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The job quality of key worker employees: Analysis of the Labour Force Survey

Working paper

By Dr Matt Barnes, Nhlanhla Ndebele and Dr Eric Harrison
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2020

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Dr Eric Harrison is a Senior Research Fellow in the Department of Sociology at City, University of London, and Co-Director of the City Q-Step Centre. Eric is a quantitative sociologist who specialises in social survey design and analysis, and the study of work and wellbeing.

Acknowledgements

We are grateful to Christine Farquharson and colleagues at the Institute of Fiscal Studies for advice on the definition of key workers, and to Simon Woodsford at the Office for National Statistics for advice on the Labour Force Survey dataset.

Introduction

Key workers have emerged as being critical to the running of the country during the COVID-19 pandemic. The challenging circumstances key workers now face in doing their jobs has been well documented, particularly the health risks of frontline workers such as nurses, care workers and supermarket check-out operators (Kikuchi and Khurana, [2020](#); ONS, [2020](#)). This has led to discussion of how much society values these workers more generally, with many key workers paid less than the average employee, and food and social care sectors paying some of the lowest wages across the labour market (Butcher, [2020](#); Farquharson et al, [2020](#)). These earnings differentials disproportionately affect certain groups of key workers, namely women, ethnic minorities and those with lower educational qualifications (Cominetti et al, [2020](#)). Understandably, financial remuneration is at the forefront of discussions on how to properly reward key workers moving forward, as society readjusts, and potentially revalues, different parts of the labour market. But what is missing from the debate is a broader understanding of the working conditions of key workers - the security of their work, their work patterns, and their opportunities for progression - meaning that these issues can be discussed alongside calls for increased pay.

This report illustrates the job quality of key workers using data from the Labour Force Survey - the key source of labour market statistics in the UK. The data was collected from workers, rather than from employers, about their work prior to the pandemic, so the findings represent the 'usual', pre-pandemic employment circumstances of key workers.

We use data from 2016-2019 to look at a range of potentially negative working conditions:

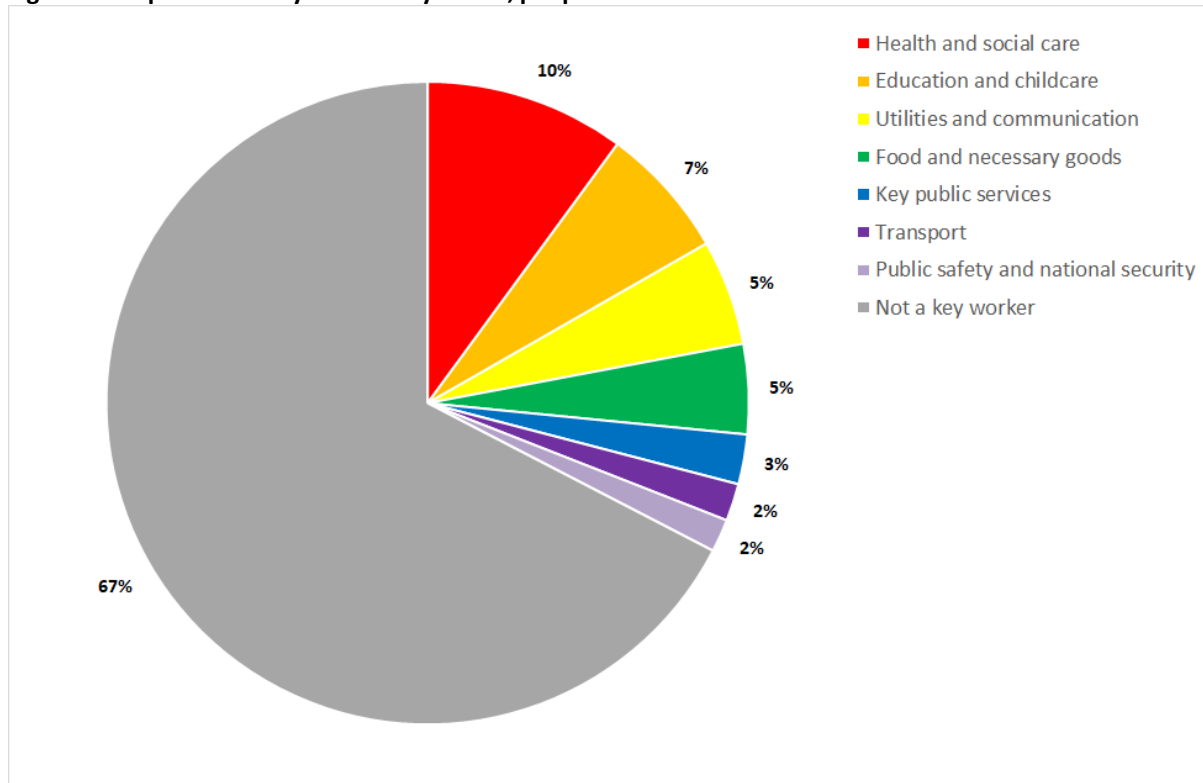
- Not having a permanent job
- Working long hours
- Working shifts
- Working evenings and nights
- Working at the weekend
- Having a zero-hours contract
- Suffering from an illness or disability caused by work
- Not being offered training or education by the employer
- Pay and conditions not influenced by trade union

According to the ONS (McSweeney, [2020](#)) in 2019, 10.6 million of those employed (33% of the total workforce) were in key worker occupations and industries (this is based on essential workers that can access schools or educational settings (DfE, [2020](#)) and who were eligible for initial Covid-19 testing (DHSC, [2020](#))). The largest sector of key worker occupations is health followed by education, utilities, and food. [Figure 1]

In this report we focus on some selected key worker occupations at the forefront of the national response to the pandemic:

- Health: medical practitioners, nurses, care workers, and cleaners
- Education: primary school teachers, teaching assistants, social workers, and nursery nurses
- Utilities: postal workers
- Food: checkout staff, and food and drink process operatives
- Public services: welfare and housing advisors
- Transport: large goods vehicle drivers, bus drivers
- Public safety: police officers, and security guards

Figure 1: Proportion of key workers by sector, people in work



Source: McSweeney ([2020](#)), data from 2019 Labour Force Survey / Annual Population Survey

The majority of key workers are employees, although this can vary according to sector - and a higher proportion of self-employed key workers are found in the food and public services sectors. These tend to be workers such as farmers and other agriculture workers, and barristers and journalists. Of the key worker occupations that we look at, the highest proportion of self-employed key workers are medical practitioners and cleaners, but still over four in five of these workers are employees. [Figure 16] We focus our analysis on employees, partly because it is often the responsibility of the employer to improve the job quality of their employees.

Measuring job quality

Understandably, much of the discussion on the employment conditions of key workers has focused on their pay. According to Farquharson et al ([2020](#)) the median key worker earns £12.26 per hour, 8 per cent less than the £13.26 per hour earned by the median earner in a non-key occupations. We know that some key workers (e.g. medical professionals) are paid well above the average employee, but that there are many paid well below (e.g. teaching assistants and nursery nurses) (Butcher, [2020](#)) – underlining again that there is great disparity between key worker occupations.

However, a full discussion of employment conditions needs to include a range of indicators of job quality as well as pay. What is meant by ‘job quality’ is difficult to define precisely; partly because the notion has multiple facets - including skills, autonomy, power relations, health and safety, work intensity and working time - and multiple indicators could be used to capture each. A government commissioned paper on ‘Good work’ recommended that the government should pay closer attention to the quality of work in the UK and suggested that a new set of indicators be created (Taylor et al, [2017](#)). Some, but by no means all, of these indicators are included in the Labour Force Survey and the details of those we use are presented below. There are other indicators of job quality, and the effects of work, that we could have included in the analysis but we have limited

them to a small but broad set of measures. We are also somewhat limited by the measures available in the safeguarded version of the Labour Force Survey.

Definitions of job quality

The different measures of job quality are taken from questions asked to workers in the Labour Force Survey (LFS):

- Not having a permanent job
Is your job... a permanent job, or is there some way that it is not permanent?
- Working long hours (measured for full-time employees)
How many hours per week do you usually work in your (main) job/business – please exclude meal breaks?, and, How many hours paid/unpaid overtime do you usually work per week?
- Shift work
Do you do shift work in your job?
- Working evenings and nights
Within your usual pattern of work is it usual for you to work in the evening, or at night?
- Working at the weekend
On how many (different) days per week do you usually work?, May I just check, on which days do you usually work?
- Having a zero-hours contract
Some people have special working hours arrangements that vary daily or weekly. In your (main) job is your agreed working arrangement any of the following...zero hours contract?
- Suffering from an illness or disability caused by work
Within the last twelve months have you suffered from any illness, disability or other physical or mental problem that was caused or made worse by your job or by work you have done in the past?
- Not being offered training or education by the employer
In the last 3 months, has your (previous or current) employer offered you any training or education either on, or away from, your job?
- Pay and conditions not influenced by trade union
Are your pay and conditions of employment directly affected by agreements between your employer and any trade union or staff association?

The research uses data from the LFS, a government funded quarter-year representative survey used to understand employment, unemployment and economic inactivity in the UK to inform social, economic and employment policy. It collects information about a wide range of topics such as occupation, training, hours of work and personal characteristics of household members aged 16 years and over. We use data from the most recent year of the survey combined with data from previous years (2016-19) to ensure we have big enough sample sizes for robust analysis (this results in a dataset of over 25,000 key workers). The LFS covers all adults in private households in the UK and like most other large-scale government surveys, the LFS excludes people living in communal establishments (except for those in NHS accommodation and students in halls of residence). The survey questionnaire comprises a 'core' of questions which are included in every survey, together with some 'non-core' questions which vary from quarter to quarter. We also use data from the Annual Hours and Earnings Survey (ASHE) to allow us to situate key workers' work conditions alongside their pay.

Definitions of selected key worker occupations (taken from [ONS Occupation Coding Tool](#))

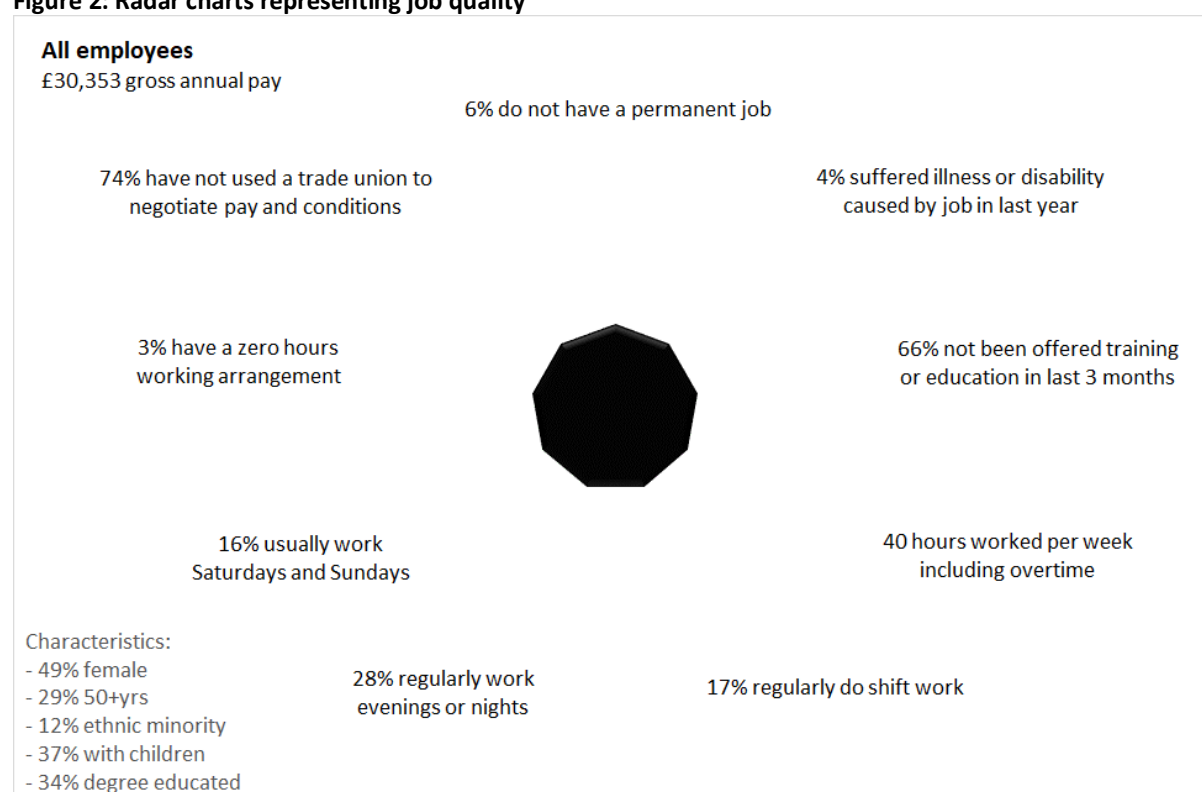
- **Medical practitioners** diagnose mental and physical injuries, disorders and diseases, prescribe and give treatment, recommend preventative action, and conduct medical education and research activities. They may specialise in particular areas of modern medicine or work in general practice and, where necessary, refer the patient to a specialist. [SOC2010 code: 2211]
- **Nurses** provide general and/or specialised nursing care for the sick, injured and others in need of such care, assist medical doctors with their tasks and work with other healthcare professionals and within teams of healthcare workers. They advise on and teach nursing practice. [SOC2010 code: 2231]
- **Care workers and home carers** attend to the personal needs and comforts of the elderly and the infirm with care and support needs ('service users') within residential care establishments, day care establishments or in their own homes. [SOC2010 code: 6145]
- **Cleaners and domestics** clean interiors of private houses, shops, hotels, schools, offices and other buildings. [SOC2010 code: 9233]
- **Primary school teachers** and nursery education teaching professionals plan, organise and provide instruction to children up to entry into secondary education. [SOC2010 code: 2315]
- **Teaching assistants** assist teachers with their day-to-day classroom work and with routine administrative tasks. [SOC2010 code: 6125]
- **Social workers** provide information, advice and support to those who are socially excluded or are experiencing crisis; they protect the welfare of vulnerable groups including children, young people, people with disabilities, elderly people and people who are mentally or physically ill, and they may specialise in specific areas of work. [SOC2010 code: 2442]
- **Nursery nurses** and assistants care for children from birth up to seven years of age in day or residential nurseries, children's homes, and maternity units. [SOC2010 code: 6121]
- **Postal workers and couriers** collect, receive, sort and deliver mail, documents, correspondence or messages. [SOC2010 code: 9211]
- **Food, drink and tobacco process operatives** set, operate and attend machinery to bake, freeze, heat, crush, mix, blend and otherwise process foodstuffs, beverages and tobacco leaves. [SOC2010 code: 8111]
- **Retail cashiers and check-out operators** accept payments from customers and give change in respect of sales or services. [SOC2010 code: 7122]
- **Welfare and housing advisors** provide a variety of welfare-related services including advice on benefits, health, disability and residential care [SOC2010 code: 3239]
- **Large goods vehicle drivers** collect, transport and deliver goods in rigid vehicles over 7.5 tonnes, articulated lorries and lorries pulling trailers. [SOC2010 code: 8211]
- **Bus and coach drivers** drive road passenger-carrying vehicles such as buses, coaches and mini-buses. [SOC2010 code: 8213]
- **Police officers (sergeant and below)** co-ordinate and undertake the investigation of crimes, patrol public areas, arrest offenders and suspects and enforce law and order. Officers of the British Transport Police operate within the specialised police service for the railway network across Britain. [SOC2010 code: 3312]
- **Security guards** protect merchandise, individuals, hotels, offices, factories, public grounds and private estates from injury, theft or damage, and investigate fraud and crime on a non-statutory basis. [SOC2010 code: 9241]

