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A Longitudinal Cohort Study of Pharmacy Careers

Report 8: Analysis of Pharmacy Practice Questionnaire

Work, employment and the early careers of cohort pharmacists

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1. Executive Summary

1.1 Overview

- The research reported here focuses on the work, employment and early careers of pharmacy graduates and is part of an ongoing five-year longitudinal research study of the early career choices and pathways of pharmacists who graduated from British pharmacy schools in 2006. The longitudinal study has been undertaken by a research team based in the Centre for Pharmacy Workforce Studies (CPWS) at the University of Manchester, and contributes to a wider programme of work conducted by CPWS concerning the pharmacy labour market, organisational change and development within the pharmacy profession.
- Designed to improve the profession's understanding of its workforce during their early careers, the study focuses on contextualising how career intentions are informed and shaped, and is interested in establishing the extent to which early career choices and decisions predict subsequent careers. Findings from the study are relevant to current debates about workforce shortages in the context of rising demand for pharmacists and pharmaceutical services, since it is important to understand what attracts, retains and motivates pharmacists in relation to their work. Key concerns that the study overall aims to address are, therefore, why young people choose a pharmacy career, and career aspirations and influences over the course of the early part of a pharmacist's career.
- The mainstay of the research is a series of annual, self-administered questionnaires, using primarily closed questions. Findings reported here are from the fourth and final survey used to capture information for the study. This survey, the 'Pharmacy Practice' questionnaire, collected data relating to the cohort's work and employment experiences one year after qualifying, and also explored their early career choices.
- Previous surveys for the study were designed to capture other career-stage-appropriate data: the first survey had a focus on choices made prior to studying pharmacy, such as how, when, and why respondents chose to study pharmacy, and was called the 'Early Choices' questionnaire; the second survey focused on how and why a particular preregistration training post had been chosen ('The Preregistration Choices' questionnaire); and the third survey was designed to capture data relating to the cohort's first step on their (pharmacy) career path – that is, on their first experiences of working and professional life, as preregistration trainees. All surveys also collected career intentions and expectations data. This methodological approach has been used elsewhere to explore the dynamic nature of career development, as well as to capture the ways in which early career plans might change in response to events such as travelling abroad, family-building etc, so that it is possible to document movements in and out of employment in British pharmacy practice.¹

- Data collection for the 'Pharmacy Practice' (PP) questionnaire took place in the spring of 2008, towards the end of the cohorts' first year in pharmacy practice. Overall, 558 completed questionnaires were returned, giving a response rate of 52.44% (558/1,064). Many of those who completed the PP questionnaire had also completed the three previous questionnaires for the study (66.5%; n=371). Moreover, 87.8% (n=490) of PP respondents had also completed the 'Early Choices' questionnaire in 2005; 90.7% (n=506) had also completed the 'Pre-Registration Choices' questionnaire in 2006; and 79.2% (n=442) had also completed the 'Your Preregistration Post' questionnaire in 2007. As with the profile of respondents to the other surveys for the study, the majority of PP respondents were female (77.1%, n=430) and white (60.4%, n=337).

1.2 Current Work Situation

- Almost all (97.8%) of respondents were actively employed as pharmacists at the time of completing the survey. Most of those in employment were working in the community (n=350; 64.1%) or hospital (n=186; 34.1%) sectors, and on full-time, permanent contracts (78.8%); 12.5% were working as locums. Most locums (85.3%) were working in community pharmacy.
- In the community sector around a third (34.1%) were working as store managers, a further fifth (23.5%) as relief pharmacists and 15.8% were working as second pharmacists. While females were more likely than males to have been working as a second pharmacist (17.2% vs. 11.4%) or as a relief pharmacist (24.4% vs. 20.5%), males were more likely to have been employed as a community pharmacy (CP) locum (30.7% vs. 13.7%) than females. Type of post varied according to the organisation worked for – those employed by a large multiple were most likely to have been working as a manager (36.6%), while 70.0% of those working in a supermarket were employed as second pharmacists.
- Nearly all of the hospital pharmacy (HP) respondents were employed as band 6 pharmacists (93.5%).
- Around a fifth of respondents (n=121; 22.2%) had more than one job; second jobs were most common in CP (94.2%), as locums (107/121; 88.4%). Pharmacists working in HP were more likely than CP respondents to have reported having a second job.
- Most of those who had trained in CP were currently still working in the same sector (97.1%). The proportion who had trained in hospital pharmacy and were working in the hospital sector when they completed the survey was significantly lower (73.2%).
- Respondents were contracted to work on average 38.76 hours/week, with males working longer hours than females (39.78 vs. 38.51), and community pharmacists working significantly longer hours than hospital pharmacists (39.85 vs. 37.13). Moreover, respondents reported usually working an average of 40.22 hours/week, with females usually working a mean of 1.56 hours more than they were contracted to, compared with

- 1.45 for males. Those working in the community sector were around twice as likely as their hospital colleagues to have usually worked more than four hours in excess of their contracted hours a week.
- Just over half of respondents (55.6%) were working for the same employer that they had completed their preregistration training with when they completed the survey. ME (minority ethnic) respondents were more likely to have changed employer, while females and those working in CP were more likely to have remained with the same employer. Amongst those who had changed employer, the most commonly cited reasons were related to location or because there were no pharmacist posts available where they had trained.
 - Overall, most respondents (83.1%) had found it easy to obtain employment as a pharmacist, and this varied with gender, ethnicity and sector of work, with CP, white and male respondents more likely to have reported finding it easy to secure their first pharmacist job. Furthermore, respondents reported being largely successful in obtaining their first choice of job after completing their preregistration training (86.6%). White and community pharmacists were significantly more likely to have found it easy to get their first choice job.
 - Many respondents reported there was some likelihood they would leave their employer within the next two years (82.3%), but few (23.8%) – and significantly more males – imagined that they would leave the profession within the same time frame. Those working in CP were significantly more likely than those working in HP to have reported some likelihood that they would undertake training in providing additional or extended services, whereas HP respondents were significantly more likely to have reported intending to study for a clinical qualification.
 - More than two-thirds of the cohort were line managed by a pharmacist (70.5%), with female, white and HP respondents more likely to have a pharmacist line manager. Among CP respondents the likelihood of having a pharmacist line manager varied significantly: 85.0% of CP respondents working for a supermarket, 83.3% for an independent, 54.0% for a large multiple and 61.5% for a medium multiple reported having a pharmacist line manager.
 - Female, white and HP respondents were more likely to have a mentor than male, ME and CP respondents. Amongst those who had a mentor (49.1% of respondents), more than nine out of ten (93.1%) felt they had an important role to play in a pharmacist's career development.

1.3 Work Life

- Cohort respondents derived most job satisfaction from interpersonal aspects of work, and least from remuneration. Many aspects of job satisfaction varied significantly according to gender, ethnicity and sector of work, with ME and CP respondents less likely to be satisfied with many aspects of work. Moreover, ME respondents working in CP were

- significantly less satisfied with nine aspects of their work when compared with white respondents working in the same sector.
- When evaluating their work life, we found that male and ME respondents reported significantly less overload and career opportunities, and that HP respondents were significantly more likely to have reported experiencing career and growth opportunities. We also found a strong correlation between career opportunities and growth opportunities, and moderate correlations between job satisfaction and control at work, job satisfaction and career opportunities, and job satisfaction and growth opportunities.
 - Respondents were more likely to have been influenced by extrinsic factors such as salary and career and promotion prospects than by factors such as work experience when making decisions about their careers. Differences between CP and HP responses suggest differences in career attitudes and values when making career decisions.
 - Around three-fifths (58.3%) of cohort pharmacists had a strong desire to practise pharmacy; 2.4% regretted becoming a pharmacist.
 - Respondents' mean score on a measure of career commitment was 3.09, suggesting moderate career commitment. Females and white pharmacists were significantly more committed than males and ME pharmacists. Career commitment was positively correlated with control over work, career opportunities, growth opportunities, and job satisfaction. Not surprisingly, it was also strongly correlated to desire for a pharmacy career.
 - Career goal preferences were found to reflect existing occupational niches in the profession, and were related to the cohort's current employment.

1.4 Finances

- Most of the cohort had graduated with some student debt (80.7%). It was significantly more prevalent amongst white than ME respondents. Around a third (34.0%) of those with debts graduated owing between £10,000 and £14,999, and a similar proportion (34.5%) owed between £15,000 and £19,999. More than two-thirds of those with student debts expected it would take them less than 10 years to repay the debt (67.1%).
- ME pharmacists were significantly more likely than white pharmacists to have graduated with debts over £20,000. Higher levels of debt were associated with an increased likelihood of being influenced by debt when making career decisions.
- Respondents were most likely to have reported earning £25,001-£35,000 (38.3%) or £35,001-£45,000 (30.4%). Females and hospital pharmacists were significantly more likely than males and community pharmacists to have been earning less than £25,000.

1.5 Implications for Policy and Practice

- Work context is an important factor in understanding differences in cohort pharmacists' employment experiences.

- Many early pharmacy careers are ‘gendered’ or ‘ethnicised’ (or both).
- While those working in CP work, on average, longer hours than their HP peers, hospital pharmacists are more likely to have a second job, suggesting analysis of working hours should not be limited to a consideration of hours worked in a primary/main job.
- Considerably lower levels of job satisfaction recorded by those working in CP should be of concern to the profession, especially given evidence of a link between low job satisfaction and intentions to leave the pharmacy workforce.

2. Introduction

Delivery of patient-centred care, and promotion of health and well-being of the population, are future key roles for pharmacists as outlined in the recent White Paper ‘Pharmacy in England’.² With a focus on developing the pharmacy workforce to fulfil these key roles, the White Paper’s vision for pharmacy is centred on the need for pharmacists to provide safe and high quality services that provide effective, personalised outcomes for patients. While building on the strengths of pharmacy, the DoH vision sets out a need for improvements in pharmaceutical services – and improvements in services require changing the context of pharmacy and pharmacists’ work, changes to the ways that things are done, changes to processes, behaviours and organisations.³ What is missing, therefore, from the DoH vision of and for ‘Pharmacy in England’ is an understanding of the context or social nature of work, and how this relates to service delivery and patient outcomes. The research presented in this report aims to address some of this knowledge gap in relation to early career pharmacists.

The purpose of this research is therefore to understand what work is like for pharmacists during their early careers. Our aim is to model early career pharmacists’ work to better explain its social nature, so that it is possible to understand the social context in which proposed improvements to pharmacy service provision will take place. The kinds of questions we are interested in addressing include how, when and where do early career pharmacists work, what kind of employment contracts do they have, and what do these pharmacists have to do to get the job done? Is work perceived as interesting, challenging, demanding, and as meeting expectations? Is work satisfying, and how is satisfaction related to job design, career commitment, autonomy and control?

As part of this modelling of the social context and nature of work for cohort pharmacists we recognise that the changing profile of the profession is also likely to impact upon experiences of work and workforce behaviours. Of particular note is the progressive entry of women to the profession,⁴⁻⁸ who are more likely to work part-time relatively early in their careers,^{4,7,9,10} and to withdraw from the pharmacy labour market altogether, than male pharmacists.⁴ By tracking the careers of young pharmacists in this study, information relating to future working patterns in the GB pharmacy workforce can be compared with existing research,

and the point at which, for example, gender difference in working patterns occurs can be more accurately determined.

As a whole, the cohort study aims to provide information on the early careers of GB pharmacists, and in particular to:

- Contextualise the ways that career intentions are informed and shaped, determine the extent to which occupational inheritance,¹¹ family members or early career socialisation are influential, and whether early career intentions can predict aspects of later careers such as which sector of practice graduates enter;
- Determine whether early career commitment measures can identify pharmacists who leave pharmacy soon after Registration or identify those pharmacists who choose to work abroad;
- Identify patterns of workforce participation and variables influencing it; and,
- Determine sectoral and geographical mobility.

3. Methodology

3.1 Overview

This study is a five-year longitudinal cohort study of the early career choices and pathways of pharmacists who graduated from GBⁱ pharmacy schools in 2006.ⁱⁱ At the outset of the study the intention was to include the entire population of students graduating from 15 British pharmacy schools in 2006, thus providing the number of students necessary to undertake sub-group analysis, and safeguarding against having an unrepresentative sample, a possible outcome if students were drawn from only a small sample of pharmacy schools. Data collection for the study began in 2005, when the cohort were third year students. After the first round of data collection one pharmacy school was excluded from the study after problems engaging students based there in the study.

To improve the internal validity of the questionnaires all questionnaires used in our longitudinal programme of research have been pre-tested and piloted. A sample of pharmacy students who had graduated in a different year (2004) helped us with this. Researchers also conducted focus groups with a sub-sample of the 2004 cohort to examine questions in greater depth and to provide an additional measure of reliability and validity.

ⁱ The Queen's University of Belfast students were not invited to participate in the study since we assumed that the majority of graduates from this school would register with the Pharmaceutical Society of Northern Ireland. For this reason, the study focuses on GB rather than UK pharmacy graduates.

ⁱⁱ Several new UK pharmacy schools did not have students graduating in 2006. In the academic year 2007/08 twenty-four pharmacy schools are offering MPharm programmes.

To date, cohort members have completed four questionnaires – the ‘Early Choices’ questionnaire in 2005; the ‘Preregistration Choices’ questionnaire in 2006; the ‘Your Preregistration Training Post’ questionnaire in 2007; and most recently, in 2008, the ‘Pharmacy Practice’ questionnaire, analysis of which is presented for the first time in this report.

3.2 Data Collection

As the cohort were students during the first two rounds of data collection, in 2005 and 2006, the research team administered the ‘Early Choices’ and ‘Preregistration Choices’ questionnaires directly to them at the end of a timetabled lecture, in their pharmacy school, with postal questionnaires being sent to those students absent from the lecture.

The ‘Your Preregistration Training Post’ and ‘Pharmacy Practice’ questionnaires were administered only as postal questionnaires.

Prior to beginning data collection, ethical approval was sought, in the first instance from the university ethics committee where the research team are based, after which participating schools were asked to clarify whether their own institutional approval was also necessary. Five schools required additional institutional approval and in all cases this was granted.

3.2.1 ‘Early Choices’ – 1st Survey

The first questionnaire for the cohort study had an explicit focus on choices made prior to studying pharmacy, such as how, when, and why cohort participants chose to study pharmacy, early awareness of the profession, and future career intentions. At the time of completing this questionnaire, in the spring of 2005, the cohort were 3rd year students, and we hypothesized that as they were about to choose where to do their preregistration training decisions about future careers might also be taking place.¹²

Although data collection for the EC survey took place during a visit to the pharmacy schools, students attending one school were not based in their school during the data collection period. In this instance questionnaires were posted to the school for them to send out on our behalf. Unfortunately, this resulted in a low response rate and the students attending this pharmacy school were excluded from the study.

3.2.1.1 Response rate and results: Early Choices

In total 1,160 Early Choices questionnaires were completed (66.8% of the sample). Nearly three-quarters of respondents (n=830; 71.6%) were female, and almost half (n=527; 45.4%) were from minority ethnic (ME) groups (see Table 1 for a summary of response rate and respondent profiles). It is possible that respondents are not wholly representative of the cohort – for example, it is likely that females are over-represented, since only 65.9% of new entrants to the

Register of Pharmacists in August 2007 (when the majority of the cohort would have joined the Register and hence been eligible to begin pharmacy practice in GB) were female.¹³

Data analysis demonstrated high levels of commitment to studying and practising pharmacy, but also suggested that differences in the entry pathways to the MPharm of some subgroups – such as whether a place at university had been obtained via UCAS or clearing – were related to differences in motivations and expectations of the course and of a pharmacy career. Other important findings include:

- Only around a quarter expected to work full-time until retirement.
- Many (43.0%) planned to work abroad.
- The vast majority (91.8%) expected to take career breaks.

A report containing further analysis of Early Choices results is available to download from the Pharmacy Practice Research Trust website;¹⁴ short papers presenting findings of general interest to the profession have been published in The Pharmaceutical Journal;¹⁵⁻¹⁷ details of presentations to stakeholders and at conferences appear in an appendix to this report.

3.2.2 'Preregistration Choices' – 2nd Survey

The second questionnaire, administered in March 2006 when the cohort were close to completing their undergraduate education, focused on 'Preregistration Choices', and had an emphasis on career issues related to preregistration training. It sought to clarify why a particular training post had been chosen and how it was chosen (including whether respondents got their first choice of training post) and framed reasons for career decision-making in terms of contextual variables such as learning experiences and exposure to different aspects, and sectors, of pharmacy practice as an undergraduate.

3.2.2.1 Response rate and results – Preregistration Choices

We received completed questionnaires from 1,153 students, giving a response rate for the PRC questionnaire of 68.9% (1,153/1,674).ⁱⁱⁱ Students following the Overseas Pharmacists Assessment Programme (OSPAP)^{iv} were explicitly excluded from the study.

ⁱⁱⁱ Note the smaller denominator used to calculate the response rate to the 2nd cohort study survey – 1674 as opposed to 1736 used to calculate the response rate to the Early Choices questionnaire. The reduced sample size can be explained by student attrition from the MPharm course between the two data collection points

^{iv} OSPAP is the RPSGB's route to Registration for overseas pharmacists, and is a one-year, full-time conversion qualification open to pharmacists who have qualified outside the UK.

