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Ten years on: an online questionnaire evaluation of the UK special care dentistry specialist workforce

Stephen Woolley and Winto Lau

Key points

- Special care dentistry specialist services are provided by a predominantly white and/or female workforce.
- Approximately two-fifths of respondents plan to retire within the next five years, losing provision and experience from the workforce.
- Forty-four percent of respondents are dissatisfied with their pay scale, given the work they undertake.

Abstract

Aims- To provide information on the demographics and work patterns of the UK special care dentistry (SCD) specialist workforce.

Design- A self-administered electronic questionnaire.

Setting- All UK-based SCD specialists on the membership of the British Society for Disability and Oral Health and the British Society of Gerodontology.

Materials and methods- An electronic questionnaire was distributed to a potential 301 SCD specialists. Responses were descriptively analysed.

Results- One hundred responses (33%) were received. The majority of respondents were female (74%) and/or of white ethnicity (86%). Three-quarters (78%) were based in England and a third (37%) were based in South East England. Two-thirds (66%) worked in the community dental service. Forty-eight percent work part-time and 32% have had a career break. Forty-three percent are planning to retire by 2026 and approximately half (53%) plan to retire by 2031. A significant minority (44%) do not feel appropriately paid.

Conclusions- Workforce planners should anticipate the impact on specialist provision due to a combination of a predominantly female workforce with associated working patterns, an anticipated

loss of numbers and experience, and the effect financial dissatisfaction may have on attracting trainees. Efforts should be made to increase racial diversity.

Introduction

Within the United Kingdom (UK), special care dentistry (SCD) seeks to improve the oral health of patients with one or a combination of physical, sensory, intellectual, mental, medical, emotional or social impairments.¹ Specialists provide services within their locality, accept referral from primary care providers, and may be involved in undergraduate and postgraduate training and education. The speciality was formally created by the General Dental Council (GDC) in 2008, following which a two-year 'grandparenting' window facilitated admittance onto the GDC specialist list by registered dentists with sufficient experience but who had not completed approved training. Subsequent entry is granted via specialist training or mediated through evidence of an appropriate non-UK qualification or teaching and research SCD experience and expertise. As a decade has passed since the speciality window closed, a significant number of specialists admitted before 2010 may be reaching the end of their careers.

Specialist services are provided in salaried services and universities. Though not directly equivalent, the majority of SCD specialist services are based in the community dental services (CDS).² SCD is a patient-defined speciality. Research into paediatric dentistry – the other patient-defined speciality – has shown a predominantly female specialist workforce, with associated working patterns such as increased career breaks and part-time working.³ A comparable constitution may have implications for the SCD workforce.

Twenty-one percent (14.1 million) of the UK population report a disability.⁴ Approximately 18.5% (12.4 million) of the UK population are aged over 65 years and 2.5% (1.6 million) are over 85 years.⁵ The over-65 age group is the fastest growing and one in four will be over 65 by 2068.⁶ Increased life expectancy is associated with attendant comorbidities and impairments,⁷ increasing the importance of SCD specialists.

This study was conducted to understand the status of the SCD specialist workforce, and to anticipate future changes which may identify potential limitations and help dental policymakers and educators plan for future demand.

Materials and methods

Following institutional ethical approval by Cardiff University as a service evaluation, a questionnaire was developed to explore SCD workforce demographics and work patterns within the UK. This was piloted among SCD specialists associated with Cardiff University Dental School and Hospital and adapted following feedback. In autumn 2018, an invitation e-mail containing a link to an anonymous online survey (Online Surveys) was distributed by the British Society of Gerodontology (BSG) and the British Society of Disability and Oral Health (BSDH) to their members. In addition, the BSG placed a copy of the invitation text and link on their website. Members of both societies were deterred from completing the questionnaire twice by a notice on the participant information page. Potential participants were 301 UK-based specialists in SCD registered with the GDC in 2018.

The survey contained three sections consisting of a total of 37 questions – 25 (closed) quantitative and 12 (open) qualitative answers, divided into three sections:

1. Demographics and respondents' views on SCD
2. Work pattern including location, role and type of work offered to patients
3. Experience, education and opinion of training required for this specialism.