We use radar charts to illustrate the job quality of selected key worker occupations (**Figure 3 and Figure 4**). Each occupation is represented by a nine-sided shape where each point of the shape measures a different aspect of job quality. An example is given below for all employees. The black shape has equal sides (nonagon) as it represents the average job quality for all employees. This shows that 6 per cent of all employees do not have a permanent job, 4 per cent suffered an illness or disability caused by their job in the last year, and so on.

We create corresponding shapes for each of the selected key worker occupations (and colour them according to key worker sector). Where the shape stretches outside the outline of the nonagon it indicates that employees in that occupation have higher than average negative working conditions. Figure 3 plots job quality according to the average gross annual salary of employees in that occupation. Figure 4 provides more detail on each occupation (as in Figure 2 below). In the Annexe are additional charts that compare each indicator of job quality across the occupations. There are also charts on the socio-demographic characteristics of key workers in each of the selected occupations. All the tables that underly the charts can be found in a corresponding Excel file available on request from the authors.

The charts represent a summary picture of each occupation and it is important to remember that there is variation within, as well as between, occupations. This applies to both the occupation itself - for example, not all 'nurses' do exactly the same job - and the assessment of job quality - for example not all nurses earn £33,242 (it is the average, median, salary of nurses and this is likely to vary according to grade and experience). Furthermore, there are quite large differences in the magnitude of the different aspects of job quality - for example, only 4 per cent of employees suffered illness or disability caused by their job in the last year, whereas 74 per cent have not been offered training or education in the last 3 months. It is also difficult to compare the importance of each job quality indicator.

Figure 2: Radar charts representing job quality



Key findings

The research shows that many key workers not only receive low pay but also experience lower job quality than the average employee. The research also demonstrates the variations in both pay and job quality between different occupational key worker groups.

Main headlines

- Key workers whose job quality suffers in comparison to the average employee tend to work more 'anti-social' hours (evening or nights, weekends, shifts) – a reflection of some of the occupations that come under the key worker banner such as doctors, nurses, care workers and the emergency services.
- What really stands out is the variation between key workers in different occupations. When looking across the range of job quality indicators we see that some of the occupations fare markedly worse than others, and that these tend to be in the health and food sectors. For example, food, drink and tobacco operatives, and care workers, suffer from a number of poor job quality indicators and also low pay. Medical practitioners on the other hand, also experience poor job quality indicators - such as working longer hours, regular shift work and weekend work - but receive pay well above the average.
- There is a notable gender division across a number of the selected key worker occupations. Occupations in the health and education sectors are female dominated, while transport and public order sectors are male dominated. This means that some of the lowest paid occupations, with a number of poor job quality indicators, have a disproportionate number of female workers - most notably check-out operators and care workers. Ethnic minority workers are also over-represented in some of these occupations - for example, security guards.

According to different elements of job quality

- *Pay*: A number of our selected key worker occupations earn below the median pay of all employees, and some earn markedly less, most notably, cleaners, care workers, teaching assistants, nursery nurses, bus drivers, and food sector workers.
- *Non-permanent jobs*: Medical practitioners, teaching assistants and welfare advisors are among the key workers most likely to be in jobs that are not permanent.
- *Health*: Police officers and other front line services such as nurses and social workers are among the key workers most likely to have had an illness or disability caused by their job.
- *In-work training*: Some of the more manual jobs, which may involve an initial training programme, such as cleaners, postal workers, and food operative, are the most likely not to have been offered training by their employer in the past three months.
- *Long hours*: Teachers stand out as the most likely to work long hours (this includes paid and unpaid overtime), along with other key worker occupations such as medical practitioners and large goods vehicle drivers.
- *Anti-social work*: Certain key worker occupations are synonymous with working anti-social hours. Bus drivers, police officers and security guards, and occupations providing health and care, and food provision are the most likely to regularly do shift work, work evenings or nights, or work at weekends.
- *Zero-hours contracts*: Security guards and care workers are the most likely to work on zero-hour contracts.
- *Trade Unions*: As many key worker occupations are in the public sector, many of these workers have (paid) access to a trade union or staff association representation to negotiate pay and conditions. The occupations most likely to say they are not directly affected by agreements between their employer and trade union or staff association are care workers, cleaners and nursery assistants.

Figure 3: Job quality of selected key worker occupations according to gross annual salary, employees only