Characteristics of PRC respondents were generally similar to those who completed the EC questionnaire (71.8% or n=828 female; 46.8% or n=540 from ME groups) – see Table 1.

Findings from this survey demonstrated that:

- Minority ethnic (ME) students were significantly more likely to have found it difficult to secure a training post ($\chi^2=45.637$, $p<0.001$) and significantly less likely to have succeeded in securing their first choice of post ($\chi^2=47.509$, $p<0.001$) than white students.
- The majority of respondents (86.4%) chose a post for its future career prospects.
- The most influential factor in choosing a training post was that it offered good preparation for the Registration exam (65.8%).

Once again, a report presenting further analysis of PRC data is available to download from the Pharmacy Practice Research Trust website;¹⁸ papers, including conference abstracts, are also available.¹⁹⁻²² A comprehensive list of cohort study outputs appears as an appendix to this report.

3.2.3 ‘Your Preregistration Post’ – 3rd Survey

The third questionnaire for the study captured data related to the cohorts' first step on their (pharmacy) career path – that is, data about work and early career experiences – and was completed by the cohort in the spring of 2007. Aspects of work evaluated by the survey included: the contribution of different work aspects to an individual's satisfaction with their training post; quality of working life; work/life balance; an exploration of happiness with work; and relationships between job satisfaction and career commitment.

3.2.3.1 Response rate – Your Preregistration Post

Overall, 701 participants completed a questionnaire, giving a response rate of 59.8% (701/1,172).^v Respondent characteristics were broadly similar to those completing other surveys for the study, with the majority of respondents being female (76.3%, n=535) and white (60.8%, n=426) (see Table 1). At this stage in the study, a large proportion of respondents had completed all three questionnaires for the study (80.0%; n=561).

Findings include:

^v Contact addresses were only available for 1172 cohort study participants at this stage in the research, hence the reduced sample size used to calculate the response rate

- More than a third of cohort respondents reported feeling overloaded at work, and this was especially true of those training in community pharmacy, and those from ME backgrounds.
- While the cohort experienced higher levels of job satisfaction than reported by pharmacists, we found that ME trainees were significantly less satisfied than their white peers with many aspects of work measured, as were community trainees when compared with those training in hospital pharmacy. Minority ethnic trainees were significantly less satisfied than their white peers when we compared between the two subgroups training in the same sector.
- Quality of working life was better where respondents had enjoyable jobs, while work overload and low levels of feedback resulted in reduced quality of working life.
- ME trainees experienced significantly more problems with their work/life balance than white trainees. Community trainees also experienced more problems relative to their hospital peers.
- Those who were committed to their career were found to be more satisfied with their work.

A paper modelling the quality of trainees' work experiences was presented at a recent conference.²³

3.2.4 'Pharmacy Practice' – 4th survey

The purpose of the final cohort study questionnaire was to collect data related to the nature of work at the beginning of the cohort's careers as qualified pharmacists. With the intention of providing an explanatory rather than simply descriptive account of early career paths and types, questions contained in this questionnaire evaluated respondents' current work situation and anticipated changes to work; their job satisfaction; an exploration of work and career values; work/life balance; and desire for a pharmacy career. Data on student debt were also collected, and are presented towards the end of the report.

3.2.4.1 Response rate – Pharmacy Practice

A total of 558 cohort study members responded to the final questionnaire, giving a response rate of 52.4% (558/1,064).^{vi} Females were in the majority amongst respondents (77.1%; n=430), and the largest ethnic group represented was white (60.4%; n=337) (see Table 1). Many PP respondents had completed all three of the previous questionnaires for the study (66.5%; n=371); 87.8% (n=490) of PP

^{vi} The denominator for the final questionnaire was again lower than for previous rounds of data collection. This was because at this stage in the research, contact addresses were only available for 1,088 cohort members who had completed at least one previous questionnaire for the study, and 22 questionnaires were returned to sender/addressee unknown.

respondents had also completed the 'Early Choices' questionnaire in 2005; 90.7% (n=506) had also completed the 'Pre-Registration Choices' questionnaire in 2006; and 79.2% (n=442) had also completed the 'Your Preregistration Post' questionnaire in 2007.

3.2.5 All surveys

Looking across all four rounds of data collection, a total of 1,439 respondents have taken part in the study. Of this 1,439, 999 (69.4%) were female, and 49.1% (n=707) were from black and minority ethnic groups, with female respondents significantly more likely to have been white than their male counterparts (53.3% vs. 44.0% respectively; $p=0.002$). Overall, respondents were most likely to have been white British (n=544; 38.1%), Indian (n=285; 20.0%), Pakistani (n=147; 10.3%), white Irish (n=130; 9.1%) or black African (n=92; 6.4%).

Respondents were as likely to have completed all four surveys for the study (371/1,439, 25.8%) as they were to have completed one (379/1,439, 26.3%) two (358/1,439, 24.9%) or three surveys (331/1,439, 23.0%). Females were significantly more like than males to have completed all four surveys (30.0% vs. 16.1%) and significantly less likely to have only completed one survey (21.3% vs. 37.7%; $p<0.001$). A similar pattern was found when white and ME respondents were compared, with 35.3% of white and 16.5% of ME respondents completing all four surveys and a further 18.9% of white and 33.0% of ME respondents only completing one survey for the study ($p<0.001$).

Only 1,112 of the total 1,439 participants passed the Registration exam in 2007 (998 at the June examination and the remaining 114 passed the September examination). This represents a loss (or attrition rate) of 27.7%. By February 2009 the total number of previous participants on the Register was 1,108, of whom 67 were on the non-practising section of the Register (50 of these had overseas addresses).

Table 1: Response rate summary

	Early Choices (EC) Qnr	Preregistration Choices (PRC) Qnr	Your Preregistration Post (YPP) Qnr	Pharmacy Practice (PP) Qnr
Career stage	3 rd yr undergraduate	4 th yr undergraduate	Preregistration trainee	1 st yr in practice
Response rate				
TOTAL % (n)	66.8 % (1,160)	68.9% (1,153)	59.8% (701)	52.4 (558)
Female % (n)	71.6% (830)	71.8% (828)	76.3% (535)	77.1% (430)
White % (n)	54.6% (633)	53.2% (613)	61.0% (426)	60.4% (337)
% also completed EC (n)		75.0% (865)	86.9% (609)	87.8% (490)
% also completed PRC (n)			92.4% (648)	90.7% (506)
% also completed YPP (n)			80.0% (561)	79.2% (442)
% completed all (n)				66.5% (371)
Sample	n=1,736	n=1,674	n=1,172	n=1,064
Total eligible population	n=1,887*	n=1,674	n=1,343**	n=1,088***
Notes	*1 school subsequently excluded	Some students who completed EC did not progress to 4 th yr	**n=Total number of previous participants Addresses not available for all previous participants	***n=Total number of previous participants on the Register. Sample represents total number of valid addresses.

3.3 Data analysis

This report provides analysis of the fourth round of data collection undertaken for the cohort study. Analysis consists of a descriptive account of respondents' current work situation and anticipated changes to work (Chapter 4) as well as data on the cohort's finances (student debt and current salary) (Chapter 6). Results in these two chapters are contextualised in relation to respondents' characteristics. Of particular interest is the extent to which the cohort's current employment mirrors gender and ethnic 'niches' within pharmacy practice in Great Britain, since we know that, currently, female pharmacists are more likely to work in the hospital sector⁵ and that those from black and minority ethnic groups are more likely to work in the community sector.²⁴⁻²⁶

Data related to the cohort's experiences of work are also considered here (see Chapter 5). These data answer questions about what work is like for early career pharmacists, and provide insight into early career paths and types that complements the more descriptive analysis of Chapters 4 and 6. A number of interrelated aspects of work are explored in Chapter 5, including job satisfaction, experiences of work, work/life balance and desire for – and commitment to – a pharmacy career. These are discussed next.

3.3.1 Job satisfaction

Satisfaction with current employment was operationalised using a modified version of the Warr-Cook-Wall scale.²⁷ This scale measures different dimensions of job satisfaction, is valid and reliable,^{28,29} and has been used to explore job satisfaction amongst both pharmacists^{28,29} and general practitioners.³⁰⁻³²

The job satisfaction scale used in the PP questionnaire was modified from the one used previously with pharmacists. In the PP questionnaire we added an item exploring satisfaction derived from promotion and career advancement opportunities. This modification of the scale was undertaken because both our own qualitative cohort study work and studies of graduates' work experiences in the early stages of their careers have shown that disappointment with career prospects – such as a lack of achieving anticipated career development and advancement – have a negative impact on employee commitment and retention, and are likely to impact on job satisfaction.^{33,34} The modified scale was validated, and the additional item was not found to have had a detrimental effect on the scale's internal consistency. All items in the new scale were rated on a seven-point scale, ranging from 1 (extremely dissatisfied) to 7 (extremely satisfied), so that a high score indicated high satisfaction.

While when we analysed YPP data (the third survey for the study) we found higher levels of job satisfaction than reported by pharmacists, we know from other studies that job satisfaction is lower amongst pharmacists in the first ten years of their career.^{35,36} YPP data also showed that ME trainees were significantly less satisfied than their white peers with many aspects of work, as were community trainees when compared with those training in hospital

pharmacy, differences in job satisfaction that have also been reported elsewhere.^{29,35-37} Further analysis of PP data will give us an opportunity to measure possible changes to job satisfaction that occur as a result of moving from a training grade into registered professional practice, and will be presented in a separate report focusing on longitudinal analysis of cohort data.

3.3.2 Work life

Experiences of pharmacy employment were examined using four dimensions. Each dimension consisted of three items taken from standard measures used elsewhere.^{37,38} Dimensions explored the extent to which respondents felt in control of their work ('Control over work'); the extent to which they felt overloaded in their job ('Work overload'); how far respondents felt their work provided them with career opportunities ('Career opportunities'); and the extent to which they perceived their job provided them with opportunities for personal growth ('Growth opportunities'). These four dimensions captured data related to respondents' perceptions of their work life – and the extent to which their job allowed for autonomy at work and was devoid of stress and other negative consequences³⁹ – and the ways respondents felt their jobs prepared them for their future careers.

Since other studies^{37,38,40} and analysis of data collected from the cohort about their preregistration training posts²³ have shown that work life, or experiences of employment, are related to both characteristics of the worker (such as their gender and ethnicity) and their working environment (such as the sector of employment) our analysis in this report also explores associations between these and the four work life dimensions.

Furthermore, given evidence of links between job satisfaction and aspects of work such as work intensification, and stress⁴¹⁻⁴⁵ correlations between job satisfaction and work dimensions are presented in this report.

3.3.3 Work/life balance

Given the high value placed on achieving a balance between work and life outside work found amongst young people⁴⁶⁻⁴⁸ it is important to consider how the balance between work and life outside work is experienced by the cohort during their early careers.

The focus in this survey is on the impact of work on non-work roles, and we conceptualise conflict as arising between the two when a lack of balance occurs between them.⁴⁶ In PP we operationalised a definition of work/life balance as 'satisfaction and good functioning at work and at home with a minimum of role conflict'⁴⁹ used elsewhere, and assumed that 'home' refers, broadly, to non-work rather than simply to family responsibilities, such as caring for dependents,⁴⁶ since few of the cohort are likely to have these kinds of responsibilities at this stage in their lives.

We used ten statements about work/life balance – with answers of ‘agree’, ‘sometimes’, ‘disagree’, and ‘not relevant’ – from which three separate calculations of work/life balance have been performed during our analysis.⁵⁰

3.3.4 Career commitment

Work values are what are important to a worker about their work, their work priorities, such as how important work is, and how work may help an individual to attain goals in and outside work. Career commitment – a critical work value in the context of this study – is ‘one’s attitude to one’s profession or vocation’,⁵¹ since it is linked to job satisfaction³⁷ and to intentions to leave the profession.⁵² Career commitment is affected by the social context of work, and is positively correlated to having a structured work environment and low role ambiguity.⁵¹ Furthermore, research has shown that those who give a high priority to achieving work/life balance are more likely to be dissatisfied with their career; and that career commitment is higher among women and white pharmacists, but lower among those working for large multiples.³⁷

This report therefore includes an analysis of interrelationships between work dimensions, job satisfaction and career commitment.

3.4 Structure of this report

The remaining chapters of this report present analysis of the PP data, with each chapter containing analysis of a set of related questions contained in the PP questionnaire (see appendices for further details). Chapters begin with a brief overview of these related questions. Each question is then analysed separately and, where appropriate, subgroup analysis is also presented; tables of results are used to summarise findings and statistically significant results in the tables are highlighted using asterisks (*p<0.05; **p<0.01; ***p<0.001). Some discussion of results also appear in this report.

The final chapter of this report considers some implications for policy and practice of the findings.

4. Current Work Situation

4.1 Overview

Part A of the questionnaire collected data related to the cohort’s work profile and employment destination after completing preregistration training. Questions sought to clarify whether respondents were working as pharmacists, terms of employment (type of contract held), number of jobs, hours of work, sector of work, etc. Respondents were also asked whether they were line managed by a pharmacist, and whether they had a mentor.

Other questions in this section of the questionnaire sought to clarify actual and intended changes in employment. Here we asked whether respondents were

working for the same employer that they had had for their preregistration training, whether they had secured their first choice of post after training, and the likelihood that they might make changes to their employment.

4.2 Current employment

The majority of respondents were actively employed as pharmacists (n=546; 97.8%); only twelve (2.2%) were not currently working as a pharmacist. Most of those not currently working as a pharmacist were female (n=9), and white (n=7), although cell counts are too small to test for significance.

4.2.1 Currently not working as a pharmacist

Of those respondents currently not working as a pharmacist, four were in education, three were travelling, two were on maternity leave or raising a family and three were working outside pharmacy. Three of those in education provided further details about their course of study: two were pharmacy postgraduate research students, and the remaining respondent was studying for a Masters in Management with the intention of working in the financial sector on completion of his course. Employment of those not working as a pharmacist was as a dispenser in a hospital, property consultant and as an Irish dancer.

4.2.1.1 Intention to return to practise

Two thirds (66.7%; n=8) of those not currently working as a pharmacist intended to return to work as a practising pharmacist within 12 months. While all of those who were on maternity leave or travelling expected to return to pharmacy practice within this time, two respondents currently in education had no intention to return to practise, and a further one respondent in education was uncertain whether they would return or not to work as a pharmacist within the year. Two of the three respondents currently not working as a pharmacist expected to return to practise within 12 months, while the remaining respondent in this category was unsure about whether or not they would return to practise.

The twelve respondents who indicated that they were not currently in pharmacy employment were obviously not able to provide information collected by other questions contained in the PP questionnaire on the nature of their work as pharmacists. The remaining analysis undertaken for this report therefore only focuses on those actively employed in the profession (n=546).

4.3 Employment status

Respondents who were actively employed in pharmacy were asked about the kind of contract they had in their current main job. Compared with all registered pharmacists,²⁹ we found that cohort respondents were more likely to be employed and less likely to be self-employed. Almost four-fifths of our respondents (78.8%) reported that they were employed full-time on a permanent contract, and a further one in eight (12.5%) were self-employed as locums/on a

sessional basis, while analysis of 2005 census data on pharmacists' work pattern indicates that overall 67.5% of pharmacists are employees and 21.6% are self-employed locums. Our findings add to those reported elsewhere that working as a locum is more commonly associated with later career stages in the profession.⁵³

Few cohort respondents were working part-time at this stage in the early pharmacy career (n=21; 3.8%) and only one respondent reported that the contract for their main job was with an employment agency (see Table 2 for further details).

4.3.1 Subgroup analysis

Since some cells have very low counts, subgroup analysis will focus on differences between the two biggest categories – respondents reporting either being employed as a permanent full-time member of staff or as a self-employed locum/sessional pharmacist.

4.3.1.1 Gender

Female respondents were significantly more likely than males to have a permanent, full-time contract, and significantly less likely to be working on a locum basis (see Table 2). This finding is at odds with the Register as whole, where there are more female than male locum pharmacists.

4.3.1.2 Ethnicity

White respondents were more likely than those from ME groups to be working as permanent full-time pharmacists, but less likely to be locum pharmacists. This only reached statistical significance when the employment status of white and ME males were compared (Table 2).

