Ministry of Defence

UK Armed Forces

Continuous Working Patterns Survey

2021/22

Published 22 September 2022

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 2021/22 along with results from previous years by Service, broad location and rank group.

Key Points and Trends - 2021/22

▲ 44.6 hours Average weekly hours worked by trained, UK regular personnel

An increase of 2.9 hours since 2020/21 (41.7 hours).

▲ 49.2 hours Royal Navy personnel have the highest average weekly hours worked

An increase of 2.8 hours since 2020/21 (46.4 hours).



66.6 hours Average weekly hours spent on duty by trained, UK regular personnel Similar to 2020/21.

▲ 8% Of trained, UK regular personnel worked excessive hours

An increase of three percentage point since 2020/21 (5%).

Excessive hours refer to working more than 70 hours during the week surveyed.

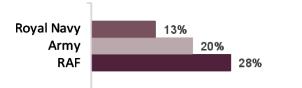
▲ 7.1 hours |Average weekly unsociable hours worked by trained, UK regular personnel

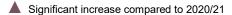
An increase of 1.8 hours since 2020/21 (5.3 hours).

Unsociable hours refer to any hours worked between 18:00 and 6:00, Monday to Friday, and any hours worked on Saturday and Sunday.

▲ 17% Is the CWP Survey's valid response rate

An increase of four percentage points since 2020/21 (13%).





▼ Significant decrease compared to 2020/21

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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

Contents

| Section | Page |
|---------------------------|------|
| Introduction | 2 |
| Section 1: Tri-Service | 4 |
| Section 2: The Royal Navy | 10 |
| Section 3: The Army | 15 |
| Section 4: The RAF | 20 |
| Methodology | 25 |
| Glossary | 29 |
| Further Information | 31 |
| 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 2021/22 was distributed to 19,508 trained UK Regular personnel between November 2021 to June 2022 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, 3,408 of the returned surveys were considered valid, which represents a response rate of 17%. This is an increase compared to the 2020/21 Survey where the response rate was 13%. Of these valid surveys, there were 2,647 responses from paper survey, which equates to about four-fifths 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. CWP Survey 2021/22 was in field between November 2021 to June 2022, when COVID-19 continued to feature heavily in daily life but national restrictions were being eased over this period. **The potential impact of COVID-19 on personnel's working pattern should be considered when interpreting the results presented**. Some working patterns reported in 2021/22, when compared to working patterns reported in 2020/21, have reverted back to levels reported in 2019/20, when COVID-19 was present for a smaller proportion of time and would have impacted working patterns less. The survey included a new question asking whether COVID-19 had an impact on working patterns. Comparisons of results from this question are provided in the reference tables.

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. 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.

Although improvement in response rate is seen with the full introduction of the online survey and the introduction of the deployed surveys trial, results may have been influenced by the new methodology. 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. Due to differences in response rates between data sets, limited significance testing could be conducted. Results were inconclusive and did not provide enough evidence to eliminate/highlight particular data sets. Continuous monitoring of these data sets would help us to further understand any biases they might introduce. 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
- * On call at a place of duty
- * Duty personnel, when on standby
- * Period of off duty / stand down on exercise or operations
- * Held at 48 hours or less Notice to Move (NTM)

Off duty includes:

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

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 <u>Army Basing Programme</u> 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 2021/22 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 2014/15 Survey. This time series data is presented in a series of tables and graphs.

Please see the <u>Background Quality Report</u> for full details of the survey methodology, analysis and data quality considerations.

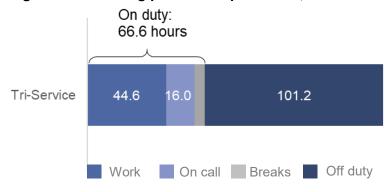
Note: Throughout the publication, where statistical significant tests applied in order to detect any statistical differences in working patterns between the current year (2021/22) and the previous year (2020/21), a series of z-tests were conducted at a 95% confidence interval.