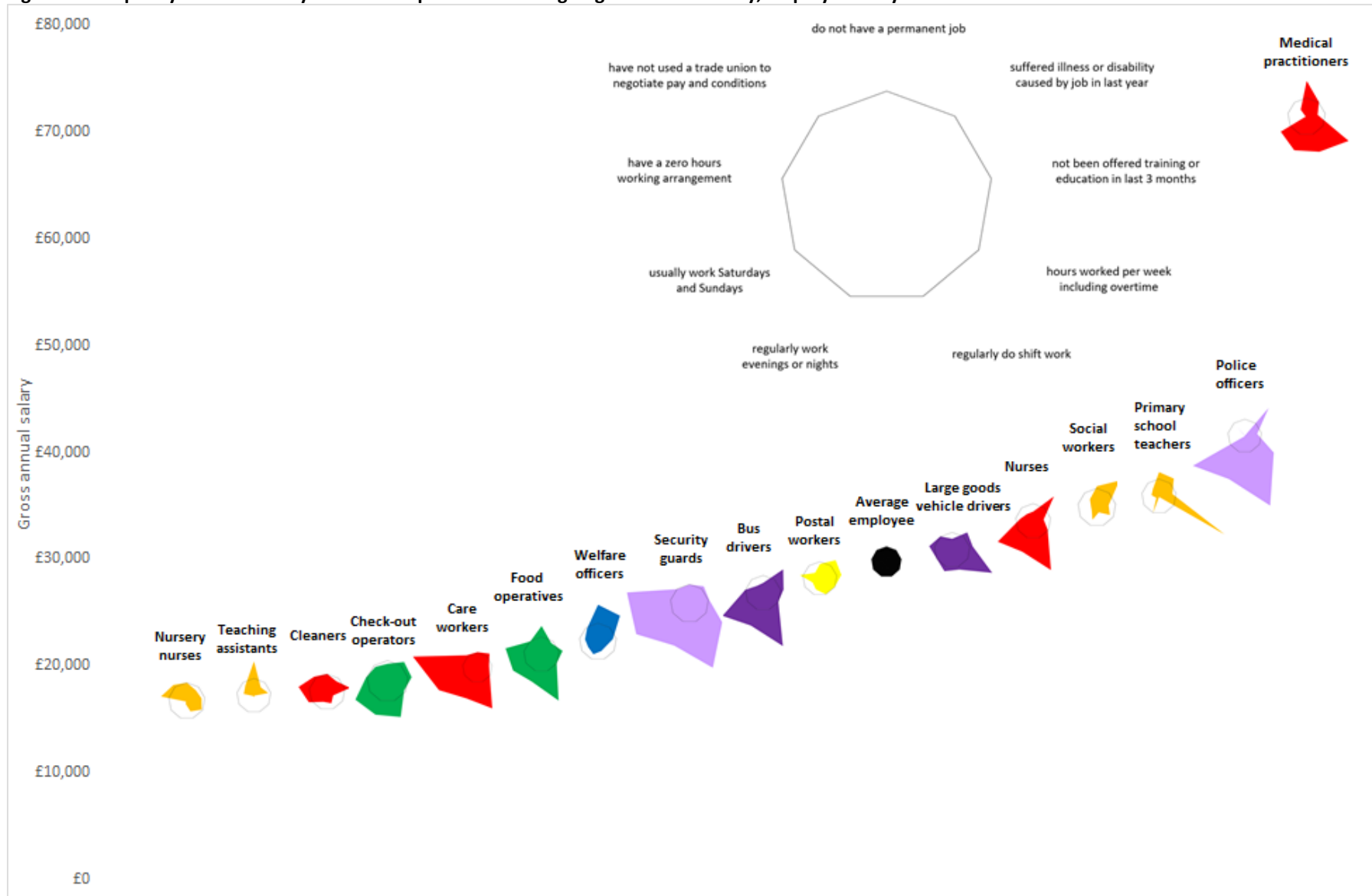
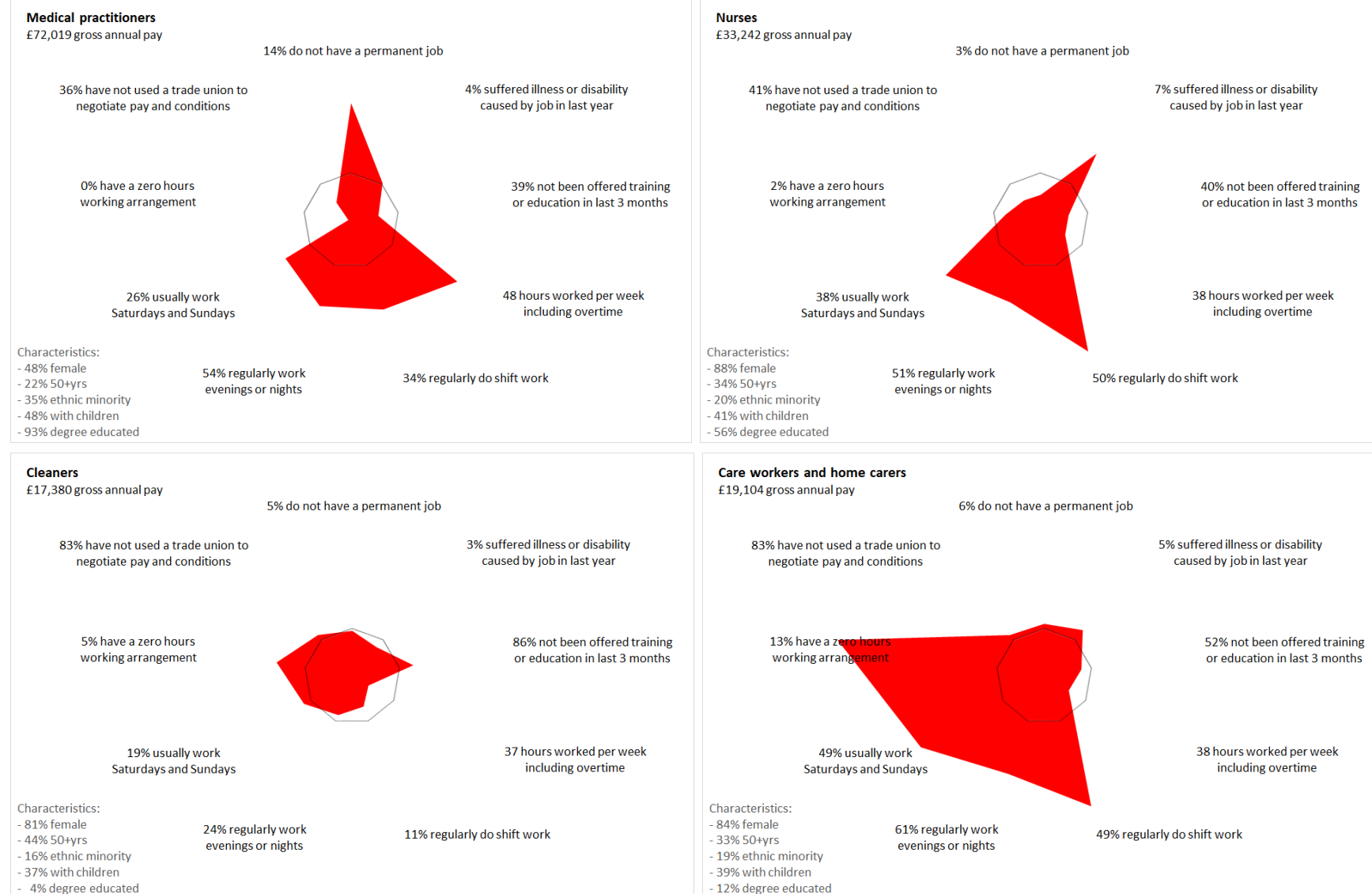
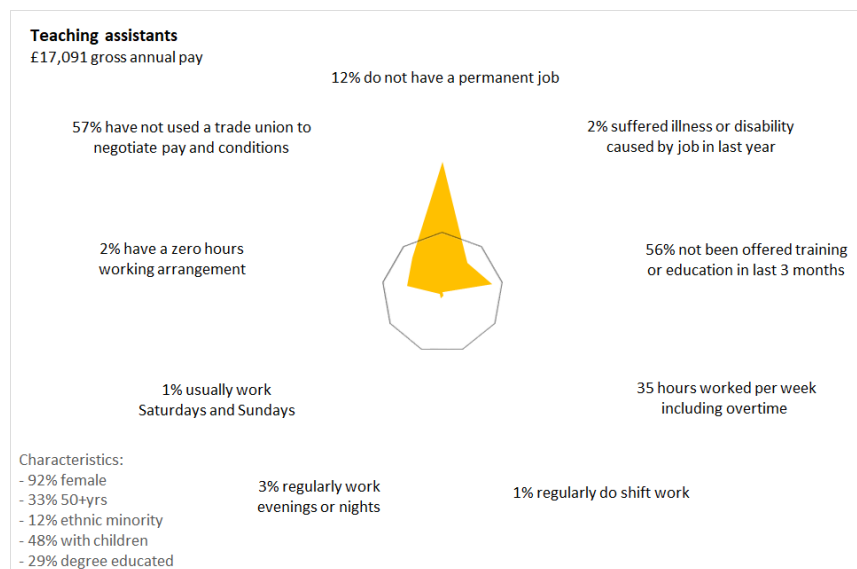
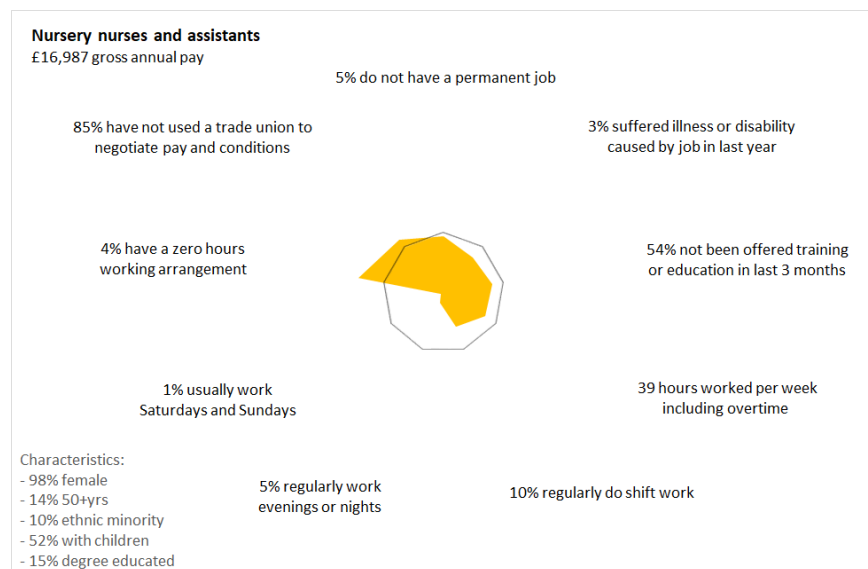
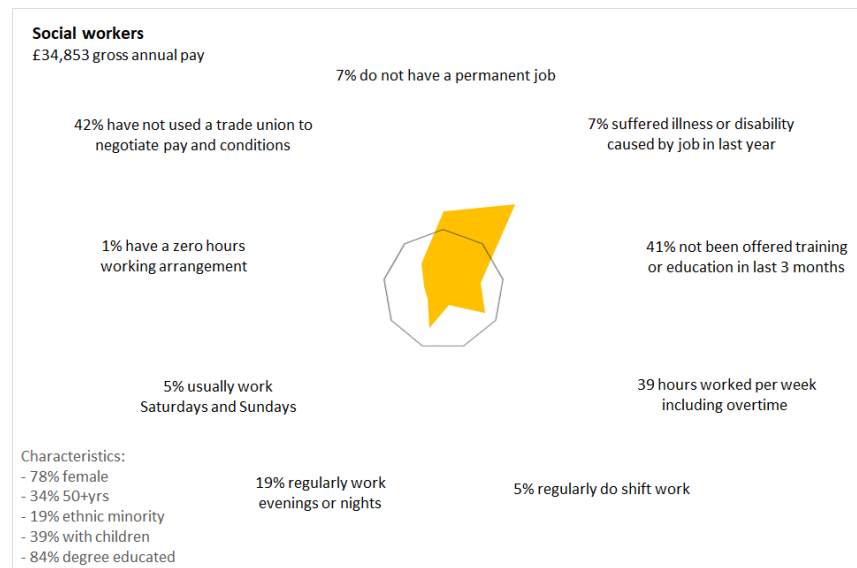
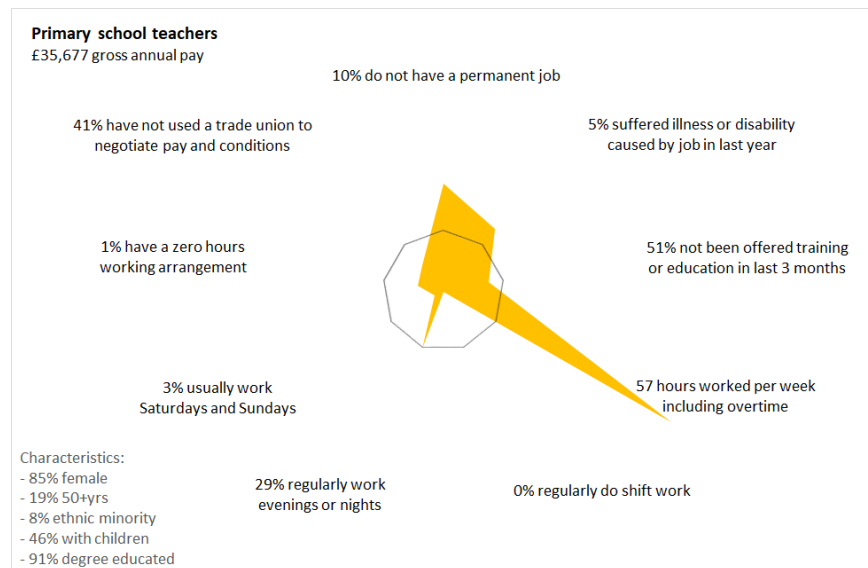
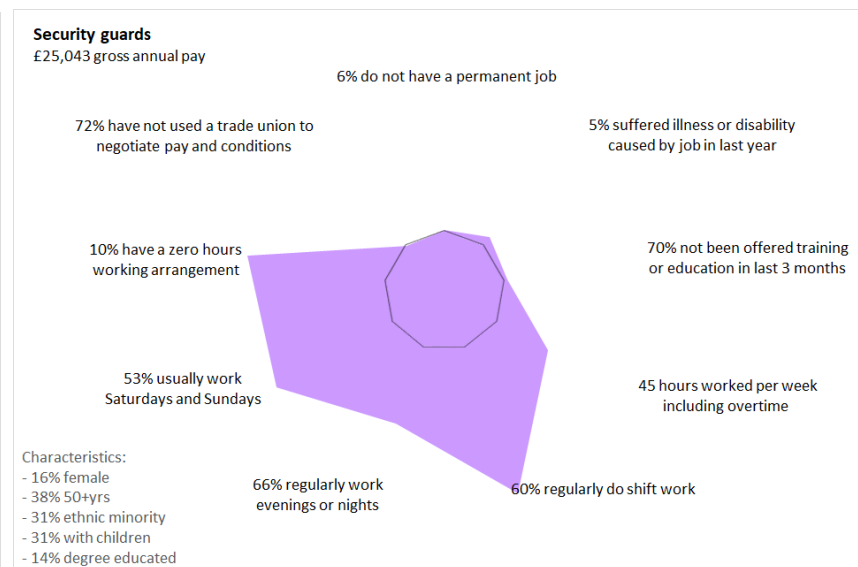
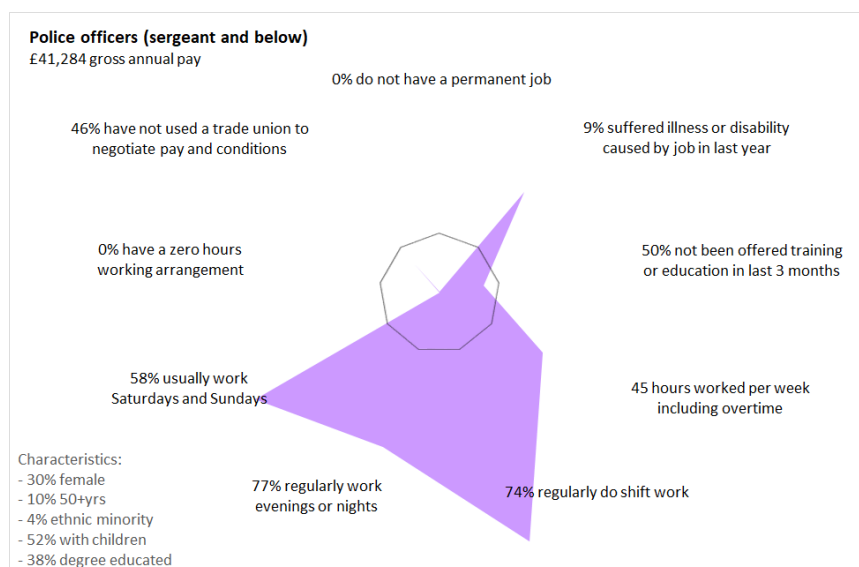
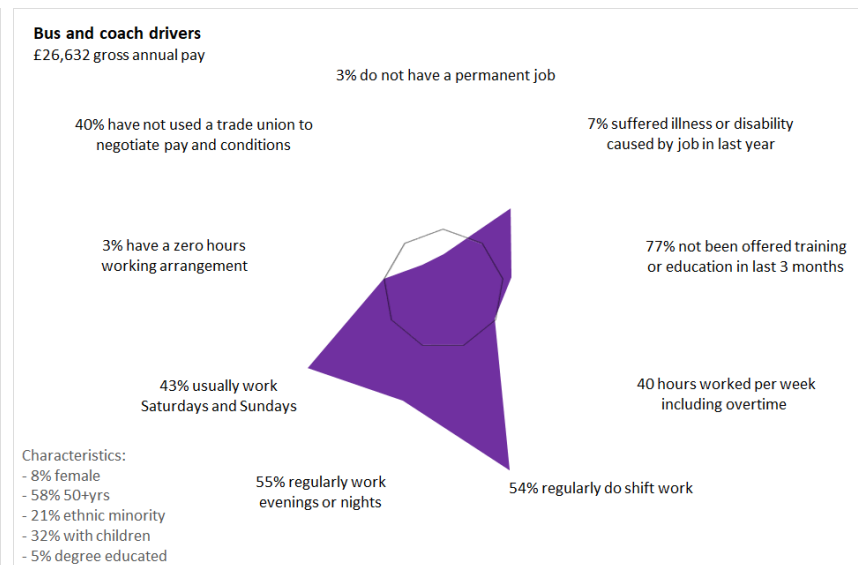
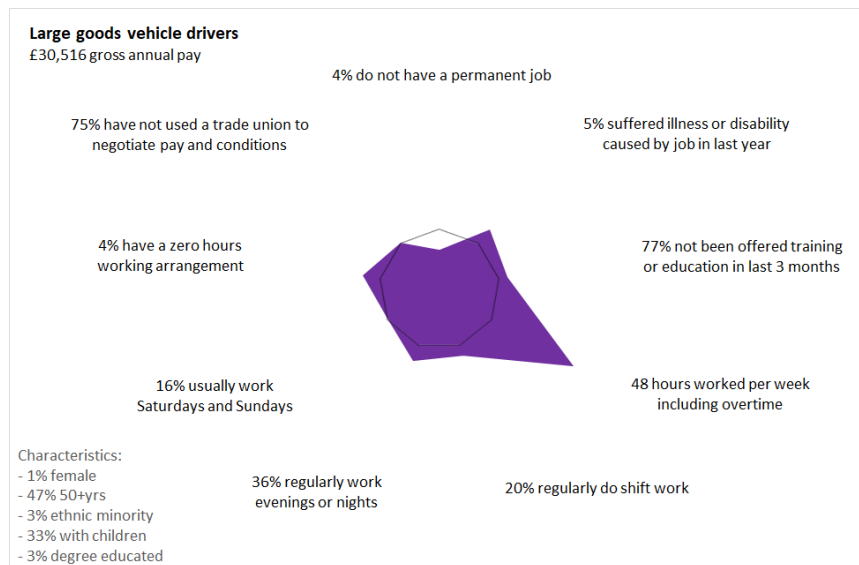


Figure 4: Job quality of selected key worker occupations, employees only









Conclusion

We mirror the findings of Farquharson et al (2020) who say that key workers are not a homogeneous group, but vary quite considerably both across and within sectors. Our analysis, albeit of only a select few of the larger key worker occupations at the forefront of the pandemic response, has shown that the heterogeneity that occurs with respect to pay, is also present in other aspects of job quality. Although job quality can vary according to pay, it is not always the case that the better paid jobs have higher levels of job quality, and vice-versa. However, there are some lower paid key worker jobs that also have a number of negative job quality indicators. Check-out operators, care workers, food operatives, security guards, and bus drivers are just some of the occupations that earn below the average employee, some well below, and also experience a number of negative working conditions, particularly regarding anti-social work hours. These findings add to the current focus on the work and health conditions of key workers, and contribute to a broader policy debate about revaluing the role of key workers in society moving forward from the pandemic.