Table 2: Employment status by gender and collapsed ethnicity

	Type of contract in main job				
	Permanent full-time	Permanent part-time	Fixed term/ temporary	Employ't agency	Locum/ sessional
MALE***	70.4 (88)	2.4 (3)	2.4 (3)	0.8 (1)	24.0 (30)
White*	79.2 (57)	2.8 (2)	2.8 (2)	1.4 (1)	13.9 (10)
Minority ethnic (ME)	58.5 (31)	1.9 (1)	1.9 (1)	0.0 (0)	37.7 (20)
FEMALE	81.2 (342)	4.3 (18)	5.5 (23)	0.0 (0)	9.0 (38)
White	83.7 (216)	3.1 (8)	4.7 (12)	0.0 (0)	8.5 (22)
Minority ethnic (ME)	77.8 (126)	5.6 (9)	6.8 (11)	0.0 (0)	9.9 (16)
ALL WHITE	82.7 (273)	3.0(10)	4.2 (14)	0.3 (1)	9.7 (32)
ALL ME	73.0 (157)	4.7 (10)	5.6 (12)	0.0 (0)	16.7 (36)
ALL	79.1 (432)	3.5 (19)	4.8 (26)	0.1 (1)	12.5 (68)

Valid % (n); some missing data; *p<0.05; ***p<0.001

4.4 Reasons for self-employment

Respondents who reported working as self-employed locums were asked to consider a range of statements about why they had chosen this type of employment, and to select all the reasons from a list of five (plus an 'other' category) that applied to them. Statements were designed to capture data related to factors influencing respondents' decision-making, and were informed by a recent qualitative study of the locum workforce.^{53,54} Table 3 shows that the most commonly cited factors influencing respondents' decisions to locum were flexibility and a desire to have control over working hours, findings also reported by the qualitative research.

Table 3: Reasons for self-employment

Reason for self-employment	Valid % (n)
Flexibility	75.8 (50)
Control hours	74.2 (49)
Achieve work/life balance	50.0 (33)
To be independent	45.5 (30)
Provide time/opportunity for study	25.8 (17)

Responses included in the 'other' category (n=13) primarily related to pay.

4.4.1 Subgroup analysis

Small cell sizes mean that analysis cannot test for significance. However, we did find that male respondents were, proportionally, more likely than female respondents to have agreed with all the statements, as were ME respondents relative to those from the white ethnic group, with the exception of the item 'to be independent' which influenced more white than ME respondents.

4.5 Sector of practice

Respondents were given the opportunity to record up to two jobs, in any of the five main sectors of the profession (community pharmacy [CP], hospital pharmacy [HP], primary care [PCT], industry and academia), as well as in 'other pharmacy' and 'other non-pharmacy', and the contracted vs. the usual number of hours worked in each job (see 4.8 and 4.9 for details of hours worked). Table 4 shows that around two-thirds of respondents were working in CP and that most of the remaining respondents were working in the hospital sector. Given evidence that few pharmacists start their career with a PCT,²⁹ it is not surprising to find that no cohort respondents reported working in this sector for either their first or second job (see Table 4).

4.5.1 Job 1

Working in community pharmacy was the norm for cohort respondents, with around two-thirds of respondents (64.1%) working in this sector (see Table 4). However, across the profession as a whole, 70.1% of pharmacists are actively employed in community pharmacy, indicating a difference between the cohorts' early career destination and the Register as a whole.²⁹ The relatively high proportion of respondents working in hospital pharmacy may reflect the tendency of young pharmacists to work in the hospital sector²⁹ or the larger number of women in the sample.

4.5.1.1 Subgroup analysis

Females were more likely than males to be working in the hospital sector of the profession (36.1% compared with 27.2%), as were white respondents when compared with those from ME groups (37.9% and 28.4% respectively). Only 13.2% of ME males were working in HP as their job 1 ($p < 0.005$). That early career paths appear to reflect existing occupational segregation in pharmacy practice in Great Britain^{5,24-26} is an important finding.

Table 4: Sector of practice (job 1) by gender and collapsed ethnicity

	Sector of practice – Job 1				
	CP	HP	Industry	Academia	Other
Male	70.4 (88)	27.2 (34)	0.8 (1)	0.8 (1)	0.8 (1)
Female	62.2 (262)	36.1 (152)	0.7 (3)	0.5 (2)	0.5 (2)
White	60.0 (200)	37.9(125)	0.6 (2)	0.6 (2)	0.3 (1)
ME	69.3 (149)	28.4 (61)	0.9 (2)	0.5 (1)	0.9 (2)
ALL	64.1 (350)	34.1 (186)	0.7 (4)	0.5 (3)	0.5 (3)

nb: the 'other' category includes all respondents not working in one of the 5 main sectors
Valid % (n); some missing data

4.5.2 Job 2

Amongst actively employed pharmacists (n=546) 121 or 22.2% participants reported having two jobs, a larger proportion than amongst pharmacists overall (17.0% of all pharmacists who completed the 2005 workforce census reported holding more than one job²⁹). The sector of work of a respondent's second job is shown in Table 5 below – the vast majority being in community pharmacy.

Table 5: Sector of practice (job 2) by gender and collapsed ethnicity

	Sector of practice – Job 2			
	CP	HP	Academia	Other
Male	92.9 (39)	2.4 (1)	4.8 (2)	0.0 (0)
Female	94.9 (75)	3.8 (3)	0.0 (0)	1.3 (1)
White	95.5 (63)	1.5 (1)	3.0 (2)	0.0 (0)
ME	92.7 (51)	5.5 (3)	0.0 (0)	1.8 (1)
ALL	94.2 (114)	3.3 (4)	1.7 (2)	0.8 (1)

Valid % (n)

4.5.3 Cross-sector mobility

Comparing between the sector of a respondents' preregistration training post and their current job 1 we found that employment sector was closely related to training sector (p<0.001) (Table 6).

Table 6: Sector of training post by sector of current job 1

Sector of job 1	Sector of preregistration training post		
	CP	HP	Split post
CP	97.1 (203)	25.8 (49)	62.9 (22)
HP	1.9 (4)	73.2 (139)	31.4 (11)
Other	1.0 (2)	1.1 (2)	5.7 (2)

Valid % (n); some missing data

Table 6 shows that two-thirds of those who had experienced a training post split across more than one sector were, at the time of completing the PP survey, working in community pharmacy; that almost all of those who had trained in the community sector were working in that same sector; and that around three-quarters of hospital trainees went on to work in the hospital sector on registration.

Moreover, we found that males and those from ME groups were significantly more likely than females and white respondents to migrate out of hospital pharmacy and into the community sector of the profession – only 69.7% of males (n=23) and 60.0% of ME respondents (n=30) who had trained in hospital pharmacy were working in this same sector when they completed the PP questionnaire, compared with 73.9% of females (n=116) and 77.9% of white respondents (n=109) (p<0.001).

4.6 Type of post held

4.6.1 Job 1

4.6.1.1 Community pharmacy

Of the 350 respondents who reported working in community pharmacy for their first or main job, the largest proportion (n=119) were employed as store managers (Table 7).

Table 7: Type of community pharmacy post (job 1)

Type of community pharmacy post (job 1)	Valid % (n)
Store manager	34.1 (119)
Relief	23.5 (82)
Locum	18.1 (63)
Second pharmacist	15.8 (55)
Other	8.3 (30)
Owner	0.2 (1)

The proportions of respondents working in the various types of community pharmacy posts was different from that of all community pharmacists: for example, locums represent 37.1% of all 2005 census community pharmacist respondents,²⁹ but only 18.1% of community pharmacy respondents to PP. 338 of those working in CP provided details about the type of pharmacy they were working in. Those employed to work in a large multiple were most likely to be working as either a manager (36.6%) or as a relief pharmacist (28.8%). More than two-fifths (46.2%) of those working in a small chain (defined as having between 2 and 4 stores) were locums, whereas around three-quarters (70.0%) of those working in supermarkets were employed as second pharmacists. Differences between type of post and type of CP worked in were statistically significant ($p < 0.001$).

4.6.1.1.1 Subgroup analysis

Analysing cohort respondents who reported working in community pharmacy as their job 1 we found that the largest proportions of both males and females were working as a store manager (35.2% and 33.6% respectively). Working as a CP store manager was considerably more common amongst white than ME respondents (43.0% compared with 21.5%; $p < 0.005$). Large and significant differences were also found between the proportions locuming (30.7% of male and 13.7% of female community pharmacists were working as locums, $p < 0.005$; 13.0% of white compared with 24.8% of ME community pharmacists were employed as CP locums; $p < 0.005$).

4.6.1.2 Hospital pharmacy

There were 186 PP respondents (34.1%) who reported working in the hospital sector for their job 1 (see Table 4 for subgroup analysis of those employed to work as hospital pharmacists). Most of these (174/186; 93.5%) were employed as band 6 pharmacists; five (2.7%) reported working as band 7 pharmacists, and a further 3.8% ($n=7$) were working as hospital locums.

4.6.2 Job 2

Of the 121 respondents who reported working in more than one job, most (107/121; 88.4%) were working as community pharmacy locums. A small number were working as either a relief pharmacist in community pharmacy ($n=4$; 3.3%) or as a hospital pharmacy locum ($n=4$; 3.3%). Although small cell counts prevent detailed subgroup analysis of job 2, we found that female and white respondents were less likely than male and ME respondents to have been locuming in CP (87.3% and 87.7% compared with 90.2% and 89.1% respectively).

More than a third (34.9%, $n=65$) of pharmacists who worked in the hospital sector as their job 1 reported having a second job compared with around one in seven (14.3%) of those who were working in CP ($p < 0.001$).

4.7 Type of community pharmacy working in

4.7.1 Job 1

Participants who reported working in community pharmacy were asked about the type of pharmacy they worked in. More than two-thirds (71.6%; n=245) of CP cohort pharmacists were working for a large multiple, 7.6% (n=26) for a medium-sized multiple, 6.1% (n=21) for a supermarket, 3.8% (n=13) for a small chain and a further 5.8% (n=20) were working for an independent. A small number (n=17; 5.0%) reported working in 'all types' of community pharmacy – these respondents were all working as locums. However looking at locums as a whole we found that, like CP employees, they were most likely to be working for a large multiple (23/63; 36.5%). Comparing findings with those for all actively employed pharmacists, cohort pharmacists were more likely to be working for a multiple CP (71.6% vs. 54.2%) and considerably less likely to have been employed by an independent (5.8% vs. 29.4%).²⁹

Table 8 shows some variation by gender and ethnicity in cohort CP employment destinations, although none of this variation was significant.

Table 8: Type of community pharmacy post (job 1) by gender and collapsed ethnicity

	Type of CP working in – Job 1					
	Large multiple	Medium multiple	Supermarket	Small chain	Independent	All types
Male	69.0 (60)	8.0 (7)	4.6 (4)	4.6 (4)	3.4 (3)	10.3 (9)
Female	72.5 (185)	7.5 (19)	6.7 (17)	3.5 (9)	6.7 (17)	3.1 (8)
White	70.6 (139)	8.6 (17)	6.6 (13)	5.1 (10)	6.1 (12)	3.0 (6)
ME	72.9 (105)	6.2 (9)	5.6 (8)	2.1 (3)	5.6 (8)	7.6 (11)
ALL	71.6 (245)	7.6 (26)	6.1 (21)	3.8 (13)	5.8 (20)	5.0 (17)

Valid % (n); some missing data

4.7.2 Job 2

Working for a large multiple was the most common type of community pharmacy employment amongst those who reported having an additional job to their current main job (job 1) (33.0%; n=31). This was followed by working for a supermarket (26.6% of second jobs in CP were with a supermarket), 'all types' (19.1%), small chain (7.4%), independent (7.4%) and working for a medium-sized CP multiple (6.4%).

Subgroup analysis revealed that proportionally more males were working for a supermarket than a large multiple (36.7% and 33.3% respectively), and that females were almost three times more likely than males to be working for an independent CP employer (9.4% vs. 3.3%). We also found that ME respondents were less likely to be working for a large multiple than their white

peers (27.5% compared with 37.0%), but were more likely to be working in an independent, small chain or supermarket CP, and to describe themselves as working in 'all types' of CP.

4.8 Contracted hours of work

4.8.1 Job 1

Cohort pharmacists in employment who reported having either a permanent full-time, permanent part-time, fixed term/temporary contract or a contract with an agency worked on average 38.76 hours per week (range: 7 to 50 hours). This calculation of mean contracted hours excludes those who reported working on a locum/sessional basis, since the majority of these respondents did not have fixed contracted hours with a pharmacist employer. Mean contracted hours of locums are reported separately (below).

4.8.1.1 Subgroup analysis

Contracted hours worked varied significantly when male and female respondents were compared: men worked an average of 39.78 hours (range: 24 to 50 hours) whereas women worked an average of 38.51 hours (range: 7 to 50 hours). This gender difference in contracted hours is much smaller than that reported when the working hours of all pharmacists were compared in the 2005 census analysis, where it was found that female pharmacists worked on average for 7 hours a week less than male pharmacists.²⁹

White and ME respondents were contracted on average to work a very similar number of hours: whites worked an average of 38.83 hours (range: 7-50 hours) and ME pharmacists an average of 38.61 hours (range 16-50 hours). Those working in CP worked on average significantly longer contracted hours (39.85, range: 7-50 hours) than their cohort peers working in HP (37.13, range: 7-40 hours) (see Table 9).

Table 9: Mean number of contracted and usual hours of employment in job 1

	No.	Contracted hours	No.	Usual hours
Characteristics				
Male	91	*39.78	113	*41.68
Female	375	38.51	392	39.78
White	293	38.83	309	40.30
ME	172	38.45	195	40.01
Sector				
CP	284	*39.76	325	*41.13
HP	177	37.13	180	38.54
Contract type				
Permanent f/t	419	39.52	409	41.07
Permanent p/t	21	27.00	21	28.24
Locum	20	41.42	49	39.54
ALL	466	38.76	513	40.22

* indicates that differences between subgroups are significant at 5% level (t-test); some missing data

Subgroup analysis of locums who reported working contracted hours (n=20) revealed that they were employed for an average of 41.43 hours a week (range: 25 to 52.50).

4.8.2 Banded hours

Contracted hours were collapsed into three categories – part-time (32 hours or less); full-time (33 to 48 hours); and excessive hours (49 hours and over). Results of this categorisation show that 93.8% (n=437) of our respondents worked between 33 and 48 hours per week, 4.2% (n=23) worked less than 33 hours, and 1.1% (n=6) worked excessive hours.

While low cell counts mean that we cannot test for significance, we found that females were around twice as likely as males to work part-time (5.6% compared with 2.2%), but half as likely to work excessive contracted hours (1.1% compared with 2.2%). Those from ME groups were also more likely to work part-time compared with those of white origin (7.6% compared with 3.4%), but no more likely to work excessive contracted hours (1.2% compared with 1.4%). Finally, when comparing between those working in CP and HP, we found that all of those in the sample who were contracted to work in excess of 48 hours were based in CP (2.1% of CP respondents reported

working excessive hours). We also found that CP respondents were more likely to be working part-time than those based in the hospital sector (6.3% compared with 2.3%), possibly indicating that either the community sector offers greater flexibility in contracted hours than HP or that those cohort respondents who do not want to work standard full-time hours were more likely to choose to work in CP.

4.8.3 Job 2

Only 22 respondents reported contracted hours worked in a job that was additional to their main job, probably reflecting the fact that most additional jobs are not contracted but locum/sessional. The mean value for job 2 contracted hours was 7.13 (range 2-16 hours), suggesting that, on average, respondents worked the equivalent of one working day in addition to their main job 1.

4.9 Usual hours of work

In order to differentiate between the number of hours pharmacists in the sample were **contracted** to work in their main and any additional job compared with the number of hours that they **usually** worked, respondents were asked to report the usual number of hours they worked as well as the hours they were contracted to work.

4.9.1 Job 1

Excluding locums, respondents reported usually working an average of 40.22 hours per week (range: 4 to 80 hours) (see Table 9 [section 4.8.1.1] for further details of usual hours of work). This figure is higher than that for contracted hours (38.76 hours).

4.9.1.1 Subgroup analysis

In common with findings related to contracted hours of work, analysis of usual hours revealed that male pharmacists in the sample on average worked significantly more hours than female pharmacists, as did those working in CP when they were compared with their peers working in HP (see Table 9).

Locums' average usual hours were 39.89 hours (range: 4-63 hours, based on 49 locums who provided data related to their usual hours of work).

4.9.2 Banded hours

Analysis of usual banded hours data revealed that a much larger proportion of respondents reported working excessive hours (5.0%; n=25) compared with the proportion reporting excessive contracted hours (1.3%; n=6). Men were more likely than women to be working more than 48 hours/week (9.7% compared with 3.8%), as were those working in CP when compared with those working in the hospital sector (7.4% compared with 0.1%). Relatively large proportions of locums reported that they usually worked the equivalent of either part-time (19.2%) or excessive hours (19.2%).

4.9.3 Job 2

76 respondents completed the question related to usual hours worked in a job additional to their main job. The most common number of usual hours (mode) worked in a job 2 was 4 hours, and in fact almost half of all respondents in this subgroup (43.4%; n=33) worked four hours or less, or the equivalent of half a day. The mean number of hours worked was 7.45 (range: 1.5-25 hours).

4.10 Difference between contracted and usual hours of work

When differences between the contracted and usual hours were calculated we found that, overall, respondents worked on average 1.54 more hours than they were contracted to work. Females usually worked a mean of 1.56 hours more than they were contracted to (1.45 hours difference for males); those from ME groups usually worked an average of 1.27 hours more than they were contracted to work (compared with 1.68 for white respondents); community pharmacists usually worked an average of 1.55 hours more than their contracted hours (1.46 for hospital pharmacists).

