



Views of UK-trained medical graduates of 1999-2009 about their first postgraduate year of training: national surveys

Journal:	<i>BMJ Open</i>
Manuscript ID:	bmjopen-2013-002723
Article Type:	Research
Date Submitted by the Author:	13-Feb-2013
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Primary Subject Heading:	Medical education and training
Secondary Subject Heading:	Health services research, Health policy
Keywords:	MEDICAL EDUCATION & TRAINING, Organisation of health services < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT

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Views of UK-trained medical graduates of 1999-2009 about their first postgraduate year of training: national surveys

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This is an independent report commissioned and funded by the Policy Research Programme in the Department of Health. The views expressed are not necessarily those of the Department.

Keywords: junior doctors; medical education; postgraduate medical training.

[2815 words]

Article summary

Article focus

To report junior doctors' rating of their training, educational opportunities, job satisfaction, and other aspects of the first training year.

To investigate change in these characteristics among doctors who graduated over the last decade.

Key messages

- Under half agreed that training and educational opportunities had been good in the first postgraduate year, and this did not change substantially over the decade
- In the most recent cohorts, half felt that they had to do too much routine non-medical work, but this represented a fall compared with earlier cohorts
- Approximately one in six F1 year doctors felt they had been required to perform clinical tasks for which they felt inadequately trained
- Satisfaction with time off work for leisure, and overall enjoyment of the job, improved over the decade

Strengths and limitations of this study

Our response rates were good; nevertheless as with all survey work non-respondent bias is a possibility. We found only small differences between early and late responders (see Appendix 2), suggesting that a high level of non-respondent bias is unlikely. The work is unique in its large scale and consistency of approach over the decade covered. The data were collected contemporaneously for each cohort, at the time of the F1 year, and are therefore not susceptible to recall bias or post hoc rationalisation. However, we did not examine the views of doctors in any great detail. We do not have any data about these newly qualified doctors from their seniors. We report the subjective assessments of the trainees. Some variation in response will reflect personality differences – faced with the same training experience, any two doctors may react differently. This is unavoidable and we cannot make allowance for it.

Abstract [250 words]

Background: In the UK, doctors' first year of medical work is also their first year of postgraduate training. It is very important that their experience of work and training is good.

Design: Surveys of whole cohorts graduating in particular years.

Setting: United Kingdom.

Method: Questionnaires sent 1 year after qualification to all UK medical graduates of 1999, 2000, 2002, 2005, 2008 and 2009.

Results: The study comprised 17831 respondents. Variation in views across cohorts was modest. Overall, 30% agreed their training had been of a high standard; 38% agreed educational opportunities had been good; 52% agreed they had to do too much routine non-medical work; and 16% agreed they had to perform clinical tasks for which they felt inadequately trained. Job enjoyment, rated from 1 ("I didn't enjoy it at all") to 10 ("I enjoyed it greatly"), improved from 70% of doctors in the 1999 cohort scoring 7-10 to 75% in the 2009 cohort. Satisfaction with available leisure time, rated from 1 ("not at all satisfied") to 10 ("extremely satisfied"), rose from 24% scoring 7-10 in the 1999s to 49% in the 2009s. Male-female differences were small.

Conclusions: There was improvement over the decade in some aspects of work, particularly satisfaction with time off work for leisure, and overall enjoyment of the job. There was little change in doctors' views about the training experience offered by the F1 year.

Introduction

The first postgraduate year of medical training (currently termed the ‘F1 year’ in the UK) is an important year in which junior doctors make the transition from medical student to trainee professional. The most recent guidelines for this stage of training were published in July 2011 by the General Medical Council as *The Trainee Doctor* (1) and, among other requirements, they specify the need for “regular, relevant, timetabled, organised educational sessions and training days, courses, resources and other learning opportunities of educational value to the trainee”. The guidelines also state that “trainees must not regularly carry out routine tasks that do not need them to use their medical expertise and knowledge, or have little educational value”.

There have been important changes to postgraduate medical education in recent years in the UK, and elsewhere, and it is important to their impact on trainees. We have undertaken national surveys of doctors in the UK, on various aspects of their career intentions and their experience of work and training, in several cohorts of doctors who graduated in the decade 1999-2009. In this paper we report on their views about their experiences of the F1 year with respect to their satisfaction with the year as a training and educational experience, and their satisfaction with the leisure time available to them, and we report on whether recent graduates’ views on these were different from their predecessors.

Methods

During their first postgraduate year, we sent a questionnaire to each UK medical graduate of 1999, 2000, 2002, 2005, 2008 and 2009 who had registered with the General Medical Council. This year was formerly termed the Pre-Registration House Officer year in the UK and is now termed Foundation Year 1, or the F1 year. For convenience, we use the term F1 throughout the time covered by this paper.