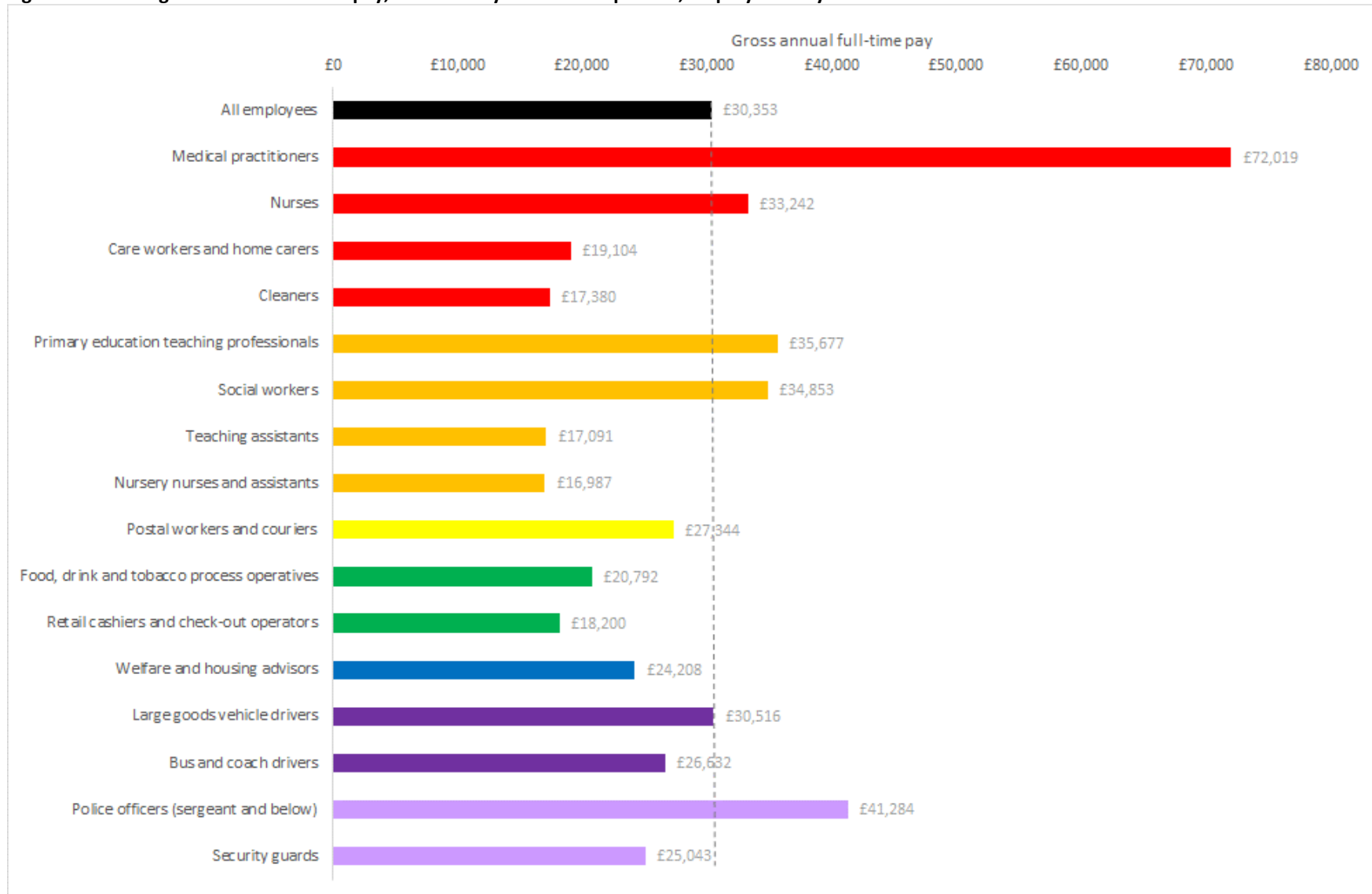
Our further work will involve using the Annual Population Survey (a combined survey of households in Britain that incorporates the Labour Force Survey) to look at additional measures of job quality. We are also using the Understanding Society survey to explore the duration of different elements of job quality, and also what drives individual changes in job quality.

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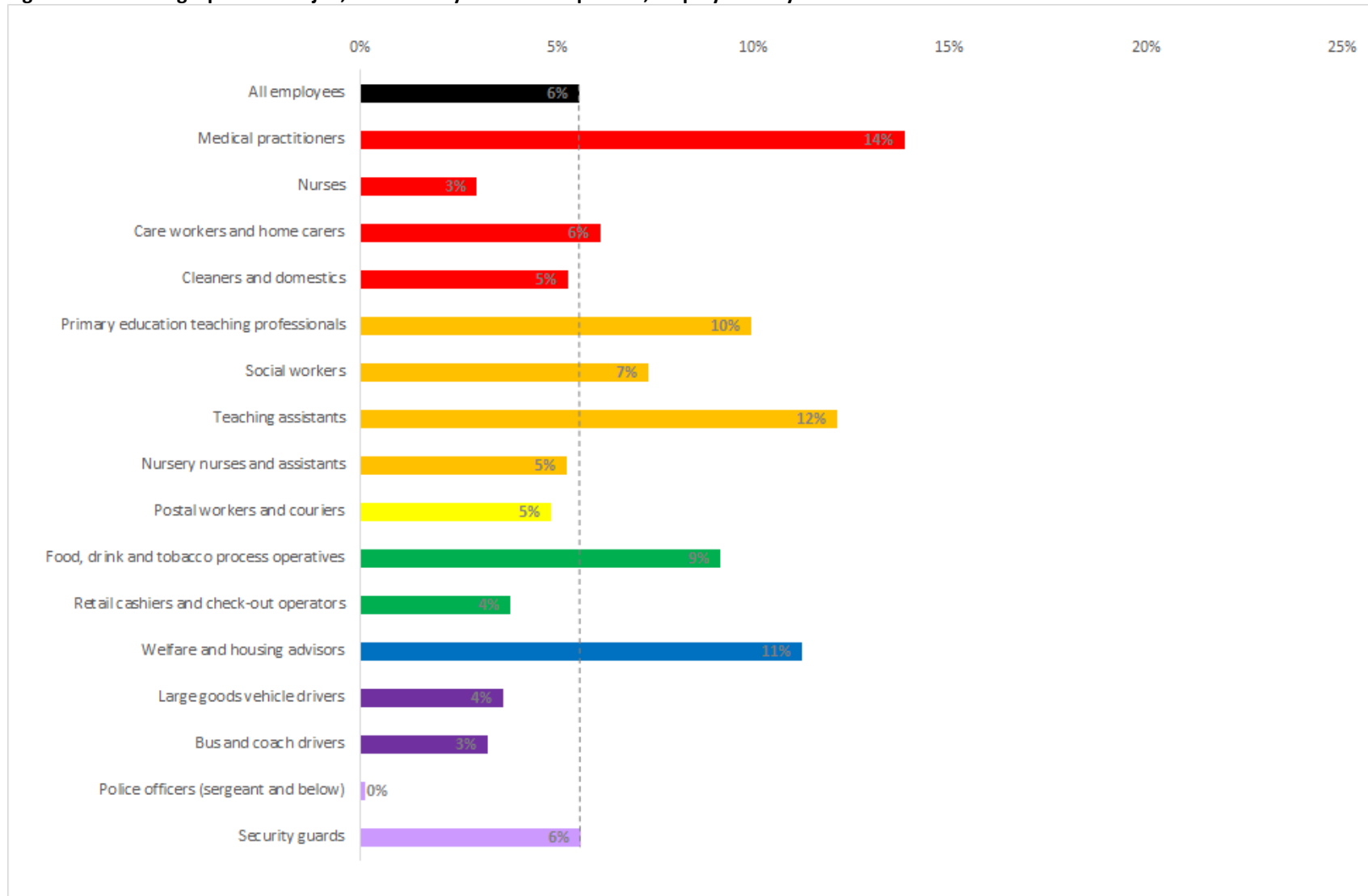
Additional charts

Figure 5: Median gross annual full-time pay, selected key worker occupations, employees only



Source: Annual Survey of Hours and Earnings (ASHE) 2019 (ONS, [2019](#))

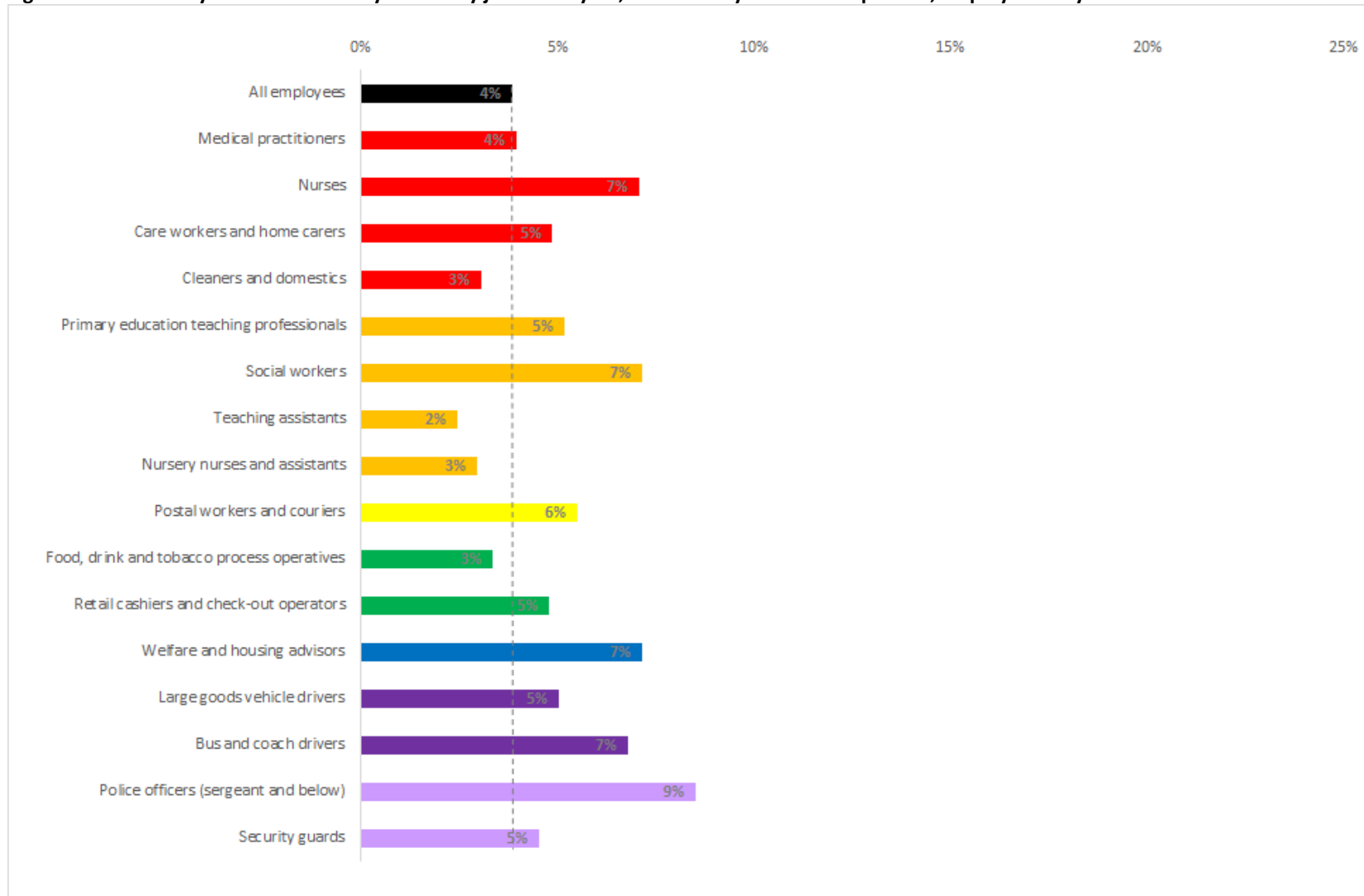
Figure 6: Not having a permanent job, selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Question asked to respondents: *Leaving aside your own personal intentions and circumstances is your job... a permanent job, or was there some way that it was not permanent?*