Those who reported usually working more than their contracted hours (42.9%; n=197) worked an average of 3.58 hours over their contracted hours (range 1-40; median 3 hours). In fact, we found that 63.5% (n=125) worked up to the equivalent of half a day longer in their usual hours per week than they were contracted to work (defined as working 3 or less additional hours); 28.9% (n=57) usually worked between half and a full day more than they were contracted to work and 7.6% (n=15) usually worked more than 8 hours per week over and above their contracted weekly hours.

4.10.1 Subgroups analysis

Once again examining only those respondents who reported usually working longer hours than they were contracted to work, we found some differences between subgroups, although small cell sizes meant that analysis could not test for significance (see Table 10 for details). It is, however, notable that CP respondents reporting working in excess of their contracted hours were more than twice as likely as their HP counterparts to have been working either four or eight hours in addition to their contracted hours.

Table 10: Difference in contracted and usual hours by gender, collapsed ethnicity and sector of work

	≤3 hours	≥4 and <8 hours	≥ 8 hours
Male	53.8 (14)	26.9 (7)	19.2 (5)
Female	64.9 (111)	29.2 (50)	5.8 (10)
White	64.4 (87)	26.7 (36)	8.9 (12)
ME	62.3 (38)	32.8 (20)	4.9 (3)
CP	50.0 (51)	40.2 (41)	9.8 (10)
HP	78.3 (72)	17.4 (16)	4.3 (4)
ALL	63.5 (125)	28.9 (57)	7.6 (15)

Valid % (n); some missing data

These findings suggest that even at an early stage in their careers some pharmacists work for longer hours than they are contracted to work – and that male pharmacists in particular are more likely than any other subgroup in the sample to have usually worked the highest number of additional non-contracted hours.

4.11 Stability and change in employer

Because we were interested in mobility directly after completion of preregistration training we asked PP respondents whether they were working for the same employer they had when they were doing their preregistration training. Evidence of stability or mobility in the labour market gives us insight into employment behaviours, and also provides us with indirect measures of career attitudes such as respondents' organisational commitment and approaches to career management.^{56,57}

Analysis of PP data revealed that just over half (55.6%; n=303) of respondents were currently working for the same employer that they had had when they were training. Given that, on average, employers retain around 50% of graduate recruits after five years of work^{58,59} this figure is reasonably low.

4.11.1 Subgroup analysis

Female pharmacists were more likely than males to have remained with the same employer as they had trained with; those from ME groups were significantly more likely to have moved employer compared with their white peers; and CP employees were significantly more likely than their hospital colleagues to be working for the same employer (see Table 11).

Table 11: Proportion remaining with preregistration employer, by gender, collapsed ethnicity and sector of work

	Valid %	Number (n)
Male	54.4	68
Female	56.0	235
White*	59.4	196
ME	49.5	106
CP**	60.7	212
HP	47.3	88
ALL	55.5	303

some missing data; *p<0.05; **p<0.005

4.11.2 Relationship to training post preferences

Further analysis of relationships between training post preferences and employment behaviours was undertaken to ascertain whether mobility or stability was related to respondents' previous experiences of applying for and securing a training post. We hypothesised that those who had failed to obtain their first choice of post would be more likely to be mobile after completion of their training, especially if they were to take responsibility for their career development. We also reasoned that finding it easy to secure a training post would influence early career mobility.

Results of this analysis were as predicted, confirming our hypotheses. We found that those who failed to secure their first choice of post were more likely to have changed employer than those who had secured their first choice training post (59.9% of those who had secured their first choice post were with the same employer as they had trained with, compared with 49.5% of those who had not secured their first choice of post). We also found that 61.7% of those who had found it easy to secure their preregistration training post were still working for the same employer compared with 46.1% of those who had found it hard to obtain a training post (p<0.05).

4.12 Reasons for changing employer

Those who reported not working for the same employer were asked the reasons for changing their employer. These qualitative data provide greater understanding of motivations for stability or change, and provided us with data that can be conceptualised in terms of expectations for more 'traditional' careers (characterised by structured, hierarchical moves within an organisation) or in terms of 'new' careers (characterised as involving frequent moves, which may be lateral, between employers that are designed to improve an individual's employability).⁵⁷

Overall, 221 respondents completed the question exploring reasons for changing employer. The most commonly cited reason (n=46; 20.8%) was not directly related to employability or career progression, but to location – such as moving to be nearer friends or family, or to another city. Many (n=30; 13.57%) had been forced to seek a new employer because there were no pharmacist posts available where they had trained.

However, other respondents were more future-oriented and instrumental in their mobility, with 17.65% (n=39) moving from hospital to community pharmacy for their careers, and a further 11.31% (n=25) moving Trust rather than leaving the NHS in order to gain more clinical experience or exposure to different specialities. Fifteen respondents (6.79%) left their preregistration training employer for improved career opportunities and 9.5% moved employer (n=21) to locum. A minority (3.17%; n=7) were motivated to change employers because they had not enjoyed working for that employer as a trainee, a further 3.62% (n=8) had actively sought to work for a different employer, and three respondents said that they left their preregistration employer because they wanted to work in a different environment to the one they had experienced as a trainee.

4.13 Ease of securing first job

Since we found that around two-thirds (63.1%) of PRC respondents had found it easy to secure a training post, but that some ethnic subgroups were more likely to have found it difficult to secure a post, even when we controlled for other factors such as sector, we were interested in whether these results would also be found when we analysed PP data.

Overall, most PP respondents (83.1%; n=453) had found it easy to obtain employment as a pharmacist.

4.13.1 Subgroup analysis

Females were less likely than males, and ME respondents significantly less likely than their white peers, to have found it easy to get their first job (Table 12). Those working in the community sector were significantly more likely than their hospital colleagues to have found it easy to secure pharmacy employment, probably reflecting the larger size of this sector.

Table 12: Ease of securing first job, by gender, collapsed ethnicity and sector of work

	Easy	Not easy
Male	87.2 (109)	12.8 (16)
Female	81.9 (344)	18.1 (76)
White***	88.2 (291)	11.8 (39)
ME	75.2 (161)	24.8 (53)
CP***	89.7 (313)	10.3 (36)
HP	71.0 (132)	29.0 (54)
ALL	83.1 (453)	16.9 (92)

Valid % (n);some missing data; ***p<0.001

Moreover, those from the ME subgroup were significantly less likely than those from the white subgroup to have found it easy to secure pharmacy employment, irrespective of the sector of employment they entered: hence 83.1% of ME respondents employed in CP (compared with 94.5% of white; p<0.005) and 57.4% of ME respondents employed in HP (compared with 77.6% of white; p<0.05) reported that they had found it easy to obtain pharmacy employment.

Finally, some consistency between difficulty in securing a training post and difficulty in securing pharmacist employment was found. Thus 21.1% of respondents who had experienced difficulty in securing a training post also experienced difficulty in obtaining employment, compared with just 14.9% of those who reported finding it easy to obtain a training post but difficult to obtain pharmacist employment.

4.14 Success in securing first choice of job

Not only did the majority of PP respondents report finding it easy to obtain pharmacy employment after completing their training, we also found that most PP respondents had succeeded in obtaining their first choice of job (86.6%; n=467). Obtaining a first choice of job was significantly related to ease of securing pharmacy employment (p<0.001): 90.0% (n=405) of those who found the process of obtaining employment easy got their first choice of post, whereas only 70.5% (n=62) of those who had not found it easy also secured their first choice job.

4.14.1 Subgroup analysis

Female cohort members were more likely than their male peers to have reported securing their first choice of employment, as were those working in CP when compared with those working in the hospital sector (Table 13).

Table 13: Proportion securing first choice of job, by gender, collapsed ethnicity and sector of work

	Valid %	Number
Male	83.5	101
Female	87.6	366
White**	90.6	298
ME	80.4	168
CP	87.2	301
HP	85.9	159
ALL	86.6	467

some missing data; **p<0.005

White respondents were significantly more likely to have been successful in securing their first choice of job after completing their training than respondents from ME groups (Table 13). This significant relationship only held when comparing between white and ME cohort members working in CP, with 93.0% (n=185) of white CP respondents and 79.3% of ME respondents working in CP reporting that they succeeded in obtaining their first choice of job after training (p<0.001; $\chi^2=12.823$). Similar proportions of white and ME respondents working in HP had succeeded in securing their first choice post (87.2% vs. 83.3% respectively).

4.15 Planned employment changes

In order to capture data related to possible changes in employment over the next two years respondents were asked to evaluate the likelihood that they might make any of 17 changes. Eight of these related to changes likely to impact on pharmacist workforce supply, and included intentions to leave the profession, work abroad, and increase/reduce work hours. The remaining nine possible changes related to intentions to undertake personal development or career/employability-directed activities, such as training in providing additional services or studying for a clinical diploma. Responses were recorded on a five-point scale ranging from 'No likelihood' (1) to 'High likelihood' (5). Our analysis combines all responses from 2 to 5 to create a value for 'some likelihood' to allow for sufficient cell sizes for our subgroup analyses.

Figure 1 (over) shows that, in relation to the items measuring workforce supply plans, three-quarters of respondents (76.2%) reported that there was no likelihood that they would leave the profession over the next two years, but that four-fifths of respondents (82.3%) reported that there was some likelihood that they would leave their current employer. High levels of interest in working abroad are also noteworthy as this would have a considerable impact on workforce supply if put into practice (58.6% said there was some likelihood they would work abroad in the next 2 years).

Figure 1: Proportion reporting no likelihood/some likelihood they would make changes affecting pharmacist workforce supply

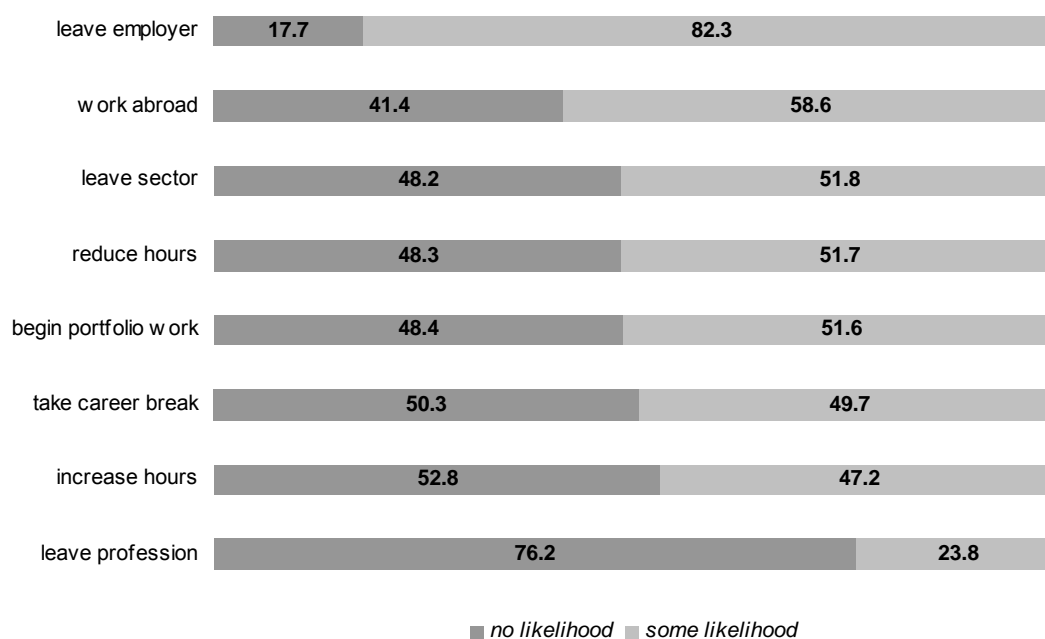
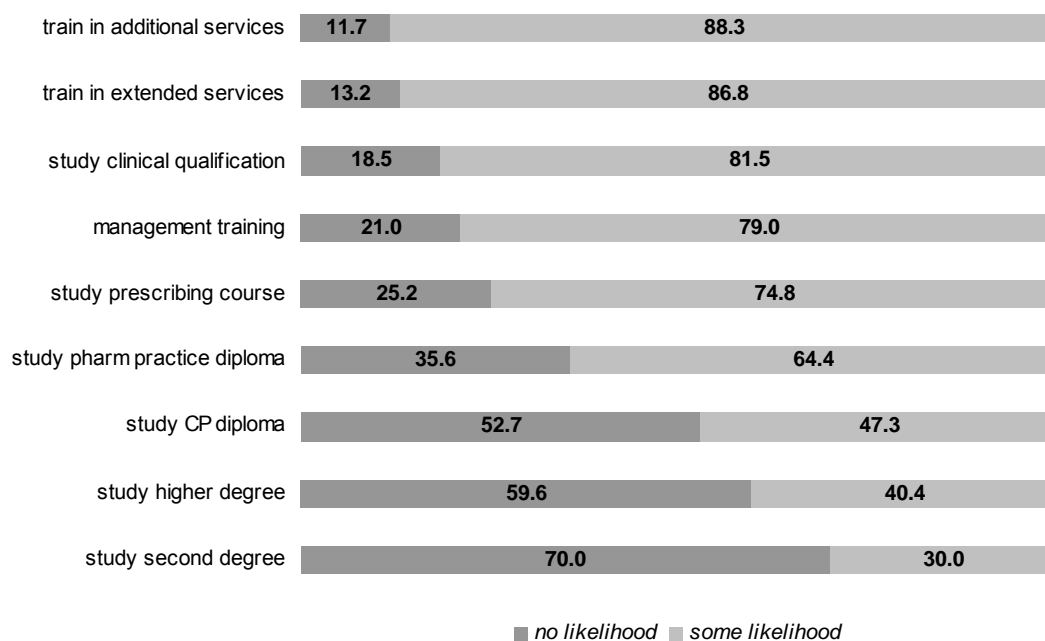


Figure 2 shows that in general respondents were more likely to have been planning to undertake activities that would enable them to develop and improve their knowledge and skills and hence build on their employability or labour market assets than they were to have been likely to intend to make changes that would have an effect on pharmacist supply.

Figure 2: Proportion reporting no likelihood/some likelihood they would make changes related to their employability



4.15.1 Subgroup analysis

4.15.1.1 Planned changes likely to impact on workforce supply

Male respondents were significantly more likely than female respondents to have agreed there was some likelihood they would leave the profession, a finding indicating gender differences in levels of professional commitment (see Table 14 for further details). A recent paper exploring intentions to leave the profession amongst British pharmacists also reported that male pharmacists were more likely than female pharmacists to intend to quit pharmacy.³⁵ Additional analysis of commitment to a career in pharmacy is explored in section 5.8 of this report.

Comparing between white and ME respondents we found that, in general, ME respondents were more likely to have agreed that they might make any of the eight changes evaluated relating to workforce supply. Differences in plans reached statistical significance for items evaluating intentions to increase hours of work, begin portfolio working and reduce hours of work (see Table 14 for details).

Significantly more CP respondents intended to reduce their hours of work relative to their HP peers, a finding that may reflect a desire to avoid the long hours culture of community pharmacy. Those working in HP were found to be significantly more likely than those working in CP to plan to begin portfolio working (Table 14).

4.15.1.2 Planned changes related to employability

Male cohort members were more likely than female members to be planning to study for a second degree, a higher degree, a diploma in pharmacy practice, a supplementary/independent prescribing course or to undertake management training. Only in relation to intentions to study for a second degree were these differences statistically significant.

Respondents from black and minority ethnic groups were more likely than white respondents to have responded that there was 'some likelihood' they would make each of the changes related to employability during the two years after being surveyed. In particular ME respondents were significantly more likely to be planning to study a second degree, a higher degree or for a diploma in pharmacy practice.

Not surprisingly, those working in CP were significantly more likely than those working in HP to have reported 'some likelihood' they would undertake training activities that would add to their employability assets in this sector (for example, by undertaking training in the provision of additional or extended services); similarly, those working in HP were significantly more likely to have reported having some intention to study for a clinical qualification, something which would add to employability assets in the hospital sector of the profession.