Our questionnaires addressed various aspects of the doctors’ future career choices and career plans, and current experience of training and work, and included four attitudinal statements about their first training year: *Training has been of a high standard*; *Educational opportunities have been good*; *I have been expected to perform too much non-medical work*; and *I have had to perform clinical tasks for which I felt inadequately trained*. For each statement the doctors were asked to respond with a choice from *agree*, *neither agree nor disagree*, or *disagree*. Doctors in the 2008 and 2009 cohorts were asked to respond with regard to the F1 year overall, while the doctors who graduated in 1999, 2000, 2002 and 2005 were asked to respond with respect to their current placement only; typically the current placement would be for four or six months.

Additionally, we asked the doctors: *How much have you enjoyed the F1 year overall on a scale from 1 (didn’t enjoy it at all) to 10 (enjoyed it greatly)?* and *How satisfied are you with the amount of time the*

1 *F1 year has left you for family, social and recreational activities, on a scale from 1 (not at all satisfied) to*
2 *10 (extremely satisfied)?.*

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5 We distributed the questionnaires by post with several reminders to non-responders, and for the later
6 cohorts we also used email contact for web-based response. Our methods have been described in greater
7 detail elsewhere.^{(2) (3)}

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10 Analysis was by cross-tabulation, with chi-square tests for heterogeneity and for linear trends, and we
11 calculated 95% confidence intervals for key results. For the attitudinal questions, in addition to showing
12 the percentages who agreed or disagreed with each statement, we also show 'net agreement ratings' as the
13 difference in percentages agreeing or disagreeing with each statement.
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17 18 19 20 **Results**

21 22 **Survey response**

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25 Of a total of 31,576 doctors in the six cohorts, we had the means to contact 30,636 and 17,831 replied
26 giving a response rate to contact of 58.2%. The 'lost' 940 doctors comprised 857 with invalid addresses,
27 61 who declined to participate in our surveys, 18 who had qualified but not registered with the General
28 Medical Council, and 4 who qualified but were deceased by the time of the survey. The response rate
29 varied between cohorts from 69% in the 2000 cohort to 47% in the 2009 cohort. In each survey the final
30 mailing to non-responders was an abbreviated questionnaire which excluded questions about the F1 year.
31 In the 2000 cohort, only one in four of the cohort was sent a full questionnaire. A total of 14,329
32 respondents gave answers to the questions about the F1 year, though not every respondent replied to
33 every question; see Table 1 and Appendices for denominators.
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40 41 **Attitudinal statements**