Open questions provided further exploration of some answers to provide increased detail and depth of understanding.

The data collection window was eight weeks. The initial invite included a cover letter and a link to the questionnaire, which contained participant information and requested online consent before giving access to the questionnaire. Four weeks after the initial invite, a reminder e-mail was sent containing a modified invite and the original link. This was repeated after a further two weeks. The survey was closed after a final two weeks. Collected data were entered into Microsoft Excel for descriptive analysis.

Results

This paper reports on answers related to workforce demographics and work pattern. Questionnaires were completed by 108 respondents. However, eight respondents were excluded; some were not specialists in SCD, not UK-based practitioners, or had already retired. Therefore, analysis was based on a convenience sample of 100 SCD specialists (a response rate of 33%); 26% male (n = 26) and 74%

female (n = 74). Ten respondents (seven female, three male) did not wish to state their age (Fig. 1). The most common age ranges for women and men were 41–50 years old and 51–60 years old, respectively. A third of respondents were aged 41–50 (n = 33) and another third were aged 51–60 (n = 33). Forty-two percent of respondents were over 50 years old. Figure 1 illustrates the number of respondents distributed by gender and age. Sixty percent of female specialists (n = 40) were under 51 years old while 65% of male specialists (n = 15) were over 50 years old. While the mean female-to-male ratio is approximately 3:1 (74:26), this varies depending on age group, ranging from 1.2:1 to 5.6:1.

The majority of respondents (n = 85) were white. Fifty-five were 'White (English)', ten 'White (Scottish)', eight 'White (Welsh)', seven 'White (Irish)' and five 'White (Other)'. Of 14 respondents from minority ethnicities, five were 'Indian', three were 'Other Asian background', two were 'Other mixed ethnic background' and one respondent reported coming from 'Caribbean', 'African' and 'Other Black' background. One respondent declined to answer.

Specialists identified which postgraduate deanery they practised within. Four respondents practised in Northern Ireland, nine in Scotland, nine in Wales and the majority were located in England (78). Geographic differences were noted in specialist provision between English deaneries, with 37% of specialists practising within deaneries in South East England. In contrast, the lowest three postgraduate deaneries were East Midlands (two), North East England (three) and East of England (four).

Eighty-one specialists (81%) achieved their GDC SCD specialist status by being 'grandparented' onto the specialist list and 14 (14%) had undertaken specialist training in the UK. The remainder had gained access through academic and research evidence or non-UK specialist qualifications. Of those participants who had undertaken specialist training (n = 14), 12 were female and 2 were male.

Four-fifths of respondents (n = 80) worked solely within one role – 59 exclusively in salaried community roles, 18 exclusively in hospital roles and 3 in exclusively academic roles. Eight respondents worked in more than one setting. A further ten respondents indicated roles (for example, clinical director), but not which setting they worked within. Half of community-based respondents (n = 66) stated their position in the workforce as senior dental officer (51.5%, n = 34). Other community roles consisted of community dental officer (9.1%, n = 6), speciality doctor (9.1%, n = 6), associate specialist (7.6%, n = 5) and consultant (4.5%, n = 3). Six respondents (10.2%) described themselves as clinical lead, head of service or deputy medical director. Within hospital posts (n = 23), NHS consultants were the most common role (82.6%, n = 19), while other roles included honorary consultant (4.4%, n = 1), speciality doctor (4.4%, n = 1) and clinical director (13%, n = 3), with some respondents stating multiple

roles. Fifty percent (n = 5) of those in academia (n = 11) were lecturers. Other roles were senior lecturer (36.4%, n = 4) and professor (18.2%, n = 2).