Table 14: Proportion reporting some likelihood to make employment-related changes, by gender, collapsed ethnicity and sector of work

Changes affecting workforce supply	% some likelihood (n)						
	Male	Female	White	ME	CP	HP	ALL
Leave employer	77.3 (92)	83.8 (346)	83.6 (271)	80.2 (166)	82.6 (281)	82.5 (151)	82.3 (438)
Work abroad	63.1 (77)	57.2 (237)	58.8 (190)	58.0 (123)	58.4 (202)	58.6 (106)	58.6 (314)
Leave sector	49.2 (62)	52.5 (218)	50.3 (164)	54.3 (114)	50.0 (174)	56.1 (101)	51.8 (278)
Reduce hours	52.8 (65)	51.3 (212)	***44.3 (143)	62.7 (133)	***60.1 (208)	37.2 (67)	51.7 (277)
Begin portfolio working	52.1 (61)	51.5 (209)	*47.6 (151)	58.0 (119)	*47.2 (159)	59.3 (105)	51.6 (270)
Career break	49.2 (60)	49.9 (206)	48.9 (158)	51.3 (108)	51.9 (179)	48.1 (87)	49.9 (266)
Increase hours	45.9 (56)	45.1 (186)	*43.5 (140)	53.1 (112)	44.9 (154)	50.5 (92)	47.2 (252)
Leave profession	*31.1 (38)	21.6 (90)	22.8 (74)	25.5 (54)	23.0 (80)	24.9 (45)	23.8 (128)
Changes related to employability							
Additional services training	86.2 (106)	88.9 (369)	86.4 (279)	91.1 (195)	***96.8 (335)	74.7 (136)	88.3 (475)
Extended services training	86.2 (106)	87.0 (360)	84.5 (272)	90.2 (193)	***96.2 (332)	71.4 (130)	86.8 (466)
Clinical qualification	79.3 (96)	82.2 (336)	80.6 (257)	83.3 (175)	***76.0 (263)	95.4 (167)	81.5 (432)
Management training	83.5 (101)	77.7 (320)	78.0 (251)	81.0 (170)	***88.4 (304)	61.7 (180)	79.0 (421)
Supplementary/indept prescribing	78.7 (96)	73.7 (305)	74.4 (241)	75.8 (160)	77.4 (267)	73.6 (134)	74.8 (401)
Diploma in pharmacy practice	52.1 (63)	45.9 (188)	***40.3 (129)	58.1 (122)	***63.1 (217)	19.1 (34)	47.3 (251)
Higher degree	47.5 (58)	38.3 (158)	**35.3 (114)	47.9 (101)	37.6 (130)	45.6 (82)	40.4 (216)
Second degree	*39.7 (48)	27.1 (112)	***23.9 (77)	39.3 (83)	29.8 (103)	29.6 (53)	30.0 (160)

some missing data; *p<0.05; **p<0.005; ***p<0.001

4.16 Line management

The final questions in part A of the PP questionnaire asked cohort members about those involved in managing and advising them about their career. We were interested in whether some groups of employees/some subgroups in the sample were more likely to have a trusted pharmacist advisor, or mentor, and in perceptions of the value of this advisor. Previous studies have shown that managers and mentors can positively influence a worker's job satisfaction and professional commitment, and can act as a buffer against the negative effects of adverse work experiences such as role conflict.^{60,61} Mentoring has also been found to play a critical role in the development of professional attitudes and behaviours during the early career years, and hence having a mentor is especially important for effective early career socialisation.⁶²

Given the important role played by senior staff and mentors in professionalisation it is reassuring to report that more than two-thirds of cohort respondents reported having a pharmacist line manager (70.5%, n=372), although a further 22.5% (n=123) were not directly managed by a pharmacist and the remaining 6.2% (n=33) were unsure about whether their line manager was a pharmacist or not.

4.16.1 Subgroup analysis

Almost three-quarters of females in the sample reported having a pharmacist line manager (73.0%) compared with 61.5% of males. Interestingly, around one in ten (9.4%) males were unsure whether their line manager was a pharmacist or not.

Significantly fewer ME respondents had a pharmacist line manager compared with white respondents (61.4% vs. 76.6%; p=0.001). Since those working in CP were also significantly less likely than their HP peers to have reported having a pharmacist line manager (57.8% vs. 94.6%; p<0.001), and those from black and ME groups were more likely to be working in CP, relationships between these variables were explored further. Results of this analysis suggest that having a pharmacist line manager in HP was the norm regardless of ethnicity, but that the propensity to have a pharmacist line manager in CP varied according to ethnicity (see Table 15).

Table 15: Proportion with a pharmacist line manager, by collapsed ethnicity and sector of work

	% with pharmacist line manager (n)		
Sector	White	ME	ALL
CP	*65.1 (125)	48.2 (68)	***57.8 (193)
HP	94.4 (118)	95.1 (58)	94.6 (176)
ALL	**76.6 (245)	61.4 (127)	

some missing data; *p<0.05; ***p<0.001

4.17 Prevalence of career mentors

Less than half of cohort respondents reported having a mentor (49.1%, n=267), although this figure varied significantly according to the gender of respondents with 52.3% of females and 38.4 % of males agreeing that they had a mentor or trusted advisor (p=0.009). White respondents were also more likely to have reported having a career mentor than those from ME groups (51.7% vs. 45.3%), although this difference was not statistically significant. However, a large and significant difference between the proportions having a mentor was found when community and hospital pharmacists in the sample were compared: 35.9% of those working in the community sector and 73.7% of those working in the hospital sector of the profession reported having a mentor (p<0.001).

Comparing between male and female, and between white and ME respondents working in the same sector we found that regardless of sector females were more likely than males and white respondents more likely than those from ME groups to have a mentor. However, differences were only statistically significant in relation to proportions of male and female community pharmacists who reported having a mentor (25.0% vs. 39.6% respectively, p=0.019).

4.18 Perceived value of a mentor

Only those who reported having a mentor were asked to consider how valuable they felt having a mentor was to their career; however, responses to the question were received from 317 participants, rather than from the 267 who reported having a mentor when they answered the previous question.

Overall, very high levels of agreement were found relating to the value of a mentor, with more than nine out of ten of those who answered the question agreeing that a mentor had an important role to play in a pharmacist's career development (n=295, 93.1%). Table 16 shows that very little variation in response was found when subgroups within the sample were compared.

Table 16: Perceived value of a career mentor, by gender, collapsed ethnicity and sector of work

	perceived value of a career mentor % (n)		
	important	not important	not sure
Male	91.7 (55)	3.3 (2)	5.0 (3)
Female	93.4 (240)	5.1 (13)	1.6 (4)
White	92.3 (179)	5.7 (11)	2.1 (4)
ME	94.3 (115)	3.3 (4)	2.5 (3)
CP	91.4 (148)	4.9 (8)	3.7 (6)
HP	94.6 (140)	4.7 (7)	0.7 (1)
ALL	93.1 (295)	4.7 (15)	2.2 (7)

5. Work Life

5.1 Overview

The second part of the PP questionnaire consisted of questions designed to explore aspects of the cohort's work and future careers: there were questions exploring job satisfaction, perceptions of current job (work life), work/life balance, influences on career decision-making, motivation for a career in pharmacy, and career commitment. A free text response question at the end of the questionnaire asked respondents about their ultimate career goal.

Measuring job satisfaction involved respondents' evaluating their experiences of work and assessing either whether the objectives they deemed important in their work had been achieved⁶³ (that is, it involved an evaluation of job satisfaction or dissatisfaction associated with twelve work characteristics). Respondents' work experiences were examined using twelve statements designed to explore four dimensions of work (control over work, work overload, career opportunities and growth opportunities). Work/life balance was explored using a previously validated tool⁵⁰ designed to measure the impact of work on non-work roles.⁶⁴ The question capturing influences on career decision-making consisted of sixteen items rated on a four-point scale and had been included in each of the three previous surveys, and is based on one used to determine influences on medical career decision-making.⁶⁵ Motivations for a pharmacy career were measured using a single item, rated on a scale ranging from very strong to regretting becoming a pharmacist. Finally, a series of statements exploring respondents' career commitment were included in PP in light of research showing that commitment is correlated with intentions to leave a profession as well as with work performance.^{33, 34}

5.2 Job satisfaction

Mean job satisfaction scores and standard deviations for each of the scale items (including overall job satisfaction) were calculated. Subsequently, mean scores were compared on the basis of gender, ethnicity and sector (with sector simplified to compare between community and hospital jobs only). Mean values for the subgroups were compared using t-tests.

Analysis of PP data showed that, as with YPP data, cohort respondents derived most satisfaction from interpersonal aspects of work (colleagues and fellow workers and patient contact). Once again, they were most dissatisfied with the remuneration they received, the recognition they received for good work, and for variety in their job (see Table 17).

5.2.1 Subgroup analysis

5.2.1.1 Gender

Females in the sample were significantly more satisfied than males with patient contact, opportunities to use their abilities, opportunities for promotion and the amount of variety in the job. There were no other statistically

significant differences between male and female respondents (see Table 17 for details).

5.2.1.2 Ethnicity

The results in Table 18 show that there were significant differences between white and minority ethnic respondents in levels of satisfaction for nine of the 12 satisfaction items, including overall job satisfaction. In all of these nine instances, minority ethnic trainees were less satisfied than their white peers. The only items in the scale for which there were no statistically significant differences were 'freedom to choose your own methods of working', 'hours of work' and 'recognition for good work'.

Similar differences in job satisfaction between minority ethnic and white cohort members were also found as a result of analysing YPP data.

5.2.1.3 Sector

The results in Table 19 indicate that CP respondents were significantly less satisfied than cohort members working in HP with patient contact, colleagues and fellow workers, their physical working conditions, opportunities to use their abilities and the amount of variety in their job. On the other hand, hospital pharmacists were significantly less satisfied than their community peers in relation to their remuneration, probably reflecting differences in salaries between the two sectors (see 6.2 for further details).

CP and HP differences in job satisfaction may have arisen because the nature of work is qualitatively different in the sectors. Similar findings were also noted when the job satisfaction of community and hospital preregistration trainees was compared for the cohort study one year ago. Of particular note once again is the finding that the item 'amount of variety in your job' was rated even lower amongst community pharmacists than remuneration; if we consider the degree of variety in a job to measure the satisfaction derived from job characteristics such as complex and interesting work then the consistency in the findings across the two data sets suggests that experiences of training or working in community pharmacy are associated with low levels of satisfaction derived from repetitive work, which occurs perhaps as a result of the way that these jobs/posts are structured. Job complexity has also been linked to the organisational context and job design by other studies of work and job satisfaction.⁶⁶

Table 17: Mean job satisfaction scores for all respondents and by gender

Job satisfaction: mean values (SD)	Male (n=125)	Female (n=421)	ALL (n=546)	Rank order (all)	T test results		% satisfied (≥ 5) (n)
					t	p	
Patient contact*	5.22 (1.423)	5.47 (1.108)	5.41 (1.191)	1	-2.072	0.039	83.5 (455)
Your colleagues and fellow workers	5.16 (1.370)	5.42 (1.261)	5.36 (1.290)	2	-1.942	0.53	81.6 (444)
Amount of responsibility you are given	5.07 (1.327)	5.06 (1.216)	5.06 (1.241)	3	0.099	0.922	73.6 (401)
Opportunity to use your abilities*	4.64 (1.478)	4.92 (1.236)	4.86 (1.300)	4	-2.132	0.033	70.8 (386)
Freedom to choose your own method of working	4.86 (1.376)	4.85 (1.204)	4.86 (1.244)	4	0.078	0.938	69.6 (378)
Physical working conditions	4.81 (1.506)	4.86 (1.247)	4.85 (1.310))	6	-0.371	0.711	96.2 (378)
Opportunity for promotion/career advancement*	4.43 (1.598)	4.74 (1.312)	4.67 (1.387)	7	-2.168	0.031	60.1 (327)
Your hours of work	4.59 (1.380)	4.69 (1.419)	4.67 (1.409)	8	-0.675	0.500	59.7 (324)
Amount of variety in your job*	4.09 (1.709)	4.74 (1.397)	4.59 (1.498)	9	-4.365	0.000	61.5 (334)
Recognition you get for good work	4.26 (1.626)	4.33 (1.556)	4.31 (1.571)	10	-0.463	0.643	54.8 (299)
Your remuneration	4.37 (1.565)	4.23 (1.465)	4.26 (1.489)	11	0.962	0.337	50.3 (268)
Overall satisfaction with main job	4.98 (1.296)	5.05 (1.196)	5.03 (1.217)		-0.486	0.627	77.6 (387)

*indicates that differences between males and females are significant at 5% level (t-test); some missing values

Table 18: Mean job satisfaction scores by collapsed ethnic group

Job satisfaction: mean values (SD)	White (n=330)	ME (n=215)	ALL (n=546)	Rank order (all)	T test results		% satisfied (≥ 5) (n)
					t	p	
Your colleagues and fellow workers*	5.52 (1.235)	5.11 (1.338)	5.41 (1.191)	2	3.636	0.000	81.6 (444)
Patient contact*	5.50 (1.145)	5.27 (1.249)	5.36 (1.290)	1	2.300	0.022	83.5 (455)
Amount of responsibility you are given*	5.21 (1.182)	4.85 (1.300)	5.06 (1.241)	3	3.337	0.001	73.6 (401)
Opportunity to use your abilities*	5.01 (1.200)	4.62 (1.412)	4.86 (1.300)	4	3.444	0.001	70.8 (386)
Physical working conditions*	4.97 (1.259)	4.66 (1.368)	4.86 (1.244)	6	2.748	0.006	96.2 (378)
Freedom to choose your own method of working	4.92 (1.204)	4.75 (1.303)	4.85 (1.310))	4	1.581	0.115	69.6 (378)
Opportunity for promotion & career advancement*	4.86 (1.284)	4.37 (1.489)	4.67 (1.387)	7	4.087	0.000	60.1 (327)
Amount of variety in your job*	4.78 (1.439)	4.31 (1.550)	4.67 (1.409)	9	3.589	0.000	61.5 (334)
Your hours of work	4.73 (1.400)	4.58 (1.421)	4.59 (1.498)	8	1.206	0.228	59.7 (324)
Your remuneration*	4.49 (1.376)	3.91 (1.593)	4.31 (1.571)	11	4.403	0.000	50.3 (268)
Recognition you get for good work	4.42 (1.486)	4.16 (1.686)	4.26 (1.489)	10	1.892	0.059	54.8 (299)
Overall satisfaction with main job*	5.17 (1.161)	4.81 (1.276)	5.03 (1.217)		3.297	0.001	77.6 (387)

*indicates that differences between white and ME respondents are significant at 5% level (t-test); some missing values

Table 19: Mean job satisfaction scores by sector of work

Job satisfaction: mean values (SD)	CP (n=350)	HP (n=186)	ALL (n=546)	Rank order (all)	T test results		% satisfied (≥ 5) (n)
					t	p	
Patient contact*	5.31 (1.209)	5.62 (1.131)	5.41 (1.191)	1	-2.938	0.003	83.5 (455)
Your colleagues and fellow workers*	5.23 (1.280)	5.56 (1.282)	5.36 (1.290)	2	-2.807	0.005	81.6 (444)
Amount of responsibility you are given	5.06 (1.290)	5.06 (1.143)	5.06 (1.241)	3	-0.021	0.984	73.6 (401)
Freedom to choose your own method of working	4.82 (1.301)	4.89 (1.080)	4.86 (1.300)	4	-0.604	0.546	69.6 (378)
Physical working conditions*	4.74 (1.358)	4.99 (1.183)	4.86 (1.244)	6	-2.182	0.030	96.2 (378)
Opportunity to use your abilities*	4.69 (1.364)	5.16 (1.080)	4.85 (1.310))	4	-4.407	0.000	70.8 (386)
Your hours of work	4.60 (1.430)	4.76 (1.363)	4.67 (1.387)	8	-1.199	0.231	59.7 (324)
Opportunity for promotion & career advancement	4.58 (1.428)	4.81 (1.277)	4.67 (1.409)	7	-1.832	0.068	60.1 (327)
Your remuneration*	4.52 (1.470)	3.73 (1.406)	4.59 (1.498)	11	5.960	0.000	50.3 (268)
Recognition you get for good work	4.27 (1.598)	4.32 (1.500)	4.31 (1.571)	10	-0.302	0.763	54.8 (299)
Amount of variety in your job*	4.21 (1.503)	5.27 (1.205)	4.26 (1.489)	9	-8.267	0.000	61.5 (334)
Overall satisfaction with main job	4.95 (1.248)	5.14 (1.136)	5.03 (1.217)		-1.649	0.100	77.6 (387)

*indicates that differences between CP and HP respondents are significant at 5% level (t-test); some missing values

5.2.1.4 Relationship between ethnicity and sector

In the light of the many differences in job satisfaction observed when comparing between white and minority ethnic respondents, and between community and hospital pharmacist respondents, and because we know that, in the context of occupational segregation, ethnic minority respondents were more likely to be employed to work in CP, further analysis was undertaken to explore the relationship between ethnicity, sector of employment and job satisfaction variables further. Controlling for sector, we found that on the measure of overall job satisfaction only minority ethnic respondents employed to work in CP were significantly less satisfied than their white peers (see Table 20).

Table 20: Mean overall job satisfaction by collapsed ethnic group, controlling for sector

Sector	Ethnic group	Mean	Std. Dev	t	p
CP	White*	5.15	1.181	3.490	0.001
	ME	4.66	1.291		
HP	White	5.18	1.113	0.650	0.517
	ME	5.05	1.193		

*indicates that differences between white and ME respondents are significant at 5% level (t-test); some missing values

Many significant differences were found when the other eleven job satisfaction items were compared in the same way (Table 21 shows differences between white and minority ethnic respondents training in community pharmacy, while Table 22 compares between white and minority ethnic respondents training in hospital pharmacy).

