Working Lives of Preregistration Trainees

A Longitudinal Cohort Study of Pharmacy Careers

Preregistration Post Questionnaire

Report 7: Analysis of the Questionnaire

Prepared by Sarah Willis (Research Fellow)

Dr Liz Seston (Research Fellow)

Professor Karen Hassell (Chair in Social Pharmacy; Director, CPWS)

Centre for Pharmacy Workforce Studies
@ The Workforce Academy

School of Pharmacy and Pharmaceutical Sciences
The University of Manchester

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1.1   Overview

The third survey from a longitudinal cohort study about pharmacy careers, 'Your Preregistration Post (YPP) questionnaire' collected data relating to the cohorts' experiences of their preregistration training post. Data relating to aspects of the cohorts' early career choices, such as their career intentions and expectations, were also collected by the survey.

Previous surveys for the study had focused on choices made prior to studying pharmacy, such as how, when, and why respondents' chose to study pharmacy (the 'Early Choices' questionnaire), and on how and why a particular preregistration training post had been chosen ('The Preregistration Choices' questionnaire). Both of these surveys also collected career intentions and expectations data.

Data collection for 'Your Preregistration Post' took place in the spring of 2007. Overall, 701 completed questionnaires were returned, giving a response rate of 59.8% (701/1172), a smaller number than had taken part in earlier stages of the study. Many of those who completed YPP had also completed the two previous questionnaires for the study (80.0%; n=561); 92.4% (n=648) had completed the 'Preregistration Choices' questionnaire in 2006 and 86.9% (n=609) had completed the 'Early Choices' questionnaire in 2005. The majority of respondents were female (76.3%, n=535) and white (61.0%, n=426).

1.2   Preregistration Training

Just over half of respondents (50.2%) were training in community pharmacy. Minority ethnic (ME) males were over-represented and white females under-represented amongst those training in this sector, demonstrating that gender and ethnic occupational segregation occurs early in pharmacy careers.

Extrinsic factors influenced the largest proportion of respondents when choosing their training post – 88.6% were motivated to choose a post because of the career and promotion prospects it offered.

Reflecting on their preregistration post decision-making, most respondents agreed that they had chosen a post that offered good preparation for the Registration Examination (91.5%). Having a post that enabled professional development was also important. Minority ethnic respondents had significantly higher levels of career-decidedness than their white peers, and were more likely to have chosen a post in the light of future plans for a community pharmacy career.

1.3   Intentions after Preregistration Training

Four-fifths (80.6%) of respondents planned to go straight into GB pharmacy practice. White females were most likely, and ME females least likely, to

expect to go into practice after completing their training (84.2% vs. 76.7% respectively).

Three-quarters of those taking part (74.2%) had a clear short-term career plan, although 25.8% were undecided or had no future career plans. White females were most likely to be certain about their short-term career plans (80.9%); significantly more ME females were uncertain (39.6%).

More than half (55.2%) of respondents wanted to work in community pharmacy after they had finished training, around a third hoped to work in hospital pharmacy (32.3%) and 9.0% were undecided about the sector they hoped to work in after they had completed training. Sectoral preferences reflected existing occupational segregation within the profession – 38.5% of white females wanted to work in hospital pharmacy and 70.6% of ME males in community pharmacy after their preregistration training. ME females were the subgroup most likely to be undecided about their early careers (12.6%).

Popular intended first posts were relief pharmacist, pharmacy manager, and rotational hospital pharmacy jobs. Working in industry was the most commonly cited rejected type of pharmacy employment.

Overall, 42.5% aimed to work in the same region as the pharmacy school they had attended. However, this varied significantly: while 4.6% of Strathclyde graduates intended to remain in Scotland only 20.6% of Nottingham graduates intended to remain in the East Midlands.

1.4   Quality of Working Life

To examine the cohort's quality of working we explored their job satisfaction, their experiences of work, and relationships between these two variables.

The cohort experienced higher levels of job satisfaction than levels reported by pharmacists. They derived most satisfaction from interpersonal aspects of work and least from remuneration. Females were significantly more satisfied than males with their colleagues and fellow workers, their hours of work, and the amount of variety in their job. 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. In the context of occupational segregation, these results suggest structural differences between community and hospital training posts impacted on respondents' job satisfaction. However, since we also found that minority ethnic trainees were significantly less satisfied than their white peers when we compared between the two subgroups training in the same sector, differences in respondents' characteristics may also contribute to variations in job satisfaction between white and ME subgroups in the sample.

When we analysed data relating to the cohort's work experiences we found that the majority felt that their training post was enjoyable (80.9%) and had allowed them to develop their professional knowledge (89.8%) and their clinical skills (77.7%). However, around a quarter of respondents (26.0%) felt that they did not receive sufficient feedback at work and a larger proportion

(36.5%) felt that they were overloaded at work. Few significant gender differences in work experiences were found, but – as with job satisfaction – we found many significant ethnic and sectoral differences between subgroups, suggesting that there may be qualitative differences between community and hospital posts, and/or between the work experiences of white and ME trainees.

Quality of working life was better where respondents had enjoyable jobs, while work overload and low levels of feedback were found to have a negative impact on job satisfaction, and hence resulted in reduced quality of working life.

1.5   Work and Future Careers

The most popular future career choices for 10 years time were: working for a large multiple in community pharmacy (43.5%); working in hospital pharmacy (42.5%); practising pharmacy abroad (27.9%); working in primary care pharmacy (26.0%); and pharmacy ownership (18.0%). These choices once again reflected existing occupational segregation, with 47.0% of white females intending to have a hospital pharmacy career in 10 years, and 46.3% of ME males a career with a large multiple in community pharmacy.

While just over half the male respondents (54.6%) planned to work full-time, 37.1% of females anticipated working full-time with breaks for statutory maternity leave.

Few cohort members (6.6%) did not expect to take a career break; 61.1% expected to take a break for family-building, 45.6% to travel, 28.1% to work abroad, and 15.6% to study. Females were significantly more likely than males to anticipate a career break to start a family (76.1% vs. 12.7%); and ME females were significantly more likely than white females to anticipate having a career break to study (23.8% vs.8.5%).

The results of three different ways of calculating trainees' work/life balance showed that ME females experienced significantly more problems with their work/life balance than males, and that community trainees also experienced more problems relative to their hospital peers. We also found that there was a moderate negative correlation between job satisfaction and work/life balance, with job satisfaction decreasing as the balance between work and non-work worsened.

Commitment to working in the profession was high amongst respondents: 91.6% expected to work hard in their careers, 61.4% to work within the profession until retirement, and few (20.0%) wanted to be something other than a pharmacist. Males were significantly less likely than females to intend to work in the profession until retirement and significantly more likely to want to do something other than pharmacy during their careers. Less than half of ME females (48.8%) agreed that they saw pharmacy as a career until retirement compared with 71.5% of white females; ME females were also twice as likely as white females to want to be something other than a pharmacist. Career commitment was moderately correlated to job satisfaction,

with respondents who saw pharmacy as a career until retirement more likely to be satisfied with their work.

2. Introduction

With Government plans to remove the RPSGB's regulatory functions and to establish a General Pharmaceutical Council, as well as Department of Health proposals aiming to replace the concept of 'personal control' with that of the 'responsible pharmacist', the roles of pharmacy and pharmacists are being challenged. As pharmacists are drawn into providing additional and extended services under the new contract, further changes to the traditional dispensing role of a pharmacist are being made.

The pharmacy workforce is also gradually changing, with the progressive entry of women to the profession[1-5] being viewed as particularly problematic from a workforce planning perspective, given that there is evidence that female pharmacists are more likely to work part-time than male pharmacists,[1-3,5-7] and that part-time working begins relatively soon after qualification.[1,5] 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.

Overall, this study aims to provide information on the early careers of GB pharmacists, and in particular to:

- Contextualize the ways that career intentions are informed and shaped, whether occupational inheritance[8] or family members 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 usefully identify pharmacists who leave pharmacy as a career soon after registration or identify those pharmacists who choose to work abroad.
- Identify patterns of workforce participation and variables influencing it.
- Determine sectoral and geographical mobility.

3. Methodology

The cohort study is a five-year longitudinal study of the early career choices and pathways of pharmacists who graduated from GB[i] pharmacy schools in 2006. Members of this graduate cohort were invited to join the study in November 2004 when the research team visited each of the 15 pharmacy schools in Great Britain with students due to graduate in 2006 and gave a short presentation about the study.[ii]

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[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.

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 compiled by the (then) RPSGB Education Division on the cohort when they *entered* the MPharm programme in the academic year 2002/03 shows that there were 2,057 students in their first year of study at the 15 pharmacy schools in the academic year 2002/03, of whom 72 were retaking the first year. Out of the total of 2,057, 233 (11.3%) were overseas students, and 1,275 (62.0%) were female.

All questionnaires used in the cohort study were pretested and piloted with a sample of recent (2004) pharmacy graduates to improve the internal validity of the questionnaires. Focus groups with a sub-sample of the 2004 cohort have also been conducted to examine questions in greater depth and to provide an additional measure of reliability and validity.

3.1 Data Collection

Data collection for the study began in the spring of 2005 when the cohort were 3rd year students. However, before 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.

By the time the cohort were in the *third year* of the MPharm, in the academic year 2004/05, the (then) RPSGB Education Division gave a total number of full-time students based in the 15 schools of 1,887, 170 fewer than were recorded as entering the MPharm three years earlier in 2002/03.[iii]

Unfortunately the (then) Education Division only broke down the total number of students by gender and fee status for the year they entered pharmacy school, and we were unable to get clarification from the schools regarding student characteristics for the cohort in the 2004/05 year. This means that it is difficult to know how representative our respondents are of the cohort as a whole.

3.1.1 'Early Choices' – 1st Survey

The first questionnaire for the study (known as 'Early Choices') had an explicit focus on choices made prior to studying pharmacy, such as how, when, and why respondents' chose to study pharmacy. The Early Choices (EC) questionnaire was administered directly to the students during another visit to each of the schools, and was completed at the end of a timetabled lecture. However, students attending one school of pharmacy were not based in their school during this data collection period, and in this case questionnaires were

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iii   This represents an overall attrition rate on 8.3% between year 1 and year 3

posted to the school for them to send out on our behalf. Unfortunately, this resulted in a low response rate from this school, and ultimately these students (n=151) were excluded from our study. Excluding these students resulted in the study tracking the careers of a reduced sample of *1,736* students (1,736 being the total number of full-time third year MPharm students attending the 14 pharmacy schools remaining in the study)[iv].

3.1.1.1 Response rate and results: Early Choices

Only questionnaires where respondents had completed the section asking for their name were used in our analysis so that each participant could be assigned a numerical identifier, allowing data to be linked from year to year in subsequent years using the unique identifier. 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). Given that on entry to the MPharm only 62.2% of the cohort were female, it is likely that females were over-represented amongst respondents, although in the light of recent evidence that male students have higher rates of attrition over the course of their undergraduate education than their female counterparts,[9] the extent of the under-representation of males students amongst respondents may be smaller than our figures at first suggest.

Results of analysis of EC data showed that differences existed between cohort members in relation to how, why, and when they made their early (pharmacy career) choices, and that differences in, for example, the entry pathways of some subgroups were related to differences in motivations and expectations of the course and of a pharmacy career.

Some of the headline findings from this survey were:

- 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
- Most were committed to a career in pharmacy, with 94.5% expecting to work very hard in their pharmacy careers.

A report containing a more comprehensive analysis of the Early Choices results is available from the Pharmacy Practice Research Trust;[10] short papers presenting findings of general interest to the profession have been published in The Pharmaceutical Journal.[11-13]

3.1.2 'Preregistration Choices' – 2nd Survey

A second wave of data collection, focussing on the 'Preregistration Choices' (PRC) of the cohort took place during February/March 2006. As the cohort

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[iv]   RPSGB Education Division data shows that 1,874 students entered the MPharm programme at the participating 14 pharmacy schools in the academic year 2002/03, giving an overall attrition between yrs 1 and 3 of 8.4%

were 4th year students at this time, the research team returned to the pharmacy schools and once again administered the questionnaire directly to the students. When the team visited Aston, Brighton and Sunderland pharmacy schools care was taken to deter students following the Overseas Pharmacists Assessment Programme (OSPAP)[v] from completing a questionnaire. OSPAP students attend some of the same lectures as 4th year MPharm students, and also undertake preregistration training in Great Britain. However, since they do not meet the inclusion criteria for this study we were careful to exclude them from our work – we even asked the relevant pharmacy schools to provide class lists so that we could remove any questionnaires completed by OSPAP students before we began our analysis [vi]

The Preregistration Choices questionnaire 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 of, and sectors of, pharmacy practice as an undergraduate.

3.1.2.1 Response rate and results – Preregistration Choices

The (then) RPSGB Education Division records show that there were 1,674 full-time fourth year MPharm students registered at the 14 pharmacy schools included in the study during the academic year 2005/06, some 62 fewer students than were registered as full-time third year students in 2004/05.[vii]

We received completed questionnaires from 1,153 students, giving a response rate for the PRC questionnaire of 68.9% (1,153/1,674). 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.

Headline 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 Examination (65.8%).

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v   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.

vi   As OSPAP students do not attend 3rd year MPharm courses they were not present at the time of collecting Early Choices data

vii   With 1674 4th year students based in the 14 pharmacy schools in 2005/06, down from 1874 that began their 1st year in 2002/03, overall attrition from the MPharm is 10.7%.

A report presenting further analysis of PRC data has been published recently;[14] papers, including conference abstracts, are also available.[15-18]

3.1.3 'Your Preregistration Post' – 3rd Survey

This brings us to the most recent survey, 'Your Preregistration Post' (YPP), the results of which are presented for the first time in this report. The third questionnaire in a series devised by the team conducting a longitudinal cohort study about pharmacy careers, 'Your Preregistration Post' collected data related to the cohorts' experiences of their preregistration training post, as well as data related to aspects of early career choice, such as career intentions, expectations, etc. Although some questions related to career intentions appeared in the previous two questionnaires, this report primarily focuses on analysing YPP data cross-sectionally.

In contrast to the two previous cohort study questionnaires, the primary method for distributing YPP to the 2006 cohort was by post, with questionnaires being sent to preregistration placement (that is, work) addresses.[viii] At the time of mailing out the YPP survey we had a database of 1,343 cohort members who had taken part in the study thus far – either they had completed an EC questionnaire, a PRC questionnaire, or both questionnaires. However, when we came to do the mailout only 662 of the 1,343 participants who had taken part previously could be matched to a work address. Participants for whom no placement address was available were sent a copy of the questionnaire to the contact address they supplied when they completed either/both EC and PRC if one was available, or were emailed asking for a contact address if no address had been given. However, few responded to questionnaires sent to contact addresses or to emails requesting a contact address.

Subsequent contact with the RPSGB revealed that an updated version of the preregistration placement database was available. The updated database was used for a second, reminder mailout. This meant that placement addresses were now available for 1,052 participants. A further 120 participants were on the RPSGB database with a registered home address. As a result, a reduced sample size of n=1,172 study members were traceable through the RPSGB.

A number of methods were used to maximise the response rate to this questionnaire. These included:

- Making an online version of YPP available to participants to complete electronically.
- Placing an advert on The Pharmaceutical Journal notice board reminding the cohort to return the questionnaire.
- Asking the NHS pharmacy education and development committee to encourage NHS preregistration tutors to remind their trainees to return the questionnaire.

[viii]   The RPSGB preregistration department provided a database of preregistration names and placement addresses.

- Producing a flyer that was inserted in every Registration Examination reminding the cohort about the study and asking for completed questionnaires to be returned.

3.1.3.1 Response rate – Your Preregistration Post

Pharmacy employers returned five questionnaires because a trainee had not taken up their training post, and six were returned to sender.

Overall, 701 participants completed a questionnaire, giving a response rate of 59.8% (701/1,172). Only a small number (n=62; 10.8%) completed the online questionnaire. Once again, the majority of respondents were female (76.3%, n=535) and white (61.0%, n=426) (Table 1).

A large proportion of YPP respondents had completed all three questionnaires for the study (80.0%; n=561). However, we acknowledge that the size of the cohort taking part is now smaller than in the earlier stages of the study.

Table 1: Response rate summary

	Early Choices (EC) Questionnaire	*Preregistration Choices (PRC)* Questionnaire	*Your Preregistration Post (YPP)* Questionnaire
Career stage	3rd yr undergraduate	4th yr undergraduate	Preregistration trainee
Response rate			
TOTAL % (n)	66.8 % (1,160)	68.9% (1,153)	59.8% (701)
Female % (n)	71.6% (830)	71.8% (828)	76.3% (535)
White % (n)	54.6% (633)	53.2% (613)	61.0% (426)
% also completed EC (n)		75.0% (865)	86.9% (609)
% also completed PRC (n)			92.4% (648)
% completed EC & PRC (n)			80.0% (561)
Sample	n=1,736	n=1,674	n=1,172
Total eligible population	n=1,887*	n=1,674	n=1,343**
Notes	*1 pharmacy school subsequently excluded	Some students who completed EC did not progress to 4th yr	**n=Total number of previous participants Addresses not available for all previous participants

3.2   Data analysis

This report provides a descriptive account of the degree of influence of various factors on the cohort's choice of preregistration training post, and explores relationships between this choice, the gender and ethnicity of respondents, and the sector of a training post. A similar approach has been used in both EC and PRC, as well as by a cohort study of UK medical graduates.[19] Contextual information is also presented describing the cohort's placement/work situation, together with analysis of aspects of preregistration trainees' working lives (data which are explored in relation to a number of themes, described below, in section 3.2.1).

Where relevant, results are contextualised in relation to the wider pharmacy workforce literature. Of particular interest is the extent to which career plans

mirror 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 sector[2] and that those from black and minority ethnic groups are more likely to work in the community sector.[20-22] Certainly, recent research[10,14,15,23] suggests that pharmacy students' early career preferences already reflect these niches in pharmacy practice.

3.2.1 Themes

Since YPP 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 – this report also explores a number of interrelating themes about preregistration trainees' working lives. These are:

- An evaluation of various aspects of work and their contribution to an individual's satisfaction with their work (job satisfaction);
- An analysis of the cohort's experiences of work and the relationship between these experiences and their job satisfaction (quality of working life);
- A measure of the extent of balance between work and non-work (work/life balance);
- An exploration of possible relationships between work/life balance and job satisfaction to determine happiness with work (occupational well-being);
- How happiness with work (measured as job satisfaction) relates to happiness with career choice (career commitment).

