Responses to questions on obtaining approval from research ethics committees in different countries

	Belgium	Slovenia	United Kingdom	Denmark	Israel	Netherlands	Portugal	Austria	France	Germany	Switzerland
Approval got:											
Yes, compulsory	√	√	√								
No, but checked with committee first				√	√	√	√				
No, not necessary								√	√	√	√
If no, criteria for needing approval	—	—	—	Biomedical research	All human research	All human research. Questionnaires or interviews, only if time consuming, mentally burdensome, or for vulnerable people	Clinical trials	Clinical trial with drugs	Intervention, medication, or physical risk	Not if regarded as a quality improvement activity	Intervention studies
Documents submitted:											
Protocol		√	√		√						
Patient's pack*	√	√	√		√						
General practitioner's pack*		√	√								
Researchers' CV		√	√		√						
Changes required?	No	No	Yes, minor		No						

*The patient's pack comprised a letter of invitation, information leaflet, and questionnaires for patients; the general practitioner's pack was similar but different.

research that requires only answering questions, without risk of psychological distress.[5] The sooner this concept is implemented by committeees in all countries, the sooner we can stop unnecessary applications which are both risky and costly.

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Competing interests: HH is an active researcher who has applied for, and will continue to apply for, the approval of research ethics committees in the United Kingdom for studies she leads.

Ethical approval: Not needed.

1 World Medical Association. *Declaration of Helsinki*. Ferney-Voltaire: WMA, 2002. www.wma.net/e/policy/b3.htm (accessed 16 Oct 2003).
2 Maskell NA, Jones EL, Davies RJO. Variations in experience in obtaining local ethical approval for participation in a multi-centre study. *Q J Med* 2003;96:305-7.
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4 Centrale Commissie Mensgebonden Onderzoek. www.ccmo.nl
5 Doll R. What are the effects of the fifth revision of the Declaration of Helsinki: research will be impeded. *BMJ* 2001;323:1421-2.

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Sex ratios in healthcare occupations: population based study

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Thirty years ago a clear dichotomy existed between the healthcare occupations of men and women. If feminists' predictions were correct—that equal opportunities legislation would widen occupational choices for everyone[1]—there should by now be a trend towards equal numbers of men and women in occupations that were formerly male or female dominated. We aimed to support or refute the feminists' predictions by comparing the sex ratio in healthcare occupations in 1971 with the ratio in 2001.

Methods and results

We used census data for 1971 and 2001 (obtained respectively from *New Zealand Statistics*[2] and the New Zealand's government statistics website, www.stats.govt.nz) to examine the situation before and after the introduction of legislation on equal opportunities for men and women in employment. We used data only for workers aged 18-44 years because this was the age group that would reflect any changes that might have occurred as a result of the legislation. We defined a healthcare worker as anyone working face to face with people who have health or disability problems.

If more than 90% of those employed in an occupation belonged to one sex, we considered the occupation to be "male dominated" or "female dominated." If more than 70% belonged to one sex, we considered the occupation to be "mostly male" or "mostly female." If the proportions of men and women were between 30% and 70%, we considered the occupation to be "balanced." We used χ^2 tests to test the significance of the differences in proportions between 1971 and 2001.

For healthcare workers aged 18-44 in 1971, there were 10 male dominated and 13 female dominated occupations; the table shows the numbers of staff in the 10 male dominated occupations and the top 10 female dominated occupations. Each of the 10 male

P+ *A figure showing the change in sex ratios in occupations is at bmj.com*

Numbers (percentages) of men and women in top 10 male and female dominated healthcare occupations for age range 18-44 years, 1971 and 2001