42 Table 1 shows the results for the four attitudinal statements. Over all cohorts, 30% agreed and 26%
43 disagreed that *Training has been of a high standard* (net agreement rating of 4%); 38% agreed and 27%
44 disagreed that *Educational opportunities have been good* (net agreement 11%); 52% agreed and 19%
45 disagreed with the statement *I have been expected to perform too much routine non-medical work* (net
46 agreement 33%), and 16% agreed and 57% disagreed that *I have had to perform clinical tasks for which I*
47 *felt inadequately trained* (net agreement -41%). For each statement the remaining percentages signified a
48 neutral view from respondents who neither agreed nor disagreed (Table 1).
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54 Figures 1-4 show trends over time for agreement and disagreement with the four statements, for
55 successive year of graduation cohorts.
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1 For each statement there was a statistically significant overall difference between the cohorts ($p < 0.001$ in
2 χ^2_5 test for heterogeneity), though numbers were large and percentage variations were modest. More
3 importantly, there was no significant linear trend across the cohorts in the level of agreement with the
4 three statements on training (Figure 1), educational opportunities (Figure 2), and the requirement to
5 perform clinical tasks for which respondents felt inadequately trained (Figure 4); $p > 0.05$ in each case.
6 However, although there was no trend in percentage agreement, the percentages who *disagreed* decreased
7 across the cohorts (Figures 1, 2, 4; $p < 0.001$ for linear trend).
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13 In all cohorts except that of 2005, more than half the respondents agreed that they had been expected to
14 perform too much non-medical work during the F1 year (Figure 3). Over the six cohorts, there was a
15 significant decline in the percentage who agreed with the statement (test for linear trend, $p < 0.001$), with
16 the 2008 and 2009 results (52% and 54% agreeing) lower than those for 1999 and 2000 (64% and 62%
17 agreeing). The net level of agreement was highest in the 1999 and 2000 cohorts at 49% and 45%, fell to
18 26% and 17% in the 2002 and 2005 cohorts, and rose to 36% and 40% in the 2008 and 2009 cohorts
19 (Figure 3).
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24 Differences for men and women were generally small. Over all cohorts, 28.9% of men and 30.8% of
25 women agreed that training had been of a high standard ($p = .02$); 37.5% of men and 38.7% of women
26 agreed that educational opportunities had been good ($p = .16$); 55.7% of men and 50.0% of women agreed
27 that they had undertaken an excessive amount of non-medical work ($p < .001$ using χ^2_1 test); and 15.2% of
28 men and 17.2% of women agreed that they had had inadequate training for some tasks ($p = .002$).
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35 **Enjoyment of job: “How much have you enjoyed the F1 year overall on a scale from 1 (didn’t enjoy it**
36 **at all) to 10 (enjoyed it greatly)?”**
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38 Figure 5 shows the percentage distribution of the scores for each cohort (the percentages on which
39 Figures 5 and 6 are based are in Appendix 1). The overall (grouped) median score was 7.5, indicating a
40 generally positive view of the year. Over all six cohorts, the median test showed a significant difference
41 between the cohorts ($\chi^2_5 = 47.5$, $p < 0.001$); excluding the 1999 and 2000 cohorts whose median score was
42 7.2, the other four cohorts did not differ significantly ($\chi^2_3 = 6.5$, $p = 0.09$), having median scores of 7.5, 7.6,
43 7.5, 7.6 for 2002, 2005, 2008, and 2009 respectively. There was a shift over time in the highest categories
44 of enjoyment: 44% of doctors in the 1999 and 2000 cohorts scored 8, 9 or 10, as did 54% of the qualifiers
45 of 2008 and 2009. 70% of doctors in the 1999 cohort scored 7-10 which rose to 75% in the 2009 cohorts.
46 There was no difference between men and women in enjoyment of the year, with both having a median
47 score of 7.5.
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2 **Leisure time: “How satisfied are you with the amount of time the F1 year has left you for family,**
3 **social and recreational activities, on a scale from 1(not at all satisfied) to 10 (extremely satisfied)?”**
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6 The results varied considerably by cohort (Figure 6), with an overall median score of 5.7, indicating that
7 views were less positive than those about enjoyment of the year. Over all six cohorts, the median test
8 showed a significant difference between the cohorts ($\chi^2_5=530.9$, $p<0.001$), with the median score rising
9 from 4.3 in 1999 and 4.2 in 2000 to 5.5 in 2002, 6.0 in 2005, 6.2 in 2008 and 6.4 in 2009; excluding the
10 1999 and 2000 cohorts, the other four cohorts remained significantly different ($\chi^2_3=115.4$, $p<0.001$),
11 with a rising trend. 10% of the qualifiers of 1999 scored in the range 8-10, as did 27% of the 2009s. 24%
12 of the qualifiers of 1999 scored in the 7-10 range, as did 48% of the 2009s. At the most dissatisfied end of
13 the scale, scores of 1-3 were given by 37% of the 1999s and 39% of the 2000s; and these fell to 16% of
14 the 2008s and 13% of the 2009s. There was no difference between men and women in satisfaction with
15 leisure time, with both having a median score of 5.7 ($p=0.99$).
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21 **Discussion**

22 **Key findings**

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24 We report a very large study of views about the F1 year covering the responses of over 14,000 junior
25 doctors in six graduation years spread across the decade from 2000 to 2010. Although only a third of
26 respondents affirmed their training to have been of a high standard in their experience, the proportion who
27 disagreed with the statement that their ‘training was of a high standard’ showed an encouraging reduction
28 across the cohorts. In the latest cohorts we surveyed at about one respondent in five disagreed. Views of
29 the quality of educational opportunities followed a similar pattern, with approximately a quarter in the
30 latest cohorts disagreeing that opportunities were good, representing a small fall over the decade.
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35 There was majority agreement among the doctors that they had to undertake, in their view, an excessive
36 amount of non-medical work which could be done by staff without medical training. However, the most
37 recent graduates had less negative views on this than their predecessors a decade earlier. Approximately
38 one in six of the most recent graduates felt they were sometimes asked to perform tasks for which they
39 felt inadequately trained, a proportion which did not change a great deal across the cohorts. Male-female
40 differences on all four aspects of the year covered by these statements were small.
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49 The results on job enjoyment underline the generally positive and improving views which UK graduates
50 hold about their F1 year. Fewer than a quarter of the graduates in each cohort scored less than 6 on the
51 enjoyment scale from 1 to 10; in other words, three quarters of respondents gave a score in the upper half
52 of the scale. Results on satisfaction with the amount of leisure time were much less positive than those on
53 job enjoyment. However, there was a sustained improvement cohort by cohort in satisfaction with time
54 off work for family, social and recreational activities. The greatest increase in satisfaction levels was
55 between the qualifiers of 1999/2000 and those of 2002, with a further noteworthy increase between the
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2005s and the 2008/2009s. We found no male-female difference of note in either job enjoyment or leisure time satisfaction.