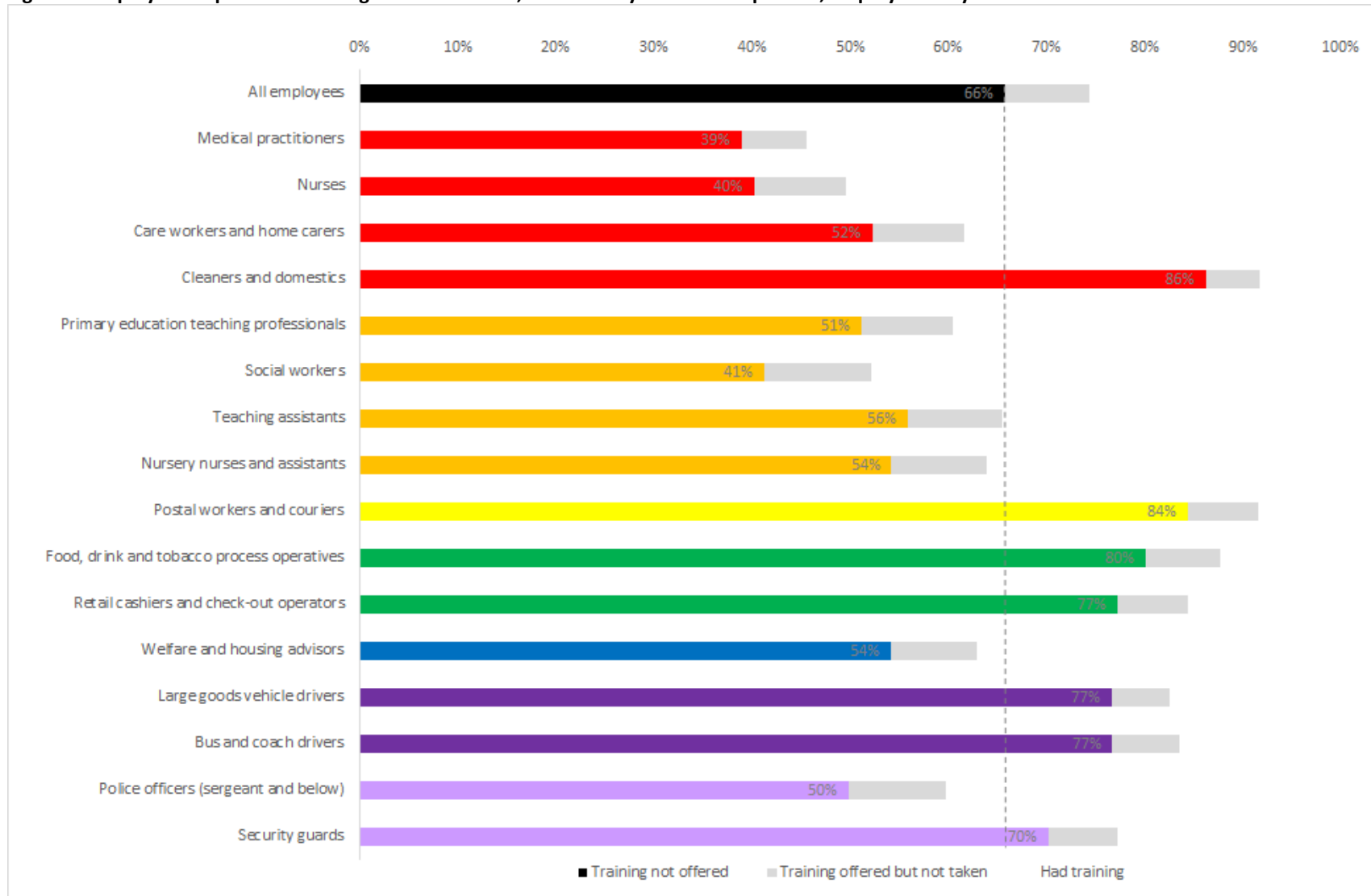
Figure 7: Suffered any illness or disability caused by job in last year, selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Question asked to respondents: *Within the last twelve months have you suffered from any illness, disability or other physical or mental problem that was caused or made worse by your job or by work you have done in the past?*

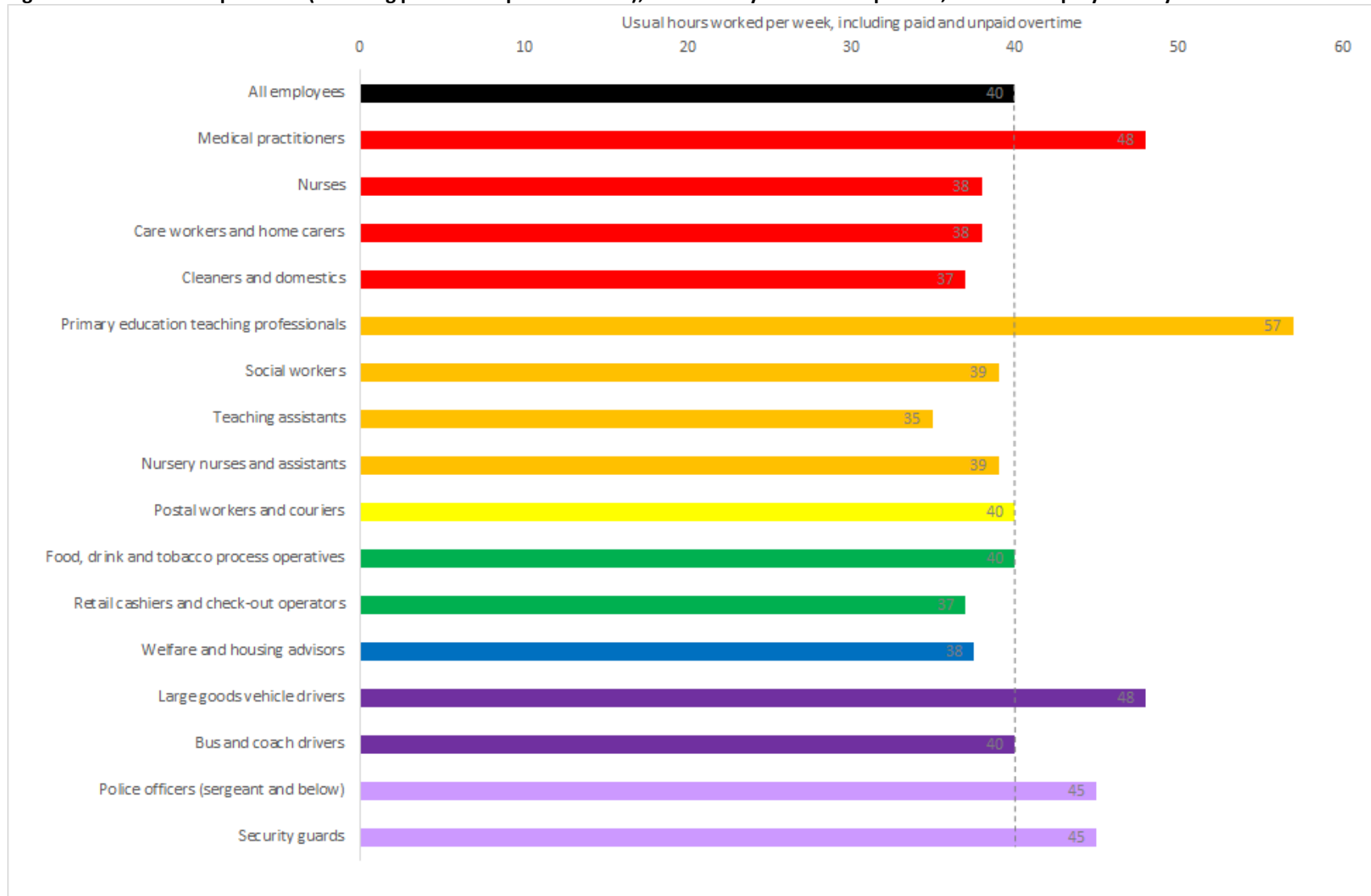
Figure 8: Employer not provided training in last 3 months, selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Question asked to respondents: *In the last 3 months, has your (previous or current) employer offered you any training or education either on, or away from, your job?*

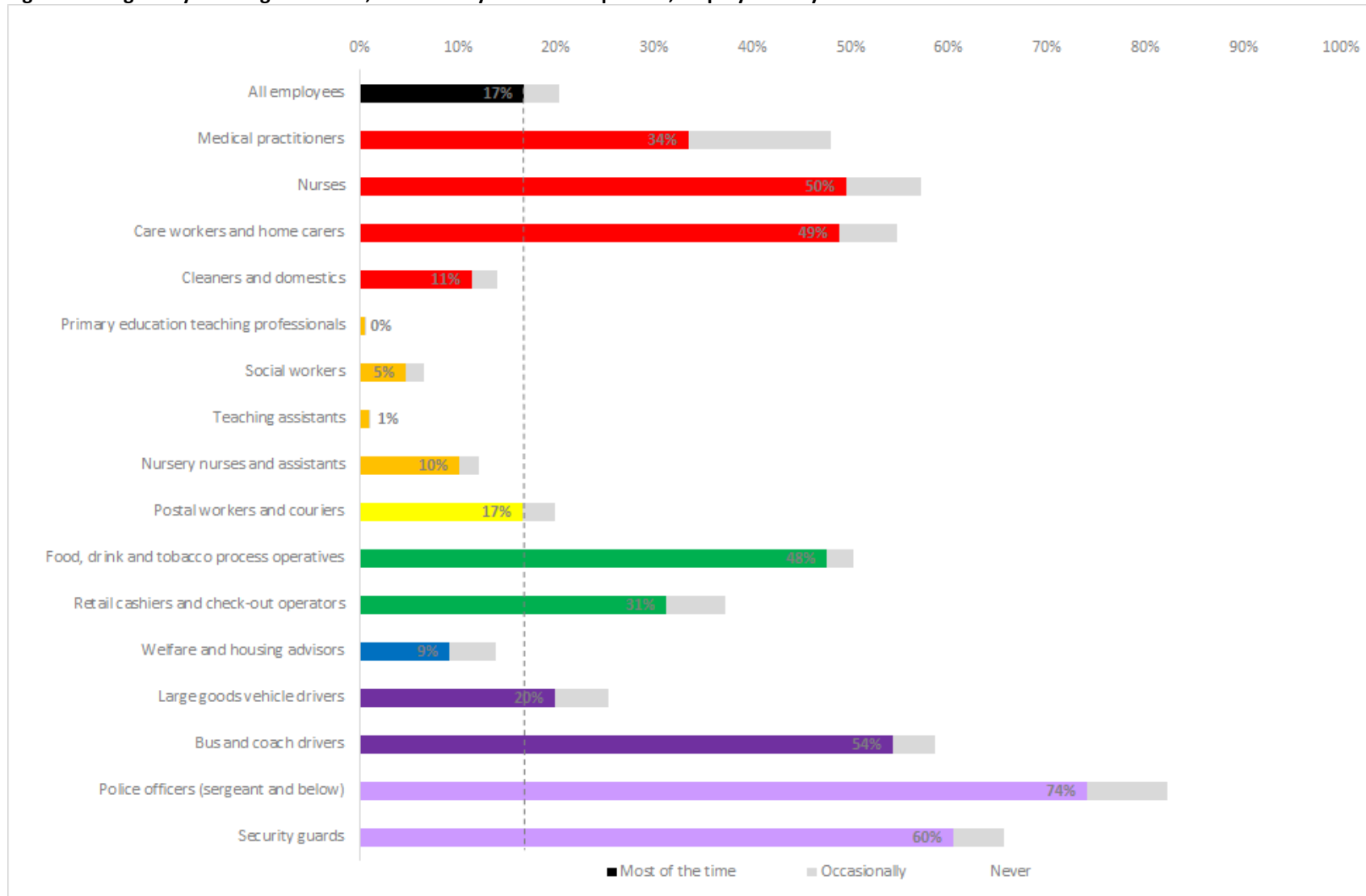
Figure 9: Hours worked per week (including paid and unpaid overtime), selected key worker occupations, full-time employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

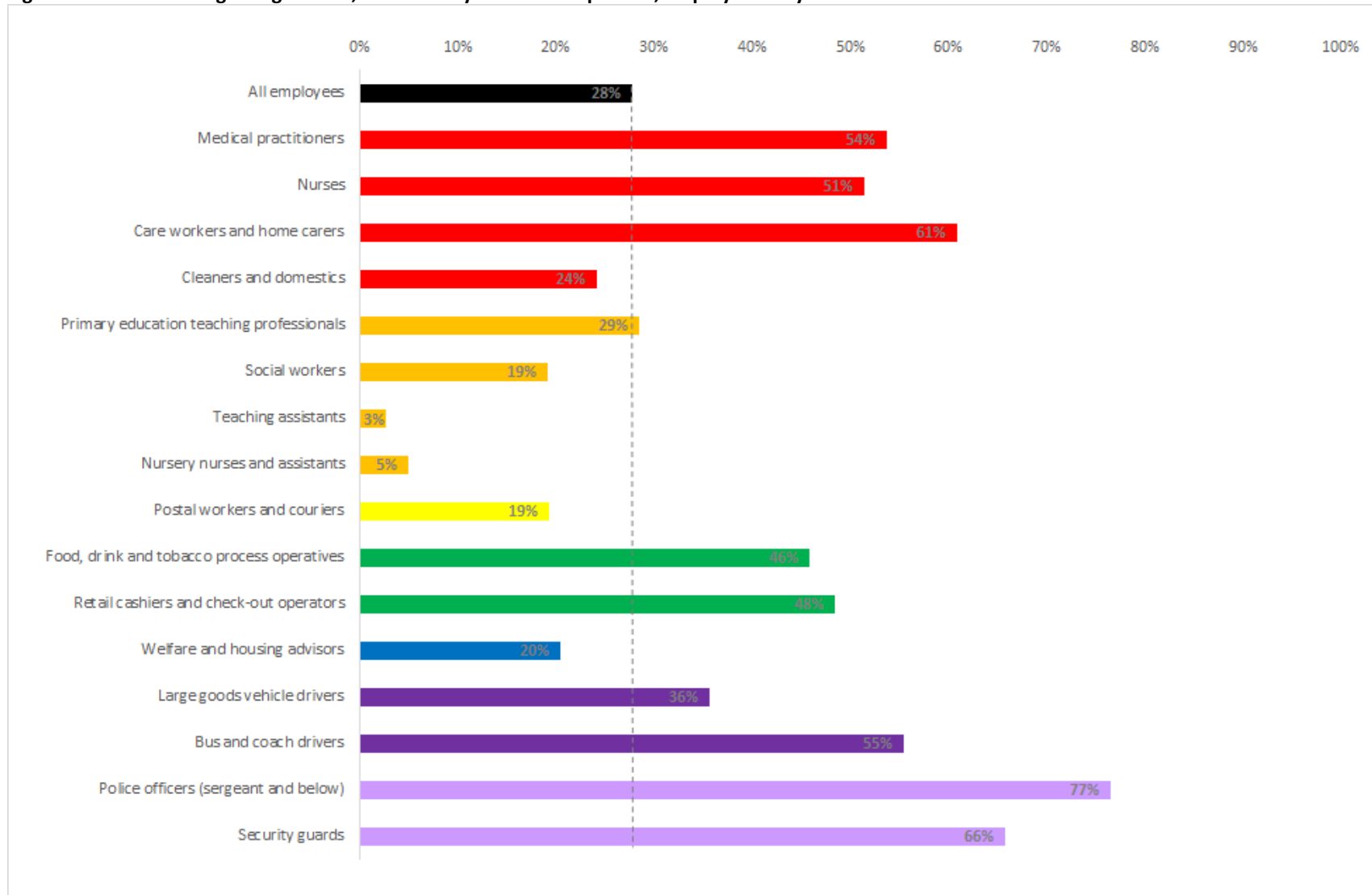
Question asked to respondents: How many hours per week do you usually work in your (main) job/business – please exclude meal breaks? How many hours unpaid overtime do you usually work per week?

