



The Continuous Working Patterns (CWP) Survey is a seven day diary completed by trained, UK regular personnel to record the number of hours spent at work, on call, on breaks and off duty. The aim of the survey is to measure and describe the working patterns of trained, UK regular personnel.

This publication provides results from the CWP Survey 2022/23 along with results from previous years by Service, broad location and rank group.

Key Points and Trends - 2022/23

44.3 hours Average weekly hours worked by trained, UK regular personnel
Similar to 2021/22.

49.2 hours Royal Navy personnel have the highest average weekly hours worked
Similar to 2021/22 .

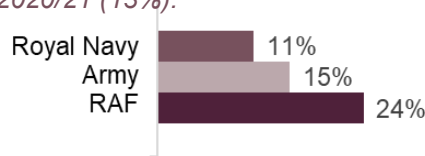


65.4 hours Average weekly hours spent on duty by trained, UK regular personnel
Similar to 2021/22.

9% Of trained, UK regular personnel worked excessive hours
Similar to 2021/22. Excessive hours refer to working more than 70 hours during the week surveyed.

6.3 hours Average weekly unsociable hours worked by trained, UK regular personnel
Similar to 2021/22. Unsociable hours refer to any hours worked between 18:00 and 6:00, Monday to Friday, and any hours worked on Saturday and Sunday.

14% Is the CWP Survey's valid response rate
A decrease of three percentage points since 2021/22 (17%) and returning to levels similar as in 2020/21 (13%).



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Background quality report: https://www.gov.uk/government/collections/armed-forces-continuous-working-patterns-survey-index

Would you like to be added to our contact list, so that we can inform you about updates to these statistics and consult you if we are thinking of making changes? You can subscribe to updates by emailing Analysis-Publications@mod.gov.uk

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## Introduction

### About these statistics

The Chief of Defence People (CDP) sponsors the CWP survey under a remit from the Armed Forces Pay Review Body (AFPRB).

The CWP Survey 2022/23 was distributed to 23,296 trained UK Regular personnel between October 2022 to May 2023 using both online and paper questionnaires. Participants were chosen using stratified simple random sampling, designed to ensure sufficient responses from each Service and from each rank group within each Service.

Overall, 3,314 of the returned surveys were considered valid, which represents a response rate of 14%. This is a decrease compared to the 2021/22 Survey where the response rate was 17%. Of these valid surveys, there were 537 responses from the paper survey, which equates to about one fifth of all valid responses.

### Data Quality Note

CWP survey 2020/21 was in field from November 2020 to June 2021, during a time of national restrictions imposed as a result of the COVID-19 pandemic, and two national lockdowns which may have influenced results. **The potential impact of COVID-19 on personnel's working pattern should still be considered when comparing this year's 2022/23 results with 2021/22.** Some working patterns reported in 2022/23, when compared to working patterns reported in 2020/21, have reverted back to levels reported in 2019/20. COVID-19 was present for a smaller proportion of time in this period and may have had less of an impact on working patterns.

An online version of the survey was introduced in the second wave of CWP 2020/21 to improve response rates following feedback on the difficulties distributing paper questionnaires during lockdowns. For the last two years, the online survey is utilised in both waves and distributed to all personnel in the sample. Moreover, we carried out a trial of sending additional surveys to deployed locations to improve response rates, due to observations and feedback on difficulties in collecting responses from deployed locations. Unnamed batches of the survey were sent to deployed locations for distribution, in addition to the ones sent to identified deployed personnel from the main sample. We then sent periodic reminders to these named points of contact at these locations to encourage the distribution of the online link, to further boost response rates.

Although an improvement in response rate was seen last year in 2021/22 with the full introduction of the online survey and the introduction of the deployed surveys trial, response rates this year have returned to levels seen in 2020/21. We plan to investigate why this has occurred. Those who responded online may have different working patterns to those who responded on paper; and those responded to the deployed surveys trial might have different working patterns to the identified deployed personnel from the main sample.

To better understand the possible effect on results, paper and online responses have been analysed and compared separately as part of the analysis this year. Similarly, responses from the deployed surveys trial were analysed separately and compared to the analysis of the original deployed sample. The main report and accompanying reference tables to this report provide the combined paper and online results and the combined results from the deployed personnel surveys trial and the main deployed personnel surveys. More detail is provided in the [Background Quality Report](#).

## About this statistical release

The CWP survey consists of a seven day diary of time spent at work, on break, on call and off duty. The following definitions are used within the questionnaire and therefore hold within this report:

### **Work includes:**

- \* Normal work
- \* Duty personnel, when working
- \* Compulsory fitness training
- \* Duty travel
- \* Service representational duties
- \* Working from home
- \* Exercise / Operations working time
- \* Instruction / training course
- \* Ceremonial / hosting duties
- \* Secondary duties (for example Mess Treasurer)

### **Breaks include:**

- \* Meal and tea breaks

### **On call includes:**

- \* Held in a specified location
- \* Duty personnel, when on standby
- \* Held at 48 hours or less Notice to Move (NTM)
- \* On call at a place of duty
- \* Period of off duty / stand down on exercise or operations

### **Off duty includes:**

- \* Leave (for less than 24 hours)
- \* Off duty / stand down (except for when on exercise / operations—see on call)
- \* Travel between home and place of duty

In addition, the following terminology has been used throughout this report:

- “On duty” refers to time spent at work, on call or on breaks.
- “Royal Navy” refers to the Royal Navy and the Royal Marines.

## Data quality

The [Army Basing Programme](#) aimed to bring all Army units back from Germany to the UK by 2020. The numbers of personnel based in Germany greatly reduced since 2019/20 from a few thousand to just a few hundred.

This has greatly reduced the number of responses received from Germany. Therefore, breakdowns of Army results for Germany have not been included in this report since 2019/20. However, Germany responses have been included in the overall Army and Tri-Service results.

Excel Reference tables, ODS References tables and CWP 2022/23 questionnaires are published as separate documents and can be found on the CWP webpage here: <https://www.gov.uk/government/collections/armed-forces-continuous-working-patterns-survey-index>

As well as providing details of the working patterns of the Services, the reference tables also provide details of the three single Service working patterns broken down by rank group and broad locations each year from the 2015/16 Survey. This time series data is presented in a series of tables and graphs.

Please see the [Background Quality Report](#) for full details of the survey methodology, analysis and data quality considerations.

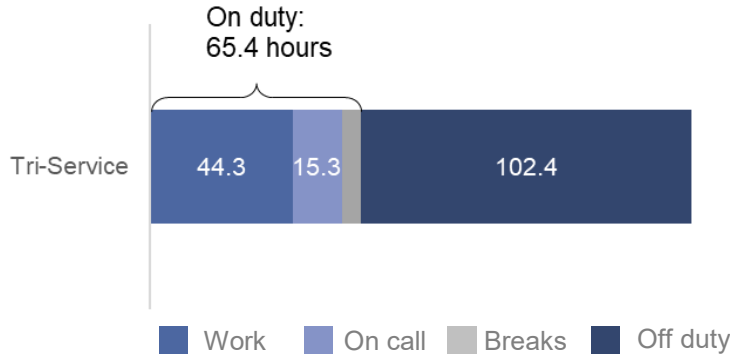
Note: Throughout the publication, where statistical significant tests applied in order to detect any statistical differences in working patterns between the current year (2022/23) and the previous year (2021/22), a series of z-tests were conducted at a 95% confidence interval.

# Section 1: Tri-Service

## 1.1 Working patterns, 2022/23

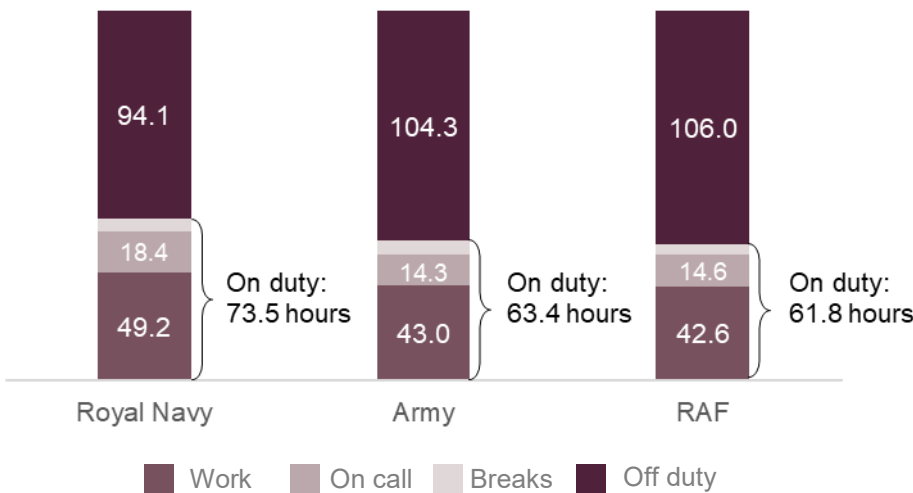
Average hours worked (44.3 hours) and hours spent on call (15.3 hours) have remained stable at a Tri Service level since last year. As a result, average time spent on duty (65.4 hours) remains similar to last year (66.6 hours) at a Tri Service level.

**Figure 1.1: Working patterns of personnel, 2022/23**



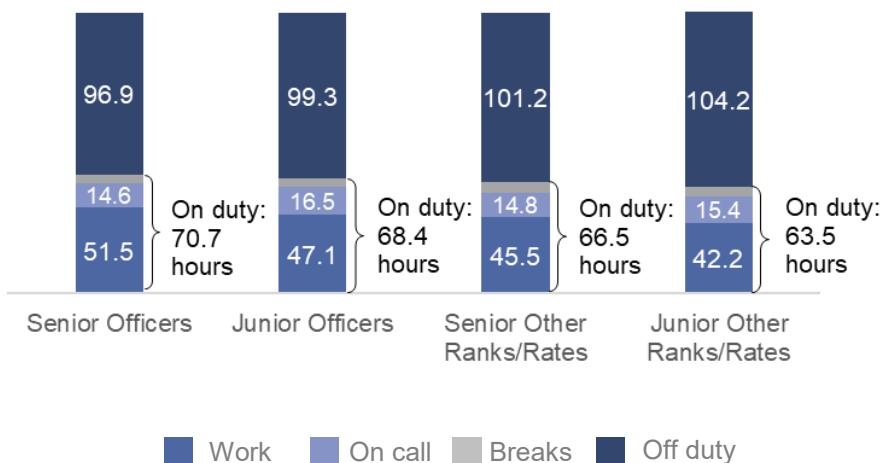
On average, personnel worked 44.3 hours per week, similar to last year (44.6 hours). This year, personnel spent 15.3 hours per week on call. This is also at a similar level to last year (16.0 hours).

**Figure 1.2: Working patterns of all personnel by Service, 2022/23**



On average, Royal Navy report more time at work, on call and on duty than the other Services. This difference is largely due to Royal Navy sea-based personnel who report considerably higher average hours worked, on call and on duty than personnel based on shore.

**Figure 1.3: Working patterns of personnel by rank group, 2022/23**



Senior Officers report the highest time spent on duty, reporting the highest average hours worked amongst all rank groups.

Junior Other Ranks/Rates report the lowest average time spent on duty, reporting the lowest average hours worked.

**Table 1.1: Working patterns of personnel, 2021/22 - 2022/23**

	At Work		On Call		On Duty	
	2021/22	2022/23	2021/22	2022/23	2021/22	2022/23
<b>Tri-Service</b>	44.6	44.3	16.0	15.3	66.6	65.4
<b>Royal Navy</b>	49.2	49.2	21.6	18.4 ▼	75.8	73.5
<b>Army</b>	43.3	43.0	13.6	14.3	63.6	63.4
<b>RAF</b>	43.2	42.6	16.1	14.6	64.6	61.8 ▼
<b>Senior Officers</b>	49.9	51.5 ▲	18.5	14.6 ▼	73.1	70.7 ▼
<b>Junior Officers</b>	47.5	47.1	16.8	16.5	69.6	68.4
<b>Senior Ranks/Rates</b>	45.3	45.5	15.8	14.8	67.4	66.5
<b>Junior Ranks/ Rates</b>	43.0	42.2	15.5	15.4	64.8	63.5

**Key:**

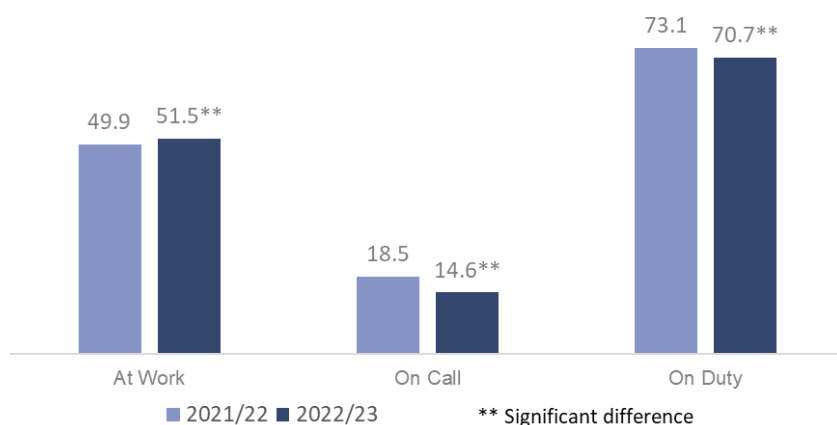
- ▲ Significant increase from 2021/22
- ▼ Significant decrease from 2021/22

At a Tri Service level, time spent at work, on call and on duty in 2022/23 has remained similar to the figures reported in 2021/22.

At the single service level, there are two notable changes between this year and last. Royal Navy personnel reported a decrease of time spent on call from 21.6 hours in 2021/22, to 18.4 hours in 2022/23. Whilst RAF personnel have seen a decrease in time spent on duty this year compared to last (61.8 hours and 64.6 hours respectively). There are no other significant differences present at the single service level compared to last year.

Within different rank groups, Senior Officers were the only rank that saw notable differences between this year and last. On average, this year Senior Officers spent 51.5 hours per week at work, this is an increase from last year (49.9 hours).

**Figure 1.4: Working pattern of Senior Officers 2021/22 - 2022/23**



Meanwhile, time spent on call and on duty this year for Senior Officers (14.6 hours and 70.7 hours) has seen a decrease compared to last year (18.5 hours and 73.1 hours respectively). Time spent at work, on call and on duty by Junior Officers and both Senior and Junior Ranks/Rates in 2022/23 has remained relatively similar to the levels previously reported in 2021/22.