3.2.1.1 Job satisfaction

A definition of job satisfaction as 'an affective reaction to a job that results from the person's comparison of actual outcomes with those that are desired, anticipated or deserved'[24] was operationalised using a modified version of the Warr-Cook-Wall scale.[25] The Warr-Cook-Wall scale was originally developed for use with manual workers in the UK, and consists of a series of scales designed to measure eight concepts comprising various aspects of quality of working life and occupational well-being, job satisfaction being one of the eight concepts.
A shortened and amended scale based on the Warr-Cook-Wall scale has been used previously to explore job satisfaction rather than to assess all the various aspects of working life amongst general practitioners (GPs).[26-28] The scale used with GPs contained ten items, including one item measuring overall satisfaction with a job. Other items in the scale measured the degree of satisfaction with extrinsic and intrinsic features of a job, such as satisfaction with physical working conditions, satisfaction with colleagues and fellow workers, and satisfaction with amount of variety in a job.

The job satisfaction scale used in the research with GPs has been demonstrated elsewhere to have a very high reliability and to be suitable to use with pharmacists.[29] However, when the scale was used with pharmacists an additional item of 'patient contact' was added, and this addition was not found to have had a detrimental effect on the internal consistency of the scale.

The additional eleventh item was also included in a workforce survey of all registered pharmacists conducted in 2005.[30] The results of this large-scale survey showed that, in general, pharmacists were highly satisfied with their jobs, and that they derived most satisfaction from their colleagues, the amount of responsibility they were given, and patient contact, and the least from their remuneration.

When we included the job satisfaction scale in YPP we decided to add one further item evaluating satisfaction derived from 'opportunities for promotion and career advancement'. This item appeared in the original Warr-Cook-Wall job satisfaction scale, and was also included in a pilot version of the YPP questionnaire, as qualitative focus groups undertaken for the cohort study suggested that promotion and career advancement opportunities are an important component of job satisfaction for pharmacists in their early career. Moreover, other studies of graduates' work experiences[31,32] 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.

Reliability analysis of the 12-item scale produced a Cronbach alpha coefficient of 0.91, indicating that the amended scale achieves a high measure of internal consistency.[ix] A still high, but slightly lower Cronbach alpha coefficient of 0.90 was obtained without the additional 'promotion and career advancement' item, suggesting that the addition of the twelfth item to the scale has not had a detrimental effect on its 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.

Since hospital pharmacists in junior grades have been found to be more dissatisfied than their senior colleagues,[34] and pharmacists aged 22-29 compared with older pharmacists (aged 30-39) are more likely to be considering leaving the profession altogether,[35] we thought it would be interesting to measure job satisfaction at a very early career stage and to assess the extent to which existing reported differences between subgroups' job satisfaction[30, 36] are also found in the cohort data. Comparing between YPP results and those reported elsewhere will also enable us to determine relative levels of satisfaction through our analysis.

3.2.1.2 Quality of working life (QWL)

Measuring quality of working life (QWL) in YPP involved assessing the well-being of employees derived through participation in the workplace, and in essence involved measuring how respondents' interpreted their experiences of their training posts. QWL was explored in YPP because there is evidence that work-related experiences contribute to job satisfaction.[37,38]

[ix]   George and Mallery[33] state that a value greater than 0.9 indicates excellent internal consistency, and that an alpha of >0.8 is good

QWL, as a concept, refers to an individual's job-related experiences and the extent to which these experiences are rewarding and fulfilling. To achieve a good QWL, negative job-related experiences such as work overload or professional isolation should not dominate an individual's experiences of work. In this report, QWL is explored through an analysis of the relationships between experiences of work and satisfaction with work.

3.2.1.3 Work/life balance

A measure of work/life balance was included in the YPP questionnaire, in part in recognition of research showing that young people, in particular, place a high value on achieving a balance between work and life outside work.[39,40] For example, a longitudinal study of graduates in large organisations found that, on entry to an organisational career, the issue of work/life balance is very important, and that graduates are keen to avoid socialisation to a long working hours culture.[41] There is also evidence that pharmacists who report high levels of work/life conflict are more likely to intend to leave the profession.[37] An understanding of work/life balance is therefore important in the context of understanding influences on career decision-making, and is also important when making projections about workforce supply and retention.

The focus in this survey was on the impact of a training post on non-work roles, and we conceptualised conflict as arising between the two when a lack of balance occurs between them.[39] We operationalised a definition of work/life balance as 'satisfaction and good functioning at work and at home with a minimum of role conflict'[42] used elsewhere, and assumed that 'home' refers, broadly, to non-work rather than simply to family responsibilities, such as caring for dependents,[39] since few of the cohort are likely to have these kinds of responsibilities at this stage in their lives.

The measure we used in YPP to assess work/life balance was derived from a study of work/life balance that was conducted in eight organisations/sectors, and whose subjects included healthcare workers.[43] The measure consists of ten statements about work/life balance where answers are either 'agree', 'sometimes', 'disagree', and 'not relevant'. However, three of the statements can only be answered meaningfully by those who are in partnerships and/or have family responsibilities, so for respondents where these circumstances do not apply, a measure of work/life balance is calculated using responses to only the seven relevant statements. A measure involving all ten statements can also be calculated for those respondents who do have partnerships and/or family responsibilities. By scoring participants' responses to the statements, and then by summing these scores, a total score is derived, with higher total scores signifying increasing problems with work/life balance.

Because the work/life balance measure had not been applied to a cohort of preregistration trainees before, a reliability analysis was once again performed. Here we obtained a Cronbach alpha of 0.86 for the measure including all ten items, and a value of 0.83 for the seven-item scale. These values indicate that the items in the scale(s) are measuring the same underlying concept (work/life balance).

3.2.1.4 Occupational well-being

To explore aspects of the cohort's quality of working life and occupational well-being we examined correlations between job satisfaction and work/life balance. This analysis was undertaken in the light of evidence that pharmacists' occupational wellbeing – as a product of their quality of working life – is being negatively affected by their working conditions, at least in the community sector of the profession.[44] Indeed, recent qualitative work suggests that work intensification associated with high pressure working environments in the community sector has had a negative impact on the health and well-being of community pharmacists, and that this work-related stress has implications for patient safety. Undoubtedly life at work and occupational well-being are affected by features of a pharmacist's work environment, and this report draws out notable correlations between the sector of a trainee's placement and their relative well-being.

Prior to beginning our exploration of occupational well-being, we used factor analysis to determine whether the job satisfaction and work/life balance scales were measuring different concepts or components contributing to occupational well-being. The results of this analysis showed that the scales were measuring two different concepts, with the job satisfaction items loading onto one factor and the work/life balance items onto another factor.

3.2.1.5 Career commitment

Career commitment is 'one's attitude to one's profession or vocation',[45] and has been demonstrated previously as being linked to job satisfaction[37] and to intentions to leave the pharmacy profession.[46] As with occupational well-being, career commitment is affected by particular working environments and situations, and is positively correlated to having a structured work environment and low role ambiguity.[45] 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]

Finally, in order to gain an understanding of the quality of the trainee side of the trainee/organisation relationship, the ways that job satisfaction and career commitment interrelate are also presented in this report.

3.3 Structure of this report

The report structure follows that of the YPP questionnaire (see Appendix 1 for further details). Since YPP consists of four parts, each part forms a separate chapter here. Chapters begin with a brief overview of the questions contained within that particular part of the questionnaire. Each question is analysed separately and, where appropriate, subgroup analysis is also presented; tables of results are used to summarise findings and statistically significant results are highlighted using asterisks (*$p<0.05$; **$p<0.01$; ***$p<0.001$). Some discussion of results also appears in this report.

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

4. Preregistration Training

4.1 Overview

Part A of the questionnaire consisted of three questions designed to capture data relating to the process of applying for and securing a training post. The first question sought to capture placement details (that is, information relating to sector of placement). This was followed by a question collecting data on influences on placement decision-making (consisting of twelve items rated on a four-point scale), a measure that is similar to the one used to determine influences on medical career decision-making.[19] The final question in this section sought to explore respondents' beliefs and values relating to their training post, and included items designed to examine their motivations for choosing a particular training placement (in total sixteen items were included for respondents to evaluate using a seven-point scale). Questions one and three also appeared in PRC, and were included in YPP both to ensure that we had a comprehensive data set on the sample, and to be able to make comparisons between the data collected by the two questionnaires, where relevant. Question two had also been used in PRC, but was modified when it was included in YPP – for example, the item exploring the degree of influence a university tutor played in choosing a placement was excluded from YPP, since it had been found to account for very little influence on decision-making when it was incorporated in PRC.

4.2 Sector of preregistration training post

Although just over half (50.2%) of the sample reported having a training post in the community sector; Table 2 clearly demonstrates that amongst those training in this sector, minority ethnic males were over-represented and white females under-represented.

Table 2: Sector of training placement by gender and collapsed ethnicity

	SECTOR OF PLACEMENT		
	Hospital	Community	Split post
MALE*	34.9 (58)	59.0 (98)	6.0 (10)
White	40.6 (39)	55.2 (53)	4.2 (4)
Minority ethnic	27.1 (19)	64.3 (45)	8.6 (6)
FEMALE*	43.2 (231)	47.5 (254)	9.3 (50)
White	48.2 (159)	45.5 (150)	6.4 (21)
Minority ethnic	35.6 (72)	50.5 (102)	13.9 (28)
ALL WHITE**	46.5 (198)	47.7 (203)	5.9 (25)
ALL MINORITY ETHNIC ***	33.5 (91)	54.0 (147)	12.5 (34)
% TOTAL (n)	41.2 (289)	50.2 (352)	8.6 (60)

Valid % (n); some missing data; *p<0.05; **p=0.01; ***P<0.001

A large proportion of those training in split community/hospital posts (n=11/46; 23.9%, p=0.002) were Bradford sandwich students, whereas those in hospital/industry split posts were most likely to be graduates of Bath or Nottingham pharmacy schools.

That gender and ethnic occupational segregation occurs so early in pharmacy graduates' careers was noted in our previous report.[14] Similar patterns of career preferences amongst students have also been found elsewhere, suggesting that students' early career preferences reflect existing niches in pharmacy practice.[15, 23] It is likely that the reasons for this early occupational segregation lie in the interaction between personal characteristics and perceived opportunity structures. However, personal characteristics such as gender and ethnicity have been shown in the past to have constrained pharmacy careers, with, for example, ethnic minorities being found to be under-represented in managerial positions in community pharmacy.[20] If occupational segregation has an effect on the cohort's ability to realise their early career intentions then it is possible that this will have a negative impact on their commitment to the profession, and may result in previously unintended career mobility or even in withdrawal from the profession altogether, since unfulfilled career expectations have been found to influence graduates' decisions to leave their first employer in the early years of their career by other studies.[31, 32]

4.3 Factors influencing choice of training post

Cohort members were asked to evaluate a list of items in relation to the strength of influence they had had on their preregistration post decision-making. Table 3 shows the rank order of these items in terms of the percentages and frequencies that they 'influenced' the sample.

Table 3: Factors influencing choice of training post, in rank order

	% Influenced (n)
Career and promotion prospects	88.6 (619)
Employer's reputation	83.8 (584)
Geographical location – that is, proximity to friends and family	82.4 (570)
Appraisal of own aptitude/skills	77.7 (540)
Working conditions	76.1 (529)
Advice from others	71.8 (499)
Domestic/personal circumstances	67.4 (470)
Future financial prospects	62.9 (435)
Salary	59.0 (410)
Inclinations before pharmacy school	52.8 (367)
Hours of work	39.8 (278)

Valid % (n); some missing data

As with the previous two surveys, the factors influencing the largest proportion of respondents can be conceptualised as representing extrinsic characteristics of a training post – that is, they relate to external aspects of a post rather than to features of a post itself. That career and promotion prospects was found to be the most frequently rated influence is not surprising, since we know from other studies[31, 32] that career development is especially important to graduates in the early years after leaving university, and that graduates are disposed to being focused on achieving future career success rather than immediate gratification at work.[32]

However, while there is evidence that graduates' career decision-making is largely motivated by the prospect of promotion and progression, research suggests that the organisational culture and the extent to which graduates fit in with it is an important factor when it comes to assessing their quality of working life and occupational well-being.[32] These aspects of work and careers

are analysed in chapter 7 of this report (Work and Careers). They are of particular interest to this study, since others have found that experiences at work, such as enjoying good relationships with colleagues at work, go beyond issues of career development and influence career commitment.[32]

4.3.1 Subgroups analysis

4.3.1.1 Gender

Influencing factors varied little according to respondents' gender, with 'career and promotion prospects', 'employer's reputation' and 'geographical location' being the three most influential factors in making training post choices for both male and female trainees (Table 4). The only difference was in the ranking of items four and five: for females, the fourth most important factor was 'appraisal of own aptitude/skills' followed in fifth place by 'working conditions', whereas amongst males the order of these two items was reversed.

4.3.1.2 Ethnicity

Factors influencing preregistration post decision-making varied more when white and minority ethnic respondents were compared (Table 4).

In relation to the rank order of items, it is interesting to note that advice from others was a more important influencing factor amongst minority ethnic (ME) respondents, especially amongst ME males, where it was ranked in third place (compared with, for example, joint sixth place for white males). In an earlier stage of this study[10] we found that advice from others, such as using a relative as a source of information about pharmacy as a career, represented an important difference between ethnic subgroups within the sample in methods of pharmacy career-deciding, and suggested that this Early Choice (EC) result was evidence of the value of being able to access social resources – or cultural capital – in making career decisions amongst minority ethnic participants. In relation to the YPP result we cannot, of course, state precisely the source of the advice given (i.e. whether the advice-giver was a relative, a colleague etc) but we do know that the item 'advice from others' had a larger degree of influence on those who had also used a relative as a source of pharmacy career-awareness when they completed EC, since 75.9% of those who responded that a relative had been influential in choosing pharmacy when they completed EC were also influenced by advice when they completed YPP ($p<0.05$).

Table 4: Factors influencing choice of training post, by collapsed ethnicity

Influences on choice of training post	White male	ME male	White female	ME female	ALL WHITE	ALL ME
Career and promotion prospects	86.5 (83)	88.6 (62)	89.4 (294)	88.6 (62)	88.7 (377)	88.6 (240)
Employer's reputation	74.0 (71)*	88.4 (61)	84.8 (278)	85.1 (171)	82.3 (349)	85.9 (232)
Geographical location – that is, proximity to friends and family	80.2 (77)	73.9 (51)	84.1 (275)	83.2 (164)	83.2 (352)	80.8 (215)
Appraisal of own aptitude/skills	72.9 (70)	72.5 (50)	75.2 (246)**	86.0 (172)	74.7 (316)*	82.5 (222)
Working conditions	74.7 (71)	72.5 (50)	74.1 (243)	72.5 (50)	74.2 (314)	79.2 (213)
Advice from others	68.8 (66)	77.1 (54)	70.3 (230)	73.4 (146)	70.0 (296)	74.3 (200)
Domestic/personal circumstances	68.8 (66)	65.7 (46)	66.9 (220)	68.3 (136)	67.3 (286)	67.7 (182)
Future financial prospects	54.7 (52)	60.9 (42)	63.8 (208)	65.3 (130)	61.8 (260)	64.2 (172)
Salary	49.5 (47)**	72.5 (50)	55.5 (182)	64.5 (129)	54.1 (229)**	66.5 (179)
Inclinations before pharmacy school	49.0 (47)	62.3 (43)	49.8 (163)	55.5 (111)	49.6 (210)	57.2 (154)
Hours of work	36.5 (35)	34.8 (24)	37.5 (123)	46.5 (94)	37.3 (158)	43.5 (118)

Valid % (n); some missing data; *p<0.05; **p<0.01

4.4 Attitudes to preregistration training post choice

Cohort preregistration trainees were asked to respond to a range of statements about the process of choosing their placement. These statements were designed to capture data reflecting the ways that career decision-making may be influenced by pragmatic or opportunistic factors, as well as by future employability.[47]

When surveyed as final year students (using the PRC questionnaire in 2006) we reported finding that *getting into* the profession, achieved by passing the Registration Examination, determined the largest proportion of the cohort's preregistration post decision-making.[14] Other aspects – relating to *getting on* in the profession, such as developing teamworking skills or management experience – were found to have influenced less than half of respondents. At the time, we commented that the cohort might evaluate their motivations for choosing a training post differently when they came to complete YPP as a result of spending time training in a pharmacy practice environment, and that the cohort might come to value developing other professional skills, attitudes or identity in the early part of their careers over passing the Registration Examination.

However, analysis of YPP demonstrates that the cohort's post hoc rationalisations of their placement decision-making were largely similar to those recorded one year earlier (Table 5). The top four factors are ranked in the same order that they were when the cohort completed PRC, and most of the remaining twelve statements also appear in similar, relative positions. The main difference between the two data sets is in the extent to which respondents agreed with the statements – whereas, for example, 65.8% of the sample at PRC agreed that they had chosen a post that offered good preparation for the Registration Examination, 91.5% of those completing YPP agreed with this same statement; and where we found that less than half of PRC respondents agreed that they had chosen a post that provided team-working opportunities, the proportion agreeing with this statement at YPP was 82.3%. Thus it appears that although the cohort, on the whole, value the same factors when reflecting on their preregistration post decision-making, relative to one another, the extent to which they value the factors, individually, has increased, possibly as a result of their placement experiences.