Comparison with other studies

Some of the issues we raise are long-standing. For example, a study of house officers in 2001 showed that they were concerned about the small amount of training they received and that they estimated one fifth of their time was devoted to routine administrative tasks. (4) There have been a number of studies in recent years about the transition from medical school to junior doctor and on how the subjects feel about their ability to achieve the necessary competencies. (4-14) These studies are mainly small scale, but detailed in the aspects they examine, compared with our study which is nationwide and broad and general in scope.

An exception in terms of its national scope is the National Training Survey carried out in England since 2005 by the Postgraduate Medical Education and Training Board (PMETB), and now under the General Medical Council, which has reported on various themes discussed here. In 2007, 48.4% of Foundation trainees reported having to cope with clinical problems beyond their competence or experience. (15) By 2012, this had decreased to 15.3% (16). Overall satisfaction for all trainees (as measured by a five-point score including the quality of teaching and supervision) was reported to be 88 on a scale from 0 to 100 in the 2008-2009 Survey (17) and 80 in 2012 (16). However, this survey included all trainees, not just Foundation trainees.

Policy implications

In a previous publication on the first three cohorts reported here (the graduates of 1999 surveyed in 2000, the 2000s in 2001 and the 2002s in 2003),(18) we showed that the responses covering training and clinical support moved in a favourable direction over time between 2000 and 2003. The data on the 2008s in 2009 and the 2009s in 2010 do not suggest much substantial further improvement since the introduction of *Modernising Medical Careers* in 2005.(19)

Although the high administrative (non-medical) work content of the F1 year is a regular concern, and its avoidance is a specific target in the GMC guidelines, there is evidence that it is still too high. This is probably the area in which the tension between the demands of the service and the desire to provide training is at its greatest mismatch.

It is worrying that an appreciable minority of respondents in each year reported that they found themselves undertaking clinical tasks for which they felt they were inadequately trained.

The relatively low regard for the quality of training and educational opportunities is a cause for concern. However, it is not straightforward to interpret. One possibility is that no improvements have been made.

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2 Another is that they have; but they have not been appreciated by the junior doctors who have nothing to
3 compare their own experience against. A third possibility is that gains made by improved teaching and
4 training have been counter-acted by loss of training opportunities (in the view of some doctors) as a result
5 of other changes, notably the European Working Time Directive. Qualitative studies of the reasons
6 behind the responses on training and educational opportunities would be helpful.
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10 The high levels of enjoyment of the F1 year, and the fact that enjoyment has increased over the cohorts,
11 are gratifying. Our overall impressions from reading the many free-text comments made by doctors are
12 that, while some have concerns about specific aspects of their job, they enjoy it a lot overall. It is
13 particularly noteworthy that there has been a big increase over time in doctors' satisfaction with the hours
14 that their job leaves them for time away from work.
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Competing Interests

All authors have completed the Unified Competing Interest form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author) and all authors want to declare: (1) financial support for the submitted work from the policy research programme, Department of Health. All authors also declare: (2) no financial relationships with commercial entities that might have an interest in the submitted work; (3) no spouses, partners, or children with relationships with commercial entities that might have an interest in the submitted work; (4) no non-financial interests that may be relevant to the submitted work.

Data Sharing

No additional unpublished data are currently available.

Funding

This is an independent report commissioned and funded by the Policy Research Programme in the Department of Health. The views expressed are not necessarily those of the Department.

Contributorship

TWL and MJG designed the study. GS and TWL undertook the analysis and GS wrote the first draft. All authors contributed to further drafts and all had access to the data and are guarantors. All authors read and approved the final manuscript.

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Table 1: Response to four attitudinal statements about the F1 year, combined cohorts who qualified in 1999, 2000, 2002, 2005, 2008, and 2009

	Training has been of a high standard	Educational opportunities have been good	I have been expected to perform too much routine non-medical work	I have had to perform clinical tasks for which I felt inadequately trained
Percentages (with 95% CI)				
% Agree	30.1 (29.3,30.8)	37.9 (37.5,39.1)	52.1 (51.3,52.9)	16.5 (15.9,17.1)
% Neither agree nor disagree	43.6 (42.8,44.5)	34.1 (33.6,35.2)	29.0 (28.3,29.8)	26.2 (25.4,26.9)
% Disagree	26.3 (25.6,27.0)	27.1 (26.6,28.1)	18.9 (18.2,19.5)	57.4 (56.6,58.2)
Numbers				
Agree	4277	5437	7410	2339
Neither agree nor disagree	6208	4888	4126	3719
Disagree	3741	3883	2683	8160
Total	14226	14208	14219	14218

FIGURE LEGENDS AND FOOTNOTES

Figure 1: Percentage responses to the statement *The postgraduate training I have received so far has been of a high standard* – doctors graduating in 1999-2009, responding towards the end of their first postgraduate year

Denominators for percentages were: 1999 cohort in 2000 2380, 2000 cohort in 2010 679, 2002 cohort in 2003 2750, 2005 cohort in 2006 3066, 2008 cohort in 2009 2824, 2009 cohort in 2010 2527.