Table 21: Mean job satisfaction by collapsed ethnic group, controlling for sector (CP)

Job satisfaction	Ethnic group	Mean	Std. Dev	t	p
Patient contact	White	5.45	1.159	2.493	0.013
	ME	5.12	1.257		
Your colleagues and fellow workers	White	5.41	1.227	2.959	0.003
	ME	5.00	1.320		
Amount of responsibility you are given	White	5.39	1.184	3.933	0.000
	ME	4.75	1.365		
Physical working conditions	White	4.94	1.272	3.202	0.001
	ME	4.47	1.431		
Remuneration	White	4.92	1.186	6.149	0.000
	ME	3.98	1.644		
<i>Freedom to choose your own method of working</i>	<i>White</i>	<i>4.91</i>	<i>1.266</i>	<i>1.445</i>	<i>0.149</i>
	<i>ME</i>	<i>4.70</i>	<i>1.347</i>		
Opportunity to use your abilities	White	4.89	1.267	3.204	0.001
	ME	4.42	1.448		
Opportunity for promotion & career advancement	White	4.81	1.362	3.434	0.001
	ME	4.28	1.466		
<i>Your hours of work</i>	<i>White</i>	<i>4.67</i>	<i>1.396</i>	<i>1.011</i>	<i>0.313</i>
	<i>ME</i>	<i>4.52</i>	<i>1.473</i>		
Recognition you get for good work	White	4.48	1.480	2.697	0.007
	ME	4.01	1.716		
Amount of variety in your job	White	4.43	1.475	3.100	0.002
	ME	3.93	1.503		

Job satisfaction items in italics are not s.s.

Table 21 shows that across each of the 11 items, ME respondents were less satisfied with their work than white respondents employed in the same sector – and that this difference reached statistical significance for all but two of the items. Comparing between white and ME hospital pharmacists in the sample we found that there were no statistically significant differences in job satisfaction, and that, furthermore, on two items ME respondents were more likely to have been satisfied than white respondents (see Table 22 for details).

Table 22: Mean job satisfaction by collapsed ethnic group, controlling for sector (HP)

Job satisfaction	Ethnic group	Mean	Std. Dev	t	p
Your colleagues and fellow workers	White	5.68	1.215	1.853	0.065
	ME	5.31	1.853		
Patient contact	White	5.60	1.132	-0.287	0.774
	ME	5.66	1.138		
Amount of variety in your job	White	5.30	1.203	0.409	0.683
	ME	5.22	1.219		
Opportunity to use your abilities	White	5.19	1.049	0.660	0.510
	ME	5.08	1.144		
Amount of responsibility you are given	White	5.08	1.168	0.352	0.725
	ME	5.02	1.097		
Physical working conditions	White	5.00	1.231	0.088	0.930
	ME	4.98	1.088		
Freedom to choose your own method of working	White	4.93	1.045	0.734	0.464
	ME	4.80	1.152		
Opportunity for promotion & career advancement	White	4.93	1.150	1.902	0.059
	ME	4.56	1.478		
Your hours of work	White	4.76	1.393	0.038	0.970
	ME	4.75	1.310		
Recognition you get for good work	White	4.29	1.485	-0.379	0.705
	ME	4.38	1.540		
Remuneration	White	3.76	1.363	0.328	0.743
	ME	3.68	1.501		

Looking across the results in Tables 21 and 22, it seems that evaluations of work satisfaction were generally similar regardless of ethnicity amongst those working in HP, but often varied significantly according to a respondent's ethnicity amongst those employed to work in CP. The reasons that low levels of job satisfaction were recorded amongst ME community pharmacists cannot currently be determined by this study, but will be explored in more detail in future qualitative work undertaken with the cohort.

5.3 Work life

Where in 5.2 we reported results related to the cohort's job satisfaction, in this section we explore four aspects or dimensions of work life – job control, work overload, career opportunities and growth opportunities – designed elsewhere to evaluate pharmacists' careers and working lives.^{37,38} Each of the work dimensions in the PP questionnaire was explored using three items, with each individual item rated on a Likert scale of 1 to 5, where 5 equated to strongly agree and 1 to strongly disagree (see Table 23 for details).

Compared with all pharmacists, cohort respondents were much less likely to have reported feeling that they had autonomy at work, with 58.5% of PP respondents agreeing that they were able to carry out their work in the way they thought best, compared with 74.2% of respondents to a 2004 survey of pharmacists.³⁸ On the other hand, cohort respondents were considerably more likely to have agreed with all three statements exploring the extent to

which their current job offered career opportunities than the sample of pharmacists surveyed previously, a finding which probably reflects the cohort's early career stage.

Table 23: Evaluation of work life

Statement	disagree	neither	agree
Job control			
I determine the procedures & methods that I use in my work	12.8 (70)	24.8 (135)	62.4 (340)
I can vary how I do my work	9.2 (50)	21.5 (117)	69.3 (377)
I can carry out my work in the way I think is best	12.7 (69)	28.9 (157)	58.5 (318)
Work overload			
I often have to work very hard in my job	1.7 (9)	7.0 (38)	91.4 (498)
I often have too much work to do in my job	9.9 (54)	22.1 (120)	68.0 (370)
I often have too little time to get things done in my job	14.0 (76)	25.4 (138)	60.7 (330)
Career opportunities			
I have the opportunity for further advancement in my career	11.9 (65)	19.9 (108)	68.2 (371)
This job will open up new opportunities for me in my career	10.3 (56)	26.1 (142)	63.6 (346)
This job increases my chances to get ahead in my profession	15.6 (84)	33.7 (184)	50.7 (277)
Growth opportunities			
This job provides me with the opportunity to expand my professional knowledge	12.3 (67)	12.7 (69)	75.0 (409)
This job provides me with the opportunity for self-improvement and development	8.8 (48)	12.7 (69)	78.5 (428)
This job provides me with the opportunity for me to keep up with new developments related to my profession	12.1 (66)	23.9 (130)	64.0 (349)

Valid % (n); some missing data

5.3.1 Subgroup analysis

5.3.1.1 Control over work

No significant differences between male and female respondents in the sample were found when items related to control over work were analysed. However, those from ME groups were significantly less likely than those of white ethnicity to have agreed that they could vary how they worked, or that they could carry out their work in the way they thought best (59.3% vs 64.5% $p=0.028$ and 64.0% vs 72.6% $p=0.039$ respectively). Comparing between those working in the community and hospital sectors we found that hospital pharmacists were significantly more likely to have agreed that they could

determine the methods and procedures used in their work than their colleagues working in the community sector (72.0% vs 57.1%, $p=0.003$).

5.3.1.2 Work overload

Females were significantly more likely than males to have reported that they often had to work very hard (93.1% vs 85.5%, $p=0.026$), as were white respondents relative to those from ME groups (94.2% vs. 86.9%, $p=0.012$). White respondents were also significantly more likely than ME respondents to have agreed that they had too little time to get things done in their job (65.5% vs. 52.8%, $p=0.006$). Comparing between hospital and community pharmacists in the sample we only found significant differences in relation to the item recording the proportion who reported having too little time in their job to get things done. Here, significantly larger proportions of hospital pharmacists agreed with the statement (66.3% vs. 58.3%, $p=0.042$).

5.3.1.3 Career opportunities

Females generally felt more positive than males that their current job would enhance their career opportunities, with 66.4% of females agreeing that their current job would open up future career opportunities (compared with 54.0% of males, $p=0.001$), and 55.1% agreeing that their current job increased their chances of getting ahead in the profession (compared with only 36.3% of males, $p=0.001$). ME respondents were significantly less likely than white respondents to have agreed that they felt their current job offered them opportunities to advance their careers (58.4% vs. 74.8%); those from ME groups were also significantly less likely to have agreed that their job opened up new opportunities in their careers (55.4% vs. 68.8%, $p=0.006$). Working in HP was significantly associated with having favourable perceptions of their current career opportunities: 82.8% of hospital pharmacists and 60.7% of those working in CP agreed that their current job provided them with an opportunity to advance their career ($p<0.001$); 81.7% compared with 54.2% of community pharmacist respondents agreed that their job would open up new opportunities for them in their careers ($p<0.000$); and 66.7 % of those working in HP compared with only 42.3% of their community pharmacy colleagues agreed that their job would increase their chance to get ahead in the profession ($p<0.001$). Findings suggest then that those working in the hospital sector – where the largest subgroup of respondents are white females (53.5%, compared with 47.5% of the sample overall who are white female) – are more likely to believe that experience gained at work enhances their career opportunities. In fact, controlling for gender or ethnicity when comparing between hospital and community pharmacists in the sample we found that all differences were significant, with hospital pharmacists more likely to have agreed with all three statements.

5.3.1.4 Growth opportunities

Here we found that results only varied according to respondents' characteristics in relation to the item 'opportunities for self improvement and development', with females in the sample more likely than males to have agreed that their job provided them with this aspect of growth opportunities

(80.3% vs. 72.6%, $p=0.036$). However, when analysing the data by sector of employment we found that hospital pharmacists were significantly more likely than their community colleagues to have agreed that their job provided them with opportunities to expand their professional knowledge (94.6% vs. 64.9%, $p<0.001$), and to have agreed that their job provided opportunities for self-improvement and development (88.2% vs. 73.4%, $p<0.001$).

5.3.2 Work dimensions

In order to explore relationships between the four dimensions of work life and other variables further we computed new scale variables by combining responses for the individual items. The overall means, standard deviations and reliability of the new scales are shown in the table below.

Table 24: Overall means, standard deviations and reliability of work life dimensions

Scale	n	Mean	Std. Dev	Reliability (cronbachs α)
Job control	543	3.60	0.6969	0.753
Work overload	543	3.98	0.7431	0.784
Career opportunities	543	3.63	0.7981	0.829
Growth opportunities	545	3.76	0.7281	0.778

Comparing between the results in Table 24 and those reported by others using the same scales^{37,38} we found that our respondents were slightly less likely than pharmacists overall to feel that they had control over and autonomy in their work, experienced marginally lower levels of overload, were more likely to be optimistic that their current job would enhance their future career prospects but slightly less likely to have perceived that their current job provided them with opportunities for personal and professional development.

5.3.2.1 Subgroup analysis

Subgroup analysis using the four dimensions revealed that while the dimension measuring career opportunities varied significantly when explored in relation to gender, ethnicity and sector of work, the dimension exploring control over work varied little (see Table 25).

Table 25: Overall means, standard deviations of work life dimensions by gender, collapsed ethnicity and sector of work

Work dimension	Gender	Mean	Std. Dev	t	p	Ethnic group	Mean	Std. Dev	t	p	Sector	Mean	Std. Dev	t	p
Job control	<i>Male</i>	3.55	0.723	-0.849	0.396	<i>White</i>	3.63	0.711	1.288	0.198	<i>CP</i>	3.57	1.215	-1.515	0.130
	<i>Female</i>	3.61	0.689			<i>ME</i>	3.55	0.676			<i>HP</i>	3.66	1.853		
Work overload	Male	3.85	1.132	-1.980	0.048	White	4.03	0.736	2.888	0.004	CP	3.95	1.132	-0.875	0.382
	Female	4.00	1.138			ME	3.85	0.712			HP	4.01	1.138		
Career opportunities	Male	3.41	1.203	-3.522	0.034	White	3.73	0.740	3.603	0.000	CP	3.43	1.203	-8.502	0.000
	Female	3.69	1.219			ME	3.48	0.734			HP	4.01	1.219		
Growth Opportunities	Male	3.64	0.82	-2.129	0.000	<i>White</i>	3.80	0.768	1.604	0.109	CP	3.58	1.049	-8.567	0.000
	Female	3.79	0.695			<i>ME</i>	3.70	0.822			HP	4.11	1.144		

Work dimensions in italics found not be s.s when subgroup analysis was performed

We used regression analysis to explore relationships between the work dimensions and gender, ethnicity and sector further. The results of this showed that male and ME respondents reported significantly less overload ($p=0.012$ and $p=0.009$ respectively), and career opportunities ($p=0.004$ and $p=0.010$ respectively), while those working in HP were particularly likely to have reported career and growth opportunities (both $p<0.001$). Given these responses, it appears that there are important differences between subgroups' perceptions of their worklife.

5.4 Work life and job satisfaction

Spearman's Rho was used to test for correlations between work dimensions variables, and between these variables and overall job satisfaction. Analysis revealed positive correlations between job control and career opportunities and between job control and growth opportunities, but no correlation between job control and work overload (see Table 26 below for more details). The strongest correlation found was between career opportunities and growth opportunities.

Table 26: Correlations between work life dimensions and job satisfaction

Variable	Job satisfaction	Job control	Work overload	Career opportunities	Growth opportunities
Job satisfaction	1.000	.451 (**)	-.118 (**)	.393 (**)	.421 (**)
Job control		1.000	-.023	.419 (**)	.468 (**)
Work overload			1.000	.122 (*)	-.007
Career opportunities				1.000	.655 (**)
Growth opportunities					1.000

** correlations significant at 0.01 level; * correlations significant at 0.05 level (2-tailed)

Exploring relationships between the work dimensions and job satisfaction we found that the strongest correlation was between having control at work and job satisfaction amongst cohort respondents. Positive correlations between job satisfaction (JS) and control over work, JS and career opportunities, JS and growth opportunities, JS and career commitment, and a negative correlation between work overload and job satisfaction, were also found. These results suggest that pharmacists who perceived that they had higher levels of control over their work, and better career and growth opportunities, were more likely to be satisfied. A link between job satisfaction and growth and career opportunities has also been reported elsewhere.³⁷

5.5 Work/life balance

The scale for measuring work/life balance⁵⁰ was also used in the YPP questionnaire, where we found that ME respondents and those training in CP were more likely to report problems with work/life balance.⁶⁷ An evaluation of work/life was included in both questionnaires since it is important for

understanding experiences and perceptions of work.⁶⁴ Furthermore in the context of intensifying pressures of work⁴⁵ (a factor which may also be associated with work making increasing demands on life outside work) and given evidence that recent graduates are less tolerant of work/life imbalance^{46, 47} – data related to work/life balance are relevant when considering the cohorts' future careers.

Three methods were used to calculate work/life balance among cohort respondents. Checkscale 7 (reported in 5.5.1) used scores summed from responses to seven out of ten items included in the measure, with only respondents who had answered all seven questions included in the analysis (n=410). Checkscale 10 (5.5.2) used scores based on summed responses to all ten items in the measure, with only those who completed all ten questions were included in the analysis (n=314). Scale 7a results (see section 5.5.3) were derived by assigning all the 'agree' responses to the scale 7 items a value of one and all other responses given by a participant a value of zero. The score on the 7a scale was calculated by then summing these ones and zeros. On all scales a low score indicated fewer problems with work/life balance and a high score indicated greater problems with work/life balance (see our previous report⁶⁷ for further details of analysis).

5.5.1 Checkscale 7

The mean score on this scale was 12.8 (SD \pm 3.766) out of a possible total score of 21. Subgroup analysis of work/life balance scores revealed no significant differences between workers' characteristics or workplace characteristics (sector) and work/life balance scores (see Table 27 for details).

5.5.2 Checkscale 10

The mean for checkscale 10 was 18.11 (SD \pm 5.553). Once again, subgroup analysis revealed no significant differences.

5.5.3 Scale 7a

The mean value was 2.70 (SD \pm 1.738). As with 5.5.1 and 5.5.2, subgroup analysis produced no significant results.

Table 27: Mean values for work/life balance by gender, collapsed ethnicity and sector of work

	CHECKSCALE 7 (n=533)		CHECKSCALE 10 (n=390)		CHECKSCALE 7As (n=533)	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Male	12.26	3.592	17.82	5.306	2.45	1.720
Female	12.97	3.808	18.20	5.640	2.79	1.740
White	12.64	3.622	17.74	5.364	2.60	1.675
ME	13.08	4.021	18.84	5.897	2.91	1.834
CP	13.07	3.606	18.44	5.503	2.64	1.704
HP	12.39	3.968	17.53	5.622	2.83	1.805
ALL	12.80	3.766	18.11	5.553	2.70	1.738

some missing values

5.6 Influences on career decision-making

As with previous cohort study questionnaires, respondents were asked to evaluate a list of items in relation to whether they were influential when making decisions about work and their future careers. When surveyed about influences on career decision-making as preregistration trainees in the YPP questionnaire we found that extrinsic characteristics of the training post – that is, external aspects of the post such as career prospects, rather than features of the post itself – were most likely to have been influential. Hours of work were influential for only YPP 39.8% of respondents, which was the lowest score for any of the items evaluated.

Results from the PP survey suggest differences in influences on career decision-making, with – for example – hours of work being reported as influential by 92.3% of respondents (see Table 28 for details). It is also noteworthy that the item the largest proportion of PP respondents reported as being influential (salary) was only influential for 59.0% of YPP respondents, where it received the third lowest score of items evaluated. Change in ranking of influences may reflect changing career priorities once pharmacists begin to embed themselves in their careers.

We also found some evidence of contextual factors being important for decision-making. For example, early career decision-making was more likely to have been influenced by a pharmacist role model if a cohort member had a mentor (75.6% of respondents with a mentor were influenced by a pharmacist role model, compared with only 48.7% of those who did not have a mentor; $p < 0.001$). Similarly, having a pharmacist line manager was associated with being influenced by a pharmacist role model: 65.9% of those with a pharmacist line manager were influenced by a pharmacist role model,

compared with 49.0% of respondents who did not have a pharmacist line manager (p=0.023).