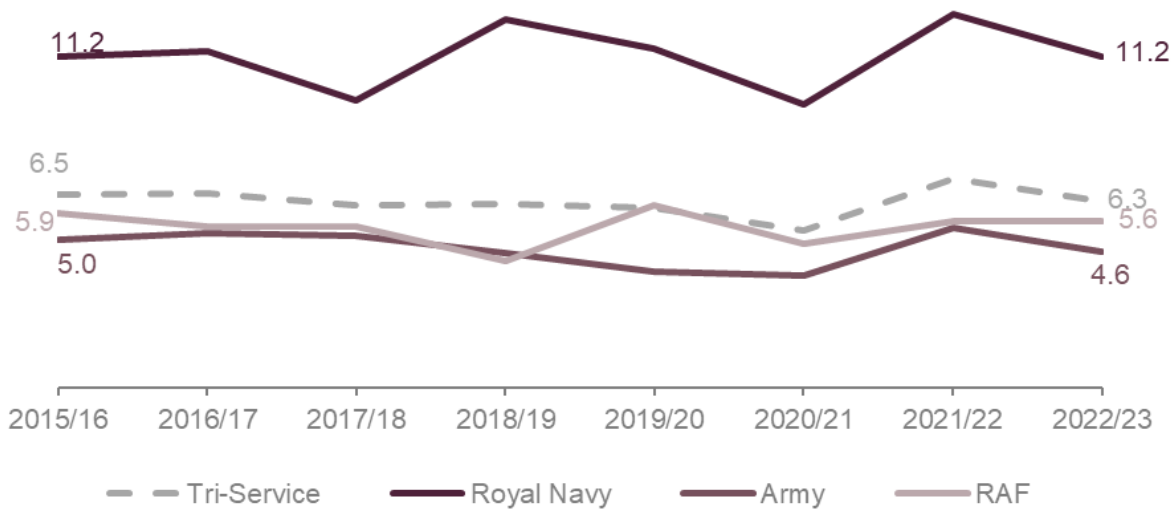
## 1.2 Unsociable hours worked by personnel, 2015/16 - 2022/23

Unsociable hours are described as:

- Any hours worked between 18:00 and 06:00, Monday to Friday
- Any hours worked on Saturday and Sunday

In 2022/23, personnel worked, on average, 6.3 unsociable hours per week. This is a similar level to last year (7.1 hours). There have not been any changes in unsociable hours worked at a Service level for any Service compared to 2021/22.

**Figure 1.5: Unsociable hours worked by Service, 2015/16 - 2022/23**



Royal Navy personnel continue to report a higher average number of unsociable hours worked than the other Services (11.2 hours). This could be because sea-based personnel have additional duties and are therefore spending extra hours at work during unsociable hours.

### 1.3 Excessive hours worked<sup>1</sup> and spent on duty, 2022/23

Section 1.3 is based on the 1,663 UK regular personnel for whom a full week's data was available in 2022/23 (50% of all valid responses).

Overall, 9% of personnel worked more than 70 hours per week.

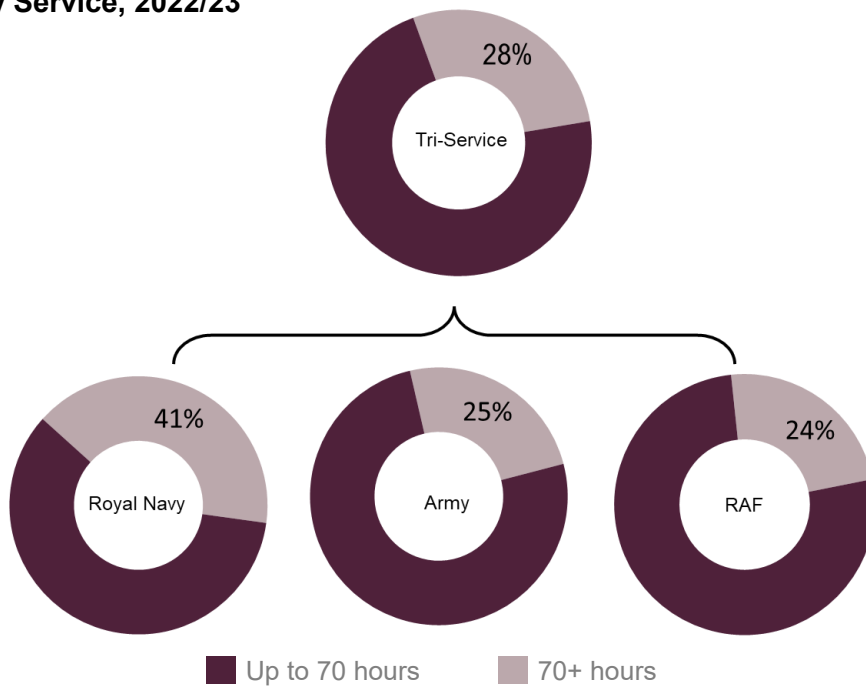
Royal Navy report 18% of personnel working excessive hours compared to 7% and 3% for Army and RAF personnel respectively.

Less variation exists in excessive hours worked by rank group. Junior Other Ranks/Rate were most likely to work excessive hours (10%). This is followed by Senior Officers (9%) and Senior Other Ranks/Rates (8%). Junior Officers were the least likely to work excessive hours (7%).

#### Excessive hours

The proportion of personnel who worked more than 70 hours during the week surveyed.

**Figure 1.6: Proportion of personnel spending more than 70 hours on duty for the week surveyed by Service, 2022/23**

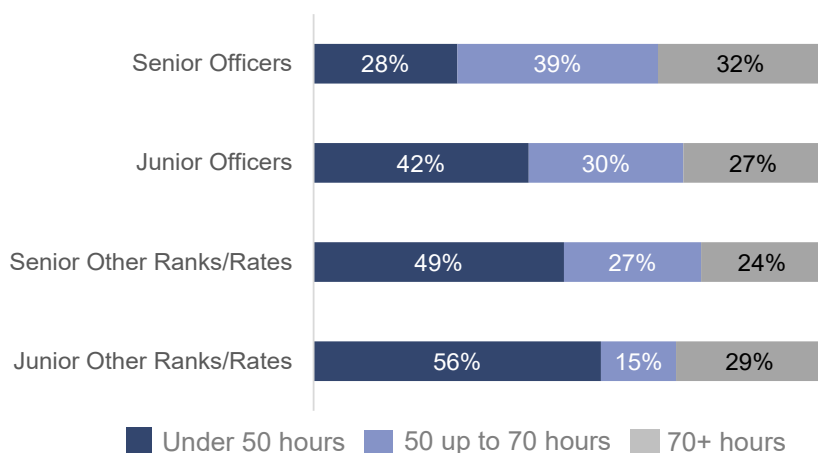


A larger proportion of Royal Navy personnel report spending more than 70 hours per week on duty than Army and RAF personnel (41% for the Royal Navy). This is most likely due to Royal Navy personnel being away at sea and having additional duties.

#### Data quality

The results on this page are based on a subset of respondents. As such, levels of precision are likely to be lower (wider confidence intervals) and are intended as an indication of the average working week.

**Figure 1.7: Distribution of hours on duty of personnel by rank group, 2022/23**



Other Ranks/Rates were most likely to report spending less than 50 hours per week on duty (56% for Junior Other Ranks/Rates and 49% for Senior Other Ranks/Rates). Senior Officers were the least likely to report the same (28%).

Senior Officers are most likely to spend excessive hours on duty (32%) and Senior Other Ranks/Rates the least (24%).

1. Please note time spent at work refers to time personnel spend carrying out normal work duties (Please see page 3 for a full definition of what this includes). While time spent on duty is a calculation of all time personnel spend at work, on call and on breaks.

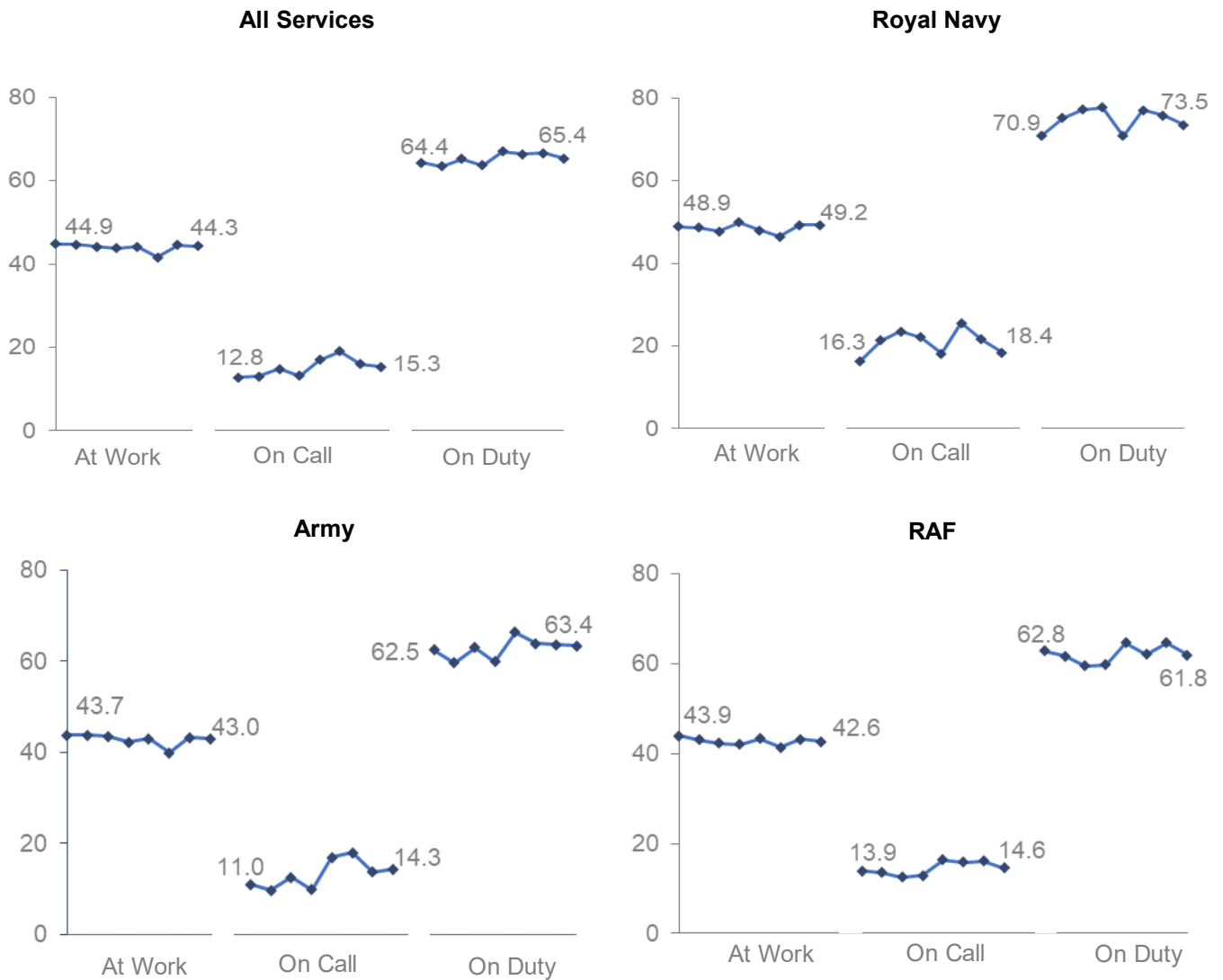
## 1.4 Time series of working patterns, 2015/16 - 2022/23

The time spent on duty at a Tri Service level has remained stable since 2019/20 (65.4 hours in 2022/23).

The number of work hours and on call hours has remained stable at a Tri Service level since last year (44.3 hours and 15.3 hours respectively in 2022/23).

The changes in working patterns since 2020/21 might reflect the impact of the COVID-19 pandemic, See [Background Quality Report](#) for more details.

**Figure 1.8: Comparison of average weekly hours spent at work, on call and on duty by Service, 2015/16 - 2022/23**



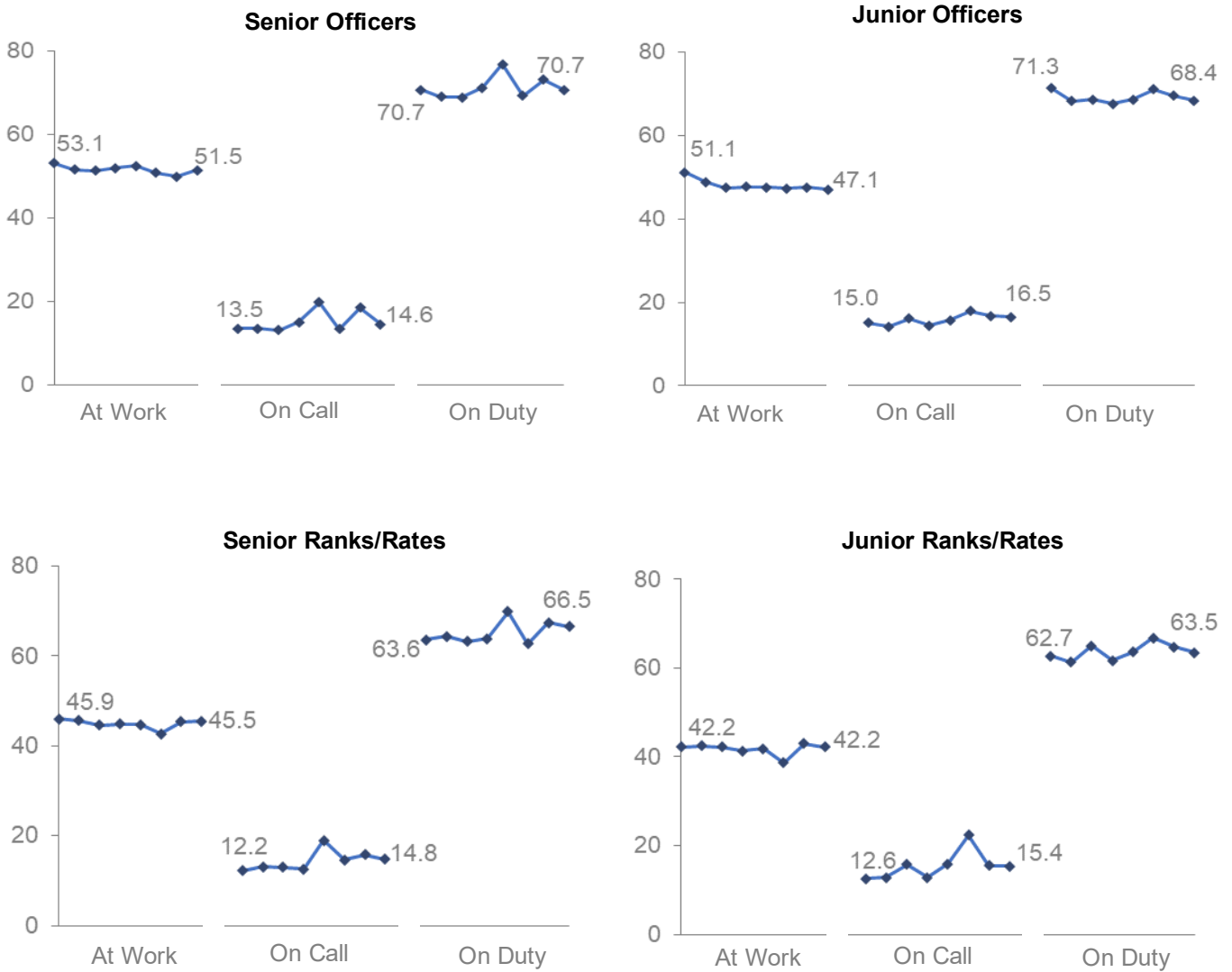
Royal Navy personnel continue to report higher average hours worked than the other Services. This is driven by personnel based at sea who work considerably more hours on average (65.7 hours), than those based on shore (43.7 hours). Following an increase in the number of hours worked in 2021/22 for all services, time spent at work has remained relatively stable this year.

Average on call hours fell for Royal Navy personnel this year (18.4 hours), whilst Army and RAF reported a similar amount of on call hours to last year (14.3 hours and 14.6 hours respectively).

Average on duty hours has remained similar to last year for Royal Navy and Army personnel, but decreased for RAF personnel (61.8 hours), reverting to level reported in 2020/21. This follows an increase last year in 2021/22 (62.1 hours in 2020/21 to 64.6 hours in 2022/23).