	No/total of men and women (%))		Change (% points)*
	1971	2001	
Male dominated			
Orthotist	50/50 (100)	54/87 (62)	–38
Ambulance officer	156/156 (100)	363/600 (61)	–40
Hospital orderly	551/559 (99)	375/534 (70)	–28
Surgeon	121/123 (98)	237/270 (88)	–11
Dentist/dental surgeon	480/492 (98)	480/786 (61)	–37
Osteopath/chiropractor	49/50 (98)	153/276 (55)	–43
Optometrist/dispensing optician	108/111 (97)	183/525 (35)	–62
Physician	82/88 (93)	396/639 (62)	–31
General practitioner	564/604 (93)	1134/2148 (53)	–41
Gynaecologist/obstetrician	27/30 (90)	21/60 (35)	–55
Female dominated			
Dental therapist	1645/1645 (100)	390/399 (98)	–2
Dietician/nutritionist	117/117 (100)	231/255 (91)	–9
Karitane nurse†	504/504 (100)	45/45 (100)	0
Midwife	253/253 (100)	1116/1122 (99)	–1
Plunket nurse‡	80/80 (100)	249/249 (100)	0
Public health nurse	290/292 (99)	489/501 (98)	–2
Occupational therapist	246/248 (99)	1083/1209 (90)	–10
Principal nurse	80/81 (99)	177/198 (89)	–9
Registered nurse	4806/4880 (98)	13968/14991 (93)	–5
Nurse aide	3538/3603 (98)	3867/4140 (93)	–5

Percentage values do not always add to 100% owing to rounding.
*The decrease for each of the 10 male dominated occupations was highly significant (χ^2 test, P<0.0001).
†Nurse trained in the care of young babies and their mothers, according to the principles of the Plunket Society (a major provider of well child and family health services in New Zealand).
‡Nurse who works for the Plunket Society.

dominated occupations showed a highly significant decrease (χ^2 test, $P < 0.0001$) in the proportion of men in 2001 compared with 1971. The decrease ranged from 11 percentage points in surgeons to 62 percentage points in optometrists/dispensing opticians. Regardless of length of training or level of skill needed, none of these 10 occupations was male dominated in 2001. Moreover, in two occupations (optometrist/dispensing optician and obstetrician/gynaecologist) women became the majority.

In contrast, eight of the top 10 female dominated occupations remained female dominated in 2001. The two that did not (occupational therapist and principal nurse) dipped only slightly below the category definition, with female proportions of 89.6% and 89.4% respectively. The decrease in the proportion of women in the top 10 female dominated occupations ranged from 0 to 10 percentage points. Two of the female dominated occupations showed no change in 2001 compared with 1971; both occupations were entirely female in both years.

For some occupations, the numbers in the workforce rose substantially. These increases are partly explained by a 36% rise in New Zealand's population, a change in definition of some jobs, and a rise in the number of part time general practitioners.

Comment

For workers aged 19-44, healthcare occupations that were male dominated 30 years ago are now balanced for the sexes, whereas occupations that used to be female dominated continue to be so. Our results therefore support the prediction that equal opportunities legislation would widen the choices for women. The same is not true for men, however, as women have retained their big majorities in the female dominated occupations; very few men have entered these occupations.

The reliability of these results is probably high. The data are from a small, developed country that has good quality census data. The extent to which these results might be atypical is unknown, although published results from other developed countries show a similar trend.[3]

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Competing interest: None declared.

Ethical approval: Not needed.

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2 *New Zealand Statistics*. Welllington: New Zealand Government Publications, 1971.
3 Wootton BH. Gender differences in occupational employment *Monthly Labor Review* 1997;120:15-24.

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Gender gap in undergraduate experience and performance in obstetrics and gynaecology: analysis of clinical experience logs

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The percentage of UK graduates considering a career in obstetrics and gynaecology is falling.[1] In 1974, for example, 3.9% of men (55) and 4.3% of women (23) specified the specialty as their first preference for a career[2]; by 2000, this was only 0.9% (12) and 3.2% (54).[1] An increasing proportion of women in the workforce exacerbates the shortage, as overall women contribute fewer working hours than men to the specialty.[3] Experiences during undergraduate training are likely to influence graduates' perceptions of identifying with and thriving within a given specialty. Differences in experience and performance in examinations may explain, at least in part, the current reluctance of male students to consider a career in obstetrics and gynaecology.

Participants, methods, and results

All undergraduates have completed a detailed log of clinical experience since 1997. By sex, we analysed