Table 5: Attitudes to preregistration training post choice

Statement	Agree	Neither agree nor disagree	Disagree
I wanted a post that offered good preparation for the Registration Examination	91.5 (639)	6.0 (42)	2.4 (17)
I took a post that offered the opportunity to interact with patients	89.6 (627)	8.3 (58)	2.1 (15)
I took a post that would provide me with the opportunity to expand my clinical knowledge	82.6 (578)	12.6 (88)	4.9 (34)
I wanted a post that would provide an opportunity to work in a team	82.3 (575)	13.4 (94)	4.3 (30)
I took a post that I thought would provide me with a real challenge	68.8 (478)	19.3 (134)	11.9 (83)
Whichever sector I got a post in I always wanted to be close to my family/partner/friends	63.4 (443)	15.6 (109)	21.0 (147)
I took a post that would provide me with good management experience	52.1 (364)	27.5 (192)	20.5 (143)
I always wanted to work in the community pharmacy sector	47.5 (332)	21.9 (153)	30.6 (214)
I took the first post that was offered to me	41.7 (291)	6.4 (45)	51.9 (362)
I always wanted to work in the hospital pharmacy sector	34.1 (238)	27.1 (189)	38.7 (270)
I wanted a post that would broaden my experience of a sector I had no previous experience in	31.7 (222)	21.6 (151)	46.7 (327)
I took a post for the business focus it would give	27.3 (190)	27.1 (189)	45.6 (318)
I didn't mind which sector I got a post in as long as I worked in a particular location	26.3 (184)	18.1 (127)	55.5 (389)
I always wanted to work for a large multiple	26.3 (184)	34.0 (238)	39.6 (277)
I always wanted to work in a large teaching hospital	26.1 (181)	30.3 (210)	43.7 (303)
I didn't mind which sector I did my preregistration training in	19.3 (135)	11.4 (80)	69.2 (484)

Valid % (n); some missing data;

4.4.1 Subgroup analysis

4.4.1.1 Gender

Few gender differences in preregistration placement decision-making were found, but those results that were significant indicate that male and female respondents were influenced by a different set of work values and attitudes. Females were more likely to have chosen a post that was close to their family and/or friends than their male peers (64.9% vs. 58.4%; $p < 0.05$); and were more likely to have been influenced by opportunities for team-working offered by a post than male respondents in the sample (85.2% vs. 72.7%; $p < 0.01$). Males were more likely to have chosen a post for its business focus than females (38.8% vs. 23.7%; $p < 0.001$).

4.4.1.2 Ethnicity

Comparing between white and respondents from black and minority ethnic groups we found many significant differences. Looking only at where the significant differences were between those agreeing or between those disagreeing with a statement (that is, disregarding those where the significant difference is between those neither agreeing nor disagreeing) a large number of factors were found to have been evaluated differently by respondents (Table 6).

The results in Table 6 demonstrate that there was a lot of variation between the ethnic subgroups in relation to their preregistration post decision-making. Several results in particular stand out. These are:

- The large proportion of minority ethnic respondents who had chosen a post because it would provide good management experience;
- Those choosing a post because they had always wanted to work in the community sector;
- Those influenced by a post's business focus;
- Those who had chosen a post because they had always wanted to work for a large multiple.

All these results suggest a significantly higher level of career-decidedness amongst ME respondents relative to their white peers.

Table 6: Attitudes to preregistration training post choice by gender and collapsed ethnicity, where statistically significant

Statement	Agree				Disagree			
	White male	ME male	White female	ME female	White male	ME male	White female	ME female
I took a post that would provide me with good management experience	47.9 (46)**	72.5 (50)	42.9 (141)***	61.4 (124)	19.8 (19)	8.7 (6)	26.4 (87)	15.3 (31)
I always wanted to work in the community pharmacy sector	44.8 (43)	61.4 (43)	41.8 (137)*	53.0 (107)	35.4 (34)	20.0 (14)	35.4 (116)	24.8 (50)
I always wanted to work in the hospital pharmacy sector	34.7 (33)	38.6 (27)	33.7 (111)	33.5 (67)	45.3 (43)	32.9 (23)	43.5 (143)**	30.5 (61)
I wanted a post that would broaden my experience of a sector I had no previous experience in	31.6 (30)**	47.1 (33)	23.3 (77)***	40.1 (81)	52.6 (50)	25.7 (18)	56.7 (187)	35.1 (71)
I took a post for the business focus it would give	29.5 (28)***	51.4 (36)	19.0 (62)***	30.2(61)	53.7 (51)	21.4 (15)	55.4 (181)	35.1 (71)
I didn't mind which sector I got a post in as long as I worked in a particular location	22.9 (22)**	38.6 (27)	21.0 (69)***	32.2 (65)	60.4 (58)	35.7 (25)	65.0 (214)	45.0 (91)
I always wanted to work for a large multiple	17.7 (17)***	40.6 (28)	17.6 (58)***	39.1 (79)	56.3 (54)	20.3 (14)	48.9 (161)	23.8 (48)
I always wanted to work in a large teaching hospital	22.3 (21)	28.6 (20)	22.3 (73) **	33.2 (66)	52.1 (49)	35.7 (25)	49.1 (161)	34.2 (68)
I didn't mind which sector I did my preregistration training in	17.7 (17)	33.3 (23)	16.1 (53)	20.3 (41)	71.9 (69)	56.5 (39)	74.5 (245)*	63.9 (129)

Valid % (n); some missing data; *p<0.05; **p<0.01; ***p<0.001

4.4.1.3 Sector of placement

Evidence of a relationship between the sector of a preregistration placement and a respondent's placement/career decision-making was also found in YPP data. Thus amongst those training in community pharmacy, 75.9% agreed that they had chosen their placement because they had always wanted to work in community pharmacy (p<0.001); 73.1% agreed that they chose a post because it offered management experience (p<0.001); 45.7% that they had chosen a post for its business focus (p<0.001); and 39.9% that they had chosen their post because they had always wanted to work for a large multiple (p<0.001). Similarly, amongst those training in the hospital sector, 60.2% rationalised their choice of placement on the grounds that they had always wanted to work in this sector (p<0.001); and 45.0% agreed that they had chosen their post because they had always wanted to work in a teaching hospital (p<0.001).

5.   Intentions after Preregistration Training

5.1   Overview

Part B of the questionnaire was designed to determine career plans for the period immediately after preregistration training, and hence collected data measuring the proportion of the cohort intending to go straight into pharmacy practice in Great Britain.

Questions in this part of the questionnaire also sought to determine sectoral and geographical preferences for respondents' early careers. We know from analysis of PRC data that employment mobility behaviours from university into preregistration training differed according to trainees' gender and ethnicity, and that, for example, ME males were significantly more likely to have secured a training post in a pharmacy in a deprived area and to have a post in an urban area of England or Wales.[48] Although detailed analysis of pharmacy graduate migration is beyond the scope of this report, in the context of the results presented here it is important to include some measure of (non)migration because other studies have shown that ME graduates are less mobile than white graduates in their early careers, and that non-migration is correlated with both lack of career progression/promotion and lower overall earnings.[49] Given these differences in career development and earnings it is therefore possible that migration is related to occupational well-being and job satisfaction, both important aspects of respondents' experiences of working and professional lives, and the main focus of the data analysed in this report.

5.2   Plans for immediately after completion of training

The first question in the section on career plans for after preregistration training asked respondents what they planned to do once they had completed their placement(s). Here we found that the majority (80.6%; n=565) planned to go straight into pharmacy practice in GB. A minority of respondents were undecided (7.1%; n=50), and a further 4.3% intended to take a career break or gap year, 3.0% to return to their home country to practise, and 1.7%

intended to go on to further study, amongst other things. Of those intending to return to their home country to practise, the majority were Irish (n=17/21; 81.0%).

5.2.1 Subgroup analysis

Analysis in this section concentrates on three possible scenarios for respondents' early careers – either entering GB pharmacy practice immediately after completion of preregistration training, not entering GB pharmacy practice at this time, or being undecided about what to do. Using these scenarios, it can be seen from Table 7 that 12.3% of the sample did not intend to follow a traditional career path into GB pharmacy practice, and that a further 7.1% were undecided about their early career plans.

Table 7 also shows that while females were, overall, more likely than males to have made early career plans involving going straight into pharmacy practice in GB (81.5% vs. 77.7% respectively), and subgroup analysis indicates that these plans varied significantly in relation to respondents' ethnicity (Table 7). Table 7 demonstrates that minority ethnic females were the least likely subgroup to have planned to go straight into pharmacy practice in GB, but the most likely to be undecided about their early careers.

Table 7: Early career plans by gender and collapsed ethnicity

	EARLY CAREER PLAN		
	Go straight into GB pharmacy practice	Not enter GB pharmacy practice	Undecided
MALE	77.7 (129)	15.1 (25)	7.2 (12)
White	77.1 (74)	17.7 (17)	5.2 (5)
Minority ethnic	78.6 (55)	11.4 (8)	10.0 (7)
FEMALE	81.5 (436)	11.4 (61)	7.1 (38)
White**	84.2 (278)	11.8 (39)	3.9 (13)
Minority ethnic	76.7 (155)	10.9 (22)	12.4 (25)
ALL WHITE**	82.6 (352)	13.1 (56)	4.2 (18)
ALL MINORITY ETHNIC	77.2 (210)	11.0 (30)	11.8 (32)
TOTAL	80.6 (565)	12.3 (86)	7.1 (50)

Valid % (n); some missing data; **$p<0.01$

5.3 Preferred post after completion of training

A free text response was invited from cohort participants regarding the post they hoped to have after completing their training. 635 respondents completed the question with an example of a post in pharmacy practice, representing 90.6% of the total sample. However, responses ranged from the vague – such as 'pharmacist' – to the specific – 'Have rejected many offers of work from large multiples and have instead accepted a pharmacy manager's post in a new branch of a small independent community pharmacy multiple (less than 5 branches)'.

Overall, the most popular responses to this question were those relating to a variety of posts in hospital (n=218), and to a range of posts in community pharmacy (n=321). A minority intended starting their careers as locums (n=55). Amongst those hoping to work in the community sector, commonly cited jobs were 'relief pharmacist' (n=136), 'manager' (n=60) and 'second pharmacist' (n=15), although many (n=84) simply recorded a preference to work in 'community pharmacy'.

5.3.1 Subgroup analysis

Transforming the free text comments into a categorical variable, with nine possible values (not answered/not a pharmacy job; pharmacist; community pharmacist; hospital pharmacist; relief pharmacist; second pharmacist; pharmacist with a large multiple; manager; and locum) subgroup analysis was undertaken. Once again, the results of this analysis clearly demonstrate that the cohort's early career preferences reflect existing occupational segregation within the profession, with white females being significantly more likely to express a preference for a hospital pharmacy post, and males to prefer pharmacy manager and locum posts (Table 8).

Table 8: First post preferences by gender and collapsed ethnicity using free text responses

	PREFERRED FIRST POST							
	Hospital pharmacist	Relief pharmacist	Community pharmacist	Manager	Locum	Pharmacist	Pharmacist with multiple	Second pharmacist
MALE**	22.3 (37)	19.3 (32)	10.8 (18)	15.7 (26)	11.4 (19)	3.6 (6)	2.4 (4)	1.8 (3)
White	9.4 (9)	19.8 (19)	8.3 (8)	13.5 (13)	11.5 (11)	4.2 (4)	2.1 (2)	1.0 (1)
Minority ethnic	11.4 (8)	18.6 (13)	14.3 (10)	18.6 (13)	11.4 (8)	2.9 (2)	2.9 (2)	2.9 (2)
FEMALE	33.8 (181)	19.4 (104)	12.3 (66)	6.4 (34)	6.7 (36)	6.5 (35)	4.1 (22)	2.2 (12)
White*	36.7 (121)	17.9 (59)	11.8 (39)	5.8 (19)	6.7 (22)	4.8 (16)	5.5 (18)	3.3 (11)
Minority ethnic	29.7 (60)	22.3 (45)	12.9 (26)	6.4 (13)	6.9 (14)	9.4 (19)	2.0 (4)	0.5 (1)
ALL WHITE*	35.2 (150)	18.3 (78)	11.0 (47)	7.5 (32)	7.7 (33)	4.7 (20)	4.7 (20)	2.8 (12)
ALL MINORITY ETHNIC	25.0 (68)	21.3 (58)	13.2 (36)	9.6 (26)	8.1 (22)	7.7 (21)	2.2 (6)	1.1 (3)
TOTAL	31.1 (218)	19.4 (136)	12.0 (84)	8.6 (60)	7.8 (55)	5.8 (41)	3.7 (26)	2.1 (15)

Valid % (n); some missing data; **p<0.01; *p<0.05

5.4 Preferred sector of employment

We have already seen in this report that the cohorts' early career choices and preferences reflect existing gender and ethnic niches in pharmacy practice,[2,20-22,50,51] with males and minority ethnic participants having been both more likely to have trained in the community sector and less likely to want to work in the hospital sector after completing their training. This question on preferred sector of employment further quantifies the extent to which niches in pharmacy practice may persist, and adds to the results presented in 5.3 above.

Choices for early careers were as follows: proportionally, working for a large multiple in the community was the most popular (38.9%; n=269), followed by hospital pharmacy (32.3%; n=223), and haven't decided yet (9.0%; n=62). Overall, 387 respondents (55.2%) hoped to work in the community sector, in either a large multiple, medium multiple, small chain, or independent pharmacy. However, only one respondent described their preferred career path immediately after training as being in academia, a finding which may cause concern in the context of existing shortages in academic pharmacy.[52, 53]

5.4.1 Subgroup analysis

5.4.1.1 Gender

Using a recoded variable for preferred sector of employment that had four categories ('hospital', 'community', 'haven't decided yet' and 'other') we found that females were significantly more likely than males to intend to work in hospital pharmacy (35.3% vs. 22.6% respectively), but significantly less likely to intend to work in community pharmacy (53.1% vs. 65.2% respectively; $p<0.010$). Females were also more likely to be undecided about their early career preferences relative to their male peers (9.7% vs. 6.7%) (see Table 9).

5.4.1.2 Ethnicity

Employment preferences for after preregistration training varied significantly according to respondents' ethnicity, with ME participants significantly less likely than white participants to intend to follow a career path in hospital pharmacy (25.8% vs. 36.6% respectively; $p<0.010$), but proportionally more likely to intend to begin their careers in the community sector (59.2% vs. 54.2% respectively). ME respondents were also significantly more likely to be undecided rather than to have chosen a career path to follow after preregistration training than their white peers (12.0% vs. 6.7%) (see Table 9).

Controlling for the effects of gender within the two main ethnic subgroups, findings suggest that occupational segregation within the profession is set to continue: hence we found that 38.5% of white females wanted to work in hospital pharmacy after completing their training (compared with 30.2% of white males and 30.7% of ME females), but that 70.6% of ME males wanted to work in community pharmacy (Table 9).

Table 9: Sector employment preferences by gender and collapsed ethnicity

	PREFERRED SECTOR OF EMPLOYMENT			
	Community	Hospital	Undecided	Other
MALE**	65.2 (107))	35.3 (186)	6.7 (11)	5.5 (9))
White*	61.5 (59)	30.2 (29)	4.2 (4)	4.2 (4)
Minority ethnic	70.6 (48)	11.8 (8)	10.3 (7)	7.4 (5)
FEMALE	53.0 (280)	35.3 (186)	9.7 (51)	1.9 (10)
White	52.0 (169)	38.5 (125)	7.4 (24)	2.2 (7)
Minority ethnic	55.3 (110)	30.7 (61)	12.6 (25)	1.5 (3)
ALL WHITE**	54.2 (228)	36.6 (154)	6.7 (28)	2.6 (11)
ALL MINORITY ETHNIC	59.2 (158)	25.8 (69)	12.0 (32)	3.0 (8)
TOTAL	56.0 (387)	32.3 (232)	9.0 (62)	2.7 (19)

Valid % (n); some missing data; **$p < 0.01$; *$p < 0.05$

5.4.1.3 Sector of placement

Preferences for work were also significantly related to sector of training ($p < 0.001$). More than three-fifths (68.6%) of those who had trained in hospital pharmacy intended to work in this sector after registration; and 91.0% of those who had trained in the community sector hoped to begin their career in the same sector, suggesting little cross-sector mobility during the earliest stages of the cohorts' careers. Those who had trained in a split post were more likely than those who had trained in community or hospital posts to be undecided about their early career path (22.0% vs. 5.5% and 10.5% respectively).

5.5   Rejected sectors of employment

The second free text response question in YPP was answered by 396 participants, with many listing two or three sectors as rejected potential career paths. Most commonly, the answer given to this question was 'industry' (n=215), and the reason given for this was typically that the sector offered no patient contact. Other popular responses to the question were 'hospital' (n=91), 'academia' (n=39), and 'community' (n=37).

However, almost a quarter of those who answered the question (n=89) said that they were open to all sectors and were keen to gain as much experience of the different branches of the profession as possible, indicating that early career-deciding was not necessarily a planned activity. This finding implies that career-deciding involves more than rational choice, may not always be predictable, and may incorporate chance occurrences or unplanned events.[54]

5.6   Preferred geographical location of employment

Analysis of PRC revealed that the cohorts' patterns of migration from graduation into training varied according to the pharmacy school they attended, as well as in relation to characteristics such as their gender and ethnicity.[48] By asking respondents about their geographical preferences for work after registration we can track early career mobility further. With mobility instrumental in career advancement[55] this data provides an important measure that will also be useful if the cohort's career development is researched further in the future.

The frequencies with which regions were selected are shown in Figure 1.

Figure 1: Preferred geographical location of employment (Valid %)
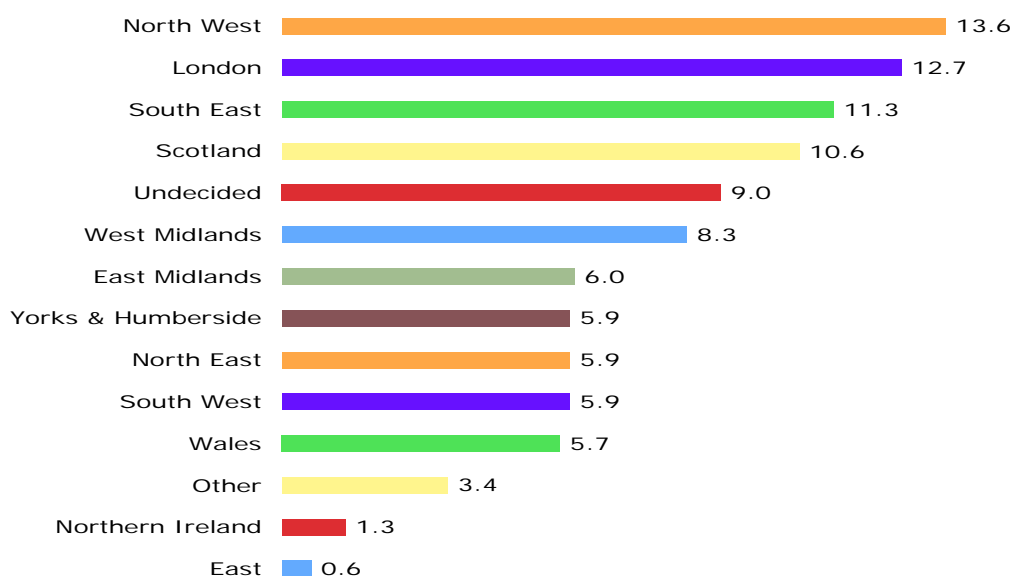
While the relative lack of popularity in the Eastern region should be of concern in the context of inequalities in healthcare provision, this concern is likely to be addressed as graduates of a new school in this area[x] train and subsequently work in the region, since approximately 40% of all graduates work in the same region of the UK as the higher education institution (HEI) they attended.[56]

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[x]   The first cohort of University of East Anglia graduates entered preregistration training in 2007

Analysing data at a country level, we found that a preferred geographical region for employment was significantly related to that of a respondent's training location (p<0.001): 81.5% of those who had undertaken their training in Scotland hoped to remain in Scotland when they started working; 75.0% of those who had trained in Wales also wanted to work in Wales upon registration; and 86.3% of those whose placement had been in England hoped to begin their working life as a pharmacist in England.