Over two-fifths of participants (44%, n = 44) did not believe they were paid on the correct scale commensurate with the role they perform and five respondents (5%) declined to comment. Thirty-four respondents who did not feel appropriately remunerated were from the CDS (34% of total sample, 52% of CDS respondents). Of those who did not feel appropriately paid, open responses fell into five themes:

1. Remuneration for difficulty of clinical work provided: *'[I have] complex, high-risk patients, stressful, lot of responsibility [...] and managerial responsibilities'*
2. Post for role provided: *'I am a specialist. The best I can expect is to still be a B and B salaried dentist'*
3. Comparison with other dental roles: *'In practice I would earn more'; 'I am paid significantly less than consultant colleagues within the hospital service'*
4. Comparison with other healthcare roles: *'Pay does not equate to a similar level of seniority in a medical speciality'*
5. Relative deflation: *'No meaningful adjustment [of pay] for RPI for ten years'*.

Ninety-eight respondents provided data regarding working pattern (Fig. 2). Fifty-two percent (32 female, 20 male) reported working full-time. Within gender cohorts, female respondents were more likely to work part-time (Fig. 3). Three-quarters of the male cohort (n = 20, 76.9%) worked full-time compared to two-fifths of the female cohort (n = 32, 43%). Forty-six respondents worked part-time (6 male, 40 female), with a range of 1–9 sessions (mean = 7, mode = 8). Mean sessions worked varied with both gender and age (Table 1). Respondents under 51 worked more sessions on average, as did male respondents compared to female respondents. Ninety-eight participants provided data on the average number of SCD patients seen per working week in addition to sessions worked. Figure 4 illustrates the number of special care dental patients seen per full-time equivalent working week (mean = 37, mode = 50).

Approximately a third (32%, n = 32) of specialists had taken a career break (5 male, 27 female). Seventy-five percent of those who had taken a career break (n = 24; 23 female, 1 male) had taken a break for maternity leave or a young family. Other reasons included charity work, travel, ill health,

further study and temporary retirement before returning to work. Of those who had previously taken a career break, 19 (59.3%) were now working on a part-time basis.

Seventy-eight respondents provided data on their anticipated retirement date. Almost a quarter of specialists (n = 23) intended to retire within the period of 2018–2021, 43% (n = 43) were planning to retire before 2026 and approximately half (n = 53) were planning to retire before 2031. Table 2 illustrates planned retirement as a total sample and for 'grandparented' respondents.

Discussion

The survey is based on a convenience sample and received responses from a third of the potential SCD specialist population. Survey invites were transmitted via gatekeepers and, due to data protection regulations, individual contact details were not accessible to contact non-responders. Nevertheless, sufficient respondents participated for descriptive analysis and conclusions to be drawn.

Within the UK, SCD specialist services are provided by a predominantly female workforce, with a mean male-to-female ratio of 1:2.4.⁸ The survey reflected this, with a mean male-to-female ratio of 1:2.8. This varies by age group (see Figure 1), with the smallest difference being in the 61–70-year-old group (1:1.2) and the largest difference being in the age group 41–50. More women than men have entered the speciality through formal training pathways, and of those participants who had undertaken specialist training (n = 14), 86% were female. This feminisation of some of the dental workforce has been noted previously in both paediatric and orthodontic specialities in the UK.^{7,9} In contrast, the male-to-female ratio of registered dentists was approximately 1:1 at the time of the survey and three-quarters of specialities were male-dominated.⁸

Restorative dentistry and endodontics, which have similar numbers of registered specialists, demonstrate an inverse gender pattern with male-to-female ratios being approximately 2.8:1 and 2.9:1, respectively. On average, 4% of UK undergraduates interested in future specialisation consider SCD as a career, with more female students than male, inferring a continued trend of low numbers and female predominance.^{10,11,12,13}

Most respondents (85%) were white and 14% came from minority ethnicities. This reflects findings from a 2001 analysis of UK dentists, which also reported respondents from minority ethnic groups comprising 14% of the workforce,¹⁴ as well as the 2011 UK Census which reported 86% of the England and Wales population as white,¹⁵ although 40.2% of the London population identify as Black, Asian and other minority ethnicities.¹⁶ In contrast, 52% of dentists registered with the GDC in 2017 were white and 27% were known to be from minority ethnicities, the most frequently reported identity

being 'Asian or Asian British' (21%).⁸ This suggests that the SCD workforce may be less diverse than the general dentist workforce and possibly less diverse than the local population. Undergraduate racial diversity further differs from qualified dentists and has led to the suggestion of a potential 'leaky pipeline' for those from minority ethnicities entering the profession.¹⁷

