Review of Nursing Turnover Research, 1977-1996." *Social Science and Medicine* 12: 1905-24.
- Tsang, M., R. Rumbereger and H. Levin. 1991. "The Impact of Surplus Schooling in Work Productivity." *Industrial Relations* 30: 209-28.
- Thomas, M., and J. Morton-Williams. 1972. *Overseas Nurses in Britain*. London, Political Economic Planning.
- Ward, M., and P. Sloane. 1999. "Job Satisfaction within the Scottish Academic Profession." Discussion Paper 38, Institute for the Study of Labor, Bonn.
- Warr, P. 1998. "Well-Being and the Workplace". In D. Kahneman, E. Diener and N. Schwartz (eds.), *Understanding Quality of Life: Scientific Perspectives on Enjoyment and Suffering*. New York, Russell Sage.

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