At a regional level of analysis it appears that the largest proportion of graduates hoped to work in the same region that they had attended pharmacy school, and that, proportionally, greater London (i.e. London and the South East) was also a popular place for pharmacy graduates to start their careers (although no graduates from Sunderland wanted to move there!). While overall 42.5% of graduates aimed to work in the same region as the HEI they had attended, the rate at which regions would retain their pharmacy graduates if intentions were translated into behaviours varied significantly (p<0.001), from 74.6% of graduates from Strathclyde who intended to remain in Scotland to 20.6% of graduates from Nottingham pharmacy school who intended to remain in the East Midlands (Figure 2).

Figure 2: Proportion of graduates hoping to work in the same region as they studied by pharmacy school (Valid %)
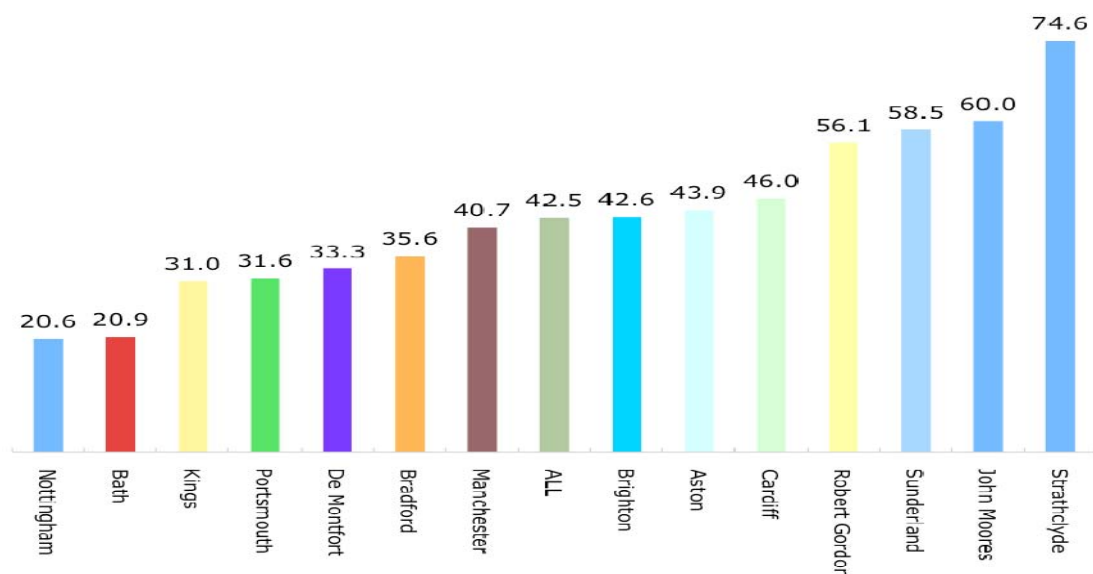
5.7 Short-term career plans

Assessing the extent of planned early career-deciding, we found that three-quarters of the cohort (74.0%; n=519) had a clear intention about the sector of the profession they wanted to work in as a pharmacist in the short-term. A further fifth (19.1%; n=134) were undecided about their short-term career intentions, and around one in sixteen (6.7%; n=47) had no clear intention. Compared with data collected by the same question from the same respondents one year ago, these results suggest that, proportionally, the cohort were more likely to have a short-term career plan than they did when they completed PRC, since only 61.1% had a clear short-term career intention at the time they completed PRC. In fact, more than half (54.2%, n=39) of

those who had been undecided about the sector of the profession they wanted to work in as a pharmacist in the short-term when they completed PRC responded that they had a clear idea about their short-term careers when they completed YPP, and 56.3% (n=94) of those who had been undecided when they completed PRC had a clear short-term career plan when they completed YPP. Finally, 86.7% (n=353) of those who were certain about their short-term career intentions when they completed PRC also had a clear intention about their future career when they completed YPP, while 3.2% (n=13) had changed from being certain about their career plans when they completed PRC to being uncertain when they completed YPP. These findings probably reflect increasing career-decidedness as the cohort begin their working and professional lives.

5.7.1 Subgroup analysis

Creating a binary variable where those who had a clear intention were given the value 1 and those who had no clear intention or were undecided were given the value 0 (indicating that a respondent did not have a clear short-term career plan), subgroup analysis of early career-deciding was undertaken.

5.7.1.1 Gender

Proportionally, more males than females were decided about the sector of the profession they wanted to work in as a pharmacist in the short-term (Table 10). This finding is in contrast to that of one year ago, where, amongst the same respondents, females in the sample were proportionally more likely to have made a clear decision regarding their short-term career.

Table 10: Short-term career plans by gender and collapsed ethnicity

| | CLEAR CAREER INTENTION | |
	Yes	No
MALE	77.1 (128)	22.9 (38)
White	82.3 (79)	17.7 (17)
Minority ethnic	70.0 (49)	30.0 (21)
FEMALE	73.3 (392)	26.7 (143)
White***	80.9 (267)	19.1 (63)
Minority ethnic	60.4 (122)	39.6 (80)
ALL WHITE***	81.2 (346)	18.8 (80)
ALL MINORITY ETHNIC	62.9 (171)	37.1 (101)
% TOTAL (n)	74.2 (520)	25.8 (181)

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

5.7.1.2 Ethnicity

Minority ethnic respondents were significantly over-represented amongst those who had no clear career intention ($p < 0.001$). Moreover, proportionally, minority ethnic females were least likely, and white males most likely, to have a short-term career intention (Table 10). These findings largely correspond with those reported in 5.2.1, where we noted that ME females were most likely to be uncertain about their early careers. The implications of these findings for pharmacist supply remain unclear at this stage in the study, but may become clearer if the cohort's careers are researched again in the future.

5.7.1.3 Sector of placement

Career intentions did not vary statistically significantly with sector of training post, although those who had trained in a split post were, proportionally, less likely to have a planned early career path than those training in hospital or community pharmacy (68.3%, 76.5% and 73.3% respectively).

6.   Quality of Working Life (QWL)

6.1   Overview

The third section in the YPP questionnaire – Part C – consisted of two questions designed to explore aspects of the cohort's quality of working life (QWL): their job satisfaction; and their experiences of work. Measuring these aspects of working life involved respondents' evaluating their experiences of work and assessing either whether the objectives they deemed important in their work had been achieved[57] (that is, it involved an evaluation of job satisfaction or dissatisfaction); and, secondly, it involved respondents' evaluating their experiences of work in relation to a series of statements designed to explore various aspects of work such as levels of control and autonomy over work, the extent to which respondents felt overloaded in their job, and opportunities for growth and career development.

The aim of incorporating this section in YPP was to provide us with data on quality of working life as a multi-dimensional construct. Our conceptualisation of the construct is that it consists of an interrelationship between work experiences and job satisfaction, and that this interrelationship is affected by attitudes and beliefs about work – which in turn have an effect on individual's evaluations of their satisfaction with that work. Furthermore, since the context in which work/training is experienced (such as the sector of a training post) impacts on job characteristics such as work overload and autonomy,[58] our analysis of QWL takes into account structural determinants of job satisfaction and experiences of work and their relationship with QWL.

6.2   Job satisfaction

The origin and our subsequent modification of the instrument used to measure job satisfaction was described in section 3.2.1.1 of this report. In this section, analysis of job satisfaction data is presented and discussed.

Analysis of job satisfaction data entailed calculating mean job satisfaction scores and standard deviations for each of the 11 items in the modified Warr-Cook-Wall job satisfaction scale,[25] as well as calculating the mean and standard deviation for an item measuring overall job satisfaction. Subsequently, mean scores were compared on the basis of gender, ethnicity and sector of training post (although sector of post was simplified to compare between community and hospital training posts only) and mean values for the subgroups were compared using t-tests.

The results shown in Table 11 indicate that cohort trainees derived most satisfaction from interpersonal aspects of work (such as their colleagues and fellow workers and patient contact). They were most dissatisfied with the remuneration they received, the freedom to choose their own methods of working and the recognition they received for good work. These results are broadly similar to those reported by recent studies of GB registered pharmacists using the same measurement scale (minus the 'opportunity for promotion and career advancement' item)[29, 30] in relation to the item with the

highest and the item with the lowest mean score, suggesting that, for example, intrinsic aspects of work, such as satisfaction derived from an enjoyable workplace, make an important contribution to job satisfaction independent of the pharmacy career stage being analysed. Observed differences between the cohorts' and pharmacists' rankings of other items in the job satisfaction scale may have occurred due to differences in the working conditions and job design of the two groups – for example, the item 'freedom to choose your own method of working', a constituent of control over work, was not scored as highly by trainees as by pharmacists, and probably reflects a lack of autonomy naturally experienced by those in a training role that is closely monitored and assessed.

More generally, our results signify that the cohort experienced higher levels of job satisfaction than the levels reported by pharmacists. The reasons for this difference may lie in the greater experience of work that pharmacists have – and hence in a larger gap between the objectives they deem important in their work and their evaluation of whether these have been achieved, a gap which this study assumes is being measured by respondents' evaluation of their job satisfaction – or in qualitative differences between the two roles, since those in a training role may experience less stress and work overload and hence may be more satisfied with their work. Whatever the reasons for this difference, what is surprising is that the trainees *were* more satisfied with their work than pharmacists, since a positive relation between age and job satisfaction has been reported previously.[30] Rather than older pharmacists having better or more fulfilling jobs that are intrinsically more satisfying the result may therefore indicate a cohort effect in operation. If this is the case subsequent surveys of the cohort would continue to find that they derive relatively high levels of job satisfaction from working as pharmacists.

6.2.1 Subgroup analysis

6.2.1.1 Gender

Females in the sample were significantly more satisfied than males with their colleagues and fellow workers, with their hours or work and the amount of variety in the job. There were no other statistically significant differences between male and female respondents (see Table 11 for details).

Table 11: Mean job satisfaction scores for preregistration trainees by gender

Job satisfaction: mean values (SD)	Male (n=166)	Female (n=535)	ALL (n=701)	Rank order (all)	% satisfied (≥ 5) (n)
Your colleagues and fellow workers*	5.49 (1.346)	5.71 (1.116)	5.66 (1.178)	1	87.8 (612)
Patient contact	5.50 (1.241)	5.60 (1.206)	5.57 (1.214)	2	87.8 (612)
Physical working conditions	5.18 (1.168)	5.34 (1.105)	5.31 (1.122)	3	82.4 (574)
Opportunity to use your abilities	5.09 (1.131)	5.29 (1.147)	5.24 (1.146)	4	81.9 (571)
Your hours of work*	5.03 (1.197)	5.29 (1.198)	5.23 (1.202)	5	80.5 (560)
Amount of responsibility you are given	5.24 (1.127)	5.21 (1.233)	5.22 (1.208)	6	80.9 (563)
Amount of variety in your job*	4.87 (1.558)	5.23 (1.376)	5.15 (1.428)	7	76.5 (534)
Opportunity for promotion/ career advancement	4.92 (1.246)	5.04 (1.291)	5.01 (1.281)	8	69.6 (484)
Recognition you get for good work	4.93 (1.321)	5.03 (1.346)	5.00 (1.340)	9	73.4 (512)
Freedom to choose your own method of working	4.85 (1.340)	4.95 (1.247)	4.92 (1.269)	10	71.2 (497)
Your remuneration	4.70 (1.308)	4.87 (1.264)	4.83 (1.275)	11	66.5 (460)
Overall satisfaction with main job	5.35 (1.041)	5.48 (1.141)	5.45 (1.120)		87.1 (576)

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

Similar gender differences in job satisfaction were also found amongst pharmacists,[30] with the same three items (amongst five others) also being scored significantly higher by female than male respondents. This consistency between the two sets of findings perhaps suggests that gender differences in job satisfaction arise because of differences in attitudes to work such as differences in expectations of work, differences in the ways that work is perceived, and differences in the ways that work is valued. This phenomena has been reported elsewhere,[58] where it has been noted that women tend to be more satisfied with their work than men.

On the other hand, given evidence that women's and men's work attitudes are determined through similar processes – processes which may, of course, result in different effects – the organisational context in which a job is performed may explain gender differences in job satisfaction. Since the pharmacy workforce is occupationally segregated, with male and female pharmacists tending to work for different kinds of organisations, and within different sectors of the profession, as well as in different kinds of pharmacist roles,[2] differences in job satisfaction between men and women (and male and female preregistration trainees) may therefore be explained by organisational and contextual effects on key job characteristics such as job complexity and autonomy.[58]

6.2.1.2 Ethnicity

The results in Table 12 indicate that there were significant differences between white and minority ethnic respondents in levels of satisfaction for ten of the 12 satisfaction items, including overall job satisfaction. In all of these ten 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 'recognition for good work' and 'amount of responsibility given'.

Table 12: Mean job satisfaction scores by ethnic origin

Job satisfaction (mean values (SD))	White (n=426)	ME (n=272)
Your colleagues and fellow workers*	5.81 (1.096)	5.42 (1.264)
Patient contact*	5.68 (1.180)	5.42 (1.257)
Physical working conditions*	5.46 (1.062)	5.07 (1.168)
Your hours of work*	5.40 (1.115)	4.96 (1.289)
Opportunity to use your abilities*	5.34 (1.137)	5.08 (1.148)
Amount of variety in your job*	5.30 (1.414)	4.91 (1.426)
Amount of responsibility you are given	5.29 (1.217)	5.12 (1.195)
Opportunity for promotion & career advancement*	5.14 (1.288)	4.80 (1.250)
Recognition you get for good work	5.07 (1.356)	4.91 (1.315)
Freedom to choose your own method of working*	5.01 (1.236)	4.79 (1.316)
Your remuneration*	4.93 (1.304)	4.67 (1.220)
Overall satisfaction with main job*	5.58 (1.098)	5.24 (1.128)

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

The difference in job satisfaction between minority ethnic and white workers has been discussed elsewhere[58], although studies seldom compare between workers doing the same job.

6.2.1.3 Sector of placement

The results in Table 13 indicate those respondents doing their preregistration training in the community sector were significantly less satisfied with their physical working conditions, their hours of work and the amount of variety in their job than cohort members training in hospital pharmacy. Hospital trainees were however, significantly less satisfied than their community peers in relation to the amount of responsibility they were given and opportunities for promotion and career advancement.

Table 13: Mean job satisfaction scores by sector of preregistration post

Job satisfaction (mean values (SD))	SECTOR OF PLACEMENT	
	Community (n=352)	Hospital (n=291)
Your colleagues and fellow workers	5.69 (1.180)	5.61 (1.191)
Patient contact	5.55 (1.168)	5.63 (1.297)
Physical working conditions*	5.20 (1.205)	5.41 (0.991)
Your hours of work*	4.99 (1.270)	5.53 (1.009)
Opportunity to use your abilities	5.25 (1.188)	5.23 (1.091)
Amount of variety in your job*	4.65 (1.428)	5.76 (1.161)
Amount of responsibility you are given*	5.43 (1.116)	4.99 (1.230)
Opportunity for promotion & career advancement*	5.16 (1.201)	4.87 (1.331)
Recognition you get for good work	4.98 (1.393)	4.98 (1.327)
Freedom to choose your own method of working	4.90 (1.256)	4.93 (1.295)
Your remuneration	4.84 (1.298)	4.79 (1.267)
Overall satisfaction with main job	5.41 (1.120)	5.49 (1.152)

*indicates that differences between preregistratiion trainees in different sectors are significant at 5% level (t-test)

These findings of sectoral differences in job satisfaction indicate that organisational and contextual influences affected trainees' reactions to their posts. It is likely that these organisational and contextual effects create different kinds of posts, which in turn have different job characteristics, thereby directly and indirectly influencing trainees' attitudes towards their posts.[58] For example, the item 'amount of variety in your job' was rated even lower amongst community trainees 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 this result suggests that those training in community pharmacy were being negatively influenced by the way that their posts were structured. Conversely, Table 13 shows that hospital trainees were significantly less satisfied with the amount of responsibility they were given at work, indicating that the lack of autonomy

offered by their posts had had a negative impact on their job satisfaction. Both job complexity and autonomy have been demonstrated elsewhere to represent the key job characteristics likely to be affected by the organisational context in which work takes place.[59]

6.2.1.4 Relationship between ethnicity and sector of placement

In the light of the many differences in job satisfaction observed when comparing between white and minority ethnic respondents, and between those training in a community and those training in a hospital post, and because we know that, in the context of occupational segregation, ethnic minority respondents were more likely to be in a training post in community pharmacy, further analysis was undertaken to explore the relationship between ethnicity, sector of training post and job satisfaction. Controlling for ethnicity, it appears that differences in *overall* job satisfaction observed between respondents training in the two sectors still hold – hence we found that minority ethnic trainees based in both sectors were significantly less satisfied than their white peers (Table 14).

Table 14: Mean overall job satisfaction by sector of post, controlling for ethnicity

SECTOR	ETHNIC GROUP	n	Mean	Std. Dev	t	p
COMMUNITY	white	191	5.57	1.140	2.983	0.003
	minority ethnic	138	5.20	1.066		
HOSPITAL	white	190	5.62	1.086	2.760	0.006
	minority ethnic	88	5.22	1.245		

Many significant differences were found when the other eleven job satisfaction items were compared in the same way (Table 15 shows differences between white and minority ethnic respondents training in community pharmacy, while Table 16 compares between white and minority ethnic respondents training in hospital pharmacy).