Geographic variation occurred in specialist provision within England. Over a third of respondents (37%) are based in deaneries in South East England, while deaneries further north east had the lowest number of respondents. Geographic variation in provision may lead to areas of under-provision of specialist services. Potentially 90% of individuals with special needs can be treated in primary care, which may be encouraged by the provision of undergraduate and postgraduate education in SCD.¹⁸ An increase in primary care provision would reduce the need to rely on specialist services, but would also require specialists to provide such education.

Forty-two percent of respondents were aged over 50 and another 33% were aged 41–50. This follows a similar pattern to the whole specialist list in 2015, which comprised 53% aged >50 and 26% aged 40–49.¹⁹ In contrast, at the nearest equivalent survey, the UK dentist population had 28% aged over 50 and 24% aged 41–50.⁸ This is unsurprising as specialists require prior experience and training, so do not reflect the general dentist workforce which includes younger colleagues. Out of the 90 respondents who specified their age, almost two-thirds of female specialists were under 50 years old while almost two-thirds of male specialists (n = 15) were over 50 years old. This correlates with the Clinical Academic Staff Survey, where women are generally younger than their male counterparts.²⁰ Approximately half of respondents were planning to retire within the next ten years, with a quarter (23%) planning to retire by 2021 and 43% by 2026. As a consequence, there will be a significant decline in the numbers of specialists available, despite the development of a training pathway. Prior to the creation of the SCD speciality, 133–400 specialists were calculated to be required for a UK population of 200,000 adults with extreme disability and/or complex needs requiring specialist input.²¹ As the UK population increases and individuals live longer with attendant comorbidities, more specialists will therefore be required.¹⁹ Discussion regarding the development and retention of the primary care dental workforce has raised concerns about the loss of experience that losing older members of the workforce creates, and the potential impact upon service provision which may occur.²² It is reasonable to worry about a similar level of experiential expertise loss within the SCD speciality which, in conjunction with reduced numbers and increased demand, may have consequences for service provision.

Previous analyses of dental workforces have highlighted a gendered difference in working continuity, with more female dentists taking career breaks than their male colleagues.^{7,23,24} The percentage of paediatric specialists taking career breaks (9% of men and 39% of women)⁷ was lower than that

reported in the general UK dental workforce (30% of men and 60% of women)²³ and a reduction was also reflected in this study (19% of men and 37% of women). The main reported reason for career breaks among female respondents was for maternity leave or childcare, a pattern that has been found elsewhere,²⁴ while childcare was reported in one male respondent. A feminised approach to childcare may change in the future, as the majority of dental undergraduates recently surveyed have felt childcare should be equally shared between parents (although longer time out of career to focus on childcare was associated with being female).^{10,12,25} This survey also reflected previous research which highlighted a gender difference regarding sessions worked.^{7,20,23,24} Almost three-quarters of male participants worked full-time, compared to two-fifths of female participants. There was a slight reduction in the mean number of sessions worked per week by female respondents (8.3) compared to male respondents (9). Gendered differences in anticipated work pattern have been found in dental undergraduates, with planned part-time working increasing over time generally, but more female students anticipating part-time work.^{10,12,25} The interplay between workforce constitution and any impact that may have on career breaks and part-time working is important in workforce planning, as both are likely to impact the number of specialist sessions provided and the costs of service recruitment.