**Figure 1.9: Comparison of average weekly hours spent at work, on call and on duty by rank group, 2015/16- 2022/23**



Senior Officers reported an increase in their recorded average time worked since last year (*51.5 hours*). This is an increase from their lowest recorded hours worked of 49.9 hours, which was reported last year. At the same time, they report a decrease in on call hours in this time period (*14.6 hours*). Junior Officers now record the highest number of on call hours (*16.5 hours*). These changes for Senior Officers have also had an impact on their reported time spent on duty, as the recorded number of on duty hours for Senior Officers has also decreased since last year (*70.7 hours in 2022/23*).

Time spent at work, on call and on duty by Junior Officers and Other Ranks/Rates this year has remained relatively similar to the figures reported last year.

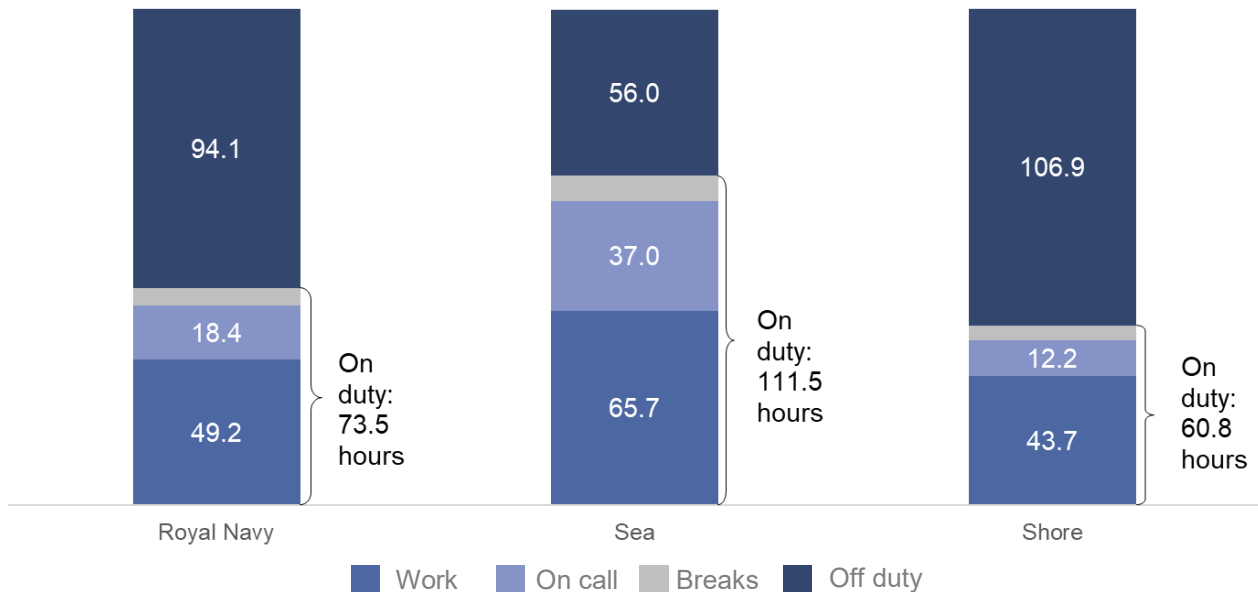
## Section 2: The Royal Navy

The Royal Navy is comprised of the Royal Navy (including Queen Alexandra's Royal Naval Nursing Service) and the Royal Marines.

### 2.1 Royal Navy working patterns, 2022/23

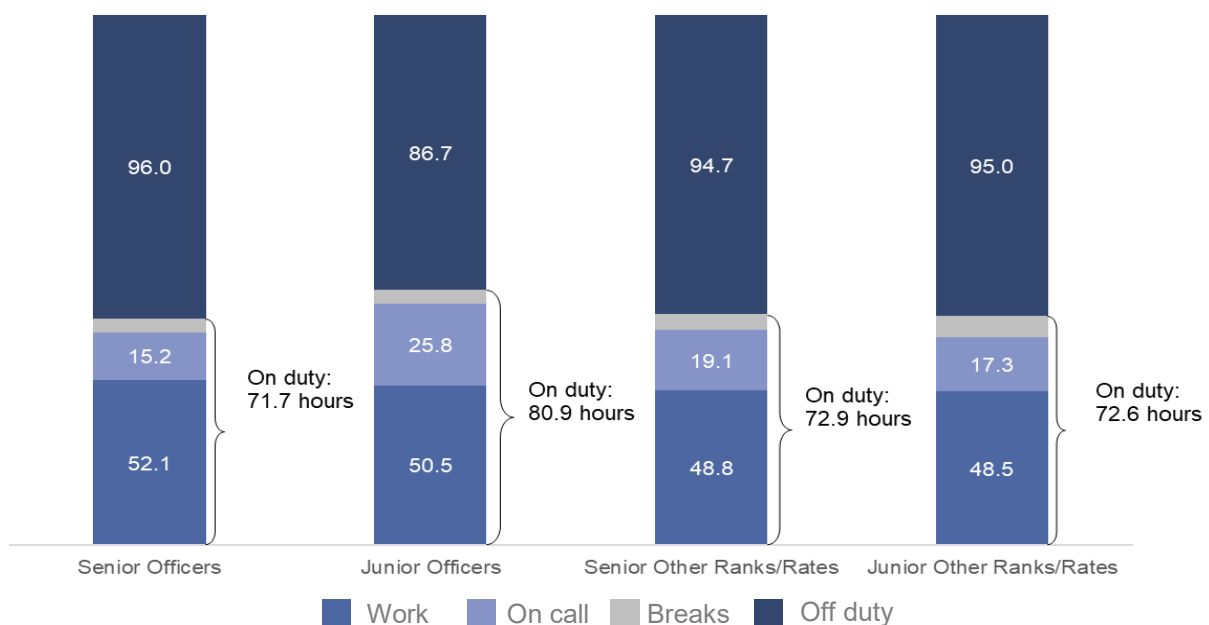
In 2022/23, Royal Navy personnel on average worked 49.2 hours per week, which has remained similar to the previous year 2021/22. During the same period, time spent on duty has remained similar, while time spent by personnel on call has decreased by 3.2 hours (18.4 hours in 2022/23).

**Figure 2.1: Royal Navy personnel working patterns by location, 2022/23**



In 2022/23, sea-based personnel on average spent more time at work, on call and on duty compared to shore-based personnel. Overall levels of on duty hours have remained stable since last year. However, since last year, the hours spent on duty has increased for those at Sea (111.5 hours) and decreased for those on Shore (60.8 hours).

**Figure 2.2: Royal Navy personnel working patterns by rank group, 2022/23**

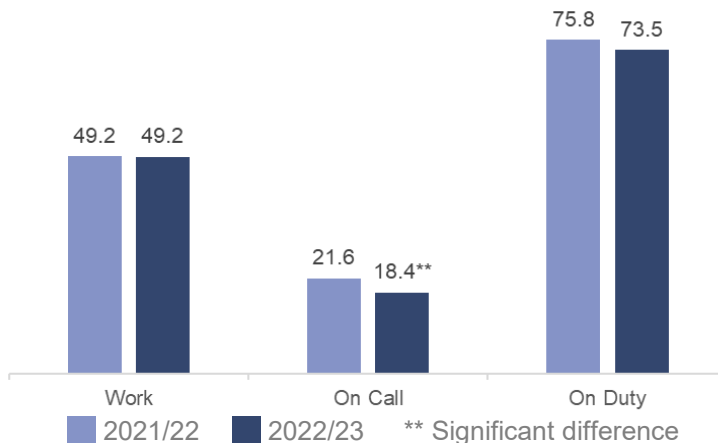


In 2022/23, Officers on average spent more time at work compared to Other Ranks/Rates. In the same time period, Junior Officers on average spent more time on call and on duty compared to Senior Officers and Other Ranks/Rates. Senior and Junior Other Ranks/Rates self-reported similar working patterns.

**Table 2.1: Working patterns of Royal Navy personnel, 2021/22 - 2022/23**

	At Work		On Call		On Duty		Key:
	2021/22	2022/23	2021/22	2022/23	2021/22	2022/23	
<b>ROYAL NAVY</b>	49.2	49.2	21.6	18.4 ▼	75.8	73.5	▲ Significant increase from 2021/22 ▼ Significant decrease from 2021/22
<b>Sea</b>	63.8	65.7	32.8	37.0 ▲	103.4	111.5 ▲	
<b>Shore</b>	43.6	43.7	17.2	12.2 ▼	65.1	60.8 ▼	
<b>Senior Officers</b>	51.0	52.1	28.2	15.2 ▼	83.6	71.7 ▼	
<b>Junior Officers</b>	50.7	50.5	22.9	25.8	79.3	80.9	
<b>Senior Ranks/Rates</b>	49.2	48.8	20.8	19.1	75.2	72.9	
<b>Junior Ranks/Rates</b>	48.6	48.5	20.4	17.3	73.9	72.6	

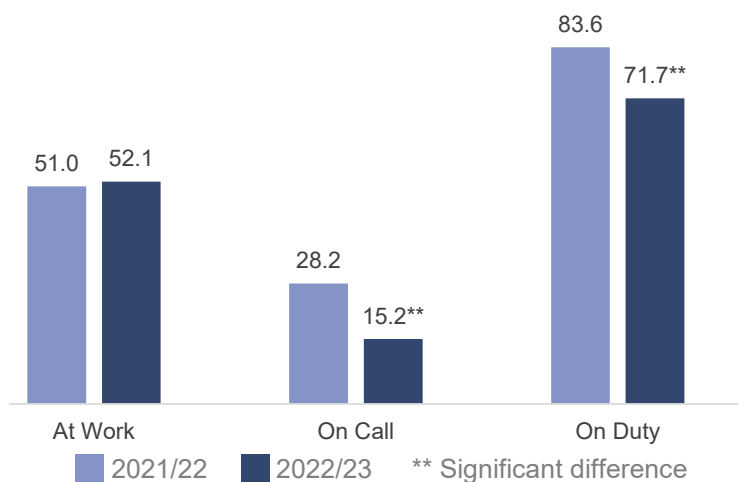
**Figure 2.3: Working patterns of Royal Navy personnel, 2021/22 - 2022/23**



In 2022/23, the average time spent at work and on duty by Royal Navy personnel has remained similar to levels reported in 2021/22.

On average, time spent on call has decreased by 3.2 hours. This change is primarily driven by Senior Officers, who on average reported a decrease of 13 on call hours.

**Figure 2.4: Working patterns of Senior Officers in the Royal Navy, 2021/22 - 2022/23**



In 2022/23, the average hours spent at work per week by Senior Officers has remained similar to time spent in 2021/22.

However, time spent on call and on duty by Senior Officers this year (15.2 hours and 71.7 hours respectively), has seen a decrease compared to last year (28.2 hours and 83.6 hours respectively). Overall, Senior Officers spent 11.9 less hours on duty in 2022/23, compared to 2021/22.

This differs from 2021/22, where changes in working patterns of Royal Navy personnel were primarily being driven by Junior Officers.

## 2.2 Royal Navy excessive hours worked<sup>1</sup> and spent on duty, 2022/23

Section 2.2 is based on the 468 Royal Navy personnel for whom a full week's data was available (48% of all valid responses).

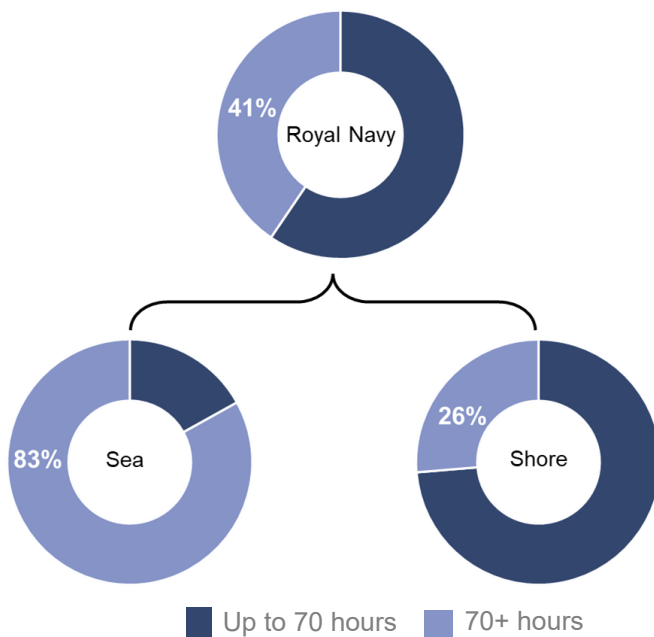
Overall, 18% of Royal Navy personnel worked more than 70 hours per week.

Excessive hours worked differs greatly by location with 50% of sea-based personnel spending excessive hours at work compared to 7% of shore-based

### Excessive hours

The proportion of personnel who worked 70 hours or more during the week surveyed.

**Figure 2.5: Proportion of Royal Navy personnel spending more than 70 hours on duty for the week surveyed by location, 2022/23**



In 2022/23, on average 41% of Royal Navy personnel spent more than 70 hours on duty per week.

This differs by location with 83% of sea-based personnel spending more than 70 hours per week on duty compared to 26% of shore-based personnel.

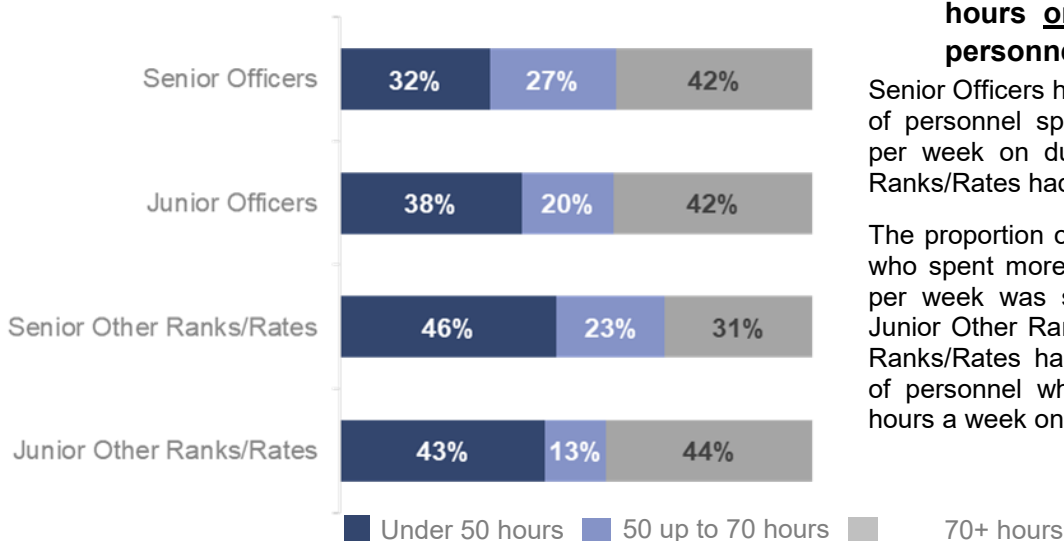
### Data quality

The results on this page are based on a subset of respondents. As such, levels of precision are likely to be lower (wider confidence intervals) and are intended as an indication of the average working week of Royal Navy personnel.

**Figure 2.6: Distribution of hours on duty of Royal Navy personnel, 2022/23**

Senior Officers had the lowest proportion of personnel spending under 50 hours per week on duty, while Senior Other Ranks/Rates had the highest.