Table 15: Mean job satisfaction for community trainees, controlling for ethnicity

Job satisfaction	Ethnic group	n	Mean	Std. Dev	t	p
Your colleagues and fellow workers	white	158	5.81	1.141		
	minority ethnic	98	5.33	1.274	3.151	0.002
Patient contact	white	158	5.64	1.136		
	minority ethnic	97	5.19	1.318	2.912	0.004
Physical working conditions	white	158	5.34	1.144		
	minority ethnic	98	4.85	1.255	3.240	0.001
Your hours of work	white	158	5.23	1.161		
	minority ethnic	98	4.47	1.416	4.664	0.000
Opportunity to use your abilities	white	158	5.35	1.178		
	minority ethnic	98	5.00	1.284	2.220	0.027
Amount of variety in your job	white	158	4.78	1.442		
	minority ethnic	98	4.18	1.431	3.251	0.001
Amount of responsibility you are given	white	157	5.50	1.084		
	minority ethnic	98	5.17	1.193	2.229	0.027
Opportunity for promotion & career advancement	white	158	5.36	1.190		
	minority ethnic	98	4.85	1.246	3.297	0.001
Recognition you get for good work	white	158	5.04	1.445		
	minority ethnic	98	4.70	1.452	1.794	0.074
Freedom to choose your own method of working	white	158	4.99	1.264		
	minority ethnic	98	4.57	1.347	2.533	0.012
Your remuneration	white	157	4.90	1.290		
	minority ethnic	97	4.63	1.302	1.649	0.100

Job satisfaction items without shading are not statistically significant.

Table 15 shows that across each of the 11 items, ME respondents were less satisfied with their community training post than white respondents training in the same sector – and that this difference reached statistical significance for all but two of the items. Comparing between white and ME respondents

training in hospital pharmacy we also found that white respondents were more likely than their ME peers to be satisfied, but that this difference only reached statistical significance for five items (see Table 16)

Table 16: Mean job satisfaction for hospital trainees, controlling for ethnicity

Job satisfaction	Ethnic group	n	Mean	Std. Dev	t	p
Your colleagues and fellow workers	white	163	5.75	1.089	3.805	0.000
	minority ethnic	64	5.08	1.462		
Patient contact	white	163	5.72	1.173	2.001	0.047
	minority ethnic	64	5.34	1.482		
Physical working conditions	white	162	5.51	0.967	2.344	0.020
	minority ethnic	64	5.16	1.116		
Your hours of work	white	163	5.55	1.043	1.268	0.206
	minority ethnic	64	5.36	0.998		
Opportunity to use your abilities	white	163	5.32	1.058	2.125	0.035
	minority ethnic	64	4.98	1.091		
Amount of variety in your job	white	163	5.81	1.051	1.920	0.056
	minority ethnic	64	5.48	1.368		
Amount of responsibility you are given	white	162	5.04	1.215	1.673	0.096
	minority ethnic	64	4.73	1.250		
Opportunity for promotion & career advancement	white	162	4.91	1.346	2.219	0.027
	minority ethnic	64	4.47	1.321		
Recognition you get for good work	white	163	4.99	1.340	1.291	0.198
	minority ethnic	64	4.73	1.417		
Freedom to choose your own method of working	white	163	5.08	1.181	2.524	0.012
	minority ethnic	64	4.61	1.454		
Your remuneration	white	162	4.80	1.289	1.200	0.231
	minority ethnic	64	4.58	1.206		

Job satisfaction items without shading are not statistically significant.

When the results in Tables 15 and 16 are compared, it seems that some aspects of job satisfaction were more likely to be rated highly by those training in hospital pharmacy, irrespective of a respondents' ethnic group – that is, job satisfaction derived from working conditions, hours of work, variety in a job, and freedom to choose your own method of working – suggesting once again that job characteristics such as complex and interesting work were more likely to have been experienced by those training in hospital pharmacy. On the other hand, many significant differences between white and ME respondents were found amongst those training in community pharmacy and between white and ME trainees in hospital pharmacy – namely job satisfaction derived from interpersonal aspects of work and opportunities for career and professional development. Finally, the results in Tables 15 and 16 suggest that recognition for good work and remuneration did not vary significantly according to respondents' ethnicity and sector of training post.

6.3 Experiences of preregistration post

In 6.2 we saw that job satisfaction varied according to respondents' gender, ethnicity and sector of training post – in this section we explore respondents' work experiences of their training post, and in the next section we consider the relationship between these and job satisfaction. The rationale for evaluating experiences in YPP was to uncover respondents' job and career values, and the relative importance assigned to various aspects of work by them. By examining these aspects we could also measure perceptions of working life such as control over work, work overload, and opportunities for growth and career development.

Work experiences during training were examined using an 11-item, five-point scale which ranged from strongly disagree to strongly agree. Five items (relating to feedback on performance, involvement in decision-making, increasing job interest over the year, significant job changes, ability to meet conflicting demands on time at work and lack of time to carry out work) were derived from a study of GP worklife[38] which found that those GPs who had better workday experiences had higher overall job satisfaction, suggesting that job attributes are important in promoting job satisfaction.

The remaining six items were modified from those used elsewhere to explore sources of satisfaction and dissatisfaction among pharmacists in relation to experiences in their current job.[37]

In total, six statements used in the scale were positive and five were negative. The proportion of respondents disagreeing, agreeing or neither disagreeing nor agreeing with the statements are shown in Table 17.

Table 17: Experiences of preregistration post

Your preregistration post (% (n))	Disagree	Neither agree nor disagree	Agree
Positive statements			
This post provides me with the opportunity to expand my professional knowledge	4.5 (31)	5.7 (40)	89.8 (624)
I am involved in deciding on the changes introduced that affect my work	24.5 (170)	(26.3) 183	49.2 (342)
My post has become more interesting over the year	9.8 (68)	17.6 (122)	72.7 (505)
I find enjoyment in my job	6.0 (42)	13.1 (91)	80.9 (562)
I have enough time in my job to undertake training and development	36.9 (256)	17.1 (119)	46.0 (319)
My post provides me with the opportunity to extend my clinical skills	10.9 (76)	11.4 (79)	77.7 (540)
Negative statements			
I often have trouble working out whether I am doing well or poorly in this post	51.7 (359)	22.3 (155)	26.0 (181)
I cannot meet all the conflicting demands on my time at work	47.1 (328)	29.2 (203)	23.7 (165)
I do not have time to carry out all my work	39.6 (275)	23.9 (166)	36.5 (254)
I often have difficulty managing others	55.8 (388)	29.7 (206)	14.5 (101)
I do not feel part of a healthcare team	80.2 (557)	10.9 (76)	8.9 (62)

The results shown in Table 17 indicate that the majority of respondents felt that the post offered them the opportunity to expand both their professional knowledge and their clinical skills. This finding is encouraging given evidence that, amongst pharmacists, the most important career anchor is to have a challenging and progressive career.[37] These values and motivations for a pharmacy career, then, were being well met at a transitional point in the cohort's careers.

In addition, a high proportion of respondents found enjoyment in their job and almost three-quarters felt that their job had become more interesting over the year. However, just under half of the respondents felt they were involved in decision-making regarding changes which affected their work and only 46% of the respondents felt they had enough time to undertake training and development activities.

In terms of the negative statements, a quarter of respondents felt that they could not tell whether or not they were doing well in their post and a similar proportion felt that they could not deal with the conflicting demands on their

time. More than a third of respondents agreed that they did not have time to carry out all their work. On a more positive note, only 15% of respondents agreed that they had difficulty managing others and less than 1 in 10 felt that they were not part of the healthcare team. See Table 17 for details.

Given that the cohort were in a training role at the time they completed this evaluation these results are somewhat surprising – we anticipated more trainees would report receiving feedback and that fewer would conceptualise their working life as overloaded. With evidence that trainees are more likely to leave the profession after registration and do not intend to return to it if their preregistration post is task-focused and pressurised rather than designed to provide opportunities to develop professionally,[60] it is crucial that the preregistration year is better focused on providing proper socialisation to the profession.

6.3.1 Subgroup analysis

6.3.1.1 Gender

The only statistically significant difference between male and female trainees was in their enjoyment of the post, with 83.1 % of females agreeing with this statement, compared with 73.8% for males ($\chi 2$=6.959, p<0.01).

6.3.1.2 Ethnicity

There were a number of significant differences in experiences of a preregistration post when data were explored in relation to respondents' ethnicity. White preregistration trainees were more likely than their minority ethnic peers to agree that the post provided them with the opportunity to expand their professional knowledge (91.8% vs. 86.5%, $\chi 2$=4.905, p<0.05), to agree that their job had become more interesting over the year (76.2% vs. 67.2%, $\chi 2$=6.722, p<0.01), to find enjoyment in their job (84.2% vs. 75.4%, $\chi 2$=8.237, p<0.01) and to agree that the post provided them with the opportunity to extend their clinical skills (82.4% vs. 70.4%, $\chi 2$=13.514, p<0.01). Overall, then, it appears that white trainees were significantly more likely than minority ethnic trainees to have rated aspects of their worklife relating to their personal and professional development highly, indicating a difference between the two subgroups in the ways that they valued aspects of their working lives, a finding also reported elsewhere.[37]

Other studies comparing between (non-pharmacist) white and minority ethnic workers have found that reported differences in experiences of work lie not in the attributes of the worker (that is, the differences are not attributable to their ethnic differences) but lie in the attributes of the job – that is, the differences occur because of structural differences between the jobs performed by white and ME workers[61]. In the context of our cohort study, and especially in the context of the ethnic segregation of training posts, it is possible that the results of this subgroup analysis can in part be explained by the over-representation of ME respondents training in the community sector, since we know that those in the community sector tend to be less satisfied with their

working life.[30] That is, given reported differences in job satisfaction between both white and minority ethnic, and between hospital and community, trainees (see 6.2.1.2 and 6.2.1.3) reported differences in experiences of work may have once again occurred because of differences between the types of posts experienced by white and minority ethnic trainees – that is, sectoral differences in training posts may account for much of the variance in experience between white and minority ethnic respondents. However, given that we have also found that, after controlling for sector, ME respondents were often significantly less satisfied than white respondents with many aspects of their posts (see section 6.2.1.4), it is possible that white and minority ethnic trainees responded differently to their work, or – perhaps – responded differently in their assessment of their work when they were completing our survey.

6.3.1.3 Sector of placement

In terms of differences between sector, hospital preregistration trainees were more likely than their community peers to agree that the post provided them with the opportunity to expand their professional knowledge (96.2% vs. 84.0%, $\chi 2$=25.198, p<0.01), to agree that the job had become more interesting (78.4% vs. 67.5%, $\chi 2$=9.300, p<0.01), to agree that they had enough time for training (52.6% vs. 39.8%, $\chi 2$=10.466, p<0.01) and to agree that their post enabled them to extend their clinical skills (93.8% vs. 64.7%, $\chi 2$=78.357, p<0.01). Other studies have similarly found that opportunities for growth were poorer amongst those working in community pharmacy.[37] Hospital pharmacy trainees were however, more likely than those working in community pharmacy to agree that they did not feel part of the healthcare team (12.1% vs. 6.9%, $\chi 2$=5.095, p<0.05). Preregistration trainees holding a post in the community sector were more likely to agree that they had been involved in decisions that affected their post (57.3% vs. 39.2%, $\chi 2$=20.874, p<0.01). Those training in community pharmacy were more likely to agree that they did not have enough time to carry out all their work (40.7% vs. 31.7%, $\chi 2$=5.483, p<0.01) and were more likely to agree that they had difficulty managing others (17.8% vs. 11.3%, $\chi 2$=5.251, p<0.05). These results again suggest that there are qualitative differences between the characteristics or job design of training posts in community and hospital pharmacy, and that these differences may result in structural differences in working conditions that affect trainees' evaluations of their working life (see also 6.2.1.3).

6.3.1.4 Relationship between ethnicity and sector of placement

As with the job satisfaction data, further analysis between experiences of work, ethnicity, and sector of placement of respondents was undertaken (see Table 18).

Comparing between the two ethnic groups training in a sector, Table 18 shows that in general white respondents were more likely to agree with the positive statements. This only reached statistical significance in relation to the proportion who felt that their post had helped them to extend their clinical skills (which was true regardless of the sector) and in relation to those who

were training in the hospital sector, where significantly more white respondents enjoyed work compared with minority ethnic respondents training in the same sector. In order to understand the implications of these results further research is required.

Table 18: Experiences of preregistration post by sector, controlling for ethnicity

Your preregistration post (% agreeing)	COMMUNITY			HOSPITAL		
	white	ME	$\chi 2$ (p)	white	ME	$\chi 2$ (p)
Positive statements						
This post provides me with the opportunity to expand my professional knowledge	85.6	81.4	0.841 (0.359)	97.0	94.4	0.549 (0.459)
I am involved in deciding on the changes introduced that affect my work	56.9	57.9	0.006 (0.940)	40.0	37.4	0.089 (0.766)
My post has become more interesting over the year	71.1	62.1	2.755 (0.097)	81.5	71.4	3.170 (0.075)
I find enjoyment in my job	80.6	73.8	1.878 (0.171)	87.0	75.8	4.889 (0.027)
I have enough time in my job to undertake training and development	44.0	34.5	2.788 (0.095)	55.0	47.3	1.211 (0.271)
My post provides me with the opportunity to extend my clinical skills	69.8	56.9	5.518 (0.019)	96.5	87.9	6.538 (0.011)
Negative statements						
I often have trouble working out whether I am doing well or poorly in this post	25.7	24.1	0.046 (0.830)	25.6	34.1	1.796 (0.180)
I cannot meet all the conflicting demands on my time at work	26.2	26.9	0.000 (0.989)	20.5	19.8	0.000 (1.000)
I do not have time to carry out all my work	39.1	42.8	0.327 (0.567)	27.1	41.8	5.508 (0.019)
I often have difficulty managing others	16.4	20.0	0.511 (0.474)	9.0	16.5	2.779 (0.095)
I do not feel part of a healthcare team	7.4	6.2	0.051 (0.821)	10.0	16.7	2.009 (0156)

Job satisfaction items with shading are statistically significant

6.4 Experiences of work and job satisfaction (QWL)

The cohort's quality of working life (QWL) was explored using spearman's rank correlation analysis to describe the strength and the direction of the relationship between their experiences of work and their job satisfaction. This enabled us to identify the aspects of work that mattered most to our respondents about their training posts if they were to derive satisfaction from work and hence to have a good quality of worklife. Where aspects of work were explored using positive statements, our analysis assumed that the larger the positive correlation between a variable and overall job satisfaction, the better the QWL; where aspects of work were assessed using negative statements we assumed that the larger the negative correlation, the worse QWL.

Results of the correlation analysis appear in Table 19 and indicate a large, positive correlation between enjoyment of a job and satisfaction derived from that job, and moderate correlations between the other five aspects of work, described using the 'positive statements' shown in Table 19, and overall job satisfaction. Moderate and small negative correlations between the negative aspects of work and job satisfaction were also found, with, for example, lower levels of feedback associated with lower levels of overall job satisfaction (see Table 19 for details).

Table 19: Correlations between experiences of work and overall job satisfaction

Statements	Overall satisfaction
Positive statements	
This post provides me with the opportunity to expand my professional knowledge	.483**
I am involved in deciding on the changes introduced that affect my work	.433**
My post has become more interesting over the year	.463**
I find enjoyment in my job	.580**
I have enough time in my job to undertake training and development	.356**
My post provides me with the opportunity to extend my clinical skills	.449**
Negative statements	
I often have trouble working out whether I am doing well or poorly in this post	-.393**
I cannot meet all the conflicting demands on my time at work	-.314**
I do not have time to carry out all my work	-.294**
I often have difficulty managing others	-.202**
I do not feel part of a healthcare team	-.426**

** Correlation is significant at the 0.01 level (2-tailed).

The results in Table 19 demonstrate the value of particular job attributes such as being interesting and enjoyable to overall job satisfaction, and also indicate that other attributes, such as work overload and lack of feedback, have a negative impact on overall job satisfaction. In other words, these findings suggest that quality of worklife is better where an individual has a satisfying job that has attributes such as being enjoyable and offering opportunities for professional development.

Coefficients of determination were also calculated between each aspect of work variable and overall job satisfaction to ascertain how much variance in respondents' scores on the job satisfaction scale was explained by the job attribute variable. Here we found 33.64% shared variance between enjoyment

and job satisfaction, 23.33% between opportunities for professional development and job satisfaction, and 21.44% between having an interesting job and job satisfaction. These percentages of variance indicate reasonably high overlap between these aspects of work and job satisfaction.

6.4.1 Subgroup analysis

Correlation coefficients were calculated in order to compare the correlations between experiences of work and job satisfaction for males and females; for white and minority ethnic respondents; and for those training in the community and hospital sectors. The results of these comparisons between the separate groups appear in Table 20.

As can be seen from Table 20, all correlations were significant at the 0.01 level. Tests to determine whether the difference between subgroups' correlation coefficients were statistically significant revealed that there were significant differences between males and females in the strength of the correlations between all the experiences of work variables and overall job satisfaction with the exception of the item 'My post has become more interesting over the year'. Statistically significant differences in the strength of the correlations between aspects of work and job satisfaction for white and minority ethnic respondents were also found – only correlations between 'I do not have time to carry out all my work'/overall job satisfaction and between 'I do not feel part of the healthcare team'/overall job satisfaction for white and minority ethnic respondents did not vary significantly. Comparing correlations between those who trained in community with those who trained in hospital pharmacy, two correlation coefficients were found to not be statistically significantly different. These were correlations between 'I have enough time in my job to undertake training and development'/overall job satisfaction and 'My post provides me with the opportunity to extend my clinical skills'/overall job satisfaction.

Table 20: Correlations between experiences of work and overall job satisfaction, by gender, ethnicity and sector of training post

Statements	OVERALL SATISFACTION					
	Male	Female	White	M. Ethnic	Community	Hospital
Positive statements						
This post provides me with the opportunity to expand my professional knowledge	.465**	.486**	.448**	.496**	.486**	.475**
I am involved in deciding on the changes introduced that affect my work	.466**	.427**	.473**	.398**	.482**	.409**
My post has become more interesting over the year	.464**	.461**	.444**	.473**	.489**	.420**
I find enjoyment in my job	.556**	.586**	.568**	.599**	.597**	.574**
I have enough time in my job to undertake training and development	.457**	.331**	.369**	.323**	.355**	.346**
My post provides me with the opportunity to extend my clinical skills	.509**	.432**	.399**	.468**	.482**	.493**
Negative statements						
I often have trouble working out whether I am doing well or poorly in this post	-.351**	-.408**	-.415**	-.351**	-.414**	-.375**
I cannot meet all the conflicting demands on my time at work	-.295**	-.320**	-.296**	-.323**	-.346**	-.272**
I do not have time to carry out all my work	-.252**	-.306**	-.281**	-.276**	-.315**	-.252**
I often have difficulty managing others	-.233**	-.198**	-.162**	-.235**	-.220**	-.179**
I do not feel part of a healthcare team	-.357**	-.448**	-.419**	-.427**	-.396**	-.487**

** Correlation is significant at the 0.01 level (2-tailed).

7. Work and Future Careers

7.1 Overview

The final section of YPP (Part D) was designed to explore respondents' early career intentions, and to provide insight into the cohort's career commitment and motivation to work in the profession.