The majority of respondents (66%) worked within the salaried CDS. Forty-four percent of all respondents, and 52% of CDS respondents, did not feel appropriately remunerated for the work they undertook. Reasons given related to the work and role undertaken: whether they were on or at an appropriate pay scale level for the complexity and responsibility or practical role performed; comparison to others within and without dentistry; and relative deflation of NHS salaries. This reflects findings regarding the CDS by the British Dental Association (BDA), which noted that 47% (strongly) disagreed that their pay was fair.²⁶ The BDA survey found that 66% of CDS dentists had reached the top of their salary scale and the majority did not believe there were opportunities for career progression. Meanwhile, salaried pay awards were highlighted as effective pay cuts and dentists had increasing workloads due to reducing numbers. Forty-seven percent of CDS dentists report high levels of occupational stress and the CDS have higher levels of burnout than either hospital dentists or academia.²⁷ Forty-five percent of dentists do not anticipate working within the CDS in the next five years.²⁶ Although these figures reflect the CDS dentist workforce as a whole, it is worrying that levels of dissatisfaction may be so high as the majority of specialists worked in the CDS. In addition, it is worrying that, as well as an anticipated drop in numbers due to retirement, there may be flight from the branch of dental service that provides much of the SCD specialist care, potentially impacting on those applicants willing to embark on speciality training in the future.

This research highlights several important findings which warrant further investigation and address. The specialist workforce is predominantly white and female, reflecting findings in orthodontics and paediatric dentistry.^{7,9} While orthodontics is a process-defined speciality, both paediatric dentistry and SCD are patient-defined specialities. Reasons for planned career choice have been both quantitatively and qualitatively explored.^{11,13,28,29} Further retrospective research into why specialists chose 'holistic' specialities, as well as into undergraduates' and graduates' interests and motivations, may help understand any correlation between demographic and speciality, and also how to align interests to experience in order to encourage diversity within the speciality. A significant minority of specialists did not feel appropriately remunerated. Although some changes have been made regarding pay awards, remuneration levels warrant further examination and appropriate action in order to encourage specialist workforce development, and therefore to address service provision to the most vulnerable members of society. Several models of work demands and resources have been developed elsewhere, mainly to understand burnout and stress.^{30,31,32} In addition to financial compensation, research into other resources and benefits to providing specialist SCD services may help workforce planners identify how to encourage graduates into SCD speciality training and how to maintain a workforce willing to train. To address demographic differences and an anticipated drop in the future SCD specialist workforce, an interest in SCD needs to be encouraged both as a speciality and as provided within primary care. Role models influence medical graduate careers³³ and exert some influence on students' career intentions.³⁴ Undergraduates' experience of having a 'talent' at a speciality also influences their desire to pursue specialisation,¹¹ so inspiring experience from role models within the undergraduate curriculum may also influence the choice of subsequent specialisation.¹³

This study has some limitations. A third of registered specialists responded, which was less than required for statistically significant analysis. Responses were collected via gatekeepers as contact details of individual registrants are no longer published on the GDC register. While this facilitates access, it prevents individualised follow-up of non-respondents. The initial questionnaire explored other areas regarding speciality definition and education, making the survey longer than ideal, which may have affected the response rate due to 'survey fatigue'.^{35,36,37}

Conclusion

Although the need for SCD specialist services is likely to grow with an ageing population, future provision may be affected by several factors which need to be considered and addressed: a predominantly female workforce, with an associated work pattern that affects the amount of service

provided through career breaks and part-time working; a lack of ethnic diversity which does not reflect the population; significant numbers of retiring specialists over the next ten years, with a consequent loss of experience, which will outstrip the numbers of specialists in training; and a significant minority of specialists unhappy with their work pay level and, by inference, their work conditions. By encouraging SCD education and the provision of role models, the anticipated workforce deficit may potentially be addressed both by encouraging specialisation and primary care provision. By doing so, the profession may also directly and indirectly address the lack of diversity which might impact service provision.