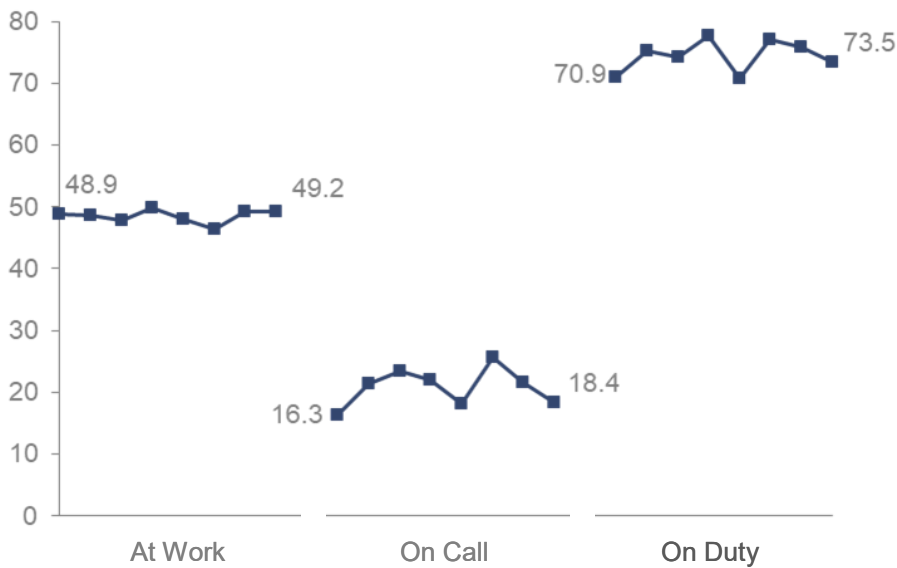
The proportion of Royal Navy personnel who spent more than 70 hours on duty per week was similar for Officers and Junior Other Ranks/Rates. Senior Other Ranks/Rates had the lowest proportion of personnel who spent more than 70 hours a week on duty at 31%.



1. Please note time spent at work refers to time personnel spend carrying out normal work duties (Please see page 3 for a full definition of what this includes). While time spent on duty is a calculation of all time personnel spend at work, on call and on breaks.

### 2.3 Time series of Royal Navy working patterns, 2015/16 - 2022/23

**Figure 2.7: Average weekly hours Royal Navy personnel spent at work, on call and on duty, 2015/16 - 2022/23**

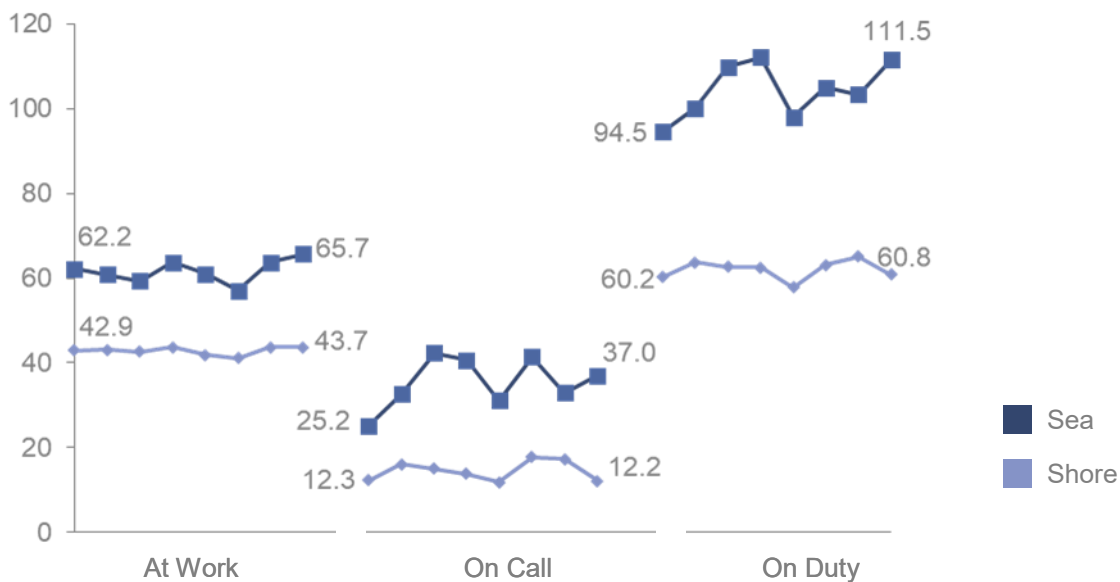


In 2022/23, the average hours worked by Royal Navy Personnel has remained similar to 2021/22 at 49.2 hours.

The average hours spent on call per week this year has decreased to 18.4 compared to 2020/21 (25.6 hours), and also 2021/22 (21.6 hours). This is now in line with the average hours reported in 2019/20.

Overall, personnel spent 73.5 hours per week on duty this year, which has remained similar to the levels that were reported last year. However, this is a 3.6 hour decrease from the reported on duty hours in 2020/21.

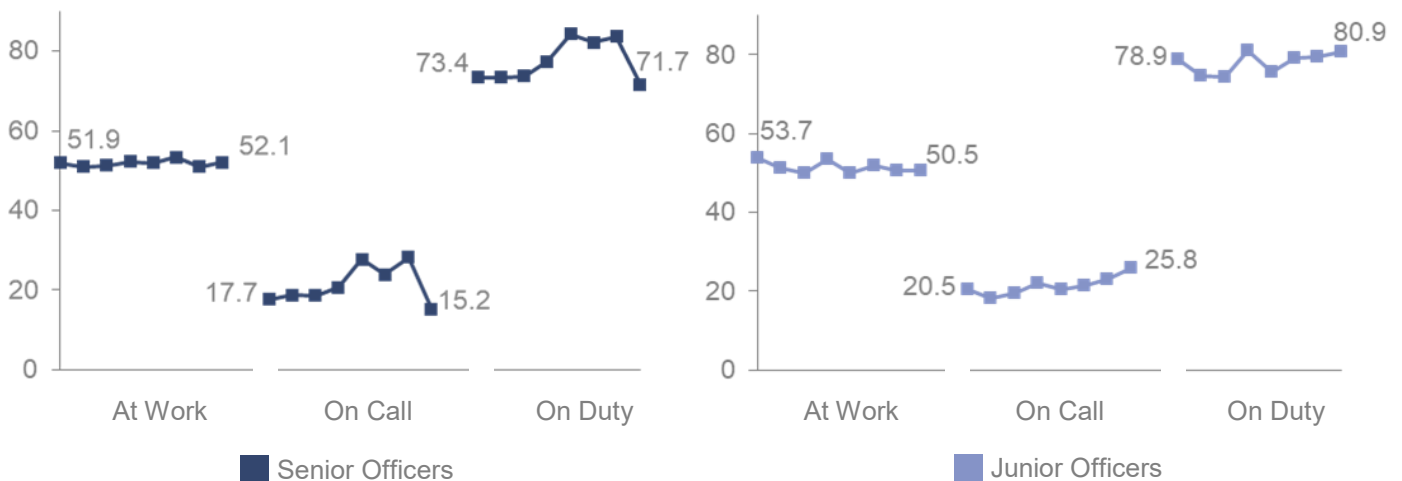
**Figure 2.8: Average weekly hours Royal Navy personnel spent at work, on call and on duty by location, 2015/16 - 2022/23**



Overall, the average hours worked by sea-based personnel in 2022/23 was 65.7 hours, which has remained similar to the levels reported in the previous year. This is higher than the figures that were reported between 2015/16 and 2020/21. Sea-based personnel have spent more hours on call per week this year compared to the previous year (37 hours and 32.8 hours respectively). Within the same time frame, sea-based personnel also saw a sharp increase in the amount of hours spent on duty at 111.5 hours.

Average hours worked by shore-based personnel this year has remained similar to the previous year (43.7 hours and 43.6 hours respectively). This is an increase from levels reported two years ago in 2020/21 (41.4 hours). The average time spent on call per week has decreased this year among shore-based personnel (12.2 hours). Time spent on duty has also decreased this year compared to the previous year (60.8 hours and 65.1 hours respectively) with levels now being back in line with figures reported in 2020/21.

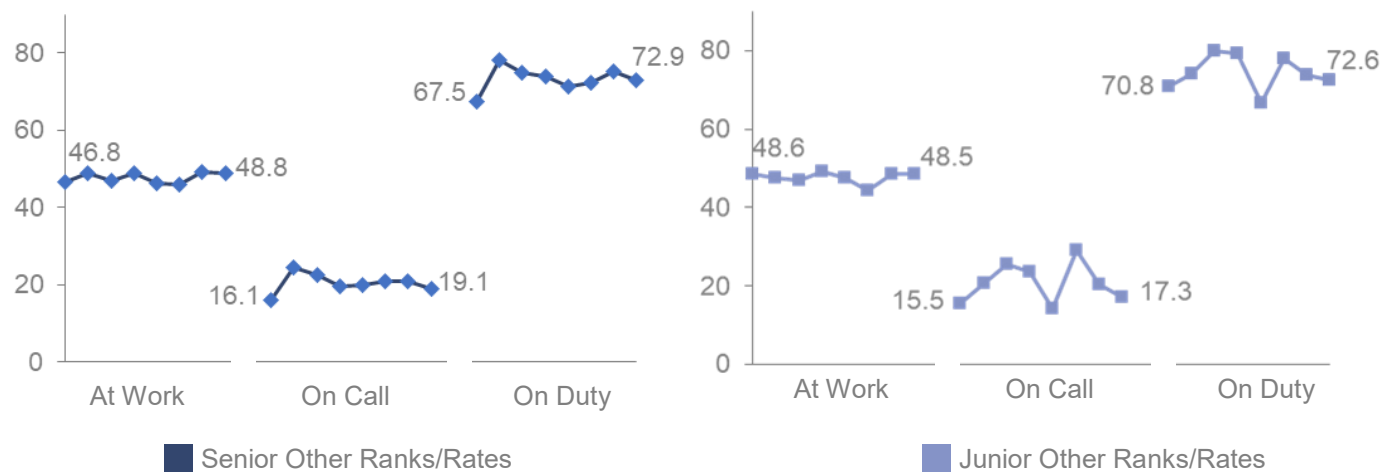
**Figure 2.9: Average weekly hours Royal Navy Officers spent at work, on call and on duty by rank group, 2015/16 - 2022/23**



In 2022/23, Senior Officers spent 52.1 hours per week at work. This is similar to the figures that have been previously reported in 2021/22. This year, Senior Officers spent 15.2 hours on call. This is a sharp decrease compared to 2021/22. Senior Officers have spent less time on duty per week this year at 71.7 hours compared to the previous year (83.6 hours).

Junior Officers spent 50.5 hours per week at work in 2022/23, which is similar to the levels reported in 2021/22. This year, Junior Officers spent 25.8 hours on call per week. Time spent on duty this year was similar to last year's levels (80.9 hours and 79.3 hours respectively).

**Figure 2.10: Average weekly hours Royal Navy Other Ranks/Rates spent at work, on call and on duty by rank group, 2015/16 - 2022/23**



Senior Other Ranks/Rates spent 48.8 hours per week at work. This is similar to the figure that was reported in 2021/22 (49.2 hours) and is higher than the hours reported two years ago in 2020/21 (46 hours). Senior Other Ranks/Rates spent 19.1 hours on call per week. Time spent on duty by Senior Ranks/Other Rates this year (72.9 hours) has remained similar since 2017/2018.

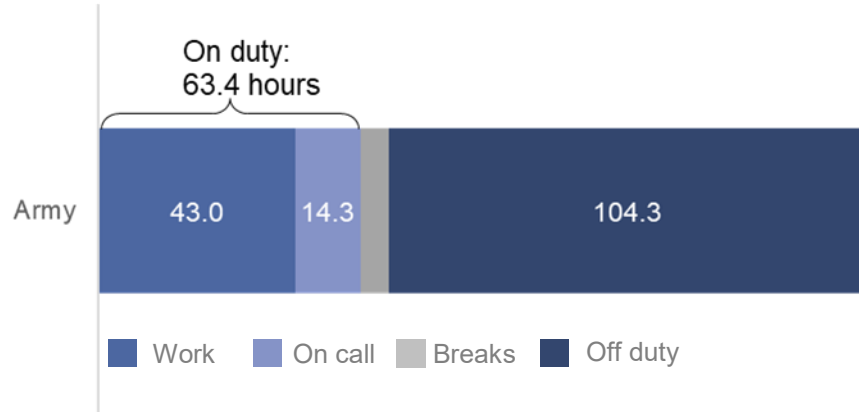
Junior Other Ranks/Rates reported similar levels of time spent at work, on call and on duty this year compared to the previous year (48.5 hours at work). However, compared to 2020/21, Junior Other Ranks/Rates spent less time on call this year (29.2 hours and 17.3 hours respectively) as well as on duty (78.2 hours and 72.6 hours respectively).

## Section 3: The Army

### 3.1 Army working patterns, 2022/23

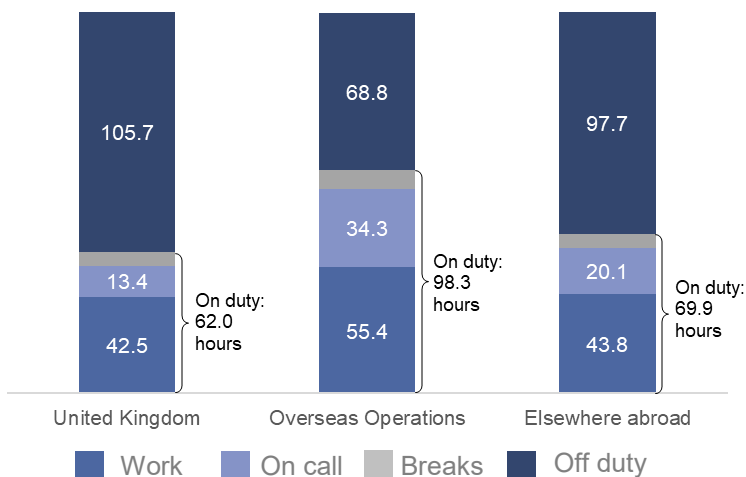
In 2022/23 Army personnel on average spent 63.4 hours on duty. This is similar to the amount spent on duty in the previous year (63.6 hours).

Figure 3.1: Army personnel working patterns, 2022/23



Army personnel reported similar working hours this year compared to the previous year (43 hours and 43.3 hours respectively). However, compared to 2020/21 the amount of hours Army personnel spent at work has increased by 3.1 hours. The amount of time spent on call and on duty this year has also remained similar to the figures that were reported in the previous year.

Figure 3.2: Army personnel working patterns by location, 2022/23

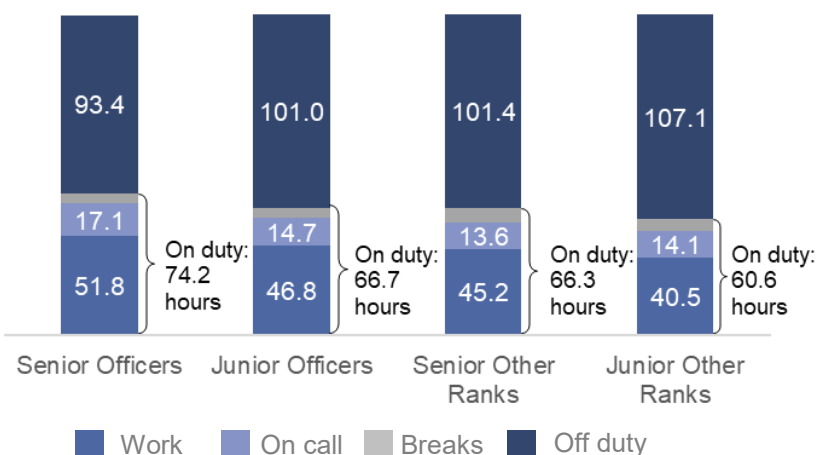


#### Germany

The [Army Basing Programme](#) led to a reduction of personnel in Germany in 2020. As a result, breakdowns for Germany have not been included in this report since 2019/20. However, Germany responses are still included in the overall Army figures.