In addition to asking respondents to consider what sort of pharmacy or non-pharmacy career they hoped to have in ten years time, they were also asked to think about the general pattern of work they expected to follow and whether they expected to have any career breaks. These data constitute some of the core longitudinal components of the study, and will allow us to compare between intended and observed career outcomes over time, thereby determining factors which may mediate between intentions and behaviours, and to identify factors that are more likely to predict which intentions are translated into outcomes.

Section D of the questionnaire also included a scale for measuring work/life balance. An evaluation of work/life was included in the questionnaire since it is an important aspect of both quality of working life and of quality of life.[62] In relation to our pharmacy careers study we were interested in exploring respondents' perceptions of their work/life balance because there is both evidence of intensifying pressures of work[44] (a factor which may be associated with work making increasing demands on life) and also evidence that recent graduates are less tolerant of work/life imbalance[39, 40] – both factors that may be relevant when considering the cohorts' future careers.

7.2 Current career choice

Current career choices were surveyed using a five-point scale. Respondents were asked to evaluate a list of 14 possible career choices for ten years time and to select whether they were 'very certain, 'certain', 'not very certain', 'very uncertain' or whether a choice was 'not relevant' to their career plans. Because respondents were not being asked to only select one item from the list they could be 'certain' about following more than one career path in the future. Figure 3 shows the data recoded into potential career paths respondents were certain or uncertain about, as well as those career paths regarded as not relevant.

Figure 3: Certainty of respondents' career choices for 10 years time
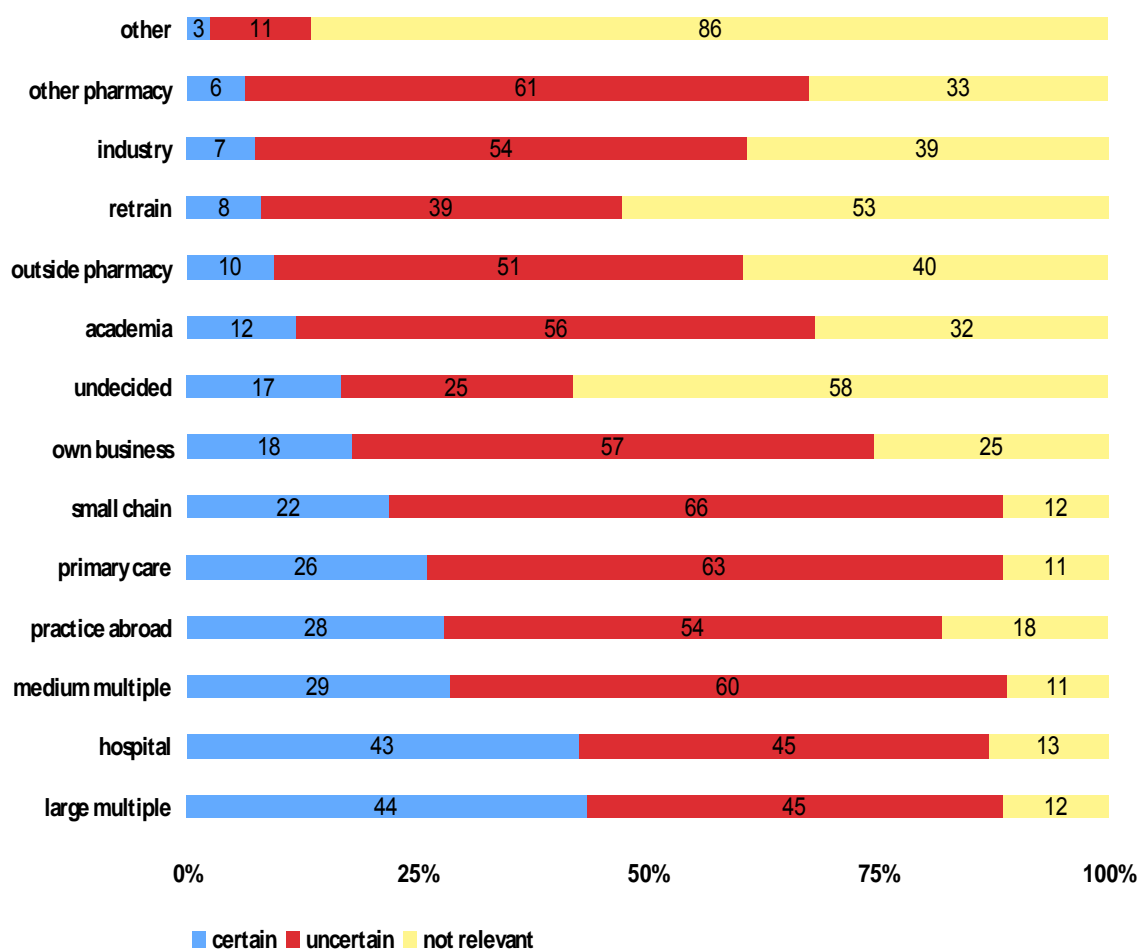
Compared with responses collected by EC and PRC, a noticeable decline in the relative popularity of many potential career paths was found (Table 21). While the decline in those intending to practice abroad or hoping to own their own pharmacy may represent the cohort, as a whole, having more realistic expectations regarding their future career path, this rationalisation is unlikely to explain why proportionally fewer respondents at YPP compared with the proportion at EC were certain that their future career lay in hospital pharmacy.

In terms of making projections about potential exits from the G.B. pharmacy workforce, the diminishing proportion planning to practice abroad (down from 43.0% of EC to 27.9% of YPP respondents, see Table 21), retrain to do something else (reduced from 11.7% of EC respondents to 8.0% of YPP respondents), or work outside pharmacy (which 11.4% of EC respondents hoped to do compared with 8.0% of YPP respondents) is good news for workforce planners. A much larger proportion (64%) of medical students graduating in the same year as the cohort of pharmacy graduates being studied here planned to practice medicine outside the U.K., either on a temporary or permanent basis, during the early stages of their careers.[19]

Table 21: Certainty of career choices for 10 years time – EC, PRC and YPP

CAREER CHOICE FOR 10 YEARS TIME	DATA SOURCE (% certain)		
	EC	PRC	YPP
Hospital pharmacy	60.3	46.8	42.5
Community pharmacy – large multiple	50.5	39.8	43.5
Practice pharmacy abroad	43.0	33.3	27.9
Primary care pharmacy	37.3	30.6	26.0
Community pharmacy – pharmacy ownership	32.7	24.1	18.0

Valid %; some missing data

7.2.1 Subgroup analysis

Subgroup analysis concentrated on the career choices that the largest proportions of respondents were certain about – namely, working for a large multiple, in hospital pharmacy, working for a medium multiple, aspirations to practice abroad, and working in primary care pharmacy.

7.2.1.1 Gender

Females in the sample were significantly more likely to be certain that their future career lay in hospital pharmacy than their male peers (46.3% vs. 29.3%; p<0.01). They were also significantly more likely to be certain of a career with a medium sized community multiple employer (31.2% vs. 19.6%; p<0.05). There were no other statistically significant differences between male and female respondents (see Table 22 for details). The continued relative popularity of hospital careers amongst females in our sample again suggests that career intentions are gendered and reflect existing occupational segregation within the profession.[2]

7.2.1.2 Ethnicity

Only intentions to follow a career path with a large multiple varied significantly according to respondents' ethnicity, with 46.3% of minority ethnic males but only 30.4% of white males being certain that their future was in this sector of the profession (p<0.05). However, more generally it is of note that the most frequently selected career paths were different for white and ME respondents: while the largest proportions of white males and females were certain that

they wanted a career in hospital pharmacy, the largest proportions of minority ethnic male and female respondents selected working for a large multiple as their preferred career path (see Table 22 for more details).

Table 22: Certainty of career choices for 10 years time by gender and collapsed ethnicity

	Large multiple	Hospital	Medium multiple	Practice abroad	Primary care
	CAREER CHOICE FOR 10 YEARS TIME				
MALE	37.1 (59)	**29.7 (47)	*19.6 (31)	31.2 (49)	24.7 (39)
White	*30.4 (28)	35.5 (33)	17.0 (16)	33.0 (30)	22.8 (21)
Minority ethnic	46.6 (31)	21.5 (14)	23.4 (15)	28.8 (19)	27.3 (18)
FEMALE	45.4 (237)	46.3 (241)	31.2 (139)	26.8 (139)	26.4 (137)
White	42.5 (136)	47.0 (150)	28.7 (90)	27.0 (86)	26.3 (84)
Minority ethnic	49.2 (98)	45.5 (90)	35.4 (68)	26.4 (52)	26.0 (51)
ALL WHITE	39.8 (164)	44.4 (143)	26.0 (106)	28.4 (116)	25.5 (105)
ALL MINORITY ETHNIC	48.5 (129)	39.5 (104)	32.4 (83)	27.0 (71)	26.3 (69)
TOTAL	43.5 (296)	42.5 (288)	28.5 (190)	27.9 (188)	26.0 (176)

Valid % (n); some missing data; **$p<0.01$; *$p<0.05$

7.2.1.3 Sector of placement

A strong association between sector of training post and career intentions for ten years time was observed. Hence 70.6% (n=209) of those who were certain that they wanted a career with a large multiple in the community sector had undertaken their preregistration training in community pharmacy (p<0.001); and 74.0% ((n=213) of those intending to follow a career in hospital pharmacy has also had a preregistration placement in the same sector (p<0.001). These findings suggest that the sector of a placement is positively associated with future career choices, and perhaps indicates that respondents had chosen a preregistration post with a future career in mind.

7.3 Pattern of work

In previous rounds of data collection for the cohort study we found that few cohort members anticipated working full-time (only 15.0% of EC respondents

and 12.8% of PRC respondents anticipated working full-time). Asking this question again in YPP we found a similar pattern of responses as recorded in the previous two surveys, with only 10.5% (n=72) of respondents expecting to work full-time until retirement (see Table 19 for further details). A further 8.1% anticipated working full-time but to retire early.

7.3.1 Subgoup analysis

7.3.1.1 Gender

Intended working patterns varied significantly according to gender. Combining several categories of response, so that comparisons could be made between anticipating working full-time, those anticipating working full-time for the majority of their career but with breaks for statutory maternity leave, those expecting to have both periods of full and periods of part-time work over their careers, and those expecting to work full-time but to have other career breaks, we found that more than half of all males in the sample expected to work full-time but that the largest proportion of females expected to work full-time with breaks for statutory maternity leave (Table 23).

Table 23: General intended working pattern, by gender and collapsed ethnicity

	INTENDED WORKING PATTERN			
	Full-time only	Combine F/T & P/T	F/T (breaks for Mat. leave)	F/T (other career breaks)
MALE***	54.6 (89)	22.7 (37)	0.6 (1)	13.5 (22)
White	53.2 (50)	21.3 (20)	0 (0)	19.1 (18)
Minority ethnic	56.5 (39)	24.6 (17)	1.4 (1)	5.8 (4)
FEMALE	7.4 (39)	33.5 (176)	37.1 (195)	7.2 (38)
White	5.6 (18)	31.8 (103)	38.6 (125)	9.0 (29)
Minority ethnic	10.6 (21)	35.9 (71)	34.8 (69)	4.5 (9)
ALL WHITE*	16.3 (68)	29.4 (123)	29.9 (125)	11.2 (47)
ALL MINORITY ETHNIC	22.5 (60)	33.0 (88)	26.2 (70)	4.9 (13)
TOTAL	18.6 (128)	31.0 (213)	28.5 (196)	8.7 (60)

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

7.3.1.2 Ethnicity

Significant differences between white and minority ethnic respondents were found in relation to the general pattern of work they intended following over the course of their careers. Proportionally, the largest differences were between intentions to work full-time amongst white and minority ethnic females, where almost twice as many minority ethnic females anticipated working full-time, and between white and minority ethnic respondents of both genders in relation to intentions to work full-time but to have other career breaks – a work pattern much more likely to have been anticipated by white trainees in the sample (see Table 23 for more details).

7.4   Career breaks

In 7.3 we noted the large proportion of respondents who intended working part-time – the data collected by this question adds to the evidence of potential reductions in the supply of pharmacists as cohort members exit the workforce, since overall, only 6.6% (n=46) of respondents did not intend to take a career break during their working life. Furthermore, amongst YPP respondents the proportions expecting to take career breaks had increased since the same questions were asked one and two years ago: for example, at EC 46.7% said they expected to have a career break to start a family, and this proportion increased to 57.2% of PRC respondents, rising further to 61.1% of YPP respondents. While this result reflects the large numbers of females in the sample, it nevertheless represents substantial anticipated absence from pharmacy practice.

Table 24 shows the proportions of respondents who intended taking any of four possible career breaks while they were working. In addition to the 6.6% who did not intend to take a career break, a further 15.0% (105) were unsure whether they would take any career breaks.

7.4.1 Subgroup analysis

7.4.1.1 Gender

Not surprisingly, females were significantly more likely than males in the sample to expect to have a career break to start a family (76.1% vs. 12.7% respectively, p<0.001, see Table 24 for more details). Males, on the other hand, were significantly more likely to be unsure about whether they would have any career breaks (24.2%, or 40/165, of male respondents vs. 12.2%, or 65/534, of female respondents were unsure if they would take any career breaks) (p<0.001), and were also significantly more likely to not anticipate any breaks over their careers (15.1% of male vs. 3.9% of females in the sample did not anticipate taking any career breaks, p<0.001).

Table 24: Intended career breaks, by gender and collapsed ethnicity

	INTENDED CAREER BREAK			
	Start a family	Travel	Work abroad	Study
MALE	***12.7 (21)	47.9 (79)	29.7 (49)	20.1 (33)
White	10.4 (10)	46.9 (45)	28.1 (27)	14.6 (14)
Minority ethnic	15.9 (11)	49.3 (34)	31.9 (22)	27.9 (19)
FEMALE	76.1 (407)	44.9 (240)	27.7 (148)	14.2 (76)
White	78.2 (258)	45.2 (149)	28.2 (93)	***8.5 (28)
Minority ethnic	72.3 (146)	44.6 (90)	26.2 (53)	23.8 (48)
ALL WHITE	62.9 (268)	45.5 (194))	28.2 (120)	***9.9 (42))
ALL MINORITY ETHNIC	57.9 (157)	45.8 (124)	27.7 (75)	24.8 (67)
TOTAL	61.1 (428)	45.6 (319)	28.1 (197)	15.6 (109)

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

7.4.1.2 Ethnicity

Ethnic differences between subgroups in the sample were found in relation to those expecting to take a career break to study. Here we found that minority ethnic respondents were significantly more likely to anticipate a career break so that they could study (p<0.001) – and, furthermore, although minority ethnic males were proportionally the largest subgroup who anticipated this kind of career break, only differences between white and minority ethnic females reached statistical significance (see Table 24 for details).

More generally, the results in Table 24 clearly demonstrate that an expectation to take career breaks amongst respondents was high. The impact of these intentions being put into practice may not, however, affect pharmacy practice uniformly – for example, with white females being more likely to intend to work in the hospital sector it follows that this sector is more likely to face workforce shortages if large proportions of white females also realise their intentions to take family-building career breaks.

7.5   Work/life balance

A ten-item scale devised elsewhere[43] was used to measure work/life balance among cohort respondents. Three different ways of calculating work/life balance were used – in the first scale (Checkscale 7, see section 7.5.1), scores from seven of the ten statements included in the scale that are relevant for the whole sample were summed. If a respondent agreed with the statement, this was given a value of three, disagreement was given a value of one and agreeing that this could 'sometimes' be a problem was given a value of two. Only respondents who had answered all seven questions were included in the analysis (n=533). Total scores ranged from 7 to 21, with a low score indicating few problems with work/life balance and a high score indicating greater problems with work/life balance.

The second scale (Checkscale 10, see section 7.5.2) included responses from all ten statements (including those relating to having a partner/family). Only those who had provided responses for all ten questions were included in the data analysis (n=390). The third scoring method (Scale 7As, see section 7.5.3) used in the analysis involved counting up where respondents had agreed with a statement – which we described as giving an 'A' (agree) response – and giving every score of 'A' the value of one and all other responses the value of zero. For both these scales a low score indicated few problems with work/life balance and a high score indicated greater problems with work/life balance.

7.5.1   Work/life balance: Checkscale 7

The mean value for respondents in the sample was 12.9 (±SD4.074) out of a possible total score of 21. Females reported a slightly higher mean value for work/life balance than males, indicating slightly higher levels of work/life imbalance amongst female respondents, but this difference was not statistically significant (t=-0.740, p=0.460). See Table 25 for details.

Table 25: Mean values for work/life balance by gender, ethnicity and sector of placement

CHARACTERISTICS	CHECKSCALE 7 (n=533)		CHECKSCALE 10 (n=390)		CHECKSCALE 7As (n=533)	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev
GENDER						
Male	12.6	4.090	17.6	5.803	1.8	2.034
Female	12.9	4.072	17.6	5.885	1.9	2.129
ETHNICITY						
White	12.3	3.948	16.8	5.576	1.6	1.982
Minority ethnic	13.8	4.135	19.3	6.080	2.3	2.254
SECTOR OF PLACEMENT						
Community	13.7	4.077	19.2	5.828	2.3	2.179
Hospital	12.0	3.953	16.0	5.543	1.5	1.971

There were however statistically significant differences in mean values for work/life balance between white and minority ethnic trainees, with minority ethnic respondents scoring higher (t=-4.209, p<0.01), suggesting that this subgroup perceived more problems with their work/life balance than white respondents within the sample.

Those respondents training in the community sector reported the highest mean values for work/life balance (t=4.657, p=<0.01), suggesting more problems with work/life balance when compared with those training in the hospital sector.