Figure 2: Percentage responses to the statement *The educational opportunities were good* – doctors graduating in 1999-2009, responding towards the end of their first postgraduate year

Denominators for percentages were 1999 cohort 2375, 2000 cohort 679, 2002 cohort 2746, 2005 cohort 3068, 2008 cohort 2817, 2009 cohort 2523.

Figure 3: Percentage responses to the statement *I am expected to perform an excessive amount of routine non-medical work* – doctors graduating in 1999-2009, responding towards the end of their first postgraduate year

Denominators for percentages were: 1999 cohort 2378, 2000 cohort 677, 2002 cohort 2743, 2005 cohort 3067, 2008 cohort 2827, 2009 cohort 2527.

Figure 4: Percentage responses to the statement *I am required to perform clinical tasks for which I do not feel adequately trained* – doctors graduating in 1999-2009, responding towards the end of their first postgraduate year

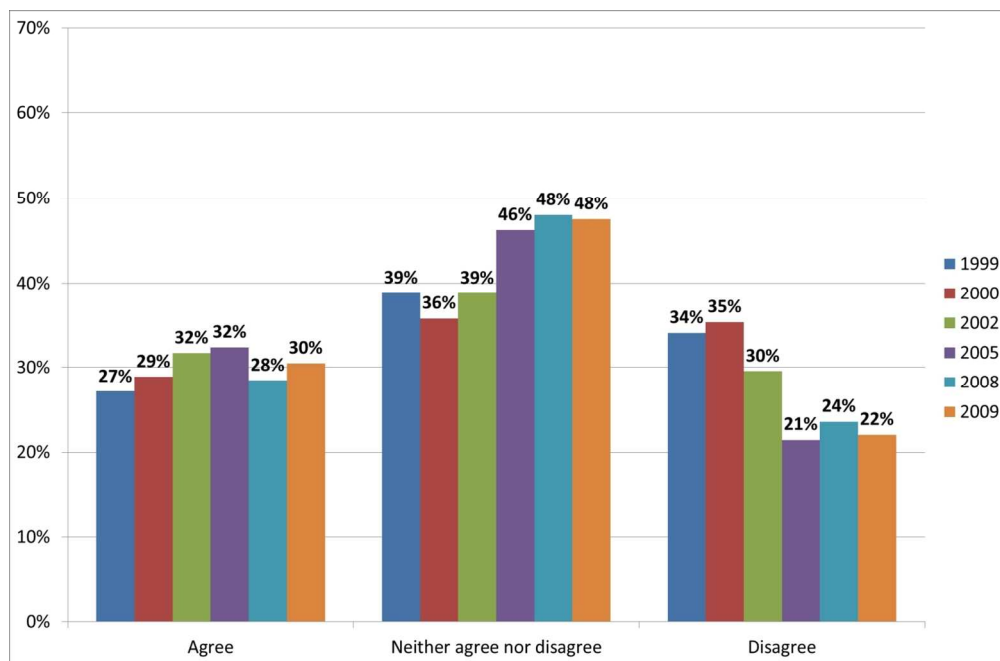
Denominators for percentages were at least: 1999 cohort 2376, 2000 cohort 679, 2002 cohort 2748, 2005 cohort 3066, 2008 cohort 2823, 2009 cohort 2526.

Figure 5: Percentage responses to the question *How much have you enjoyed the F1 year overall on a scale from 1 (I didn't enjoy it at all) to 10 (I enjoyed it greatly)?* - doctors graduating in 1999-2009, responding towards the end of their first postgraduate year

Denominators for percentages were: 1999 cohort, 2390, 2000 cohort 678, 2002 cohort 2760, 2005 cohort 3109, 2008 cohort 2828, 2009 cohort 2530.

Figure 6: Percentage responses to the statement question *How satisfied are you with the amount of time the F1 year has left you for family, social and recreational activities, on a scale from 1 (not at all satisfied) to 10 (extremely satisfied)?* - doctors graduating in 1999-2009, responding towards the end of their first postgraduate year

Denominators for percentages were: 1999 cohort, 2389, 2000 cohort 679, 2002 cohort 2758, 2005 cohort 3106, 2008 cohort 2820, 2009 cohort 2530.