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Tables

	Female	Male	Total
<51	8.5 (n=39)	9.4 (n=8)	8.7 (n=47)
51+	8.2 (n=26)	8.6 (n=15)	8.4 (n=41)
Missing	6.9 (n=7)	10 (n=3)	7.8 (10)
Total	8.3 (n=72)	9 (n=26)	8.5 (n=98)

Table 1 Mean sessions worked compared by gender and age category

Planned Retirement Year	Number of 'grandparented' specialists (n=70)	Number of specialists (n=78)
2018-2021	22	23
2022-2026	19	20
2027-2031	10	10
2032-2036	9	13
2037-2041	10	12

Table 2 Planned retirement years for specialists and 'grandparented' specialists

Figures

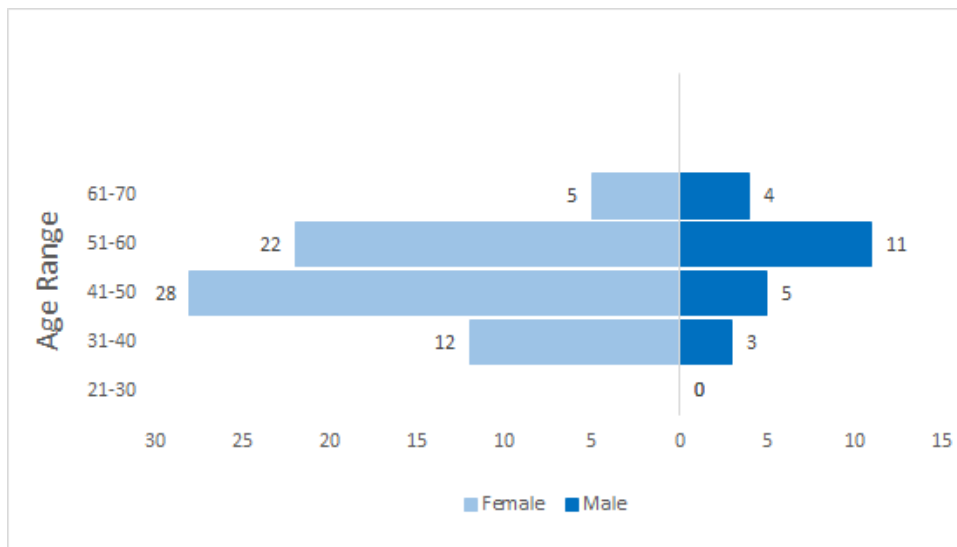


Fig. 1 Age distribution of respondents (n = 90)