Figure 10: Regularity of doing shift work, selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019
 Question asked to respondents: *Do you do shift work in your job?*

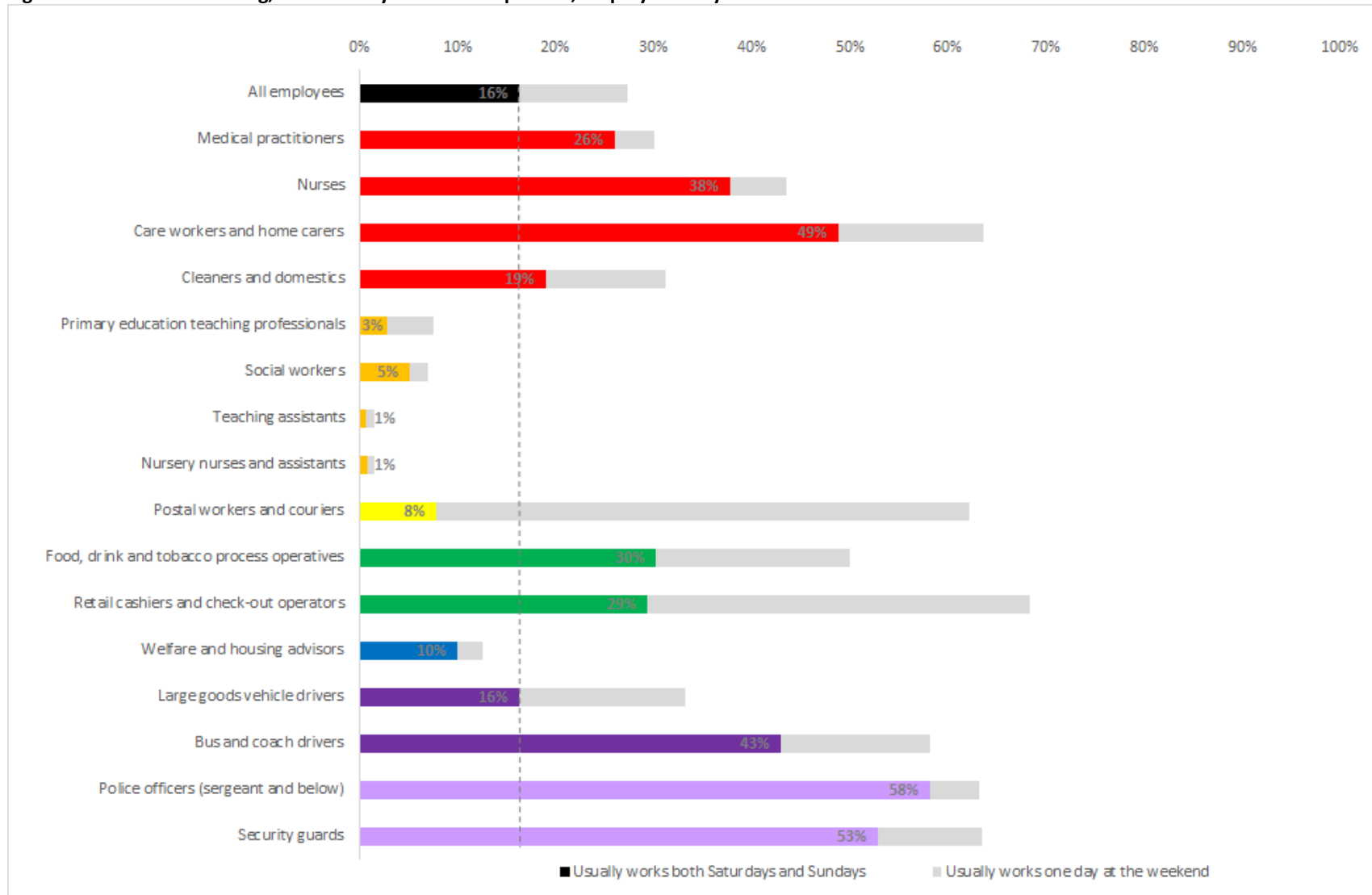
Figure 11: Usual evening or night work, selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Question asked to respondents: *Within your usual pattern of work is it usual for you to work in the evening, or at night?*

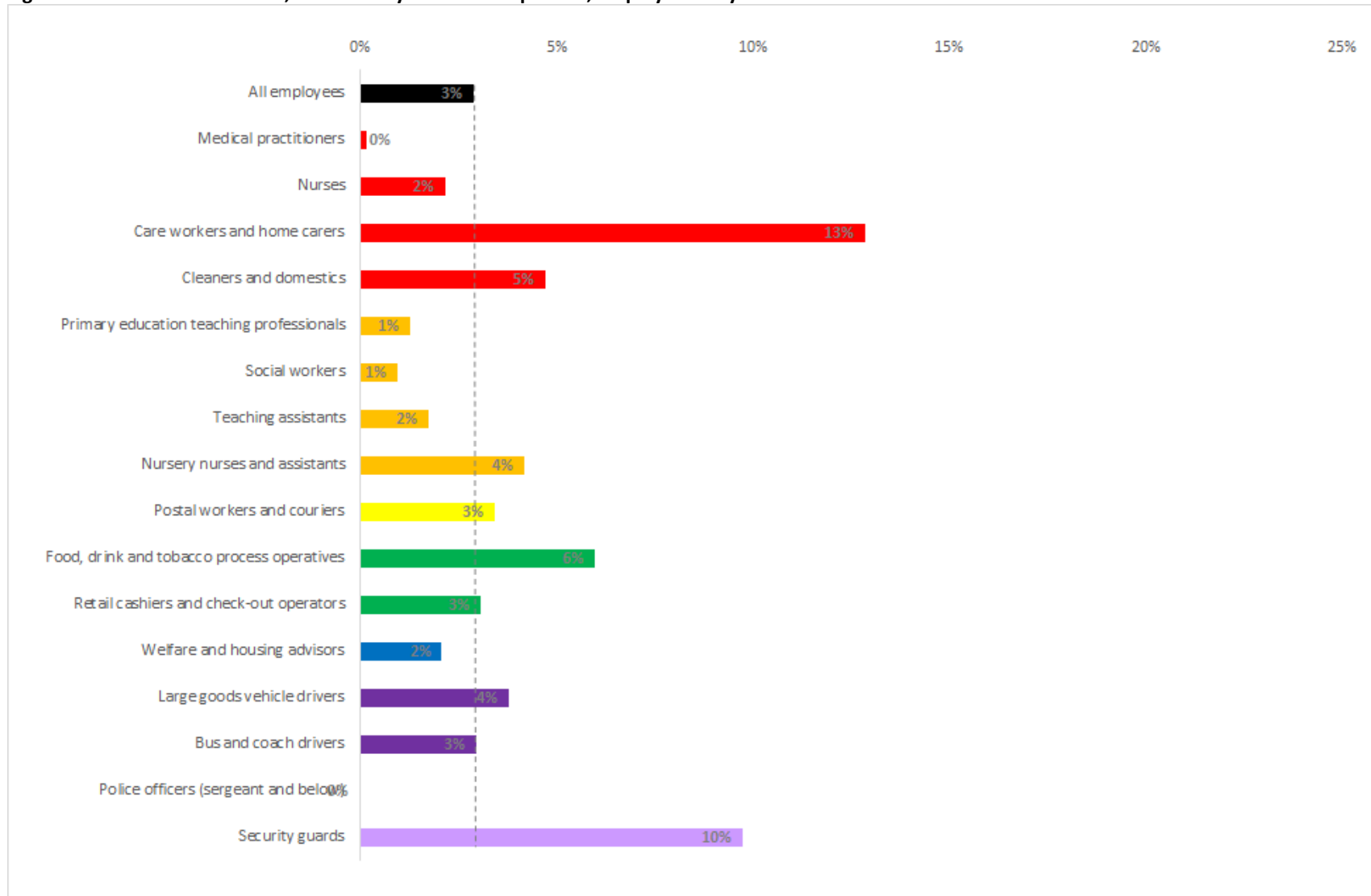
Figure 12: Weekend working, selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Question asked to respondents: *On how many (different) days per week do you usually work?, May I just check, on which days do you usually work?*

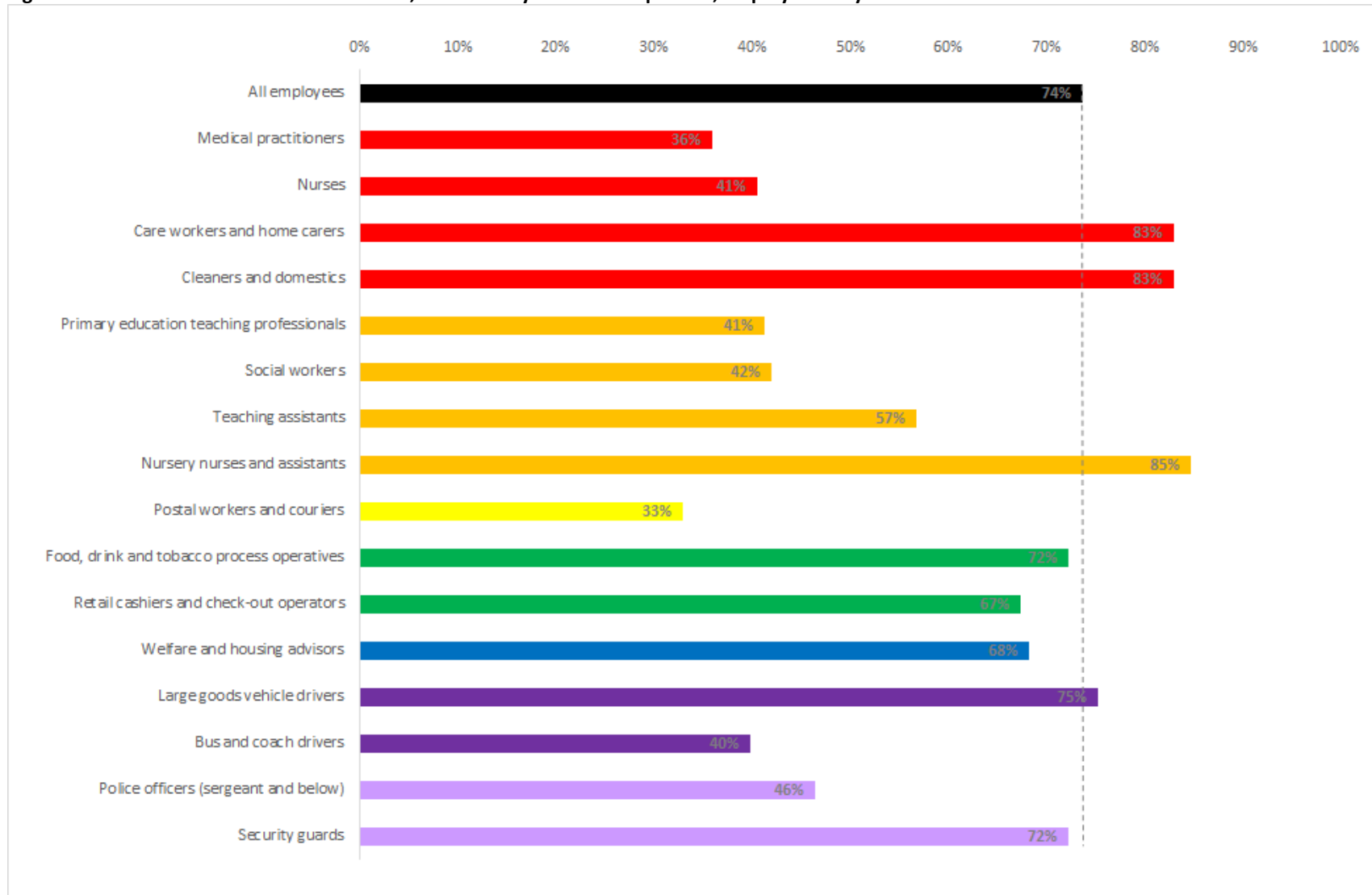
Figure 13: Zero hours contracts, selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Question asked to respondents: *Some people have special working hours arrangements that vary daily or weekly. In your (main) job is your agreed working arrangement any of the following...zero hours contract?*