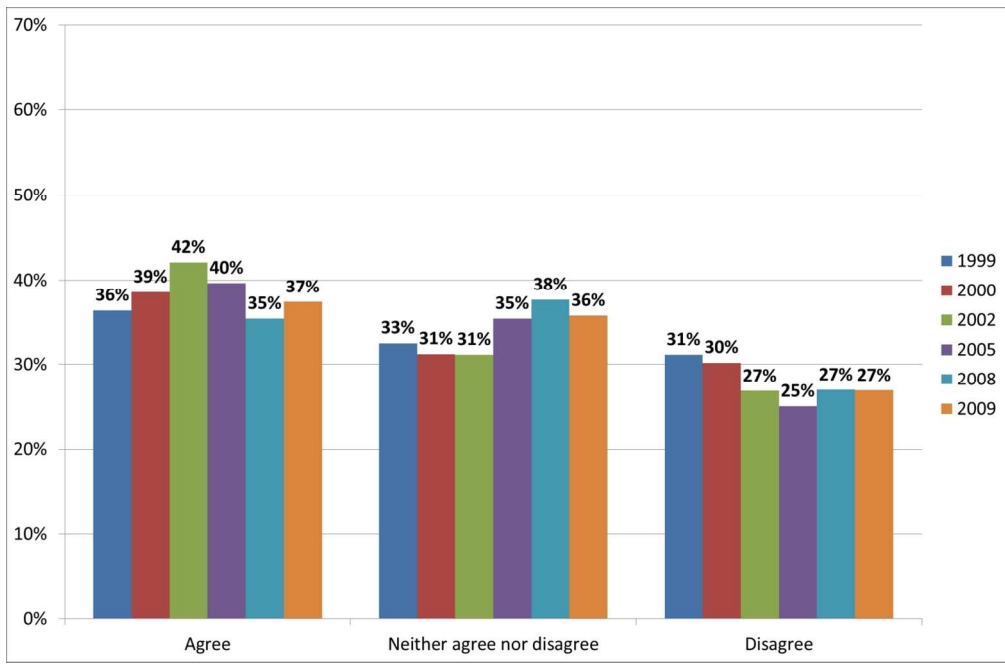


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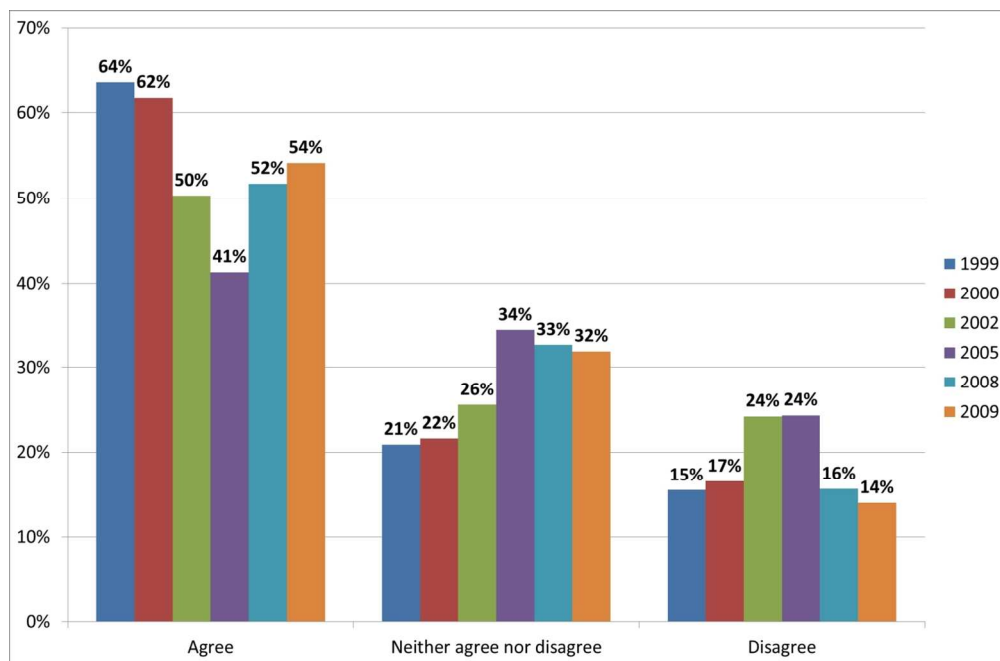
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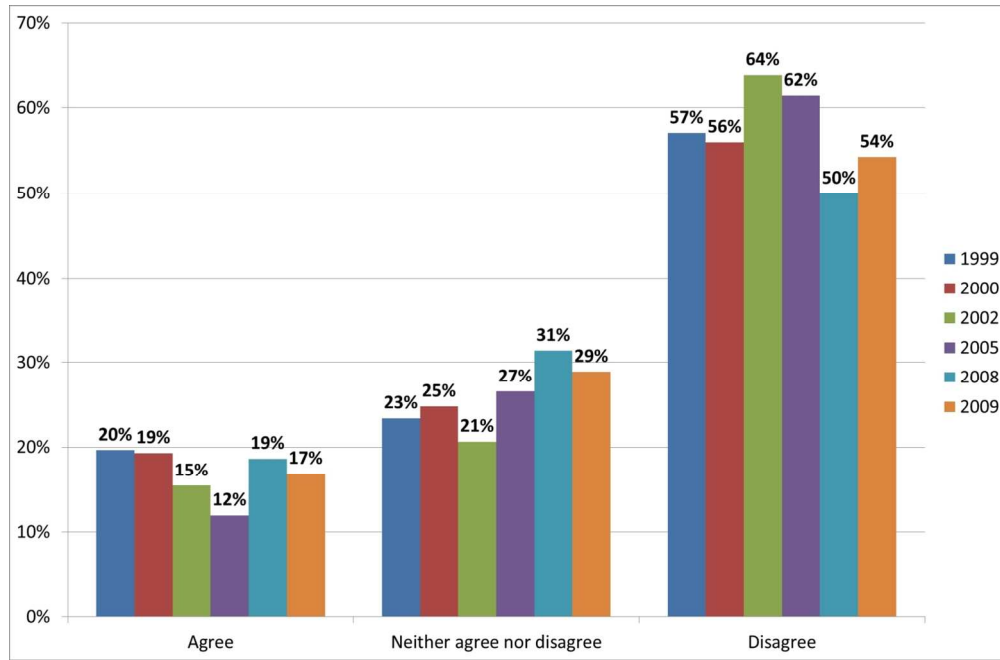