Section 1: Tri-Service

1.1 Working patterns, 2021/22

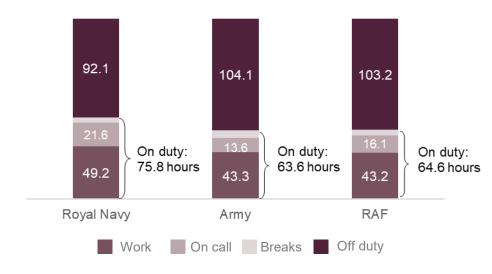
Compared to last year, average hours worked has increased whilst time spent on call has decreased. As a result, average time spent on duty (66.6 hours) remains largely unchanged since last year (66.4 hours).

Figure 1.1: Working patterns of personnel, 2021/22



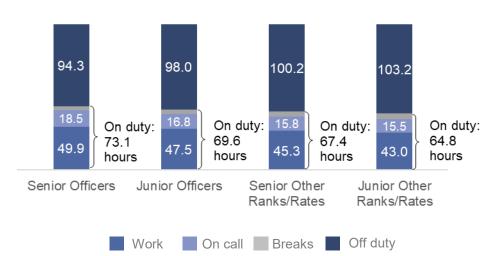
On average, personnel worked 44.6 hours per week, an increase of 2.9 hours from last year (41.7 hours). This year, personnel spent 16.0 hours per week on call. This is a decrease of 3.1 hours from last year (19.1 hours).

Figure 1.2: Working patterns of all personnel by Service, 2021/22



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, 2021/22



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, 2020/21 - 2021/22

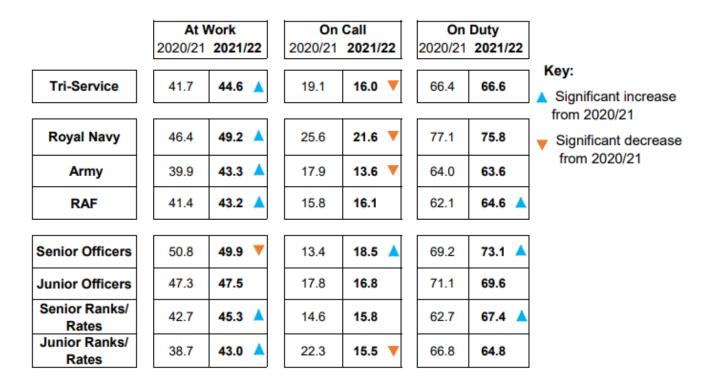
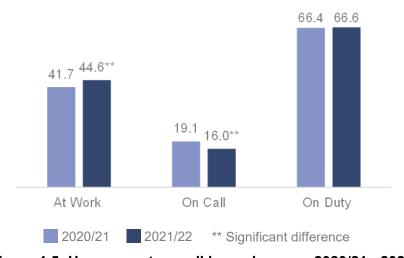
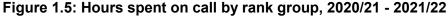


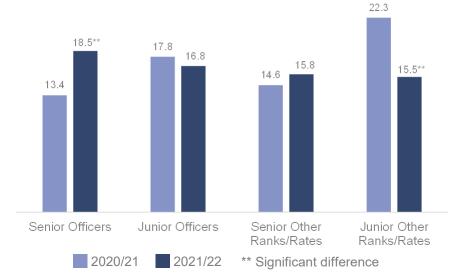
Figure 1.4: Working patterns of personnel, 2020/21 - 2021/22



Since 2020/21, average working hours increased for all Services and Other Ranks/Rates. There is a decrease in time spent on call for Royal Navy and Army personnel.

Overall, at a Tri-Service level, the time spent on duty remains similar.





The overall decrease in time spent on call is driven by the decrease in time spent on call amongst Junior Ranks, following an increase reported last year.

Senior Officers report an increase in time spent on call this year, following a decrease reported last year.

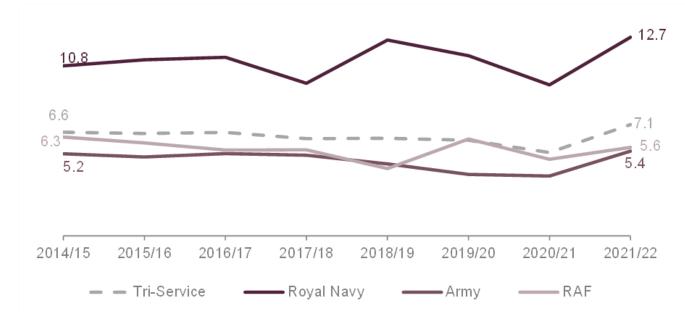
1.2 Unsociable hours worked by personnel, 2014/15 - 2021/22

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 2021/22, personnel worked, on average, 7.1 unsociable hours per week. There is a significant increase of 1.8 hours from last year, mainly driven by the increase of 3 hours for Royal Navy personnel, returning to levels similar to 2018/19.