Comparing within the two sectors to examine the influence of ethnicity on work/life balance as measured by Checkscale 7 we found that work/life balance did not vary significantly, suggesting that work/life balance problems affected white and ME respondents working in the same sector in similar ways (Table 26).

Table 26: Mean values for work/life balance by sector of placement, controlling for ethnicity

SECTOR	ETHNIC GROUP	n	Mean	Std. Dev	t	p
COMMUNITY	white	203	12.13	4.30	-1.965	0.05
	minority ethnic	146	13.05	4.41		
HOSPITAL	white	200	10.87	3.87	-1.664	0.10
	minority ethnic	91	11.73	4.54		

7.5.2 Work/life balance: Checkscale 10

The mean value for Checkscale 10 for all trainees was 17.6 (SD 5.858) out of a possible score of 30. There were no significant differences in work/life balance between male and female respondents (t=-0.064, p=0.949) but there were significant differences between white and minority ethnic trainees, with the latter group scoring higher on the work/life balance scale (t=-4.077, p<0.01), suggesting that minority ethnic trainees have more problems with work/life balance than white trainees. See Table 25 for details.

Community preregistration trainees scored higher mean values on the work/life balance Checkscale 10 than their counterparts in hospital (t=5.285, p<001), indicating greater problems with work/life balance for those on placement in this sector.

7.5.3 Work/life balance: Scale 7As

The mean value was 1.9 (SD: 2.1059) out of a possible total score of seven. There were no statistically significant differences in the Scale 7As score between male and female preregistration trainees (t=-0.706, p=0.480). Minority ethnic respondents recorded significantly higher scores on the Scale 7As than white respondents (t=-3.666, p<0.01), suggesting again that minority ethnic trainees have more problems with work/life balance than their white peers.

Respondents who had undertaken their preregistration training in the community sector were significantly more likely to record a higher score (t=4.265, p<0.01) again indicating that those on placement in this sector were more likely to have problems experienced balancing their work life and life outside work. See Table 25 for details.

The consistency with which we found that ME respondents were more likely to experience work/life balance problems as measured by all three scales than white respondents may possibly be explained by the overrepresentation of

cohort members from ME groups training in community pharmacy, since trainees in this sector consistently reported greater problems balancing life at work with life outside work. Of course it is also possible that it is not the context in which work takes place but other unexplored personal characteristics, of which ethnicity may be just one, that lie behind differences in respondents' perceptions of their work/life balance.

7.6   Occupational well-being

Occupational well-being was explored by correlating overall job satisfaction with the Checkscale 7 variable for work/life balance. Checkscale 7 was used because a large number of respondents (n=533) had responded to all seven of the work/life balance statements. The results indicate a moderate negative correlation (of -0.4) between job satisfaction and work/life balance, with job satisfaction decreasing as work increasingly intrudes on life outside work (that is, satisfaction derived from work lessens as work/life balance worsens). Given evidence that pharmacists increasingly give priority to non-work aspects of life as their careers progress,[37] occupational well-being may well decrease as the cohort progress in their careers if their job satisfaction declines to levels reported amongst pharmacists under the age of thirty.[35] This is a potentially important finding, since we know that pharmacists who give high priority to work/life balance are more dissatisfied with work,[37] and that those who are dissatisfied are more likely to intend to leave the profession.[35] Over time it will be possible to track whether differences in occupational well-being have an impact on the cohort's careers, and whether the findings reported by other studies are also true of the sample studied here.

7.6.1 Subgroup analysis

Here we tested whether there were any statistically significant differences between subgroups' correlation coefficients. Our findings once again indicated that work had been experienced differently by subgroups in the study, and that both ethnicity and sector of training post were significantly related to these different experiences.

7.7   Career commitment

The final question in YPP consisted of a series of statements designed to explore respondents' career values, preferences and commitment to the pharmacy profession. Career values and preferences have been demonstrated elsewhere as being correlated with commitment.[31] Research into career commitment has also shown that affective or value-orientated dimensions of commitment are correlated with intentions to leave a profession as well as with work performance.[31, 32]

In YPP, career commitment was explored using three statements that reflected positive values and preferences concerning pharmacy careers, and three statements designed to indicate negative (or lack of) commitment to a pharmacy career. Respondents were asked to evaluate each statement using a five-point Likert scale, which, when recoded into a three point scale, showed

that the majority of respondents expected to work hard in their careers (91.6%) and to work within the profession until retirement (61.4%), and few wanted to be something other than a pharmacist (20.0%) (see Figure 4 for further details). These results suggest that, on the whole, the cohort are committed to their future pharmacy careers.

Putting these results into context, however, indicates that overall the proportion of respondents who, for example, have a preference to remain in the profession until retirement has declined; while 70.3% of EC and 67.4% of PRC respondents agreed with the statement 'I see pharmacy as a career until I retire', only 61.4% of YPP respondents did so. Furthermore, the proportions agreeing with those statements designed to measure lack of commitment to the profession increased over the same period – hence 18.6% of EC, 19.7% of PRC and 20.0% of YPP respondents said that they would prefer not to work as a pharmacist.

Figure 4: % respondents agreeing, neither agreeing or disagreeing, or disagreeing with career values statements
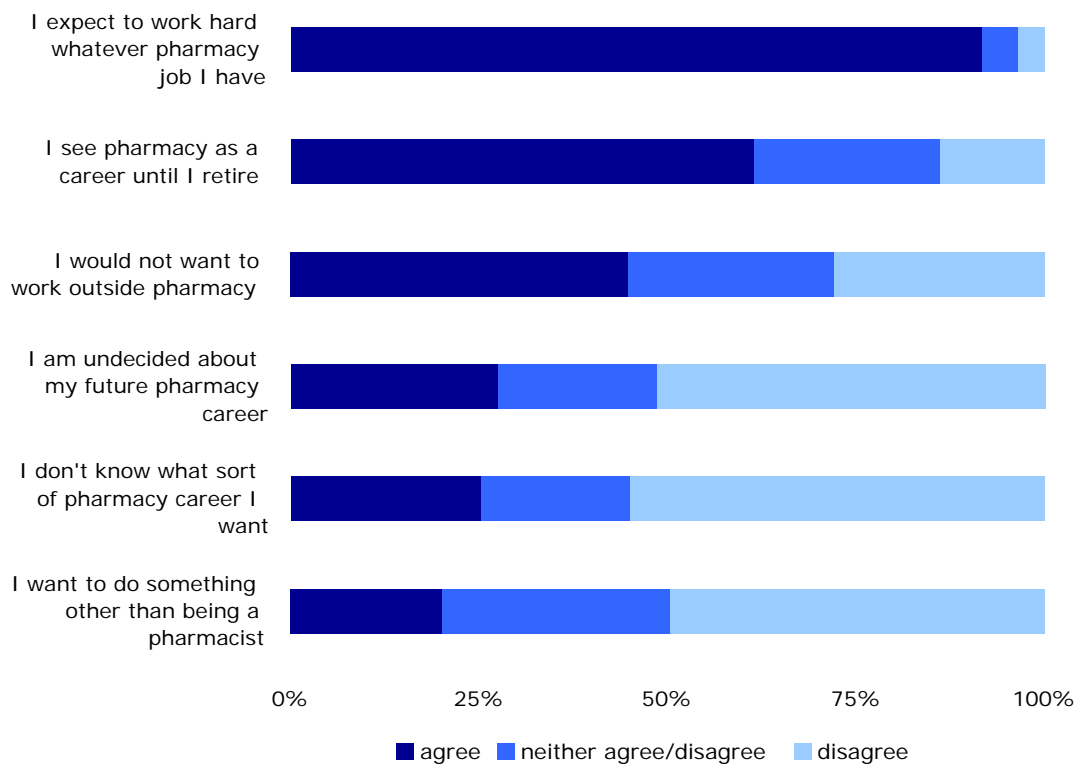
7.7.1 Subgroup analysis

Concentrating on differences between the proportions of subgroups' *agreeing* with the six statements, responses revealed many differences in values, preferences and career commitment (Table 22; significant results only).

Table 27: Career values, by gender and collapsed ethnicity

	CAREER VALUES			
	Expect to work hard	Pharmacy career till retirement	Not work outside pharmacy	Want to do something else
MALE	89.9	*55.8	**35.5	***30.1
White	92.7	53.7	33.3	28.1
Minority ethnic	85.7	58.6	38.6	32.9
FEMALE	92.3	63.1	47.6	16.9
White	93.9	***71.5	**53.3	***11.9
Minority ethnic	89.6	48.8	37.8	25.4
ALL WHITE	*93.6	***51.3	**48.8	***15.5
ALL MINORITY ETHNIC	88.6	67.5	38.0	27.3
TOTAL	91.7	61.4	44.7	20.0

Valid % (n); some missing data; *p<0.050; **p<0.010; ***p<0.001

7.7.1.1 Gender

A noticeable difference between male and female career values and commitment is apparent from the results presented in Table 27. Males were significantly less likely than females to envisage working as a pharmacist until retirement, and also significantly more likely to want to do something besides pharmacy in their careers. Similar patterns of responses were also observed in EC and PRC data.

7.7.1.2 Ethnicity

When examined in relation to the ethnicity of respondents, results show that white respondents were significantly more likely to expect to work hard and to intend to remain within the profession. White respondents were also less likely to want to do something other than pharmacy than EM respondents, but EM respondents were more likely to intend to work as a pharmacist until retirement.

Very noticeable differences between white females and EM females were also observed: for example, almost three-quarters of white females agreed that

they saw pharmacy as a career until retirement, whereas less than half of EM females agreed with the same statement; and EM females were twice as likely as white females to want to be something other than a pharmacist.

7.7.1.3 Sector of placement

Given evidence that a structured work situation leads to stronger career commitment[45] we expected to discover situational (that is, sectoral) differences in career values and commitment. However, this was not the case, as sector of training post was not found to be significantly associated with any of the career commitment statements. This is especially surprising in the context of the results presented earlier in this report, where we have noted that those who trained in community pharmacy have lower levels of job satisfaction and quality of working life, and experience a greater imbalance between their work and life outside work.

7.8 Career commitment and job satisfaction

The final analysis of YPP data explored correlations between career commitment and job satisfaction in the light of evidence that such analysis provides a good indicator of the quality of the workers/trainees' relationship with their employer/organisation.[58] Because three aspects of career commitment were assessed using negative statements, in these instances we assumed that having a low level of career commitment was associated with having a low level of overall job satisfaction.

Results indicate moderate and small correlations between career commitment and job satisfaction: for example, we found that that those respondents who saw pharmacy as a career until retirement were also more likely to be satisfied with their work (Table 28). Conversely, we found that being unsure about a future career path was negatively correlated to job satisfaction, perhaps suggesting that uncertainty has an affect on job involvement and hence reduces job satisfaction.

Table 28: Correlations between career commitment and overall job satisfaction

Statements	Overall satisfaction
Positive statements	
I expect to work very hard whatever pharmacy job I do	.132**
I would not want to work outside pharmacy	.178**
I see pharmacy as a career until I retire	.246**
Negative statements	
I am undecided about my future career	-.335**
I don't know what sort of career in pharmacy I want	-.279**
I want to do something other than being a pharmacist	-.263**

** Correlation is significant at the 0.01 level (2-tailed)

7.8.1 Subgroup analysis

In order to compare between career commitment and job satisfaction for males and females, for white and minority ethnic respondents and for those training in the community and hospital sectors, correlation coefficients were calculated. Table 29 shows that the majority of correlations were significant.

Table 29: Correlations between career commitment and overall job satisfaction, by gender, ethnicity and sector of training post

Statements	OVERALL SATISFACTION					
	Male	Female	White	Minority Ethnic	Community	Hospital
Positive statements						
I expect to work very hard whatever pharmacy job I do	$.056^{ns}$	.155**	.120*	.148*	.144**	.144*
I would not want to work outside pharmacy	$.077^{ns}$	.203**	.191**	.129*	.171**	.210**
I see pharmacy as a career until I retire	.182*	.264**	.267**	.148*	.253**	.251**
Negative statements						
I am undecided about my future career	-.281**	-.351**	-.375**	-.265**	-.346**	-.337**
I don't know what sort of career in pharmacy I want	$-.123^{ns}$	-.324**	-.303**	-.230**	-.306**	-.259*
I want to do something other than being a pharmacist	-.188*	-.287**	-.256**	-.197**	-.311**	-.201**

ns: not signficant

** Correlation significant at 0.01 level (2-tailed). * Correlation significant at 0.05 level (2-tailed).

8.   Implications for Policy and Practice

A number of issues are raised by the results presented in this report. To conclude our analysis of YPP data we therefore turn to consider the implications for policy and practice of some of these issues. Where possible, we also identify those policy makers and practitioners who may find our results most relevant.

8.1   Occupational segregation & patterns of workforce participation

Our results demonstrate that early career preferences reflect existing gender and ethnic niches within the profession. Similar findings have been reported in our analyses of earlier surveys for the study.[10,14] But what we have also discovered is that, longitudinally, preferences for early careers are pretty constant over time,[16] and are often reinforced by preregistration training experiences.

Furthermore, we have found that a sizeable proportion of the cohort don't expect to work full-time and that many cohort members intend to take career breaks to work and travel abroad.

8.1.1 Implications for workforce planners

With a largely female cohort who in the main expect to take family-building career breaks and to work part-time, the implications for workforce planners of reduced (less than full-time equivalent) participation rates is that current pharmacist supply shortages will not be resolved simply in the short-term. Since we know from other studies[1,5] that part-time working amongst female pharmacists begins relatively soon after qualification, it is likely that flexible working and non-standard career pathways will become increasingly common amongst pharmacists.

8.1.2 Implications for the profession's regulatory body

The challenge for the profession's regulatory body is to ensure that those cohort members returning from future anticipated career breaks are fit to practise. Ensuring fitness to practise for those returning to the workforce is likely to become mandatory. However, while key aspects of any return to work programme have not been identified, it is likely that a professional would want to attend a return to practise course and spend a period in supervised practice.

8.1.3 Implications for academic and industrial pharmacy

That academic pharmacy was an unpopular career choice may be of concern in the context of existing shortages of academic pharmacists available for teaching undergraduate pharmacy courses.[52] A similar lack of interest in industry raises a number of interesting questions, including why this is occurring, and whether it is as a result of this that industry is recruiting from other science disciplines. Perhaps it is the pharmacy curriculum's increasing

patient-focus that is having an impact on students' view of industry as being too science-focused?

8.2   Job satisfaction

The good news is that the cohort experienced higher levels of job satisfaction than the levels reported by Registered pharmacists – what remains to be seen is whether high levels of job satisfaction are also experienced by the cohort when they are in pharmacy practice. The next (and final) survey for the current study has used the same measure to examine job satisfaction so that we can compare between levels reported at the two data collection points and determine any change.

8.2.1   Implications for human resource management (HRM)

Since job variety – a proxy measure of complexity in the structural organisation of work – was scored especially low by those training in the community sector it might be timely for HRM professionals to pay close attention to the job design of these posts. The challenge facing community pharmacy HRM is therefore to devise strategies and practices which promote job satisfaction and commitment to their organisations.

8.2.2   Implications for future research

Of concern are the significantly lower levels of job satisfaction reported by respondents from black and minority ethnic groups. While it is likely that the work environment of community pharmacy negatively impacted on the job satisfaction of trainees based in this sector it is also possible that other explanations may account for these findings.

To understand more fully how ethnicity and sector of practice affect job satisfaction we suggest a programme of further research to explore the ways that the work environment and job characteristics are experienced, and why experiences vary according to personal characteristics such as ethnicity. This research would also help to identify the relationship between structural aspects of work and ethnicity.

8.3   Experiences of the training post

While we found the majority of respondents felt that their training post had offered them the opportunities to develop as professionals, we also found that less than half felt they had enough time to undertake training and development activities. Many felt overloaded at work and around a quarter of respondents felt that they did not receive sufficient feedback on their performance to be able to judge whether or not they were doing well in their post. These findings are important because we know that trainees are more likely to leave the profession after registration and do not intend to return to it if their preregistration post is task-focused and pressurised rather than designed to provide opportunities to develop professionally.[60]

White respondents were more likely to have rated aspects of their training post such as opportunities for growth favourably, as were those training in the hospital sector. Given community preregistration trainees were also more likely to have felt overloaded, findings suggest that there are qualitative differences between the job design of hospital and community posts, and between white and ME respondents' experiences of those posts.

8.3.1 Implications for future research

In the light of these findings it appears that those training in community pharmacy in particular encounter contextual/organisational problems which may be detrimental to their professional development. In parallel to further research on job satisfaction we recommend undertaking a study of the professional growth of preregistration trainees, and the role of the organisation/sector in promoting or hindering this growth.

Findings should also be used to inform debate about education and training. With the recent publication of the government White Paper 'Pharmacy in England'[63] the role and purpose of the preregistration year is being questioned. Since the White Paper advocates a longitudinal evaluation of new approaches to pharmacy education and training we feel that our existing cohort study data will provide an invaluable baseline against which new programmes can be evaluated.

8.4 Integrating clinical experience into the undergraduate degree

Another recommendation in the White Paper is to design ways of integrating the degree course with preregistration training. Since we have seen that the quality of clinical experience in the cohort's training posts varied it is important to consider the aims and objectives of undergraduate clinical experience and how it will be quality assured. The problem of providing sufficient clinical experience locally to a higher education institute will also need to be addressed.

8.4.1 Implications for curriculum planners

If clinical experience is to be integrated into the undergraduate curriculum then a major challenge to be resolved is that of how to provide clinical placements and experience that is of good quality and of educational value. Consultation with relevant stakeholders, such as Strategic Health Authorities, community pharmacy employers, etc. will also be required.

8.5 The new career drifters?

Where we found in the Early Choices data evidence of students drifting into (studying) pharmacy, in Your Preregistration Training Post data we have found evidence of a subgroup within the sample that appear to have no short-term career plans. Typically female and from EM backgrounds, this subgroup were likely to be undecided about what they intended to do after completing their training, to be uncertain about which sector of the profession they wanted

to work in as a pharmacist in the short-term, and to score low on a variety of career commitment measures relative to their white female peers.