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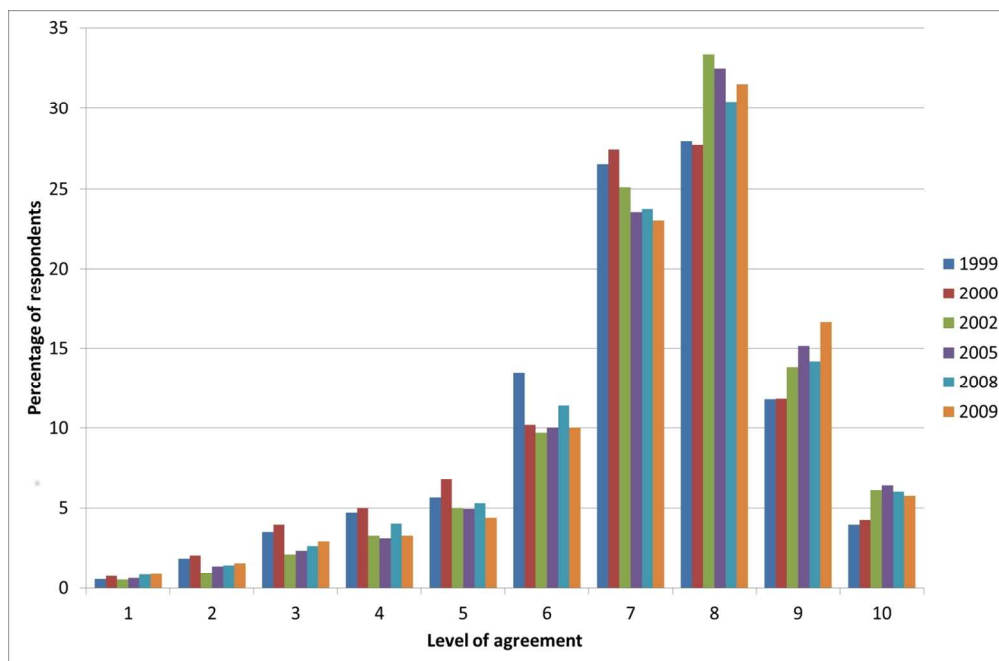
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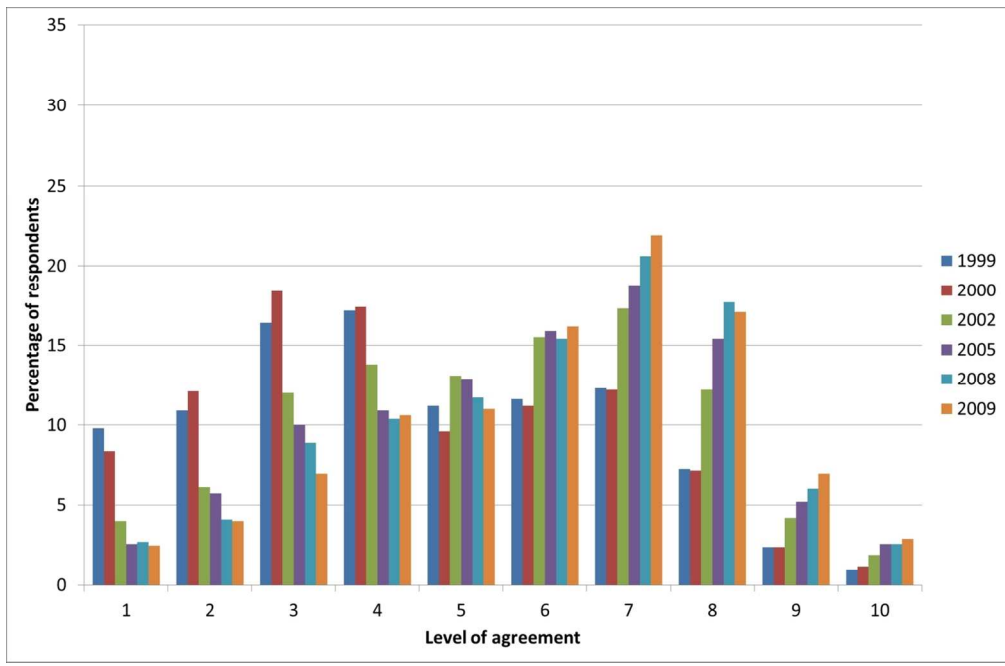