Army personnel on deployed overseas operation spend the most time at work at 55.4 hours whilst personnel based in the UK (42.5 hours) and elsewhere abroad (43.8 hours) reported similar figures. Personnel deployed on overseas operations also spent the most time on call and on duty (34.3 hours and 98.3 hours respectively), this was followed by personnel based elsewhere abroad (20.1 hours and 69.9 hours respectively). UK based personnel reported the least amount of time spent on call and on duty (13.4 hours and 62 hours respectively).

Figure 3.3: Army personnel working patterns by rank group, 2022/23

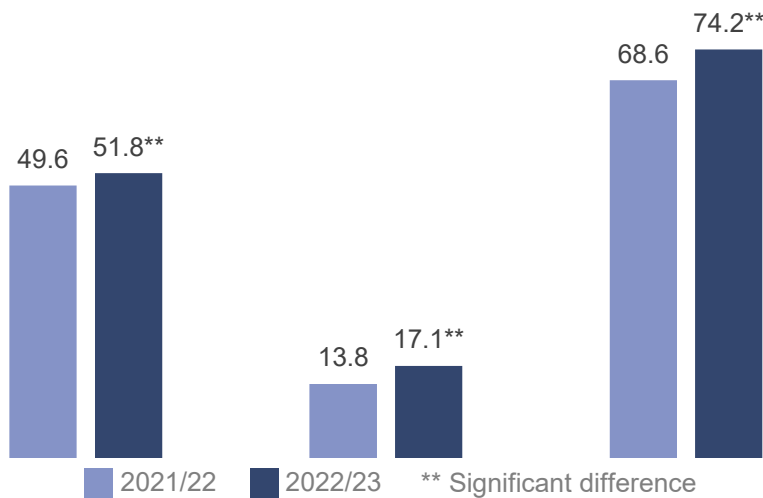


Senior Officers this year spent more time at work, on call and on duty compared to the previous year. Furthermore, Senior Officers on average were also more likely to spend more time at work and on duty compared to Junior Officers and Other Ranks/Rates. Junior Other Ranks/Rates on average spent the least amount of time at work and on duty.

**Table 3.1: Working patterns of Army personnel, 2021/22 - 2022/23**

	At Work		On Call		On Duty		Key:
	2021/22	2022/23	2021/22	2022/23	2021/22	2022/23	
<b>ARMY</b>	43.3	43.0	13.6	14.3	63.6	63.4	
<b>United Kingdom</b>	43.1	42.5	13.2	13.4	62.6	62.0	
<b>Overseas Operations</b>	51.8	55.4 ▲	23.1	34.3 ▲	92.3	98.3 ▲	▲ Significant increase from 2021/22
<b>Elsewhere abroad</b>	42.3	43.8 ▲	17.3	20.1	68.2	69.9	▼ Significant decrease from 2021/22
<b>Senior Officers</b>	49.6	51.8 ▲	13.8	17.1 ▲	68.6	74.2 ▲	
<b>Junior Officers</b>	47.8	46.8	15.1	14.7	68.5	66.7	
<b>Senior Ranks/Rates</b>	44.3	45.2	16.1	13.6	67.9	66.3	
<b>Junior Ranks/rates</b>	41.6	40.5	12.6	14.1	60.9	60.6	

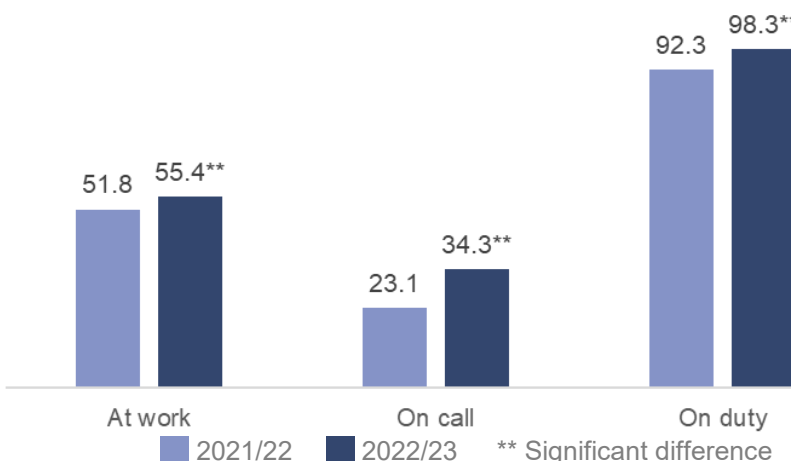
**Figure 3.4: Working patterns of Senior Officers in the Army, 2021/22 - 2022/23**



On average, Senior Officers spent more time on duty this year compared to last year (74.2 hours and 68.6 hours respectively), an increase of 5.2 hours per week. Furthermore, Senior Officers on average spent more hours at work and on call this year (51.8 hours and 17.1 hours), compared to last year (49.6 hours and 13.8 hours respectively).

In the same time period, Junior Officers and Other Ranks/Rates reported spending similar hours at work, on call and on duty this year compared to last year.

**Figure 3.5: Working patterns of Army personnel deployed on overseas Operations, 2021/22 - 2022/23**



This year the average hours worked by Army personnel deployed on operations has increased from 51.8 hours in 2021/22 to 55.4 hours in 2022/23. Time spent on call also saw a sharp increase with personnel deployed on overseas operations spending 11.2 more hours this year (34.3 hours) on call compared to the previous year. Time spent on duty also saw a significant increase with personnel spending on average 6 hours more on duty (98.3 hours) compared to 2021/22.



### 3.2 Army excessive hours worked<sup>1</sup> and spent on duty, 2022/23

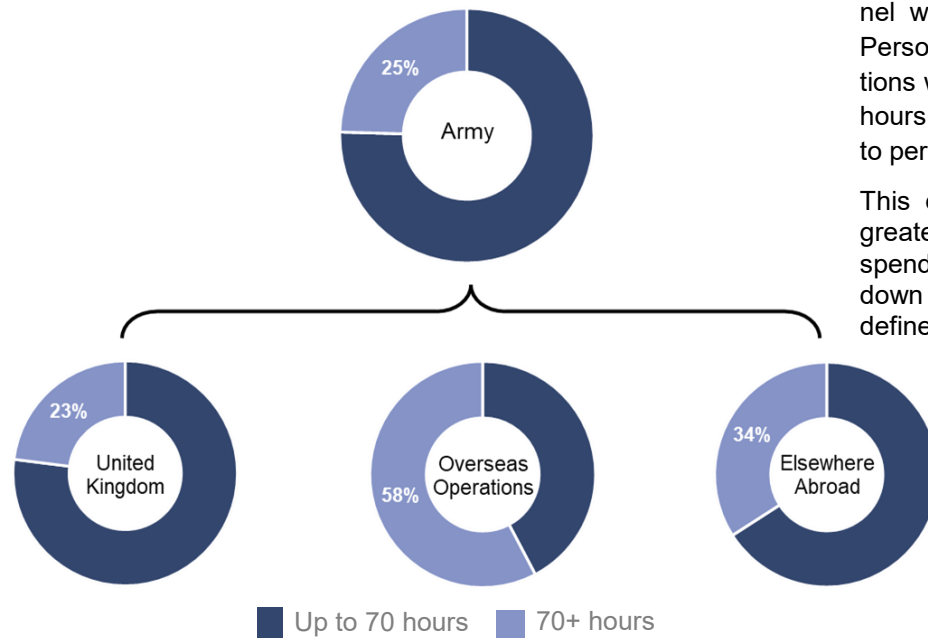
Section 3.2 is based on the 611 Army personnel for whom a full week's data was available (46% of all valid responses).

Overall, 7% of personnel spent more than 70 hours per week at work.

Army personnel deployed on Overseas Operations reported spending more time working excessive hours (22%) compared to the UK (7%) and Elsewhere Abroad (6%).

**Excessive hours**  
Personnel who worked 70 hours or more during the week surveyed.

**Figure 3.6: Proportion of Army personnel spending more than 70 hours on duty for the week surveyed by location, 2022/23**



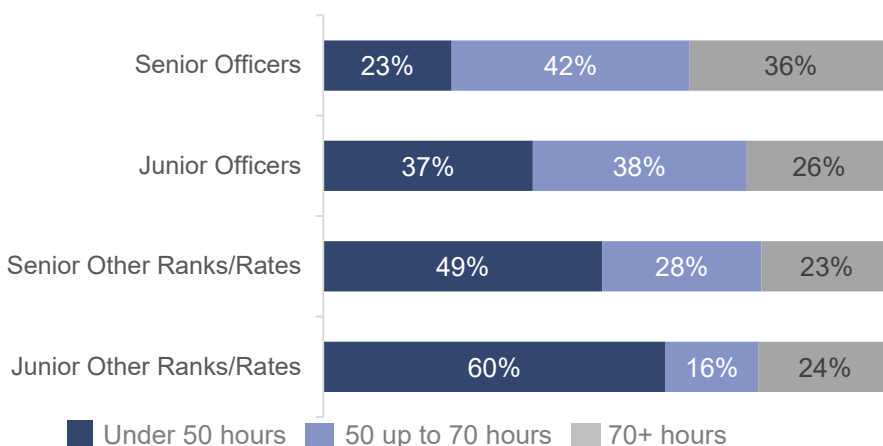
Overall, in 2022/23, 25% of Army personnel were on duty for 70 or more hours. Personnel deployed on Overseas Operations were more likely to spend 70 or more hours on duty per week (58%) compared to personnel based in other locations.

This difference maybe partly due to the greater amount of time those deployed spend on call. Periods of off duty/stand down when on exercise or operation are defined as time on call.

#### Data Quality Note

The results on this page are based on a subset of respondents. As such, levels of precision are likely to be lower (wider confidence intervals) and are an indication of the working week of Army personnel.

**Figure 3.7: Distribution of hours on duty for Army personnel by rank group, 2022/23**



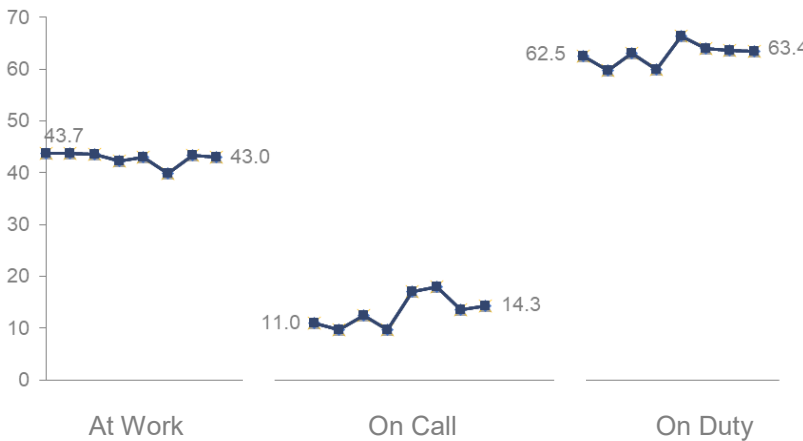
A higher proportion of Senior Officers report spending excessive hours on duty compared to other personnel.

A higher proportion of Junior Other Ranks/Rates spend under 50 hours per week on duty (60%). Whilst Senior Officers report the smallest proportion of personnel spending under 50 hours per week on duty (23%).

1. Please note time spent at work refers to time personnel spend carrying out normal work duties (Please see page 3 for a full definition of what this includes). While time spent on duty is a calculation of all time personnel spend at work, on call and on breaks.

### 3.3 Time series of Army working patterns, 2015/16 - 2022/23

**Figure 3.8: Army average weekly hours spent at work, on call and on duty, 2015/16 - 2022/23**

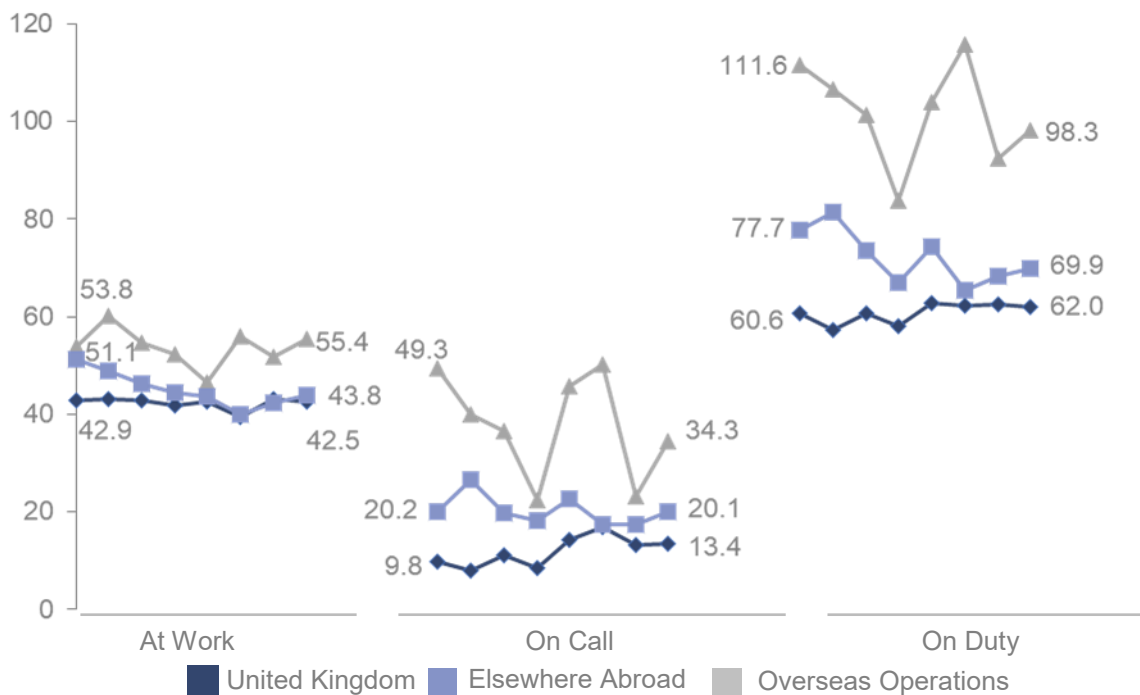


Army personnel worked on average 43 hours per week this year. This is similar to the figure that was reported last year (43.3 hours). However, this is a 3.1 hour increase from the amount that was worked in 2020/21.

Time spent on call this year at 14.3 hours has remained the same as the previous year (13.6 hours), However compared to 2019/20 and 2020/21 this is significantly lower (17.0 hours and 17.9 hours respectively).

The average hours per week spent on duty this year (63.4 hours) has remained similar to the figures that were reported in the previous two years. This is a significant decrease from 2019/20 where on average personnel would spend 66.5 hours per week on duty.