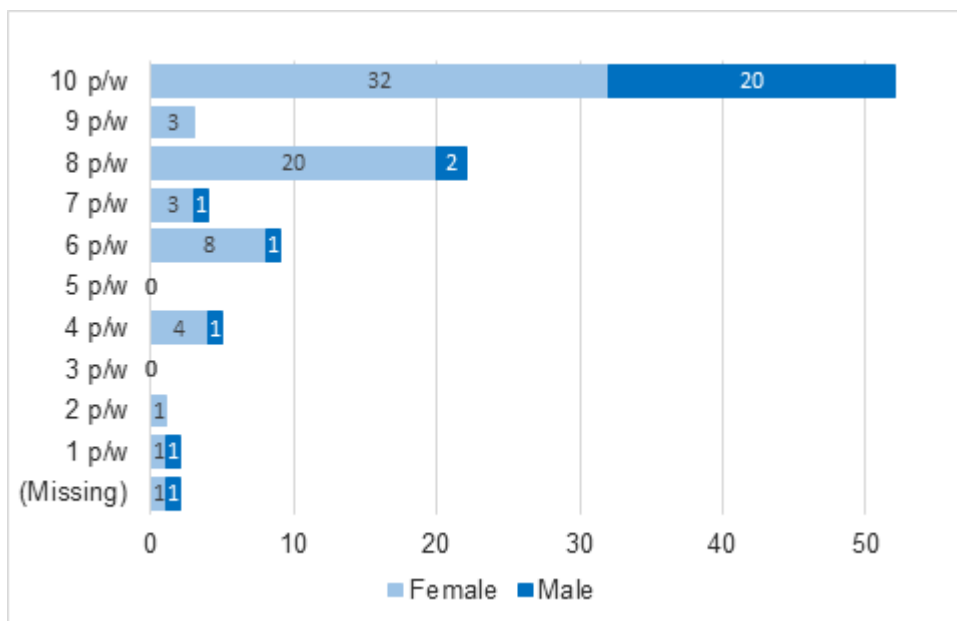


Fig. 2 Working pattern by gender

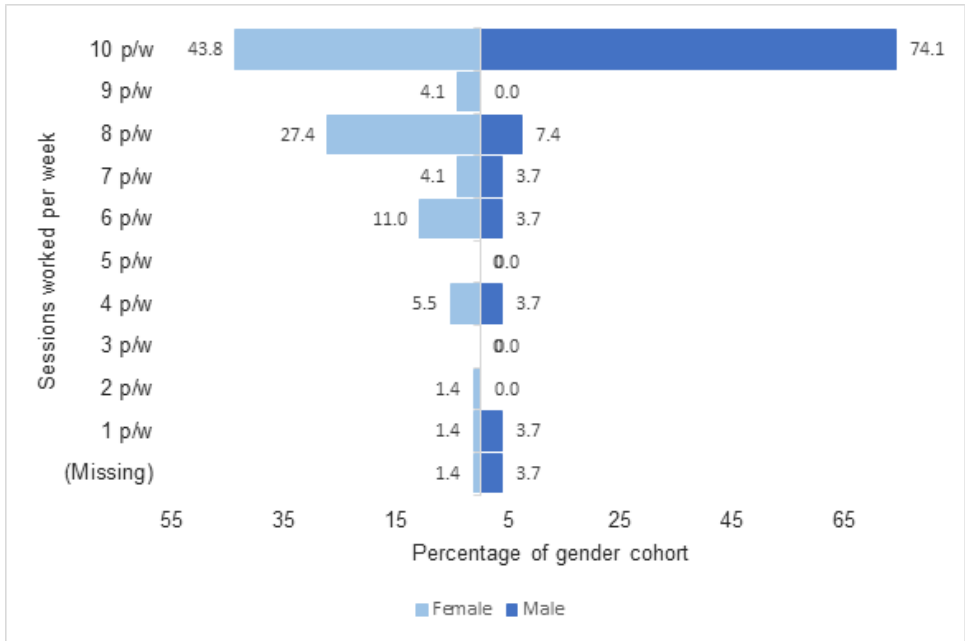


Fig. 3 Working pattern relative proportion within gender cohorts

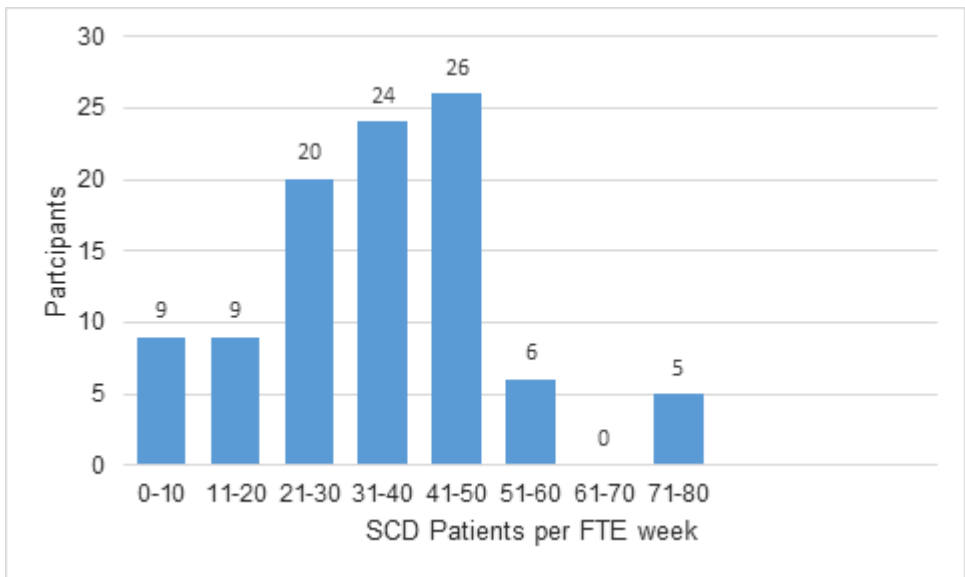


Fig. 4 Patients seen per full-time equivalent week