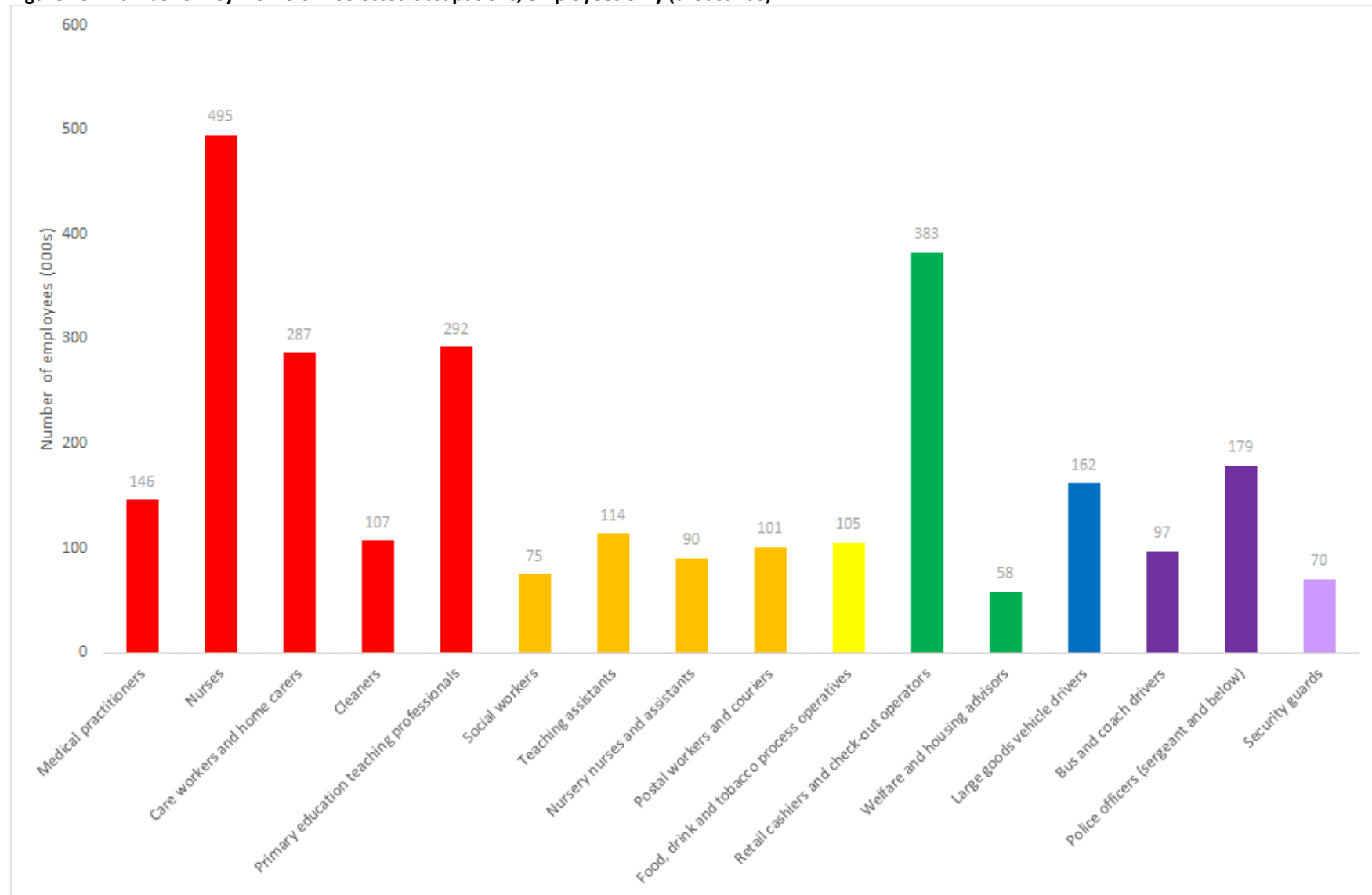
Figure 14: No trade union or staff association, selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

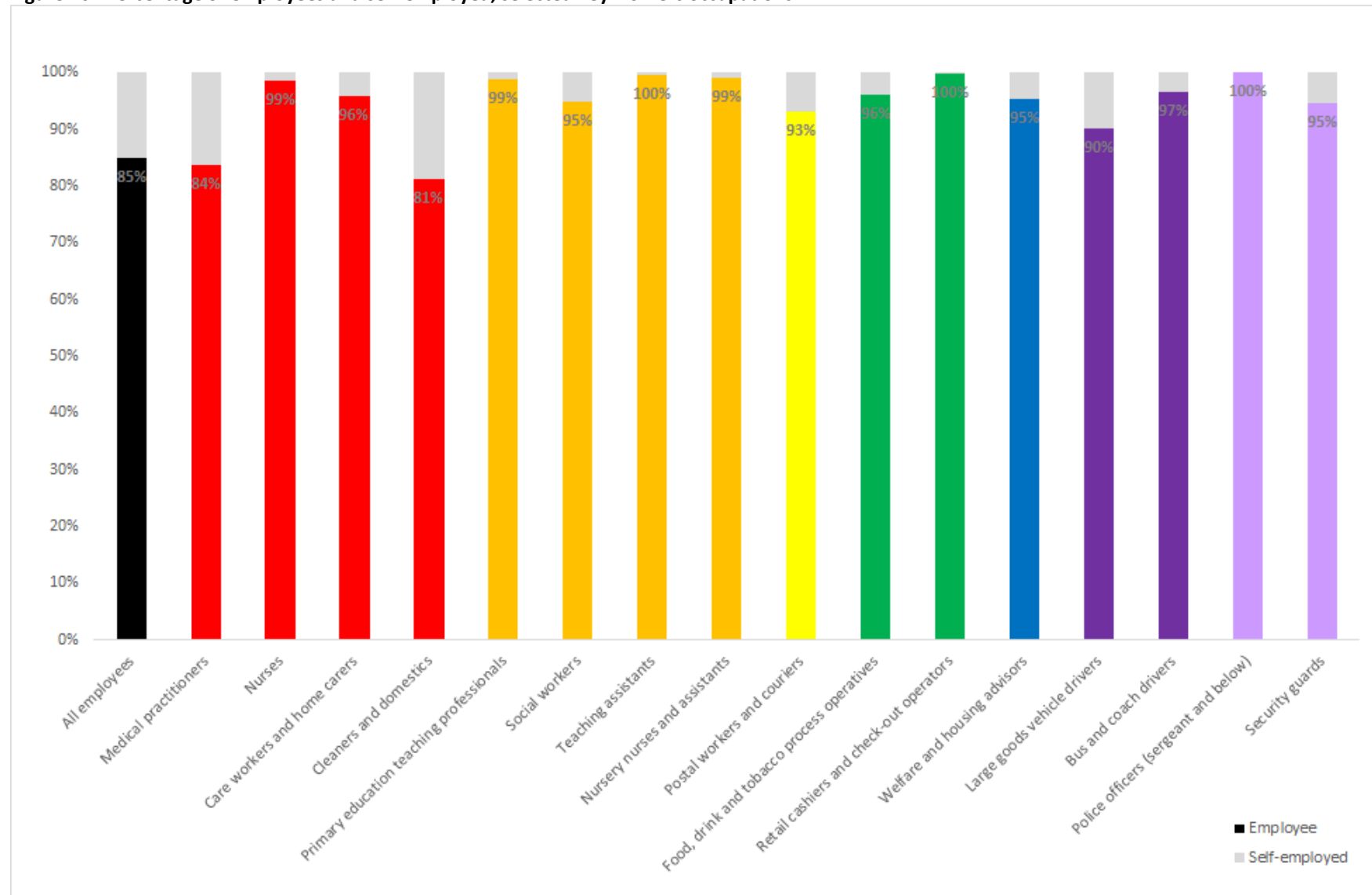
Question asked to respondents: Are your pay and conditions of employment directly affected by agreements between your employer and any trade union or staff association?

Figure 15: Number of key workers in selected occupations, employees only (thousands)



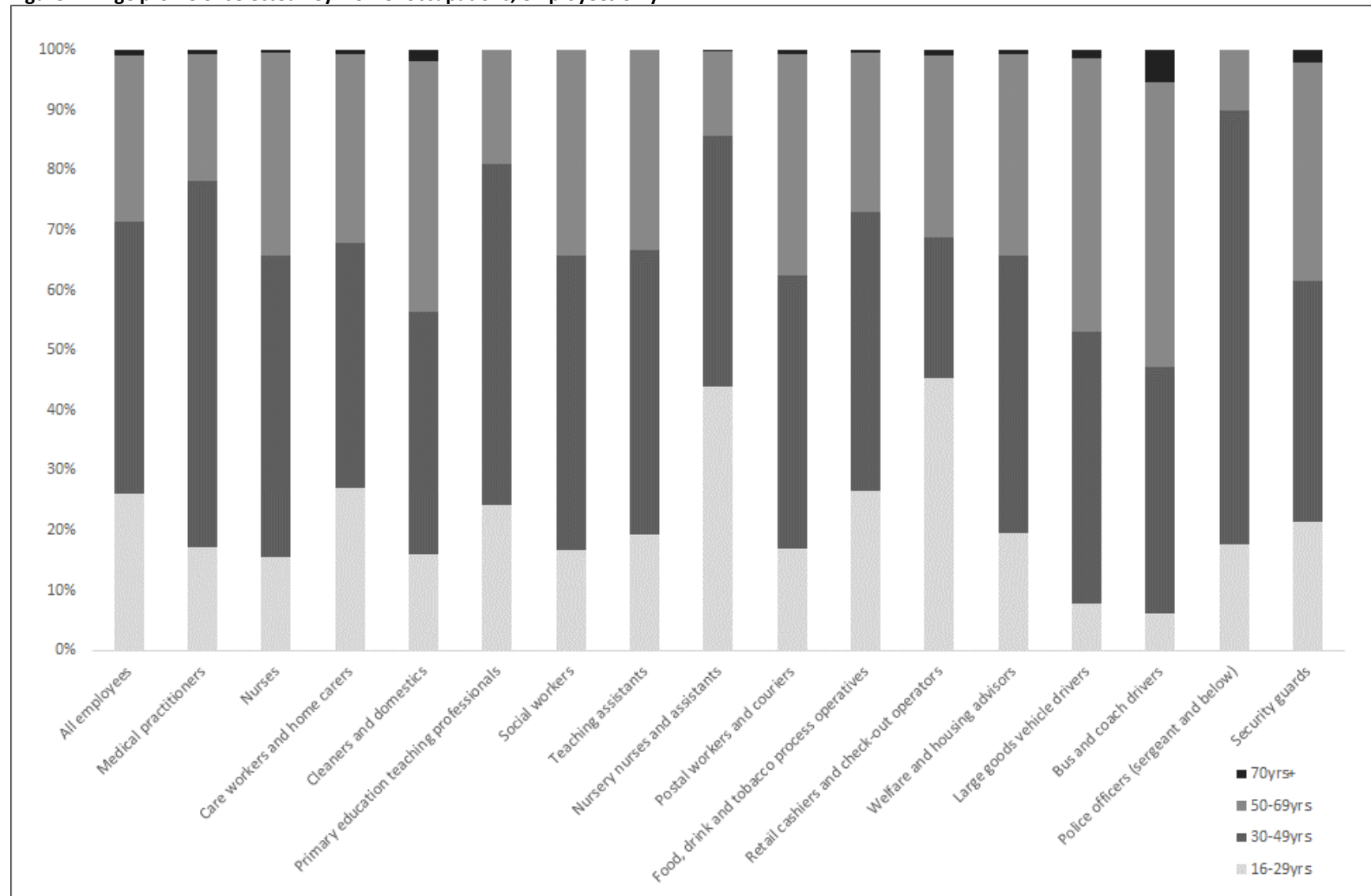
Source: Annual Survey of Hours and Earnings (ASHE) 2019 (ONS, [2019](#))

Figure 16: Percentage of employees and self-employed, selected key workers occupations



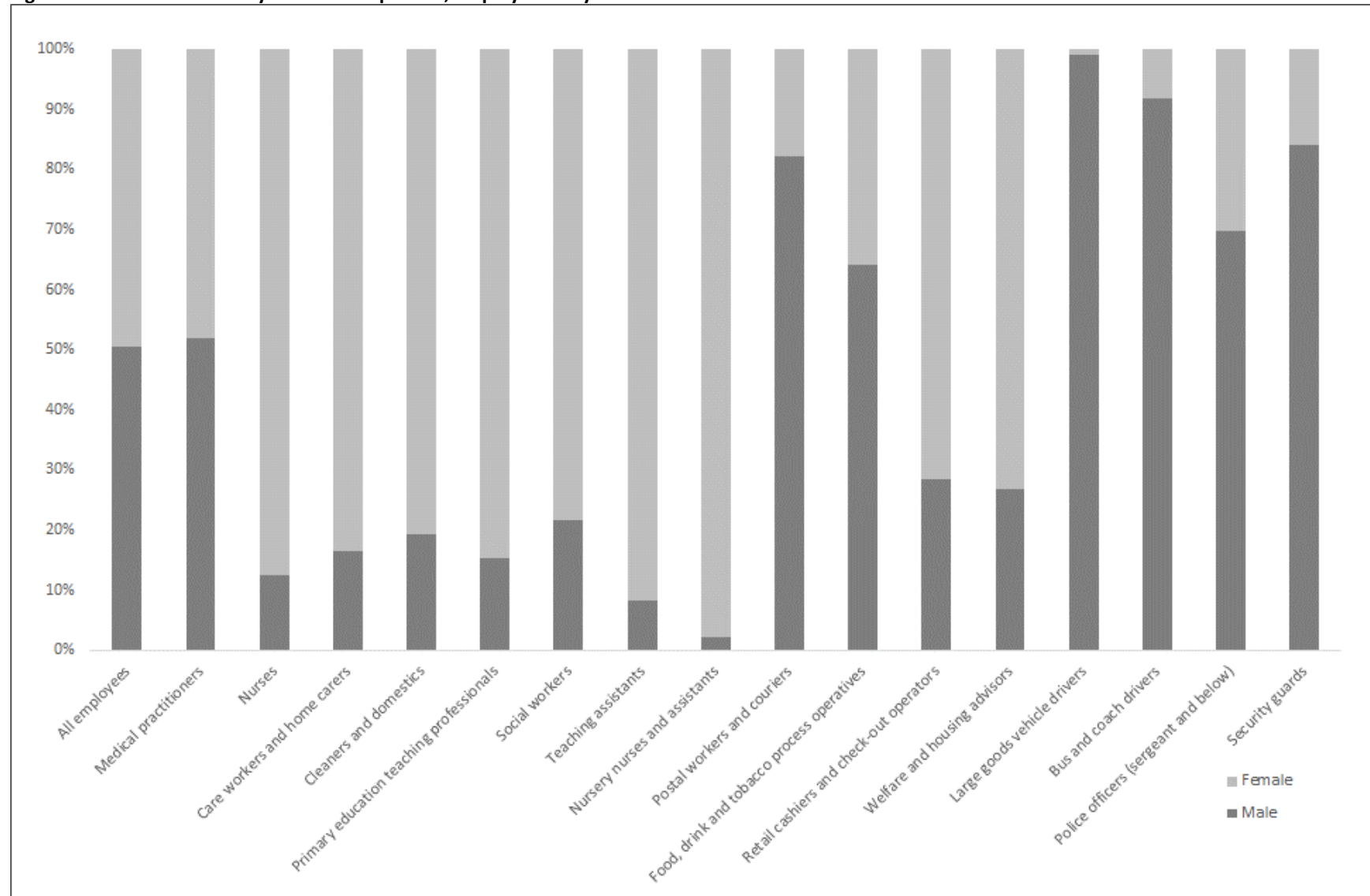
Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Figure 17: Age profile of selected key worker occupations, employees only