**Figure 3.9 Army average weekly hours spent at work, on call and on duty by location, 2015/16 - 2022/23**

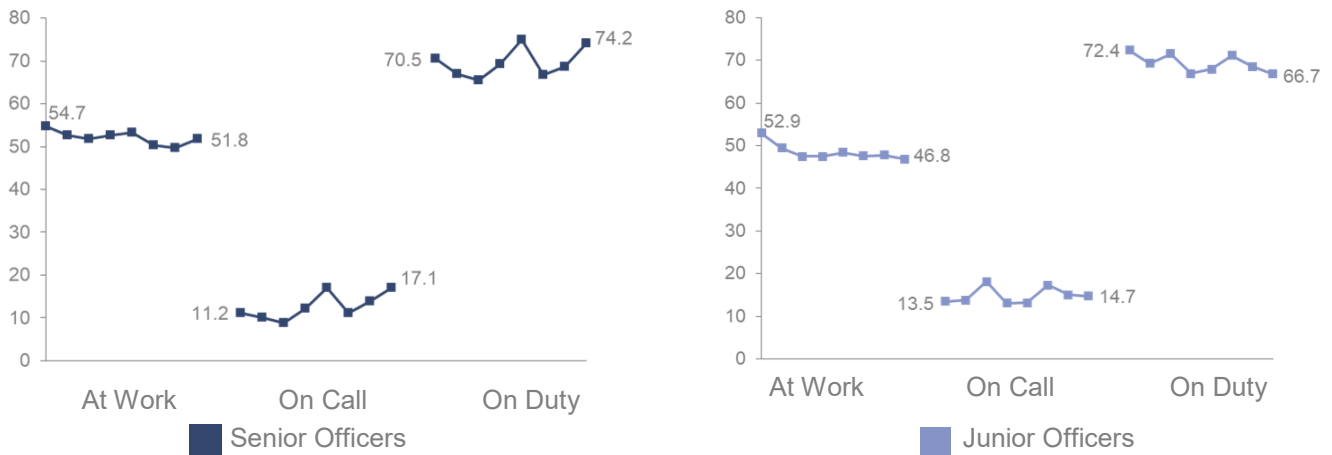


Army Personnel based in the UK this year worked similar hours to the figures reported in 2021/22 (42.5 hours and 43.1 hours respectively). This is an increase from time spent at work in 2020/21. Time personnel spent on call (14.3 hours) also remained similar to the figures reported in the previous year. However, this is a 3.6 hour decrease from 2020/21. Whilst time spent on duty this year (62.0 hours) has remained stable since 2019/20.

Personnel deployed on Overseas Operations reported working on average more hours per week this year compared to the previous year (55.4 hours and 51.8 hours respectively). This is now back in line with the figure reported in 2020/21. Time spent on call has increased by 11.2 hours this year compared to last year (34.3 hours and 23.1 hours respectively). Time spent per week on duty for overseas operations this year (98.3 hours - an increase of 6 hours from 2021/22) has returned to the figures reported in 2019/20.

Personnel Elsewhere Abroad this year spent more time at work (43.8 hours) compared to the previous two years (42.3 hours in 2021/22 and 39.9 hours in 2020/21). This is now back in line with figures reported in 2019/20. They also spent 20.1 hours on call per week this year. This figure has stayed stable since 2017/18. Time spent on duty this year has remained similar to 2021/22 (69.9 hours and 68.2 hours respectively). However, there has been a 4.4 hour increase from 2020/21.

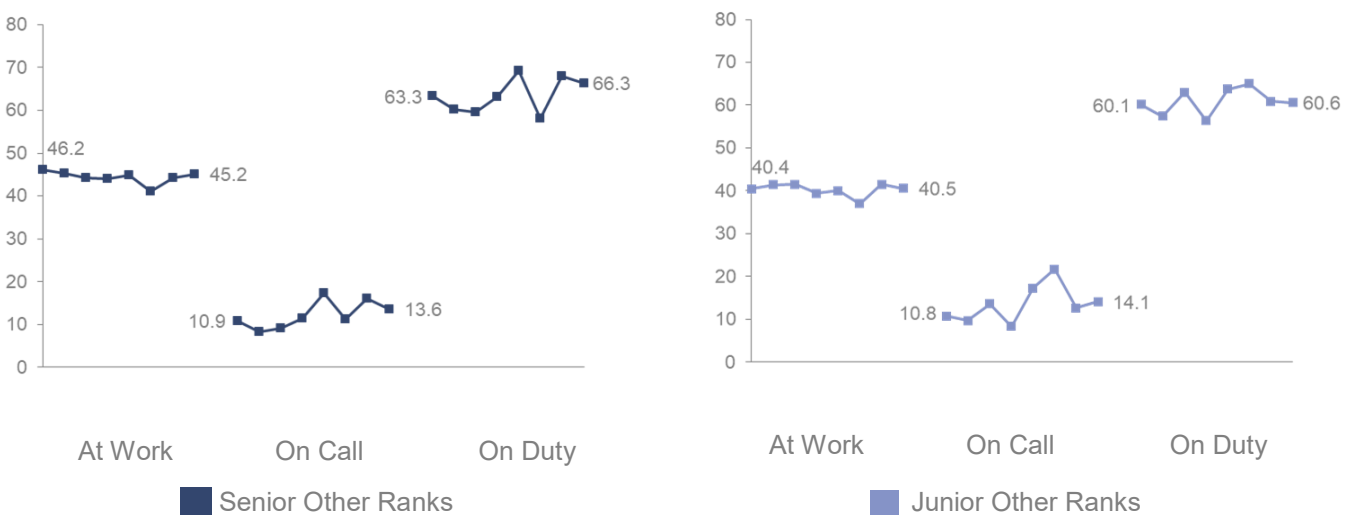
**Figure 3.10: Army average weekly hours spent at work, on call and on duty by Officers, 2015/16 - 2022/23**



This year Senior Officers spent 51.8 hours per week at work. This is an increase from the figures reported in 2020/21 and 2021/22 (50.2 hours and 49.6 hours respectively). Similarly, time spent on call and on duty this year (17.1 hours and 74.2 hours respectively) has increased compared to 2020/21 and 2021/22 levels.

Hours spent per week this year at work for Junior Officers (46.8 hours) has remained unchanged since 2017/18. Furthermore, Junior Officers spent 14.7 hours per week on call this year. This has remained unchanged since 2015/16. Time spent on duty this year (66.7 hours) remains unchanged compared to last year. However, there has been a 4.4 hour decrease compared to 2020/21.

**Figure 3.11: Army average weekly hours spent at work, on call and on duty by Other Ranks, 2015/16 - 2022/23**



Senior Other Ranks/Rates reported spending 45.2 hours per week this year at work. Excluding 2020/21 in which the lowest figure to date was reported, time spent at work has remained relatively stable. 13.6 hours per week were spent on call this year. This is in line with figures previously reported in 2020/21 and 2021/22. However, it is a decrease from 2019/20 where the highest figure to date was reported. Time spent on duty this year (66.3 hours) remains unchanged compared to last year. This is a 8.1 hour increase from 2020/21 which is the lowest figure reported to date.

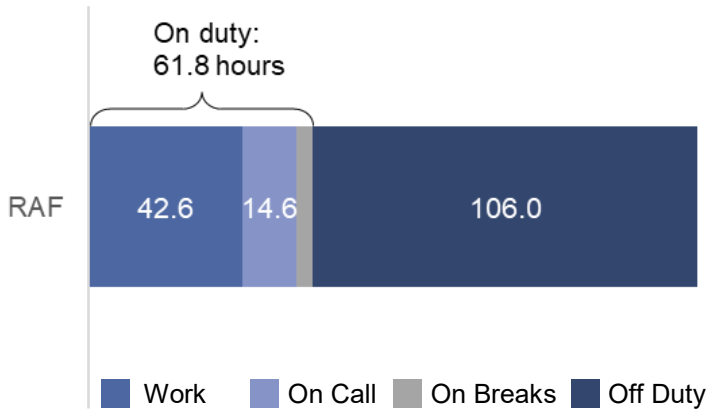
Much like Senior Other Ranks/Rates, time spent at work by Junior Other Ranks/Rates has historically remained stable, excluding 2020/21 in which the lowest figure to date was reported. Junior Other Ranks/Rates reported 40.5 average weekly hours worked in 2022/23. Time spent on call this year (14.1 hours) remains relatively unchanged compared to the previous year. However, it is a 7.6 hour decrease from 2020/21, in which the highest figure to date was reported. Following an increase in 2019/20, time spent on duty has remained relatively stable with Junior Other Ranks/Rates spending 60.6 hours per week this year on duty.

## Section 4: The RAF

### 4.1 RAF working patterns, 2022/23

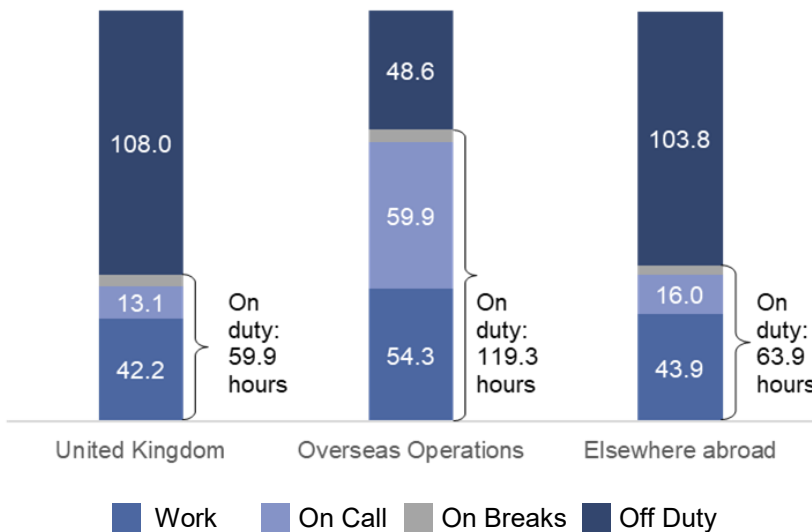
On average, RAF personnel spent 42.6 hours per week at work this year. This remains at a similar level compared to last year and is a 2.1 hour increase from 2020/21.

Figure 4.1: RAF working patterns, 2022/23



This year, RAF personnel spent 61.8 hours on duty. This is a 2.8 hour decrease from the previous year. However, this now brings hours spent on duty back in line with the figure that was reported in 2020/21.

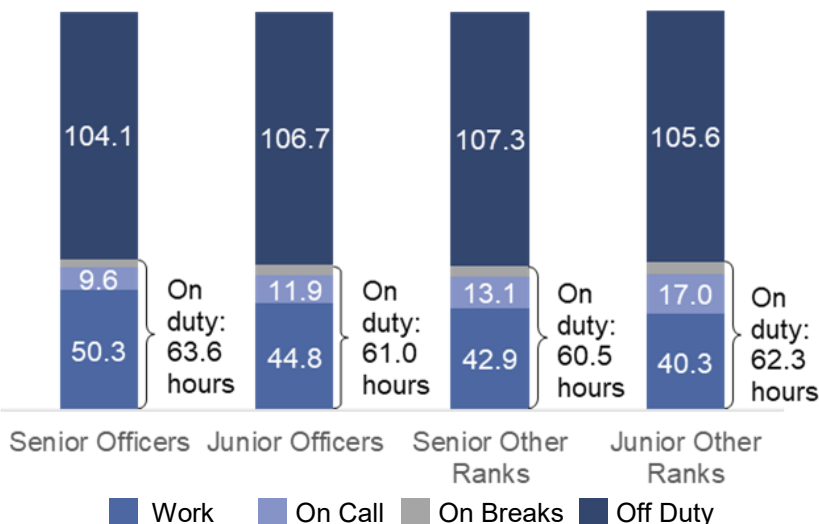
Figure 4.2: RAF working patterns by location, 2022/23



RAF personnel who are deployed on Overseas Operations spent the most time on duty (119.3 hours) this was followed by elsewhere abroad (63.9 hours) and UK (59.9 hours).

The large difference in time spent on duty by Overseas Operations compared to RAF personnel based in other locations may be largely due to the nature of work during Overseas Operations, coupled with the high number of hours deployed personnel spend on call.

Figure 4.3: RAF working patterns by rank group, 2022/23



Officers reported working more hours than Other Ranks/Rates, with Senior Officers spending the most time at work (50.3 hours) and Junior Other Ranks/Rates the least (40.3 hours).

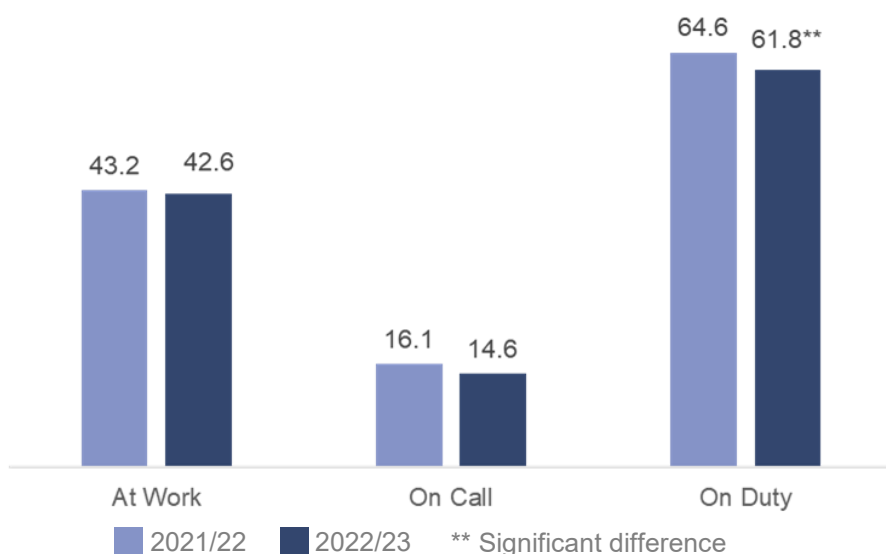
Other Ranks/Rates reported spending more hours on call compared to Senior Officers.

Overall, there was no difference in time spent on duty by rank group.

**Table 4.1: Working patterns of RAF personnel by rank group, 2021/22 - 2022/23**

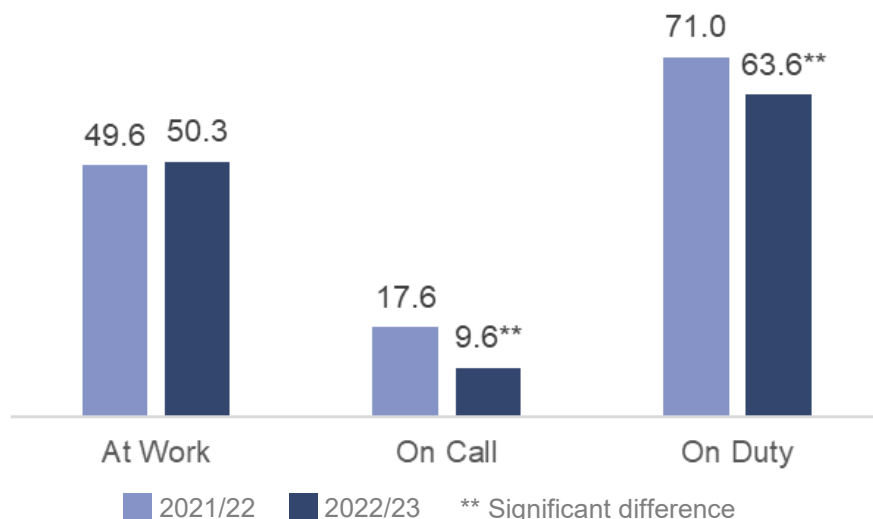
	At Work		On Call		On Duty		Key:
	2021/22	2022/23	2021/22	2022/23	2021/22	2022/23	
<b>RAF</b>	43.2	<b>42.6</b>	16.1	<b>14.6</b>	64.6	<b>61.8</b> ▼	▲ Significant increase from 2021/22 ▼ Significant decrease from 2021/22
<b>United Kingdom</b>	42.8	<b>42.2</b>	14.8	<b>13.1</b>	62.9	<b>59.9</b> ▼	
<b>Overseas Operations</b>	52.5	<b>54.3</b>	55.5	<b>59.0</b>	113.7	<b>119.3</b>	
<b>Elsewhere Abroad</b>	45.1	<b>43.9</b>	18.8	<b>16.0</b>	67.7	<b>63.9</b> ▼	
<b>Senior Officers</b>	49.6	<b>50.3</b>	17.6	<b>9.6</b> ▼	71.0	<b>63.6</b> ▼	
<b>Junior Officers</b>	44.8	<b>44.8</b>	14.5	<b>11.9</b>	63.7	<b>61.0</b>	
<b>Senior Ranks</b>	43.5	<b>42.9</b>	10.2	<b>13.1</b> ▲	58.5	<b>60.5</b>	
<b>Junior Ranks</b>	41.3	<b>40.3</b>	18.9	<b>17.0</b>	66.2	<b>62.3</b> ▼	

**Figure 4.4: Working patterns of RAF personnel, 2021/22 - 2022/23**



This year there was no difference in time spent at work (42.6 hours) and on call (14.6 hours) compared to the previous year. Time spent on duty this year (61.8 hours) has decreased compared to the previous year (64.6 hours). This is now back in line with figures reported in 2020/21.