Table 28: Factors influencing career decision-making, by gender, collapsed ethnicity and sector of work

	% some influence (n)						
	Male	Female	White	ME	CP	HP	ALL
Salary	96.0 (119)	96.4 (405)	95.4 (314)	97.7 (209)	**98.3 (343)	92.4 (171)	96.3 (524)
Career and promotion prospects	95.2 (118)	95.5 (401)	96.0 (316)	94.4 (202)	94.6 (330)	96.8 (179)	95.4 (519)
Geographical location	**89.5 (111)	97.1 (408)	95.4 (314)	95.3 (204)	96.0 (335)	94.6 (175)	95.4 (519)
Future financial prospects	96.8 (120)	94.3 (396)	94.5 (311)	95.3 (204)	*96.6 (337)	91.9 (170)	94.9 (516)
Personal/domestic circumstances	92.7 (115)	94.8 (398)	94.5 (311)	93.9 (201)	**96.6 (337)	90.8 (168)	94.3 (513)
Working conditions	95.2 (118)	93.1 (391)	94.2 (310)	92.5 (198)	**96.0 (335)	89.2 (165)	93.6 (509)
On the job experience	***85.5 (106)	95.7 (402)	93.9 (309)	92.5 (198)	93.4 (326)	93.5 (173)	93.4 (508)
Employer's reputation	88.7 (110)	93.6 (393)	92.1 (303)	93.0 (199)	92.0 (321)	94.1 (174)	92.5 (503)
Hours of work	89.5 (111)	93.1 (391)	92.4 (304)	92.1 (197)	*94.6 (330)	88.1 (163)	92.3 (502)
Appraisal skills/aptitude	84.7 (105)	88.1 (370)	*84.5 (278)	91.6 (196)	87.4 (305)	87.0 (161)	87.3 (475)
Advice from co-workers	71.0 (88)	75.7 (318)	76.0 (250)	72.9 (156)	72.8 (254)	80.0 (148)	74.6 (406)
Pharmacist role model	*58.1 (72)	69.3 (291)	65.3 (215)	68.7 (147)	66.8 (233)	68.6 (127)	66.7 (363)
Advice from line manager	59.7 (74)	63.1 (265)	63.8 (210)	60.3 (129)	63.0 (220)	61.6 (114)	62.3 (339)
Advice from family	*53.2 (66)	65.0 (273)	59.9 (197)	65.9 (141)	**66.5 (232)	54.6 (101)	62.3 (339)
Inclination before pharmacy school	37.1 (46)	43.1 (181)	39.8 (131)	44.4 (95)	41.5 (145)	41.1 (76)	41.7 (227)

Valid % (n); some missing data; *p<0.05; **p<0.005; ***p<0.001

5.6.1 Subgroup analysis

Females in the sample were significantly more likely than males to have been influenced by geographical location, on the job experience, a pharmacist role model or advice from their family. These results suggest that amongst female cohort respondents decision-making was more likely to have been a socially distributed activity, and involve relationships both inside and outside work.

Differences between CP and HP respondents are also interesting. We found evidence of two sets of distinct career values and orientations influencing respondents' career decision-making. First of all, we found that CP respondents were significantly more likely than their HP peers to have been influenced by extrinsic rewards (explored through the items salary and future financial prospects). Secondly, we found that community pharmacists were significantly more likely to have been influenced by a desire for control over the boundary between personal and occupational/professional roles (found in the larger proportions of CP respondents being influenced by domestic/personal circumstances, working conditions and hours of work). In the context of the findings presented in 5.5 regarding work/life balance – where we found that those working in the community sector were marginally more likely to have reported problems with balancing life in and outside work – these results are interesting.

More generally, these findings suggest that work setting is associated with particular role orientations or preferences, and that community and hospital pharmacists in the study were influenced by different career attitudes and values regarding the priorities given to various aspects of work and social relations when making career decisions. Possible links between work setting, roles and values have been investigated previously, although results produced by these other studies are inconsistent.⁶⁸⁻⁷⁰ Further analysis of work roles and values is outside the scope of this report, but will be explored in more detail in future qualitative research with the cohort.

5.7 Desire for a pharmacy career

As students, the majority of the cohort (79.2%) had a strong desire to study pharmacy.¹⁴ Now in practice, we found that around three-fifths (58.3%) had a strong desire for a career in the profession, a further 39.3% did not have a strong desire, and the remaining 2.4% (n=13) reported regretting becoming a pharmacist. Those who regretted their career choice were most likely to be ME males (n=5) or white females (n=4), and were marginally more likely to be working in CP (n=7).

5.7.1 Subgroup analysis

Excluding those who reported regretting becoming a pharmacist from our subgroup analysis, we found small differences in subgroups' reported desire for a career in the profession (Table 29).

Table 29: Strength of desire for a pharmacy career, by gender, collapsed ethnicity and sector of work

	Strength of desire for pharmacy career	
	Strong	Not strong
Male	52.1 (61)	47.9 (50)
Female	61.8 (256)	38.2 (158)
White	62.2 (201)	37.8 (122)
ME	55.6 (115)	44.4 (92)
CP	60.2 (206)	39.8 (136)
HP	60.3 (108)	39.7 (71)
ALL	59.7 (317)	40.3 (214)

Valid % (n); some missing data

Although not statistically significant, we found that white females were most likely to have reported having a strong desire for a pharmacy career (64.4% of white females reported having a ‘strong’ desire for a pharmacy career) and ME males were, proportionally, the group with the fewest respondents reporting a strong desire for a pharmacy career (48.9%).

5.8 Career commitment

The final question in this section of the questionnaire designed to capture work life data consisted of six statements for examining respondents’ career values, preferences and commitment to the pharmacy profession. Three of these statements reflected positive values and preferences concerning pharmacy careers, and three statements were designed to measure negative (or lack of) commitment to a pharmacy career. The statements are shown in the table below (Table 30). All six statements have also appeared in the previous cohort questionnaires.

Table 30: Career commitment statements

Career statement	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
a) I expect to work hard whatever pharmacy job I have					
b) I am undecided about my pharmacy career					
c) I would not want to work outside pharmacy					
d) I don’t know what sort of career in pharmacy I want					
e) I see pharmacy as a career until I retire					
f) I want to do something other than being a pharmacist					

A new variable measuring career commitment was created from these six statements. For the three positively-worded statements a), c) and e) a response of agree or strongly agree was coded as 1 and all other responses coded as zero. For the negatively-worded statements b), d) and f), a response of strongly disagree or disagree was coded as 1 and all other responses coded as zero.

This resulted in a scale with a range of scores from 0 to 6, where a score of 6 indicated very strong commitment to career and zero very low/no commitment. The cronbach's alpha for the new scale was 0.787.

The mean score for PP respondents' career commitment was 3.09 (SD 1.90039), suggesting a moderate commitment to a career in pharmacy.

5.8.1 Subgroup analysis

As with many of the other work life measures, comparison between subgroups' mean scores were carried out. Table 31 shows that female cohort pharmacists scored significantly higher than male cohort pharmacists, and that white cohort pharmacists also scored significantly higher than their ME peers. Findings largely replicate those published elsewhere.³⁷

Table 31: Overall means, standard deviations for career commitment by gender, collapsed ethnicity and sector of work

	Mean	Std. Dev	t	p
Male*	2.73	1.8034	-2.370	0.018
Female	3.20	1.9164		
White*	3.31	1.9887	3.480	0.001
ME	2.75	1.7063		
CP	3.10	1.8792	-0.227	0.820
HP	3.14	1.9481		
ALL	3.09	1.9004		

*indicates that differences subgroups are significant at 5% level (t-test); some missing values

That no sectoral differences in career commitment were found is interesting given that community pharmacists in the sample experienced both lower levels of job satisfaction and were less likely to believe that their job provided them with career and growth opportunities.

5.9 Career commitment, work life and job satisfaction

Analysis of correlations between career commitment and work life variables found positive correlations between control over work and career commitment, between career opportunities and career commitment, and between growth opportunities and career commitment. We also found that those who reported a higher score on the career commitment scale were more likely to be satisfied (see table below for more details). The strongest correlation found, though, was not surprisingly between career commitment and desire for a pharmacy career.

Table 32: Correlations between career commitment, job satisfaction, work/life balance, desire for a pharmacy career and work life dimensions

Variable	Career commitment
Job satisfaction	.353(**)
Work/life balance	-.058
Desire for a pharmacy career	.609(**)
Job control	.276(**)
Work overload	.035
Career opportunities	.261(**)
Growth opportunities	.253(**)

** correlations significant at 0.01 level (2-tailed); some missing values

5.10 Career goal

While 513 respondents completed the question about their ultimate career goal, the most commonly given response to the question was 'don't know' (n=242). Those who gave an example (n=271) frequently reported a preference to work in a senior/specialist hospital post (n=65), to work as a prescriber (n=45), to have their own CP (n=44) or to be a CP manager (n=26). Many (n=26) expressed their career goal in terms of a desire for a particular work/life, such as "To be in a job that makes me happy at work and socially". Others described their career goal in terms of a desire to be a 'good' professional (n=17): "My goal in whatever pharmacy job I have is to work in such a way that my colleagues and patients will benefit. I would rather be able to say at the end of my career that I made a difference, than to say that I made it to the top of the pile".

5.10.1 Subgroup analysis

Because of small cell counts, analysis focused on the most popular career goals – pharmacy ownership, working as a pharmacist prescriber, working in a specialist/senior hospital post, and working as a CP manager. Table 33 shows the results of this analysis, and indicate that a high proportion of white, female, and hospital pharmacists aimed to work in high level hospital posts while male, ME respondents and those currently working in CP were significantly more likely to have reported a desire for an entrepreneurial career in CP. These results once again demonstrate that the cohorts' career preferences mirror existing occupational segregation in pharmacy practice in Great Britain.^{5,24-26}

Table 33: Career goal, by gender, collapsed ethnicity and sector of work

	Career goal			
	Specialist hospital post	Pharmacist prescriber	CP owner	CP manager
Male***	15.7 (11)	8.6 (6)	31.4 (22)	4.3 (3)
Female	26.9 (54)	19.4 (39)	10.9 (22)	11.4 (23)
White*	30.4 (52)	13.5 (23)	14.0 (24)	11.1 (19)
ME	13.0 (13)	22.0 (22)	20.0 (22)	7.0 (7)
CP***	5.4 (9)	21.7 (36)	24.7 (41)	15.7 (26)
HP	57.1 (56)	9.2 (9)	3.1 (3)	0.0 (0)
ALL	24.0 (65)	16.6 (45)	16.2 (44)	9.6 (26)

Valid % (n); some missing data; *p<0.05; ***p<0.001

6. Finances

6.1 Student debt

Most of the cohort reported graduating from pharmacy school with student debt (434/538; 80.7%), which, while being a large proportion of respondents, is lower than the proportion reported by a survey of the 2006 cohort of medical graduates (where 89.1% graduated from medical school with some student debt⁶⁵). Having student debt was fairly consistent according to gender (86.2% males; 79.0% females), and sector of employment (80.5% CP; 81.5% HP), but was significantly higher amongst white respondents (84.0% white; 75.5% ME; p=0.020).

Less than one in ten of those with student-accrued debts reported graduating with debts under £5,000; 11.2% had debts between £5,000 and £9,999, 34.0% had debts between £10,000 and £14,999, a further 34.5% had debts between £15,000 and £19,999, 8.2% £20,000-£24,999, and the remaining 8.2% had debts of over £25,000 when they graduated from pharmacy school. Level of debt was similar for male and female and CP and HP respondents,

but ME respondents were significantly more likely to have graduated with very high levels of debt than white respondents (classified as £20,000 and over) – 8.1% of white cohort pharmacists had debts over £20,000, compared with 16.5% of those from ME backgrounds. Considering that, overall, significantly fewer ME cohort members reported graduating with any student debt, this result suggests that the relationship between ethnicity and student debt is far from straightforward.

Student debt was not, on the whole, influential when cohort members were making career decisions: only 37.3% (n=161) of those with debts reported that their debt was influential when it came to making career choices. This did not vary according to respondents' gender. However, debt was significantly more influential amongst ME respondents (influencing 31.2% of white compared with 47.2% of ME respondents with student debts; $p=0.001$), and for those working in CP relative to their HP colleagues (46.0% vs. 22.1%; $p<0.001$). Higher levels of debt were associated with larger proportions of respondents reporting being influenced by that debt: 50.7% of those with debts between £15,000 and £19,999 and 50.0% of those with debts over £20,000 were influenced by their debts when making career decisions ($p<0.001$). Estimating the time it would take them to repay their student debts, more than two-thirds (67.1%) responded that it would take them less than 10 years (34.2% expected it would take less than five years). A minority (8.5%) believed it would take more than 20 years.

6.2 Salary

Of those who completed a question related to their salary (n=530) most reported earning between £25,001 and £35,000 (38.3%, n=203) or £35,001-£45,000 (30.4%, n=161) per annum; a further fifth (21.3%) earned less than £25,000 while 10.0% earned over £45,001.

While consistent for both white and ME respondents, salary varied significantly according to gender – earning under £25,000 was twice as common amongst females (24.3% compared with 11.4% of males), with the converse true of the most highly paid (19.5% of males earned over £45,000 compared with 7.1% of females; $p<0.001$). Sector of work was also significantly associated with salary: 50.5% of HP respondents earned under £25,000, and a further 41.8% between £25,001 and £35,000. Amongst those employed in the community sector, only 5.0% earned under £25,000, and 58.6% earned over £35,001 ($p<0.001$).

7. Notable Findings

The analysis presented in this report has provided a detailed picture of the work, employment and early careers of cohort pharmacists. In this final section we first consider some notable findings before moving on to discuss the implications for policy and practice of two issues worthy of further comment and consideration.

Current work situation

- One year after Registration, 6% of previous cohort study participants were on the non-practising section of the Register.
- 12.5% of cohort pharmacists were working as locums. Of these, 85.3% were employed to work in the community sector. Flexibility was the most commonly cited factor influencing respondents' decisions to locum.
- 34.1% of cohort community pharmacists were employed as store managers.
- 71.6% of cohort community pharmacists were working for a large multiple – this compares with 54.2% of all community pharmacists on the Register.
- 22.2% of participants reported having two jobs.
- Community pharmacists reported working significantly longer contracted hours than their hospital peers (39.76 vs. 37.13 hours respectively); community pharmacists were also significantly more likely than hospital pharmacists to have reported usually working in excess of their contracted hours.
- 23.8% of respondents said there was 'some likelihood' they would leave the profession within the next two years.
- Having a pharmacist line manager was significantly more common amongst hospital than community pharmacy respondents (94.6% vs. 57.8%).
- Mentors were highly valued amongst those who had one – 93.1% agreed they were important for their careers.

Work life

- Work life data suggest that the nature of work differs significantly between the two main sectors of the profession: for example, those working in community pharmacy were significantly less satisfied with the amount of variety in their work.
- Job satisfaction was strongly correlated with having control over work; a moderate correlation between job satisfaction and career commitment was also found.
- There is some evidence of changing career priorities as the cohort embed themselves in their careers, with salary becoming increasingly important.
- Female pharmacists were significantly more likely to be committed to their careers than male pharmacists; white pharmacists were significantly more likely to be committed to their careers than ME pharmacists.

Finances

- 80.7% graduated with some student debt
- Only 37.3% were influenced by their student debt when making career decisions, although those who graduated with larger debts were more likely to have been influenced by it when making career decisions.

Some implications for policy and practice

One of the most significant areas of difference found in the work, employment and early careers of cohort pharmacists is in the work context. Many of the early careers of cohort pharmacists were either 'gendered' or 'ethnicised' in that they were working in jobs disproportionately done either by male or female pharmacists, or by white or ME pharmacists (or both). The propensity to enter particular types of employment – white females to enter the public sector (hospital pharmacy) and ME males to work in the private sector, in community pharmacy – has economic implications for cohort pharmacists. In this respect, cohort pharmacists' sector of employment is similar to that of UK graduates in general, in the tendency for women to be employed in the lower paid public sector.⁷¹ But the longer term implications of these findings for female cohort pharmacists' career outcomes may mean that they are economically disadvantaged relative to male cohort pharmacists, given evidence that gender segmentation in occupational labour markets is associated with poorer outcomes for female graduates working in female-dominated sectors.⁷¹

In addition to the tendency of females and public sector workers in the sample to earn less than males and those employed to work in the private sector, we also found that working in CP, and being male, was associated with working, on average, for longer hours a week (something which may also go some way towards explaining why male, and community pharmacists tended to be better remunerated). However, the relationship between hours of work, pay, gender and sector is obviously complex, since we also found that hospital pharmacists were more likely than their community colleagues to have a second job. Perhaps hospital pharmacists compensate for having traded off financial reward for a preference to work in the public sector by working additional hours as a CP locum?

Moreover, since we found evidence of gendered career attitudes and expectations another question raised by this research is the extent to which employment outcomes can be explained in terms of agency (choice) or structures such as gendered occupational segregation. Hence if female cohort pharmacists are choosing to trade earnings for other rewards/outcomes then this choice may be accounted for by differences in values and career orientations. But given that the pharmacy labour market is gendered, and that this gender segmentation is reproduced over time, the extent to which female cohort members choose to have a career in the hospital/public sector may be called into question.

Another important question raised by our results is that of why job satisfaction of cohort members overall had declined since they had entered pharmacy practice. Furthermore, the question of why ethnic minority respondents working in CP in particular reported significantly lower job satisfaction than their white CP colleagues (a finding also reported in relation to last year's cohort study data) requires further consideration. The relationship between ethnicity and this key work value is currently being explored further in a separate piece of qualitative work; findings from this study are likely to be of particular interest to HR managers, and may identify targeted action that can improve the job satisfaction of ME pharmacists working in the private sector.