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Appendix 1 – Percentages on which Figures 5 and 6 are based

Table A1: Response of the graduates of 1999 – 2009 to the question *How much have you enjoyed the F1 year overall on a scale from 1 (I didn't enjoy it at all) to 10 (I enjoyed it greatly)?* (percentages of responders)

Level of enjoyment	Year of graduation						Total
	1999	2000	2002	2005	2008	2009	
1	0.5	0.7	0.5	0.6	0.8	0.9	0.7
2	1.9	2.1	0.9	1.4	1.4	1.6	1.5
3	3.5	4.0	2.1	2.3	2.7	2.9	2.7
4	4.7	5.0	3.3	3.1	4.0	3.3	3.7
5	5.6	6.8	5.0	5.0	5.3	4.4	5.1
6	13.5	10.2	9.7	10.0	11.4	10.0	10.8
7	26.5	27.4	25.1	23.5	23.7	23.0	24.5
8	27.9	27.7	33.4	32.5	30.4	31.5	31.1
9	11.8	11.8	13.8	15.1	14.2	16.6	14.2
10	4.0	4.3	6.1	6.4	6.0	5.7	5.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Denominators for percentages were: 1999 cohort, 2390, 2000 cohort 678, 2002 cohort 2760, 2005 cohort 3109, 2008 cohort 2828, 2009 cohort 2530.

Table A2: Responses of the graduates of 1999 – 2009 to the question *How satisfied are you with the amount of time the F1 year has left you for family, social and recreational activities, on a scale from 1 (not at all satisfied) to 10 (extremely satisfied)?* (percentages of responders)

Level of satisfaction	Year of graduation						Total
	1999	2000	2002	2005	2008	2009	
1	9.8	8.4	4.0	2.6	2.7	2.5	4.3
2	10.9	12.1	6.1	5.7	4.1	4.0	6.3
3	16.4	18.4	12.0	10.0	8.9	7.0	11.1
4	17.2	17.4	13.8	10.9	10.4	10.6	12.7
5	11.2	9.6	13.1	12.9	11.7	11.0	11.9
6	11.6	11.2	15.5	15.9	15.4	16.2	14.8
7	12.3	12.2	17.3	18.8	20.6	21.9	18.0
8	7.3	7.2	12.2	15.4	17.7	17.1	13.8
9	2.4	2.4	4.2	5.2	6.0	7.0	4.9
10	1.0	1.2	1.9	2.6	2.6	2.9	2.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Denominators for percentages were: 1999 cohort, 2389, 2000 cohort 679, 2002 cohort 2758, 2005 cohort 3106, 2008 cohort 2820, 2009 cohort 2530.

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Appendix 2 - Representativeness of respondents

In order to ascertain whether there was likely to be non-responder bias in our findings we compared the responses of those who replied to one of the first three survey mailings and those who replied to later mailings. The reasoning behind this is that late respondents are likely to be similar in their characteristics to non-respondents, since we would not have received a reply from them if we had confined the survey to just three mailings. There were modest differences on two of the four attitudinal statements; 53% of early respondents and 49% of later respondents agreed they had been asked to perform too much non-medical work, and 27% of early respondents and 22% of later respondents disagreed that their postgraduate training had been of a high standard ($p < 0.001$). Early respondents were slightly less satisfied than later respondents with the amount of leisure time in the F1 year (median score = 5.6 for early respondents, 6.0 for later respondents; $p < 0.001$ for Mann-Whitney U test). Enjoyment of the year overall did not differ between the two groups; the median score was 7.5 in each ($p = 0.21$).