**Figure 4.5: Working patterns of RAF Senior Officers, 2021/22 - 2022/23**



Time spent on call (9.6 hours) and on duty (63.6 hours) has decreased this year from the previous year (17.6 hours and 71.0 hours respectively). These are both now back in line with figures that were reported in 2020/21. These are significantly lower than figures that have been previously reported from 2015/16 to 2019/20. Whilst the average hours spent at work this year (50.3 hours) has remained unchanged since the previous year.

## 4.2 RAF excessive hours worked<sup>1</sup> and spent on duty, 2022/23

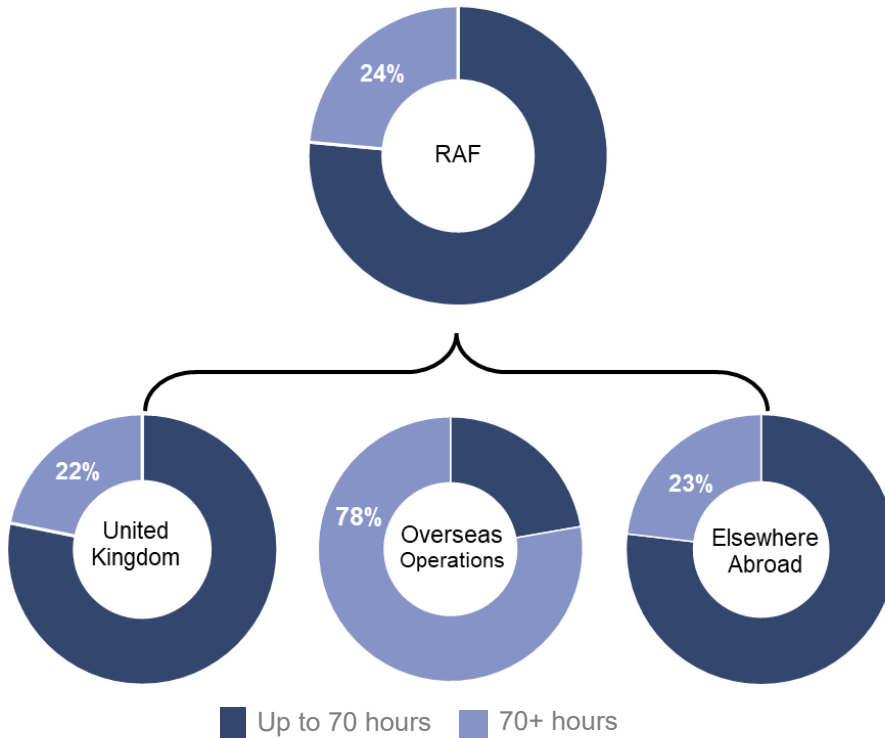
Section 4.2 is based on the 525 RAF personnel for whom a full week's data was available (52% of all valid responses).

Overall, 3% of RAF personnel worked excessive hours in 2022/23.

### Excessive hours

Personnel who worked 70 hours or more during the week surveyed.

**Figure 4.6: Proportion of RAF personnel spending more than 70 hours on duty for the week surveyed by location in 2022/23**



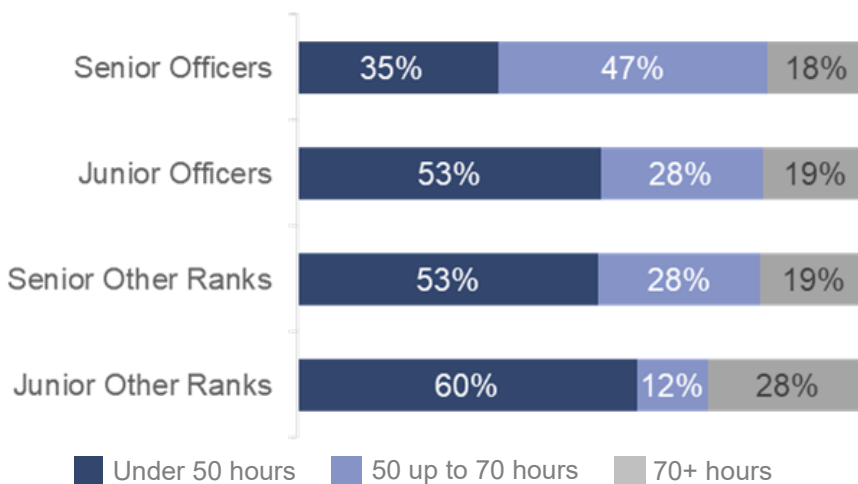
A much higher proportion of personnel deployed on Overseas Operations (78%) spent 70 or more hours per week on duty compared to personnel based at other locations (22% in the UK and 23% Elsewhere Abroad).

This difference may be due to personnel deployed on Overseas Operations spending significantly more time on call (59.9 hours) compared to personnel based at other locations. Periods of off duty/stand down when on exercise or operation are defined as time on call.

### Data Quality Note

The results on this page are based a subset of respondents. As such, levels of precision are likely to be lower (wider confidence intervals) and are an indication of the working week of RAF personnel.

**Figure 4.7: Distribution of hours on duty of RAF personnel by rank group, 2022/23**

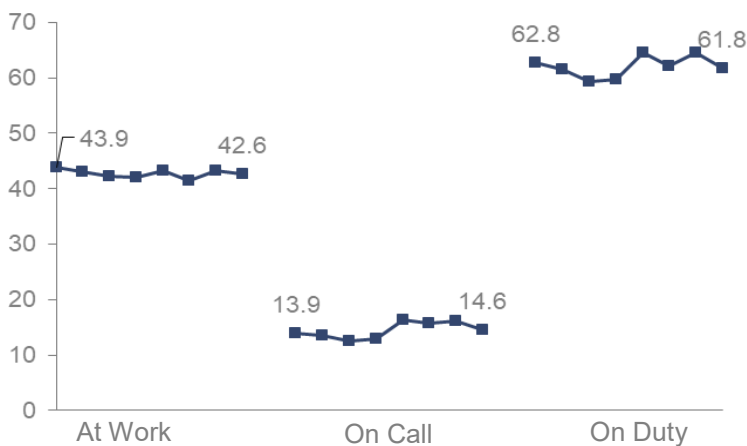


On average, Senior Officers are less likely to spend under 50 hours per week on duty and the most likely to spend between 50 to 70 hours. Junior Ranks/Rates are the most likely to spend 70 or more hours on duty compared to the other rank groups, despite having lower average on duty hours compared to Senior Officers.

1. Please note time spent at work refers to time personnel spend carrying out normal work duties (Please see page 3 for a full definition of what this includes). While time spent on duty is a calculation of all time personnel spend at work, on call and on breaks.

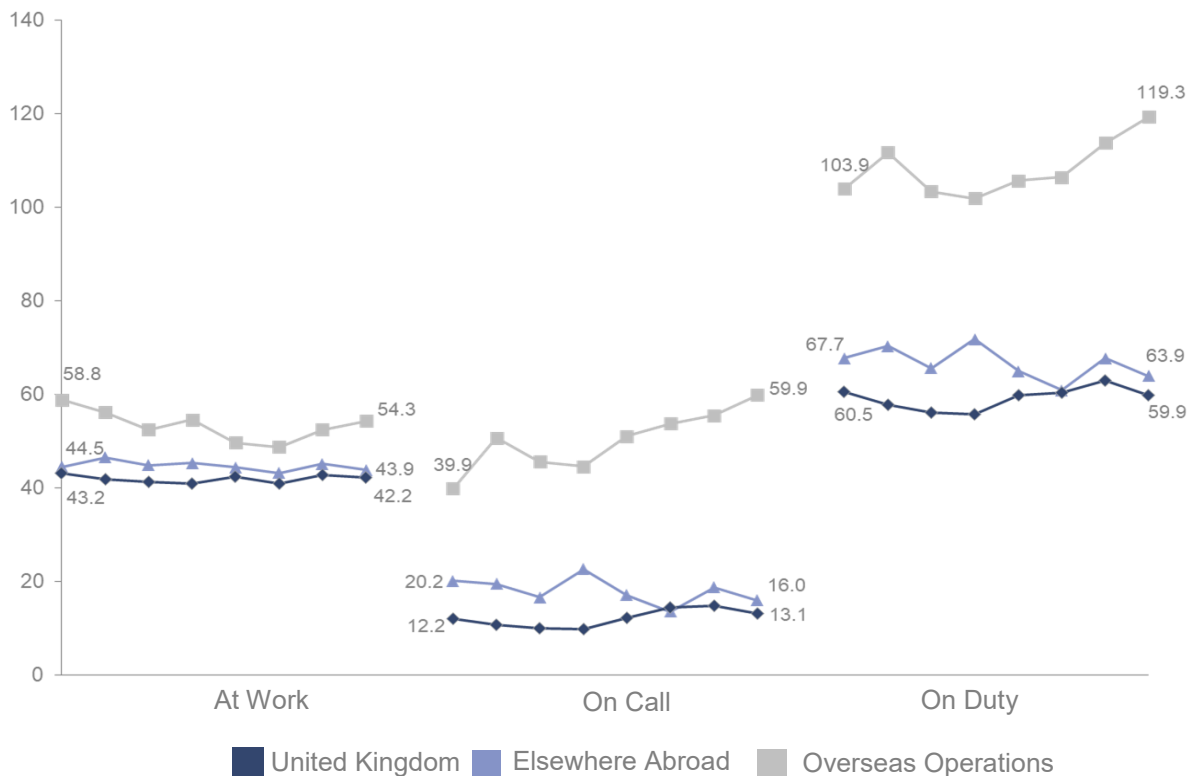
### 4.3 Time series of RAF working patterns, 2015/16 - 2022/23

**Figure 4.8: RAF average weekly hours spent at work, on call and on duty, 2015/16 - 2022/23**



Following an increase in 2021/22, the average time spent at work has remained relatively unchanged, with personnel spending 42.6 hours per week at work in 2022/23. Following an increase in 2018/19, time spent on call has remained relatively unchanged. Following its highest recorded level in the previous year, time spent on duty has seen a decrease to 61.8 hours. This is now in line with figures reported in 2020/21.

**Figure 4.9: RAF average weekly hours spent at work, on call and on duty by location, 2015/16 - 2022/23**

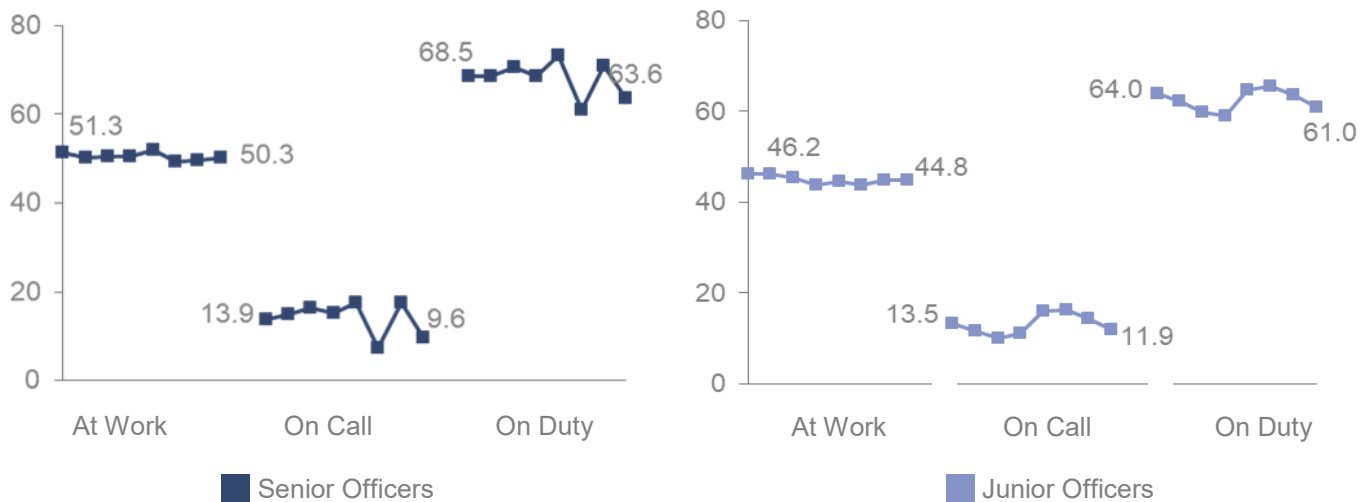


For personnel based in the UK, average hours at work have remained unchanged following an increase in 2021/22 with personnel spending 42.2 hours per week at work this year. Time spent on call has remained relatively stable following an increase in 2019/20, with UK based personnel spending 13.1 hours each week on call. The amount of time UK based personnel spent on duty this year compared to the previous year has decreased by 3.0 hours with personnel spending 59.9 hours per week on duty. This is back in line with the figures previously reported in 2019/20 and 2020/21.

RAF personnel deployed on Overseas Operations spent 54.3 hours per week at work. This remains unchanged from the previous year. This figure is significantly higher than 2019/20 and 2020/21. Time spent on call has remained stable following its increase in 2020/21, with personnel spending 59.9 hours per week on call. Time spent on duty is at its highest recorded level, with personnel spending 119.3 hours per week on duty.

Since 2017/18, the amount of time personnel Elsewhere Abroad have spent at work has remained stable (*ranging from 43.3 hours to 45.3 hours*). Time spent on call has also remained relatively unchanged since 2019/20. This comes following 2018/19, which has the highest recorded figure to date for time spent on call among those elsewhere abroad (*22.7 hours*). Similar to UK based personnel, time spent on duty this year has decreased from the previous year with personnel now spending 63.9 hours per week on duty. This is now back in line with figures reported in 2019/20 and 2020/21.