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9. Appendices

9.1 The Pharmacy Practice Questionnaire

The University
of Manchester

MANCHESTER
1824

A Longitudinal Cohort Study about Pharmacy Careers

Pharmacy Practice Questionnaire

PLEASE RETURN TO:

Professor Karen Hassell

**FREEPOST MR9661, The University of Manchester, School of Pharmacy and
Pharmaceutical Sciences, Stopford Building, 1st Floor, Oxford Rd, Manchester M13 9PT**

For each question, please follow the instructions carefully and use a tick to indicate the option(s) you have selected. After answering each question, go to the next one unless directed otherwise.

YOUR CURRENT WORK SITUATION

Please tell us here about your current employment situation.

A1. Which of the following applies to you? (Please select ONE box only).

- ¹ Currently working as a pharmacist → Go to question A2
² Currently not working as a pharmacist → Go to question A4

A2. If you are working as a pharmacist, what kind of contract do you have in your current main job? (Please select ONE box only).

- ¹ Permanent full-time → Go to question A6
² Permanent part-time → Go to question A6
³ Fixed term/temporary → Go to question A6
⁴ Contract with an employment agency → Go to question A7
⁵ Locum/sessional → Go to question A3

A3. If you are self-employed, what factors influenced your decision to become self-employed? (Please select ALL the responses that apply)

- ⁵⁵ Not applicable – not self-employed → Go to question A7
¹ To be independent → Go to question A7
¹ To control your working hours → Go to question A7
¹ To have flexibility → Go to question A7
¹ To achieve work/life balance → Go to question A7
¹ To provide time/opportunity to study → Go to question A7
¹ Other (please specify) _____ → Go to question A7

A4. If you are not currently working as a pharmacist, what are you doing instead? (Please select ONE box only).

- ¹ Working but not as a pharmacist → Go to question A5
² In full-time or part-time education → Go to question A6
³ Travelling → Go to question A6
⁴ On maternity leave or raising a family → Go to question A6
⁵ Not working due to ill health → Go to question A6
⁶ Other (please specify) _____ → Go to question A6

A5. If you are currently working, but not as a pharmacist, what job are you doing?

A6. If you are not currently working as a pharmacist, do you intend to return to work as a practising pharmacist within the next 12 months?

- ¹ Yes → Please go to Section C
² No → Please go to Section C
³ Not sure → Please go to Section C

A7. In the table below, please tick the box that most closely corresponds to your *current main job* (job 1) and any *one additional job* you have (job 2).

	Job 1	Job 2
Community Pharmacy:		
Owner		
Area Manager		
Store Manager		
Locum		
Relief		
Second		
Non-store based		
Other		
Hospital Pharmacy		
Band 6 post		
Band 7 post		
Locum		
Primary care organisation		
Industry		
Academia		
Other pharmacy		
Other non-pharmacy		

please specify _____
please specify _____

A8. If you ticked one (or more) of the above categories within Community Pharmacy please indicate with a tick in which of the following organisations you hold your position(s).

Community pharmacy Job 1 Job 2

- Independent pharmacy
- Small chain (2-4 stores)
- Medium multiple (5-25 stores)
- Large multiple (over 25 stores)

A9. In the table below please write in the number of hours per week that you are **CONTRACTED to do in your *current main job* and any *one additional job* you have, as well as the hours that you **USUALLY** work in your job(s).**

Hours of work Job 1 Job 2

- Contracted hours of work
- Usual number of hours worked

A10. Are you currently with the same employer you worked for when you were doing your preregistration training?

- ¹ Yes → *Go to question A11*
- ² No → *Why aren't you with the same employer? Please tell us here:*

A11. How easy did you find it to secure your first job after you completed your preregistration training? (Please select **ONE box only)**

- Very easy
¹
- Easy
²
- Neither easy nor difficult
³
- Difficult
⁴
- Very difficult
⁵

A12. Did you get your first choice of pharmacist job after you completed your preregistration training?

- ¹ Yes
² No

A13. What is the likelihood that you'll do any of the following over the next two years?

	<i>Likelihood</i>				
	<i>No likelihood</i>	<i>Slight</i>	<i>Moderate</i>	<i>Considerable</i>	<i>High</i>
Leave your current sector					
Leave your current employer					
Reduce your work hours					
Increase your work hours					
Take a temporary career break					
Leave the profession altogether					
Study for a clinical qualification					
Study a supplementary/independent prescriber course					
Study for a higher degree					
Study for a second degree					
Study for a diploma in pharmacy practice					
Study for a diploma in community pharmacy					
Undertake training to provide additional services					
Undertake training to provide extended services					
Undertake management training					
Work abroad					
Begin portfolio working (e.g holding more one job*)					
Other (please specify)_____					

A14. Is your line manager a pharmacist?

- ¹ Yes
² No
³ Not sure

A15. Do you currently have a mentor (eg. a role model or trusted advisor)?

- ¹ Yes → Please go to question A16.
² No → Please go to Section B.

A16. How important do you think a role model or mentor is to your career?

- Very important** ¹ **Somewhat important** ² **Not important at all** ³ **Not sure** ⁴

WORK AND YOUR FUTURE CAREER

This section will help us establish some of your views on your working life, and to understand the ways you make decisions about your career

B1. Thinking about your *current main job*, please indicate how satisfied you are with each of the following aspects of your job by ticking the appropriate box:

Job satisfaction

Extremely satisfied
 Very satisfied
 Moderately satisfied
 Neither satisfied nor dissatisfied
 Moderately dissatisfied
 Very dissatisfied
 Extremely dissatisfied

- Physical working conditions
- Freedom to choose your own method of working
- Your colleagues and fellow workers
- Recognition you get for good work
- Amount of responsibility you are given
- Your remuneration
- Opportunity to use your abilities
- Opportunity for promotion and career advancement
- Your hours of work
- Amount of variety in your job
- Patient contact

Taking everything into consideration, how do you feel about your job?

B2. Please indicate with a tick the extent to which you agree with the following statements about your *current main job* as a pharmacist.

Your job as a pharmacist		Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
This job provides me with the opportunity to expand my professional knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This job allows me to determine the methods and procedures I use in my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This job provides me with the opportunity for self-improvement and development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have the opportunity for further advancement in my career	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often have to work very hard in my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often have too much to do in my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This job will open up new opportunities for me in my career	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often have too little time to get things done in my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can carry out my work in the way I think best	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This job provides the opportunity for me to keep up with new developments related to my profession	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This job allows me to carry out my work in the way I think best	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This job increases my chance to get ahead in my profession	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B3. Please work through this list of items indicating with a tick in the table the extent to which they apply to your own life. If an item does not apply to you then please tick the 'not relevant' box.

Your working life	Agree	Sometimes	Disagree	Not relevant
At the moment, because the job demands it, I usually work long hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There isn't much time to socialise/relax with my partner/family/friends in the week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have to take work home most evenings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often work late or at weekends to deal with paperwork without interruptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relaxing and forgetting about work issues is hard to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worry about the effect of work stress on my health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My relationship with my partner is suffering because of the pressure or long hours of my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My family are missing out on my input, either because I don't see enough of them/am too tired	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finding time for hobbies, leisure activities, or to maintain friendships and extended family relationships is difficult	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would like to reduce my working hours and stress levels, but feel I have no control over the current situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B4. When you're making decisions about work and your future career please indicate with a tick how strong an influence the following factors are in shaping your decisions.

Influences on career decisions	Strong influence	Partial influence	No influence	Not relevant
Domestic/personal circumstances	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hours of work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Working conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Salary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career and promotion prospects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appraisal of own skills/aptitude	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employer's reputation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inclinations before pharmacy school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advice from family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advice from co-workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advice from line manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Future financial prospects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geographical location – that is, proximity to friends and family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On the job experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A pharmacist role-model you have worked with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (<i>please specify</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B5. Now that you are working, how strong is your desire for a career in pharmacy?

- ¹ Very strong
- ² Strong
- ³ Moderate
- ⁴ Weak
- ⁵ Very weak
- ⁶ I regret becoming a pharmacist

B6. For EACH of the following statements about pharmacy careers, please indicate with a tick the extent to which you agree or disagree with it.

Statements about pharmacy careers	Strongly disagree	Disagree	Neither agree	Agree	Strongly agree
I expect to work very hard whatever pharmacy job I have	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am undecided about my future career	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would not want to work outside pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't know what sort of career in pharmacy I want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I see pharmacy as a career until I retire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I want to do something other than being a pharmacist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B7. What would you describe as your ultimate *career goal*? If you are undecided about your career goal then please tell us that you are.

B8. Do you have any comments about your career to date that haven't already been covered in this questionnaire? Please tell us here.

C. ABOUT YOU
Please tell us...

C1. Your full name (optional): _____

C2. Current (main) job title: _____

C3. If you would like to find out more about the study, please give us an email address where we can contact you (optional):

C4. Please indicate your salary, pro rata, from all sources before taxes

- | | |
|--|--|
| <input type="checkbox"/> ¹ Less than £15,000 | <input type="checkbox"/> ⁵ £45,001 to £55,000 |
| <input type="checkbox"/> ² £15,001 to £25,000 | <input type="checkbox"/> ⁶ £55,001 to £65,000 |
| <input type="checkbox"/> ³ £25,001 to £35,000 | <input type="checkbox"/> ⁷ £65,001 to £75,000 |
| <input type="checkbox"/> ⁴ £35,001 to £45,000 | <input type="checkbox"/> ⁸ £75,001 or above |

C5. When you graduated from pharmacy school, did you have you any student debt?

- ¹ Yes **→** *Go to question C6*
- ² No **→** *Thank you for completing the questionnaire*

C6. How much debt did you have on graduation?

- | | |
|--|--|
| <input type="checkbox"/> ¹ up to £4,999 | <input type="checkbox"/> ⁴ £15,000 to £19,999 |
| <input type="checkbox"/> ² £5,000 to £9,999 | <input type="checkbox"/> ⁵ £20,000 to £24,999 |
| <input type="checkbox"/> ³ £10,000 to £14,999 | <input type="checkbox"/> ⁶ £25,000 and over |

C7. How long do you envisage it will take to pay off your current student debt?
_____ years

C8. In general, would you say your debt had influenced your career decisions?

- ¹ Didn't influence me at all
- ² Influenced me a little
- ³ Influenced me a great deal
- ⁴ Not sure

Thank you very much for taking the time to complete this questionnaire. Please return it using the FREEPOST envelope provided to: Professor Karen Hassell, School of Pharmacy, FREEPOST MR9661, The University of Manchester, School of Pharmacy and Pharmaceutical Sciences, STOPFORD BUILDING, 1st Floor, Oxford Road, Manchester, M13 9PT

ID No:

9.2 Cohort publications

9.2.1 Articles in Professional journals

- Willis S, Hassell K. The place for clinical training in pharmacy education. *The Pharmaceutical Journal* 2008;281:216
- Willis SC, Hassell K. Supply and demand for preregistration placements: don't believe the hype! *The Pharmaceutical Journal* 2007;279:42
- Willis SC, Shann P, Hassell K. Who will be tomorrow's pharmacists and why did they study pharmacy? *The Pharmaceutical Journal* 2006;277:107-108
- Willis SC, Shann P, Hassell K. Career choices, working patterns and the future pharmacy workforce. *The Pharmaceutical Journal* 2006;277:137-138
- Willis SC, Shann P, Hassell K. Graduate destinations — choices made about preregistration training. *The Pharmaceutical Journal* 2006;277:164-165

9.2.2 Papers

- Willis SC, Shann P, Hassell K. Pharmacy career-deciding: making choice a 'good fit'. *Journal of Health Organization and Management* 2009;23(1)
- Willis S, Hassell K. Career intentions of pharmacy students. *Journal of Health Services Research & Policy* 2008;13:45-51
- Willis S, Hassell K. Using learning outcomes for undergraduate pharmacy education to assess final year students' perceptions of their preparedness for pharmacy practice. *International Journal of Pharmacy Practice* – under review
- Willis S, Hassell K. Formal and informal learning in GB pharmacy degree courses: final year students' experience of the MPharm. *Pharmacy Education* – under review

9.2.3 Reports

- Willis SC, Hassell K. *Working Lives of Preregistration Trainees*. London: Royal Pharmaceutical Society of Great Britain; 2008.
- Willis SC, Hassell K. *From pharmacy education into preregistration training*. London: Royal Pharmaceutical Society of Great Britain; 2007
- Willis SC, Shann P, Hassell K. *Pre-Registration Training Post questionnaire. Piloting the questionnaire*. Manchester: CPWS; 2007
- Willis SC, Shann P, Hassell K. *Studying pharmacy: who, when, how, why? What next?* London: Royal Pharmaceutical Society of Great Britain; 2006.
- Willis SC, Shann P, Hassell K. *Early Choices questionnaire: Piloting the questionnaire*. Manchester: CPWS; 2005
- Willis SC, Shann P, Hassell K. *Early Choices questionnaire: Using focus groups to inform tool design and construction*. Manchester: CPWS; 2005
- Willis SC, Hassell K. *With a pharmacy degree you know where you're heading. A report on focus groups with undergraduate pharmacists exploring their views of a career in pharmacy*. Manchester: CPWS; 2004

9.2.4 Conference abstracts

- Willis SC, Seston ES, Hassell K. Careerist or career drifter? Career commitment at the beginning of a pharmacy career. Abstract submitted to BPC, 2009
- Willis SC, Hassell K. Preparedness for pharmacy practice: recent graduates' evaluation of competencies learned during their undergraduate education. Paper accepted for presentation at Monash Pharmacy Education Symposium 'Fitness to practice: competency-based teaching and learning in pharmacy', Prato, 2009
- Willis SC, Seston ES, Hassell K. Preregistration trainees' quality of working life. *International Journal of Pharmacy Practice* 2008;16 (suppl 3): C35-36

Wagner AC, Willis SC, Hassell K. Workforce migration: who moves for preregistration training and what kinds of places do they work in? *International Journal of Pharmacy Practice* 2008;16(suppl 1):A29.

Willis SC, Hassell K, Noyce P, Cantrill J. What kinds of pharmacy careers do pharmacy graduates want and are choices stable over time? *International Journal of Pharmacy Practice* 2007;15(suppl 2):B49.

Willis SC, Hassell K, Noyce P. Career intentions of pharmacy students. Health Services Research Network, Sheffield, 2007.

Hann M, Willis SC, Hassell K. Developing predictors for commitment to a career in pharmacy. *International Journal of Pharmacy Practice* 2007;15(Suppl1):A17.

Willis SC, Hassell K, Noyce P, Cantrill J. Choosing a pre-registration training post. *International Journal of Pharmacy Practice* 2007;15(Suppl1):A22.

Shann P, Willis SC, Hassell K, Noyce P, Cantrill J. Entrepreneurialism in the future pharmacy workforce – which students want to be pharmacy owners? 12th Health Services Research and Pharmacy Practice Conference 2006;Volume of Abstracts. University of Bath, p22.

Willis SC, Hassell K, Shann P, Noyce P. Family-building and the future pharmacy workforce. 12th Health Services Research and Pharmacy Practice Conference 2006;Conference, Volume of Abstracts. University of Bath, p33.

Willis SC, Hassell K, Shann P. The rules of engagement – lessons from recruiting pharmacy students to a longitudinal study of career choice. 11th Health Services Research and Pharmacy Practice Conference 2005;Volume of Abstracts. University of Reading, p20.

Shann P, Willis SC, Hassell K. Why choose a pharmacy degree? 11th Health Services Research and Pharmacy Practice Conference 2005;Volume of Abstracts. University of Reading, p44.

9.2.5 Invited presentations

Choosing pharmacy: lessons from a longitudinal cohort study about pharmacy careers. Council of University Heads of Schools of Pharmacy, Manchester, 2006

Motivation to study pharmacy: evidence from a longitudinal cohort study about pharmacy careers. British Pharmaceutical Students Association, Annual Conference, Bradford, 2006

Lessons from the longitudinal cohort study. Academic Pharmacists Group, Easter Conference, Birmingham, 2006

Career Expectations of Pharmacy students. Pharmacy Practice Research Trust, BMA, Tavistock Square, London, 2006

A Longitudinal Cohort Study about Pharmacy Careers. RPSGB Council, London, 2006

A Longitudinal Study on Early Career Choices and Expectations of Pharmacy Students and Pharmacy Graduates. Academic Pharmacists Group, 2004

9.2.6 Bulletins

Willis SC, Hassell K, Ko SL. Bulletin 3: Images of pharmacy and occupational identity. Manchester: CPWS; 2007

Seston E, Shann P, Hassell K, Willis SC. Bulletin 2: The future pharmacy workforce: do pharmacy students want to be entrepreneurs? Manchester: CPWS; 2006

Willis SC, Shann P, Hassell K. Bulletin 1: Family-building and the pharmacy workforce. Manchester: CPWS; 2004

Shann P, Willis SC, K Hassell. Choosing a career in pharmacy. Graduate Market Trends, HECSU www.prospects.ac.uk/links/CSDGMT