Figure 1.6: Unsociable hours worked by Service, 2014/15 - 2021/22



Royal Navy personnel continue to report a higher average number of unsociable hours worked than the other Services. This can mainly be explained by sea-based personnel who have additional duties and are therefore spending extra hours at work during unsociable hours.

1.3 Excessive hours worked and spent on duty, 2021/22

Section 1.3 is based on the 1,638 UK regular personnel for whom a full week's data was available in 2021/22 (48% of all valid responses).

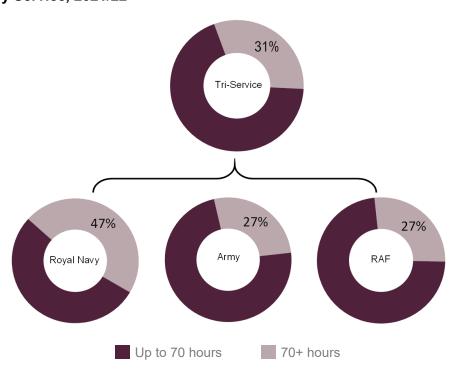
Overall, 8% of personnel worked more than 70 hours per week.

Royal Navy report 21% of personnel <u>working</u> excessive hours compared to 5% and 3% for Army and RAF personnel respectively.

Excessive hours

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

Figure 1.7: Proportion of personnel spending more than 70 hours on duty for the week surveyed by Service, 2021/22

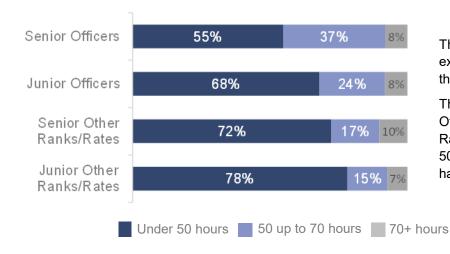


A larger proportion of Royal Navy personnel report spending more than 70 hours per week on duty than Army and RAF personnel. This is due to Royal Navy personnel being away at sea and having additional duties.

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 1.8: Distribution of hours at work of personnel by rank group, 2021/22



The proportion of personnel <u>working</u> excessive hours differs less by rank group than by Service.

The majority (72% and 78%) of Senior Other Ranks/Rates and Junior Other Ranks/Rates reported working less than 50 hours per week compared to around half of Senior Officers (55%).

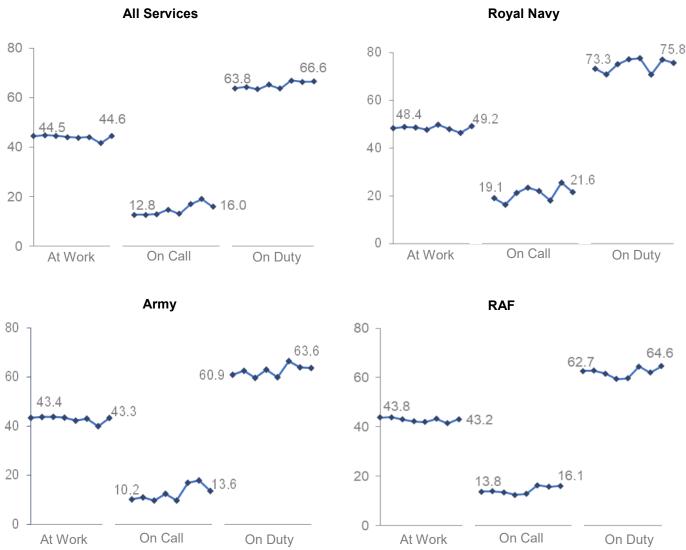
1.4 Time series of working patterns, 2014/15 - 2021/22

The time spent on duty has remained similar since 2019/20. Last year, personnel reported the lowest recorded average number of hours worked (41.7 hours) and the highest recorded average time spent on call (19.1 hours). This year, these have reverted back to levels similar to 2019/20. Average time spent on call has decreased and average time worked has increased.