8.5.1 Implications for future research

More research on these new drifters would help to clarify whether they remain in the profession and the reasons for their lack of career-decidedness at this point in their lives. Perhaps this research would benefit from an interdisciplinary perspective, involving those more experienced in researching, sociologically, the impact of cultural expectations, such as family and community pressures on employment amongst females from different black and ME groups. Certainly, there is evidence that female Pakistani and Bangladeshi graduates find that a degree level qualification provides them with an incentive for labour market participation, but that marriage reduces economic activity amongst these women to much lower levels than those of black, Indian, and white female graduates.[64]

9.   References

1. Hassell K. Destination, future intentions and views on practice of British-based pharmacists 5 and 10 years after qualifying. Pharmacy World & Science 2006; 25:116-122

2. Hassell K. The national workforce census: (6) the gendered nature of pharmacy employment in Britain.   The Pharmaceutical Journal 2003; 271:550–2.

3. Tanner J, Cockerill R, Barnsley J, Williams AP. Flight paths and revolving doors: a case of gender desegregation in pharmacy. Work, Employment and Society 1999;13:275-293.

4. Bottero W.   The changing face of the professions?   Gender and explanations of women's entry to pharmacy. Work, Employment and Society 1992;6:329-346.

5. Mott DA, Doucette WR, Gaither CA, Kreling DH, Pedersen CA, Schommer JC. Pharmacist participation in the workforce: 1990, 2000, and 2004. Journal of the American Pharmaceutical Association 2006;46(3):322-330.

6. Elworthy PH. Work pattern of women pharmacists graduating in 1953. The Pharmaceutical Journal 1980;240:11-16.

7. Elworthy PH. The work pattern of women pharmacists, 1966 to 1983. The Pharmaceutical Journal 1986;237:218-24.

8. Egerton M. Occupational Inheritance: the role of cultural capital and gender. Work, Employment Society 1997;11: 263-282.

9. Hassell K, Seston EM, Eden M, Willis S. The UK pharmacy degree: attrition rates and demographics of non-completers. Pharmacy Education 2007;7(3):249-256

10. Willis SC, Shann P, Hassell K. Studying pharmacy: who, when, how, why? What next? London: Royal Pharmaceutical Society of Great Britain; 2006. Available to download from: http://www.rpsgb.org/pdfs/studyingpharmrept.pdf

11. 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

12. Willis SC, Shann P, Hassell K. Career choices, working patterns and the future pharmacy workforce. The Pharmaceutical Journal 2006;277:137-138

13. Willis SC, Shann P, Hassell K. Graduate destinations — choices made about preregistration training. The Pharmaceutical Journal 2006;277:164-165

14. Willis SC, Hassell K. From pharmacy education into preregistration training. London: Royal Pharmaceutical Society of Great Britain; 2007. Available   to   download   from: http://www.rpsgb.org.uk/pdfs/pharmedtopreregtraining.pdf

15. Willis SC, Hassell K, Noyce P. Career intentions of pharmacy students. Journal of Health Services Research and Policy 2008 (forthcoming).

16. Willis SC, Hassell K, Noyce P. What kinds of pharmacy careers do pharmacy graduates want and are choices stable over time? International Journal of Pharmacy Practice 2007;15(Suppl2):B49.

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

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

19. British Medical Association. The cohort study of 2006 medical graduates. London: British Medical Association; 2007.

20. Hassell K. White and ethnic minority pharmacists' professional practice patterns and reasons for choosing pharmacy. International Journal of Pharmacy Practice 1996;4:43-51.

21. Hassell K, Noyce P, Jesson J. White and ethnic minority self-employment in retail pharmacy in Britain: an historical and comparative analysis. Work, Employment and Society 1998;12:245-271.

22. Platt AE, Tann J, Chishti Z. Ethnic minority pharmacy practice. International Journal of Pharmacy Practice 1997;5:72-80.

23. Wilson K, Jesson J, Langley C, Clarke L, Hatfield K. Pharmacy undergraduate students: career choices and expectations across a four-year degree programme. London: Royal Pharmaceutical Society of Great Britain; 2006. Available to download from http://www.rpsgb.org/pdfs/careerchoicesreport.pdf

24. Oshagbemi T. Overall job satisfaction: how good are single versus multiple-item measures? Journal of Managerial Psychology 1999;14(5):388-403.

25. Warr P, Cook J, Wall T. Scales for the measurement of some work attitudes and aspects of psychological well being. Journal of Occupational Psychology 1979;52:364-71.

26. Cooper CL, Rout U, Faragher B. Mental health, job satisfaction, and job stress among general practitioners. British Medical Journal 1989;298:366-70.

27. Rout U, Cooper C, Rout JK. Job stress among British general practitioners: predictors of job dissatisfaction and mental ill health. Stress Medicine 1996;12:155-66.

28. Sibbald B, Young R. The general practitioner workforce 2000. Workload, job satisfaction, recruitment and retention. Manchester: Manchester National Primary Care Research and Development Centre, University of Manchester; 2001

29. Hassell K, Seston EM, Shann P. Measuring job satisfaction of UK pharmacists: a pilot study. International Journal of Pharmacy Practice 2007;15:259-264.

30. Hassell K, Seston EM, Eden M. Pharmacy workforce census 2005: main findings. London: Royal Pharmaceutical Society of Great Britain; 2006. Available to download from http://www.rpsgb.org/pdfs/census05.pdf

31. Arnold J, Mackenzie Davet K. Graduates' work experiences as predictors of organizational commitment, intention to leave, and turnover: which experiences really matter? Applied Psychology: an International Review 1999;48 (2):211-238.

32. Sturges J, Guest D. Don't leave me this way! A qualitative study of influences on the organizational commitment and turnover intentions of graduates early in their career. British Journal of Guidance and Counselling 2001;9(4):447-462.

33. George D, Mallery P. SPSS for Windows step by step: a simple guide and reference. 11.0 update (4th ed). Boston:Allyn & Bacon;2003.

34. Rajah T, Bates I, Davies J, Webb D, Fleming G. An occupational survey of hospital pharmacists in the South of England. The Pharmaceutical Journal 2001;266:723-6.

35. Seston EM, Hassell K, Ferguson J, Hann M. Exploring the relationship between pharmacists' job satisfaction and intention to quit the profession. Paper submitted to Research in Social and Administrative Pharmacy

36. Boardman H, Blenkinsopp A, Jesson J, Wilson K. A pharmacy workforce survey in the West Midlands: (4) Morale and motivation. The Pharmaceutical Journal 2001;267:685-690.

37. Guest D, Battersby S, Oakley P. Future pharmacy workforce requirements; workforce modelling and policy recommendations. Appendices. London: Royal Pharmaceutical Society of Great Britain; 2006.

38. Whalley D, Boijke C, Gravelle H, Sibbald B. GP job satisfaction in view of contract reform: a national survey. British Journal of General Practice 2006;56:87-92.

39. Sturges J, Guest D. Working to live or living to work? Work/life balance early in the career. Human Resource Management Journal 2004;14(4):5-20

40. Smola KW, Sutton CD. Generational differences: revisitng generational work values for the new millennium. Journal of Organizational Behaviour 2002;23:363-382.

41. Sturges J, Guest D, Mackenzie Davey K. Who's in charge? Graduates' attitudes to and experiences of career management and their relationship with organisational commitment. European Journal of Work and Organisational Psychology 2000;9(3):351-70.

42. Clark S. Work-family border theory: a new theory of work-life balance. Human Relations 2000;53(6):747-770.

43. Dex S, Bond S. Measuring work-life balance and its covariates. Work, Employment and Society 2005;19:627-637

44. Gidman W, Hassell K, Day J, Payne KP. The impact of increasing workloads and role expansion on female community pharmacists in the UK. Research in Social and Administrative Pharmacy 2007;3(3):285-302.

45. Blau GJ. The measurement and prediction of career commitment. Journal of Occupational Psychology 1985;58:277-288.

46. Gaither CA, Mason HL. A model of pharmacists' career commitment, organisational commitment and career and job withdrawal intentions. Journal of Social and Administrative Pharmacy 1992;9:75-85.

47. Hodkinson P. How young people make career decisions. Education and Training 1995;37 (8):3-8

48. 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.

49. Faggian A, McCann P, Sheppard S. An analysis of ethnic differences in UK graduate migration behaviour. The Annals of Regional Science 2006;40:461-471.

50. Hassell K, Fisher R, Nichols L, Shann P. Contemporary workforce patterns and historical trends: the Pharmacy Labour Market over the last forty years. The Pharmaceutical Journal 2002;269:291-296

51. Hassell K, Seston EM. Briefing paper: RPSGB register analysis 2006. London: Royal Pharmaceutical Society of Great Britain; 2006

52. Taylor KMG, Bates IP, Harding G. The implications of increasing student numbers for pharmacy education. Pharmacy Education 2001;4(1):33-39

53. Taylor KMG, Harding G. The demise of professionally registered academics – a challenge for pharmacy. The Pharmaceutical Journal 2002;269:604

54. Bright JEH, Pryor RGL, Wilkenfeld S, Earl J. The role of social context and serendipitous events in career decision making. International Journal of Educational and Vocational Guidance 2005;5:19-36

55. von Ham M. Workplace mobility and occupational achievement. International Journal of Population Geography 2001;7:295-306

56. Regional perspectives on graduate destinations. Graduate Market Trends 2005 (spring). Avaliable to download from:
http://www.prospects.ac.uk/cms/ShowPage/Home_page/Main_menu___Research/Labour_market_information/Graduate_Market_Trends/Regional_perspectives_on_graduate_destinations__Spring_05_/p!empildi

57. Carvajal MJ, Hardigan P. Estimation or pharmacy students' expected job satisfaction functions: inter-gender differences. American Journal of Pharmaceutical Education 1999;63:285-289

58. Loscocco KA, Roschelle AR. Influences on the quality of work and nonwork life: two decades in review. Journal of Vocational Behaviour 1991;39:182-225.

59. Lincoln JR, Kalleberg AL. Work organisation and workforce commitment: a study of plants and employees in the US and Japan. American Sociological Review 1985;50:F38-F60.

60. Willis SC, Eden M, Hassell K. Pharmacist preregistration training and workforce retention. Forthcoming presentation at HSRN 2008.

61. Tuch SA, Martin JK. Race in the workplace: black/white differences in the sources of job satisfaction. The Sociological Quarterly 1991;32(1):103-116.

62. Guest DE. Perspectives on the study of work-life balance. Social Science Information 2002;41(2):255-279.

63. Department of Health. Pharmacy in England. Building on strengths – delivering the future. London: HMSO; 2008

64. Dale A, Lindley J, Dex S. A life-course perspective on ethnic differences in women's activity in Britain. European Sociological Review 2006;22:323-337.

10. Appendix

ID No:

A Longitudinal Cohort Study about Pharmacy Careers

Your Pre-Registration Post

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.

A. YOUR PRE-REGISTRATION TRAINING POST

This section recaps some of the questions that we asked you in the last questionnaire, but we are using it here to compare with your earlier responses.

A1. Where are you doing your pre-registration training?

□[1]   Hospital only (with 2 or more weeks cross-sector experience in community)
         Community only (with 2 or more weeks cross-sector experience in hospital) in:
         □[2]   An independent pharmacy
         □[3]   A small chain (2-4 stores)
         □[4]   A medium sized multiple (5-25 stores)
         □[5]   A large multiple (more than 25 stores)
□[6]   Post that is evenly split between hospital and industry
□[7]   Post that is evenly split between hospital and PCT
□[8]   Post that is in hospital only but sponsored by industry (with 2 or more weeks cross-sector experience in community)

A2. For EACH of the factors shown in the table below, please indicate with a tick how strong an influence it was on your choice of pre-registration training post.

Influences on your choice of pre-registration training post	Strong influence	Partial influence	No influence	Not relevant
Domestic/personal circumstances				
Hours of work				
Working conditions				
Salary				
Career and promotion prospects				
Appraisal of own skills/aptitude				
Employer's reputation				
Inclinations before pharmacy school				
Advice from others				
Future financial prospects				
Geographical location – that is, proximity to friends and family				
Other *(please specify)*				

A3. In relation to your pre-registration post, to what extent do you agree or disagree with EACH of the following statements?

	Very strongly agree	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Very strongly disagree
I always wanted to work in the community pharmacy sector							
I always wanted to work in the hospital pharmacy sector							
I always wanted to work for a large multiple							
I always wanted to work in a large teaching hospital							
I didn't really mind which sector I did my pre-registration training in							
Whichever sector I got a post in I always wanted to be close to my family/partner/friends							
I didn't mind which sector I got a post in as long as I worked in a particular location							
I took the first post that was offered to me							
I took a post that I thought would provide me with a real challenge							
I wanted a post that offered good preparation for the Registration exam							
I took a post that would provide me with the opportunity to expand my clinical knowledge							
I took a post that would provide me with good management experience							
I took a post for the business focus it would give							
I wanted a post that would provide an opportunity to work in a team							
I wanted a post that would broaden my experience of a sector I had no previous work experience in							
I took a post that offered the opportunity to interact with patients							

B. INTENTIONS AFTER YOUR PRE-REGISTRATION TRAINING

This section will help us to establish what you intend to do once you've finish your pre-registration year

B1. What are your plans for after your pre-registration training?

- $\square^1$ Go straight into pharmacy practice in GB
- $\square^2$ Take a career break or a gap year
- $\square^3$ Go straight into another graduate job
- $\square^4$ Expect to take other, non-graduate, work
- $\square^5$ Go on to further study
- $\square^6$ Return to my home country to practice
- $\square^7$ Haven't decided yet
- $\square^8$ Other (please specify) _____

B2. Please tell us what post you hope to have when you have finished your pre-registration training.

_____

B3. In which sector do you intend to work once you have completed your pre-registration training?

- $\square^1$ Hospital
  Community:
  - $\square^2$ An independent pharmacy
  - $\square^3$ A small chain (2-4 stores)
  - $\square^4$ A medium sized multiple (5-25 stores)
  - $\square^5$ A large multiple (more than 25 stores)
- $\square^6$ Industry
- $\square^7$ PCT
- $\square^8$ Academia
- $\square^9$ Haven't decided yet
- $\square^{10}$ Other (please specify) _____

B4. Are there any sectors that you definitely *DON'T* want to work in? Please tell us about this here.

_____

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B5. In which geographical location do you intend to work once you have completed your pre-registration training?

☐[1]   Scotland
☐[2]   Wales
☐[3]   Northern Ireland
     England:
       ☐[4]   North-East
       ☐[5]   North-West
       ☐[6]   East Midlands
       ☐[7]   West Midlands
       ☐[8]   East
       ☐[9]   Yorkshire and Humberside
       ☐[10]   London
       ☐[11]   South-East
       ☐[12]   South-West
☐[13]   Haven't decided yet
☐[14]   Other *(please specify)* _____

B6. Do you have a clear idea about which sector of the profession you want to work in as a pharmacist in the short-term, say over the next 2-3 years?

☐[1]   No clear intention
☐[2]   I'm currently undecided
☐[3]   Yes, have a clear intention

C. QUALITY OF WORKING LIFE

This section will help us establish some of your views on your working life

C1. Thinking about your current post, please indicate how satisfied you have been with each of the following aspects of it by ticking the appropriate box:

Job satisfaction	Extremely dissatisfied	Very dissatisfied	Moderately dissatisfied	Neither satisfied nor dissatisfied	Moderately satisfied	Very satisfied	Extremely satisfied
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?							

C2. Please indicate with a tick the extent to which you agree with the following statements about your pre-registration training post.

Your pre-registration post	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
This post provides me with the opportunity to expand my professional knowledge					
I often have trouble working out whether I am doing well or poorly in this post					
I am involved in deciding on the changes introduced that affect my work					
I cannot meet all the conflicting demands on my time at work					
My post has become more interesting over the year					
I do not have time to carry out all my work					
I find enjoyment in my job					
I often have difficulty managing others					
I have enough time in my job to undertake training and development					
I do not feel part of a healthcare team					
My post provides me with the opportunity to extend my clinical skills					

D. WORK AND YOUR FUTURE CAREER

This section will help us identify your intentions which can then be mapped against actual practice

E1. What are your *CURRENT* choices for your career in 10 years time? Please indicate with a tick the degree of certainty you feel about your choices. If you are definitely *NOT* considering one of the career choices listed, please tick the 'Not Relevant' box.

Current careers choices	Very certain	Quite certain	Not very certain	Very uncertain	Not relevant
Outside pharmacy					
Community – own business					
Community – working for a small chain (2-4 stores)					
Community – working for a medium multiple (5-25 stores)					
Community – working for a large multiple (more than 25 stores)					
Primary Care					
Industry					
Academia					
Other pharmacy					
Hospital					
Practice pharmacy abroad					
Undecided					
Retrain to do something else					
Other					

E2. What do you expect the general pattern of your work will be over the course of your career? Please select *ONE* of the following that best describes the general pattern you expect to work.

☐ 1   Work full-time until retirement
☐ 2   Work full-time but aim to retire early
☐ 3   Work full-time and then stop working altogether after starting a family
☐ 4   Work full-time but with breaks for statutory maternity leave
☐ 5   Work full-time but have other career breaks
☐ 6   Work predominantly full-time with periods of part-time work
☐ 7   Work full-time early on and then part-time later on
☐ 8   Work part-time always
☐ 9   Don't know
☐ 10   Other *(please specify)* _____

E3. Do you ever expect to have career breaks during your career? *[Please select <u>ALL</u> that you expect to have]*.

☐¹   Yes, to study
☐²   Yes, to travel abroad
☐³   Yes, to work abroad
☐⁴   Yes, to start a family
☐⁵   No
☐⁶   Don't know
☐⁷   Other *(please specify)*   _____

E4. Please work though 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 worklife balance	Agree	Sometimes	Disagree	Not relevant
At the moment, because my post demands it, I usually work long hours				
There isn't much time to socialise/relax with my partner/see family in the week				
I have to take work home most evenings				
I often work late or at weekends to deal with paperwork without interruptions				
Relaxing and forgetting about work issues is hard to do				
I worry about the effect of work stress on my health				
My relationship with my partner is suffering because of the pressure or long hours of my work				
My family are missing out on my input, either because I don't see enough of them/am too tired				
Finding time for hobbies, leisure activities, or to maintain friendships and extended family relationships is difficult				
I would like to reduce my working hours and stress levels, but feel I have no control over the current situation				

E5. 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 or disagree	Agree	Strongly agree
I expect to work very hard whatever pharmacy job I have					
I am undecided about my future career					
I would not want to work outside pharmacy					
I don't know what sort of career in pharmacy I want					
I see pharmacy as a career until I retire					
I want to do something other than being a pharmacist					