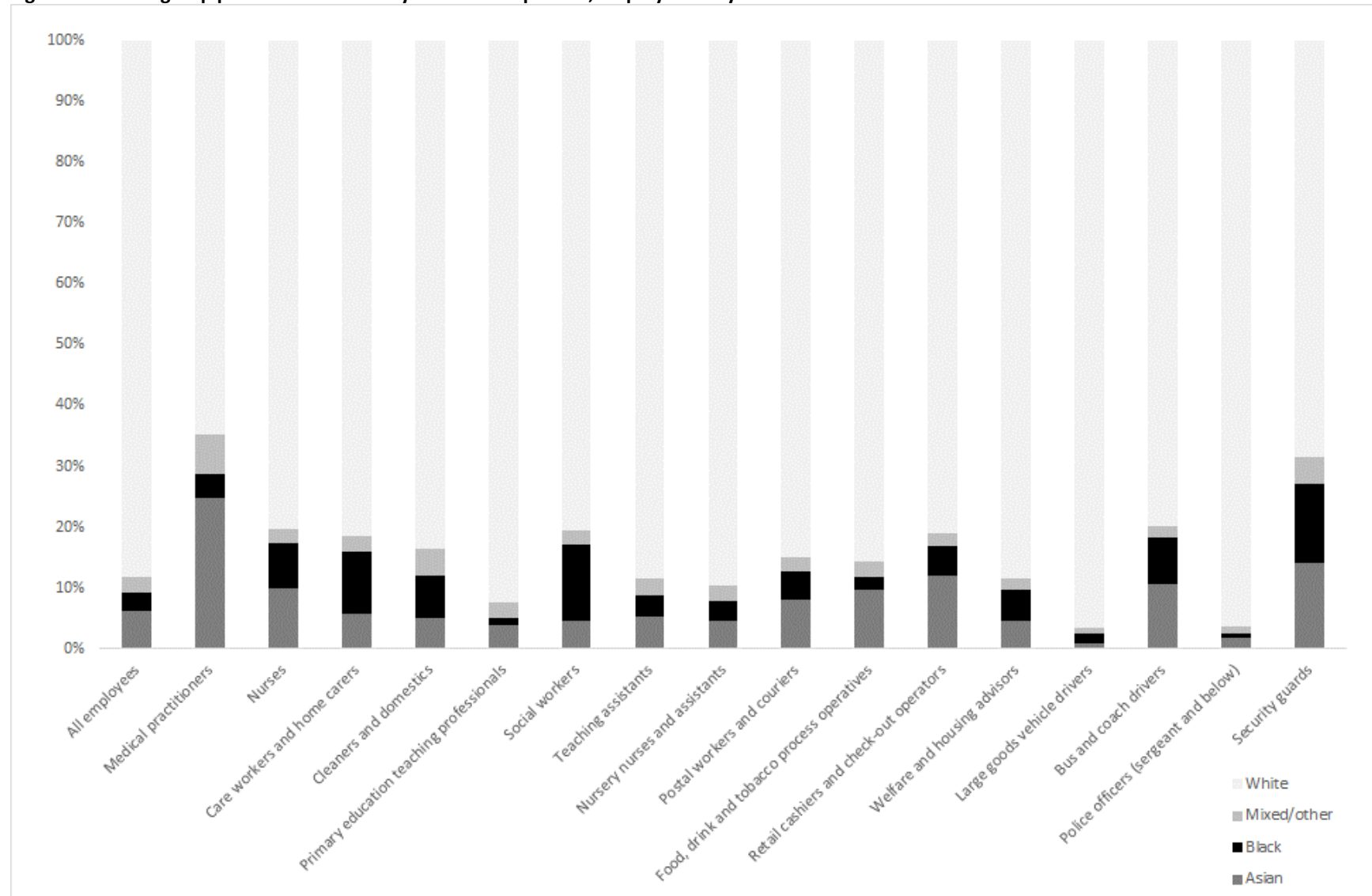
Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Figure 18: Sex of selected key worker occupations, employees only



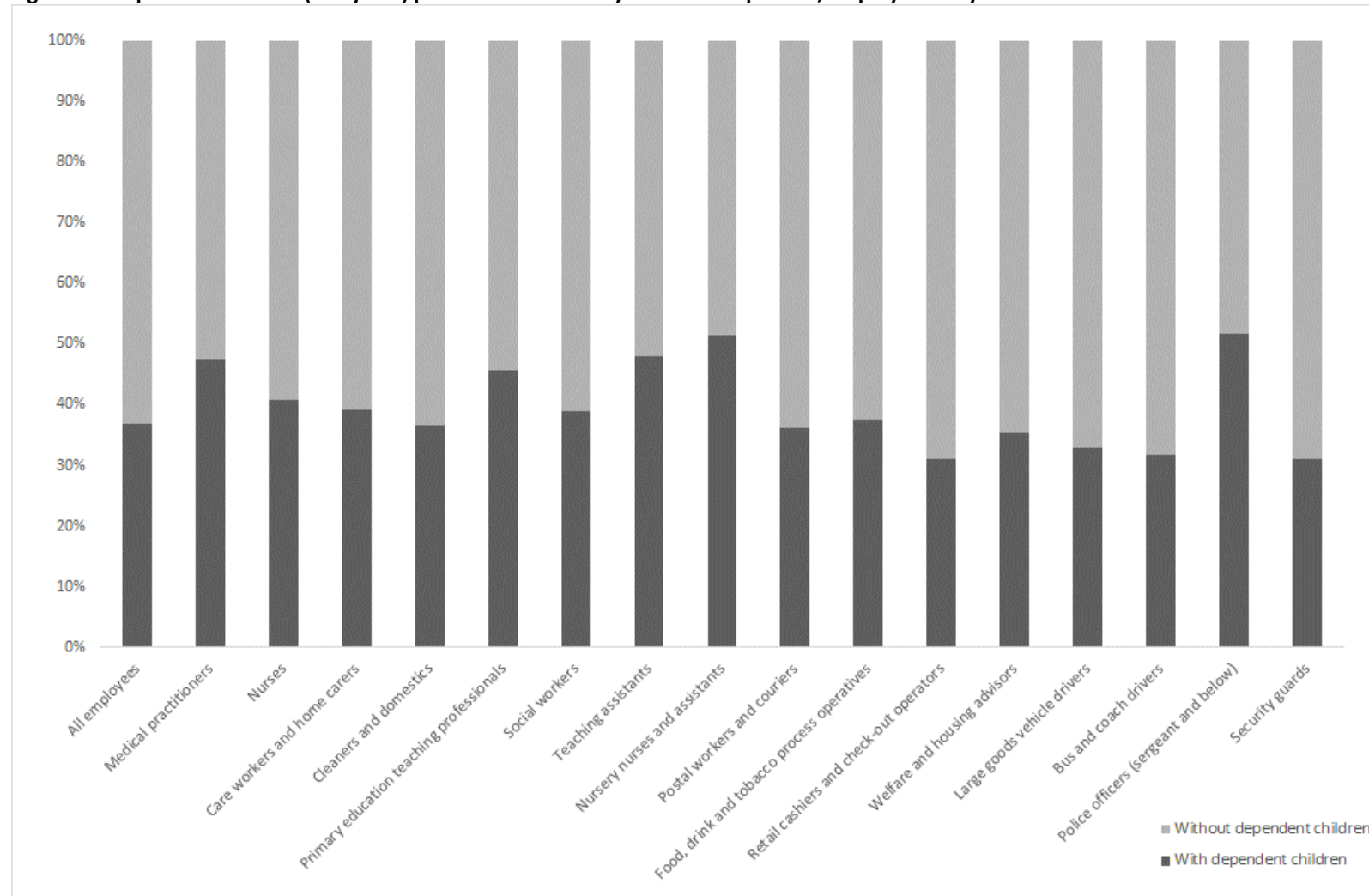
Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Figure 19: Ethnic group profile of selected key worker occupations, employees only



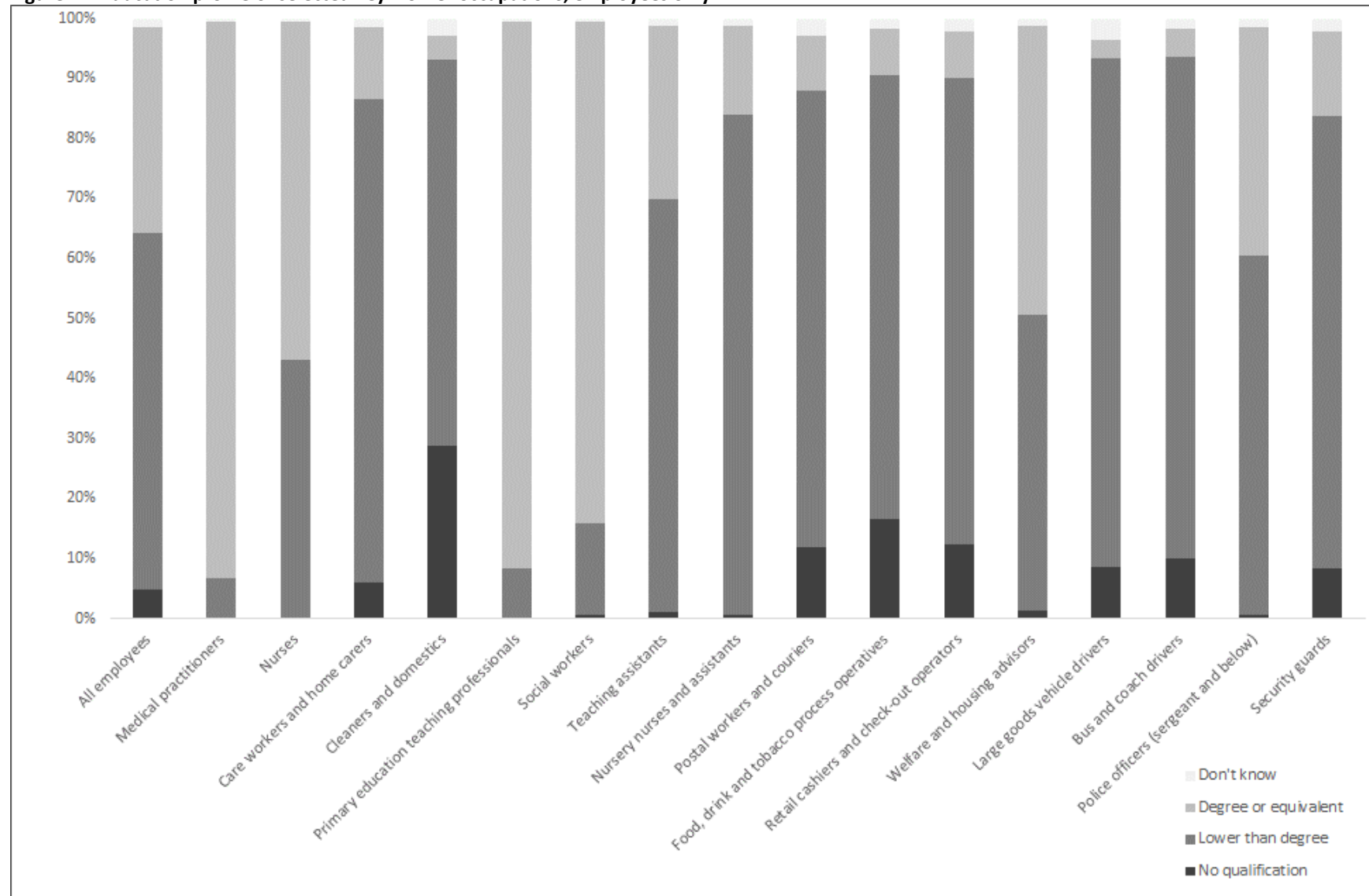
Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Figure 20: Dependent children (<16 years) profile of selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019

Figure 21: Education profile of selected key worker occupations, employees only



Source: Authors own analysis of pooled Labour Force Survey 2016-2019



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