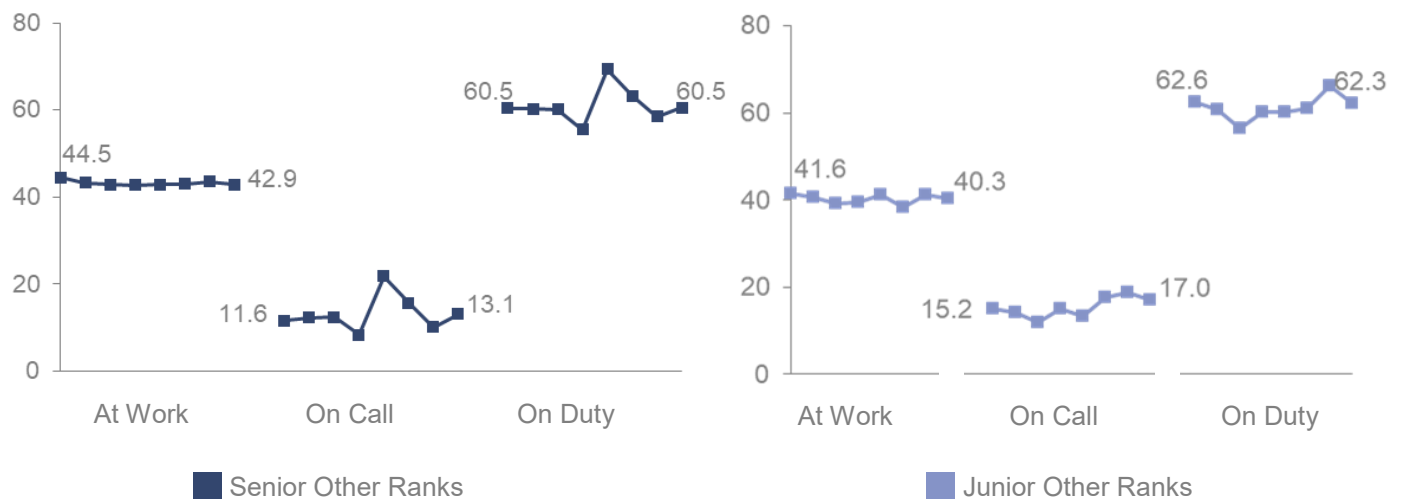
**Figure 4.10: RAF average weekly hours spent at work, on call and on duty by Officers, 2015/16 - 2022/23**



On average, the time spent at work by Senior Officers has remained relatively stable (*50.3 hours in 2022/23*). However, time spent on call and on duty have seen a sharp decline since last year. These are now back in line with figures that were reported in 2020/21.

Following a decrease in 2017/18, time spent at work by Junior Officers has remained relatively stable with Junior Officers spending 44.8 hours per week at work in 2022/23. Time spent on call and on duty this year has remained relatively unchanged compared to the previous year. However, this is a decrease from the figures previously reported in 2019/20 and 2020/21.

**Figure 4.11: RAF average weekly hours spent at work, on call and on duty by Other Ranks/Rates, 2015/16 - 2022/23**



Historical figures show that since 2016/17, time spent at work has remained relatively unchanged with Senior Other Ranks/Rates, spending 42.9 hours per week at work in 2022/23. Time spent on call this year (*13.1 hours*) has increased from the previous year and is now back in line with figures reported in 2020/21. It however remains significantly under the figure reported at its highest in 2019/20. Time spent on duty (*60.5 hours*) has remained unchanged following the decrease in 2020/21.

Time spent at work by Junior Other Ranks/Rates (*40.3 hours*) has remained relatively stable from 2015/16 onwards, barring a decrease in 2020/21. Following increases in 2018/19, time spent on call and on duty by Junior Other Ranks/Rates has remained relatively unchanged.



# Methodology

## The questionnaire

In addition to the CWP paper survey, an online version of CWP was introduced in the later phase of the second wave of 2020/21 to collect responses from service personnel. Since then, paper and online survey were both used to collect responses throughout the two waves of data collection. Approximately half the personnel in the sample were sent a questionnaire in November 2022, the other half were sent a questionnaire in March 2023. Whilst both paper and online survey were offered to personnel from the same sample, some points of contacts had requested for an online option only, relevant personnel were only sent an online survey. Data collection for paper survey ran from November 2022 up to June 2023.

The CWP survey includes a seven day diary; each day is divided into four periods of six hours. Respondents were asked to indicate time spent at 'work', 'on breaks', 'on call' and 'off duty' for each of these periods. Personnel were provided with guidance on how different activities should be recorded. The survey is confidential rather than anonymous. An individual's unique Service number is used to allow responses to be linked to demographic data held on the Joint Personnel Administration System (JPA). Personally identifiable data are only available to a small group of civilian researchers working on the analysis and report production.

## The sample and respondents

The target population are UK regular personnel who are full-time, trained strength. It excludes untrained personnel, those on long term absence, Special Forces, Gurkhas, reservists and personnel ranked above OF6. There were a number of other minor exclusions arising from the practicalities of running the survey e.g. those with invalid address data. Address data for personnel in the sample were obtained from the JPA.

### Valid response rates by Service 2022/23

	Sample size	All valid responses	Valid response rate
<b>Tri-Service</b>	<b>23,296</b>	<b>3,314</b>	<b>14%</b>
Royal Navy	8,774	980	11%
Army	8,062	1,242	15%
RAF	4,088	978	24%
Deployed surveys trial	2,372	114	5%

Paper valid responses	Online valid responses
<b>537</b>	<b>2,663</b>
211	769
196	1,046
130	848

A 'valid response' refers to a returned questionnaire with at least one usable day within the 7 day diary.

The total CWP sample consisted of 23,296 personnel. A stratified simple random sampling process was used to select the sample. Stratification was by Service (Royal Navy, Army and RAF), rank group (Senior Officers, Junior Officers, Senior Ranks/Rates and Junior Ranks/Rates) and broad location. For the Royal Navy, the locations were at sea and shore. For the Army, the locations were United Kingdom, Germany, overseas Operations, and elsewhere abroad. For the RAF, the locations were United Kingdom, overseas Operations and elsewhere abroad. About four-fifths of valid responses were received from the online survey. Combining the responses from the online and paper surveys, the response rate has decreased from 17% last year to 14% this year. The deployed surveys trial response rate may have been overestimated due to a continual circulation of an online link to the survey, and has been calculated only from the initial, known sample size.

## Impact of COVID-19 on CWP

CWP survey 2020/21 was in field November 2020 to June 2021, during a time of national restrictions, imposed as a result of the COVID-19 pandemic and two national lockdowns which may have influenced results. The CWP Survey 2021/22 included a new question asking whether COVID-19 had impacted on working patterns. Comparisons of results by this question are provided in the reference tables.

## Full introduction of online survey

An online version of the survey was introduced in the second wave of CWP 2020/21 to improve response rates following feedback on the difficulties distributing paper questionnaires during lockdowns. This year, the online survey is utilised in both waves and distributed to all personnel in the sample. The difference in the mode of survey instrument might have an impact on the responses we captured. Considering that, results from paper survey and online survey were analysed both separately and as a combined dataset. This report focuses on the combined results of both paper and online responses. More detail is provided in the [Background Quality Report](#).

## Germany

In line with the announcement of the Strategic Defence and Security Review (SDSR) of 2010, the [Army Basing Programme \(ABP\)](#) was established to rebase the British Army from Germany to the UK by 2020. Large numbers of personnel moved from Germany back to the UK over the summer of 2019. This led to very low levels of response from Germany. As a result, reports since 2019/20 do not include any breakdowns for Germany, although responses are included in the overall Army and Rank group averages.

## Personnel deployed overseas on operations

For the Army and RAF, the CWP survey measures the working patterns of personnel deployed on overseas Operations. During 2014, the UK Armed Forces reduced its military presence in Afghanistan from over 5,000 personnel to less than 500. In recent years, deployments have been more dispersed over a wider range of locations. For more information please see the [MOD Annual Report and Accounts](#). The survey process to select samples, print and dispatch questionnaires can take several months. This, coupled with the high mobility of deployed personnel means many will have moved locations by the time the questionnaires arrive.

## Number of personnel deployed on overseas Operations returning a valid Continuous Working Patterns questionnaire, broken down by Service

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
<b>Army</b>	109	143	122	55	75	205	190	87
<b>RAF</b>	144	189	139	38	147	78	120	27
<b>Total</b>	<b>253</b>	<b>332</b>	<b>261</b>	<b>93</b>	<b>222</b>	<b>283</b>	<b>310</b>	<b>114</b>

The reduction in the number of personnel deployed and the difficulties making contact with those who are, has led to a reduction in the number of responses from deployed personnel in recent years. Following a large decrease in responses from those deployed on overseas Operations in 2018/19, we have trialled sending batches of unnamed questionnaires to points of contact in large deployed locations over the past three years.

Although this has increased responses, numbers are still relatively low and so estimates for personnel deployed on operations Overseas will have wider confidence intervals.

In 2021/22, a separate questionnaire was created and sent to deployed locations for distribution to increase response rates. The questionnaires were sent unnamed, in batches to deployed locations for distribution, in addition to the ones sent to identified deployed personnel from the main sample. This year, deployed personnel were only sent a link to access the survey online. Through named points of contact, we then periodically recirculated a link for onward distribution for those in a local unit meeting the eligibility criteria. Because of this, the deployed response rate may have been overestimated. The difference in the working patterns of respondents in the deployed surveys trial and those deployed selected in the main sample might have an impact on the responses we captured. Considering that, results from the deployed surveys trial were analysed both separately and as a combined dataset with the main deployed sample. This report focuses on the combined results of deployed personnel in both the main sample and the trial. More detail is provided in the [Background Quality Report](#).

## Margins of error

The sample was designed to provide sufficient responses to yield estimates with a margin of error of approximately +/- 0.80 hours for each single Service average weekly hours worked. This was approximately met for Royal Navy and Army. However, the margin of error of hours worked for RAF was +/- 0.61 hours. For the overall total and the three single Services, levels of precision were lower (wider confidence intervals) for on duty and on call averages. Margins of error ranged from +/- 1.47 for Army On Call averages to +/- 1.22 hours for Royal Navy On Call averages.

## Weighting the data

Due to the sample design and the differences in prevalence of non-response between Service, rank group and broad location, the distribution of characteristics among CWP respondents does not reflect the distribution of the trained, regular UK Armed Forces population. Therefore, responses have been weighted by Service, rank group and broad location in order to correct for the bias caused by over or under representation.

The weights are calculated simply by:

$$\frac{\text{Population size of strata (p)}}{\text{Number of responses within strata (r)}}$$

Weighting in this way assumes missing data are missing at random (MAR) only within strata. This means we assume that within strata, the working patterns of non-respondents do not differ (on average) to the working patterns of respondents. If those who did not respond have different working patterns to those who did, then the observations in this report will not be representative of the working patterns of trained, regular UK Armed Forces, rather, the observations would only represent the working patterns of the responding population. Non-response that is directly related to individual working patterns will lead to bias within these survey results. For example, those busiest and hence working longer hours may be less likely to complete the survey.

## Analysis

The automated data cleaning rules are set out below:

1. If a respondent has recorded they are on annual leave or sick leave but has also filled in some hours, we ignore the hours and assume the leave marker is true.
2. For Monday to Friday, if a respondent has recorded they are on duty but has not filled out any hours in the boxes, we change the leave marker to show them as being on annual leave. Anyone on annual leave will not be used in the calculations, as we are only interested in people who were working a 'normal' week, with no annual leave.
3. On Saturday and Sunday, if a respondent has recorded they are on duty but has not filled out any hours in the boxes, we change the leave marker to show them as being on weekend leave (we feel that this is a reasonable assumption to make).
4. On Saturday and Sunday, if a respondent has recorded they are on weekend leave, we make sure they have 24 hours off duty recorded for that day.
5. If a respondent has recorded they were on weekend leave from Monday to Friday (not a valid option on the questionnaire), we change the leave code to show annual leave.
6. If the total hours for a day add up to between 23 and 25 hours then we allow that day in the calculations without cleansing. We see this as an acceptable margin of error. Any totals that fall outside this margin will not be used in the calculations.

Many personnel returned questionnaires which included leave days or days that had to be discarded because of inconsistent or missing data. If analysis was restricted to only those questionnaires that cover a full working week, results would be based on much less data and confidence intervals would be considerably wider. The methodology used is based upon a 'notional' week made up of the average Monday, the average Tuesday, ..., the average Sunday.

## **Rounding**

Where rounding has been used, totals and sub-totals have been rounded separately and so may not equal the sums of their rounded parts.

## **Revisions**

There are no planned revisions of this report nor are there any revisions within the main report. Figures may have been revised in previous reports and so may not match previously published figures.

## **Statistical comparisons**

In order to detect any statistical differences in working patterns between the current year and the previous year, a series of z-tests were conducted at the 95% confidence level.

If a statistical difference is found it means that the difference between years is unlikely to be the result of random variation and is therefore indicative of a genuine change in hours spent at 'work', 'on duty' or 'on call' when comparing the averages reported in different time periods e.g. 2019/20 vs. 2022/23, 2021/22 vs. 2022/23. It does not mean that the change is necessarily large or substantively "important".

Non-sampling errors such as non-response, timing of response and the location of respondents within the broad location should also be kept in mind when interpreting the results here.

It is important to note that the absence of a statistically significant difference between years does not necessarily mean that no difference is expected to exist between populations. Simply that, given the number of respondents, the detected difference is too small for us to be confident that a difference of this size could not have arisen due to chance variation in the survey process.

# Glossary

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**Armed Forces Pay Review Body (AFPRB)** Provides independent advice to the Prime Minister and the Secretary of State for Defence on pay and changes for members of the Naval, Military and Air Forces of the Crown.

**Breaks** Are meal breaks during periods of work.

**Excessive hours** Refers to a working week of 70 hours or more.

**Joint Personnel Administration (JPA)** Is the system used by the Armed Forces to deal with matters of pay, leave and other personal administrative tasks.

**Junior Officers** Armed Forces personnel with a NATO Rank of OF1 to OF2.

**Junior Ranks/Rates** Armed Forces personnel with a NATO Rank of OR1 to OR4.

**Missing at random (MAR)** Statistical theory that states those who did not respond to a question do not differ from those who did respond.

**MOD** Ministry of Defence.

**NATO** North Atlantic Treaty Organisation.

**Royal Navy** Comprises the Royal Navy (including Queen Alexandra's Royal Naval Nursing Service) and the Royal Marines combined.

**Non-response** Refers either to a person who although sampled and sent a questionnaire did not provide details of their working patterns, or to a respondent who did not complete a question.

**Off duty** Not at work, on breaks or on call.

**Officers** In the CWP survey, this refers to Officers with a NATO Rank of OF1 to OF6.

**On call** Includes all time when available as necessary, including all time away at sea, time spent on exercise or operations (including periods of off duty / stand down) and fully kitted for immediate call out.

**On duty** All time spent at work, on breaks and on call.

**Ranks/Rates** Ranks are members of the Royal Marines, Army and RAF who are not Officers. The equivalent group in the Royal Navy are known as 'Ratings'.

**RAF** Royal Air Force.

**RM** Royal Marines.

**RN** Royal Navy.

# Glossary

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**Senior Officers** Armed Forces personnel with a NATO Rank of OF3 to OF6.

**Senior Ranks/Rates** Armed Forces personnel with a NATO Rank of OR6 to OR9.

**Single Services** Royal Navy, Army and RAF.

**Statistically significant** Refers to the result of a statistical test in which there is evidence of a difference in average weekly hours spent at work, on call or on duty between the averages reported in different time period/Services/ rank groups, that is unlikely to be the result of random variation

**Statistical tests** Refers to those tests which are carried out to see if any evidence exists for a difference that is unlikely to be the result of random variation, in working patterns between the averages reported in different time period/Services/ rank groups.

**Unsocial hours** Are any hours worked between 00:00 and 06:00 Monday to Friday, any hours worked between 18:00 and 24:00 Monday to Friday, and any hours worked on Saturday and Sunday.

**Work** Includes all time spent on core activities, secondary duties, compulsory fitness training, organised sports and representational activities, but excludes breaks.

**Weighting** Refers to weights that are applied to the respondent data set (by Service, rank group and broad location) in order to make the data more representative of the population of interest.

**z-test** Statistical tests based on a standardised distribution which allows comparison between years for populations of different sizes.

## Further Information

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### Contact us

Defence Statistics welcome feedback on our statistical products. If you have any comments or questions about this publication or about our statistics in general, you can contact us as follows:

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