The increase in work hours is seen across all Services, whilst the decrease in average on call hours is driven by Royal Navy and Army personnel, who both reported highest recorded levels of on call hours last year.

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 1.9: Comparison of average weekly hours spent at work, on call and on duty by Service, 2014/15 - 2021/22



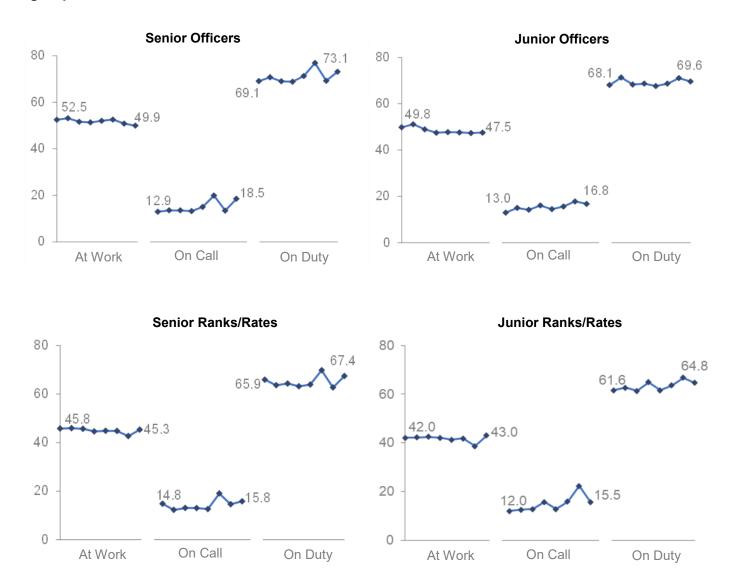
Average hours worked by Royal Navy personnel increased by 2.8 hours, continuing to report higher average hours worked than the other Services. This is driven by personnel based at sea who work considerably more hours on average (63.8 hours), than those based on shore (43.6 hours). Average hours worked also increased for both Army and RAF this year, by 3.3 hours and 1.8 hours respectively.

Following significant increases in average time spent on call in 2019/20 (7.2 hours for Army, 3.4 hours for RAF), levels have decreased and are in line with those reported in 2017/18 for Army personnel (13.6 hours in 2021/22) and remain consistent for RAF personnel (16.1 hours in 2021/22). Average on call hours fell for Royal Navy personnel this year to a similar level reported in 2018/19 (21.6 hours in 2021/22). Average on duty hours has remained similar to last year for Army personnel (63.6 hours in 2021/22) and Royal Navy personnel (75.8 hours in 2021/22) and increased for RAF personnel, reverting to level reported in 2019/20 (64.6 hours in 2021/22).

Senior Officers reported their lowest recorded average time worked since 2014/15. At the same time, they report the highest recorded level of on call hours in this time period, similar to levels in 2019/20. These changes have had an impact on the time spent on duty which follows a similar trend to on call hours for Senior Officers, with a similar level of time spent on duty reported in 2018/19.

Working patterns for Junior Officers have been fairly stable since 2017/18. Time spent on call and on duty have remained stable since 2019/20 and 2014/15 respectively.

Figure 1.10: Comparison of average weekly hours spent at work, on call and on duty by rank group, 2014/15 - 2021/22



Both Senior and Junior Other Ranks/Rates reported their lowest recorded average hours worked last year. This year, they both reverted back to 2019/20 levels.

Senior Other Ranks/Rates report a similar time spent on call this year to last year (14.6 hours), as well as to 2014/15 level. The increase in time spent at work this year has driven the increase in time spent on duty, returning to the levels reported in 2019/20.

Junior Other Ranks/Rates report a decrease in time spent on call this year, after reporting consecutive increases between 2018/19 and 2020/21 (*from 12.8 hours to 22.3 hours*). Time spent on call is now similar to level reported in 2019/20 (15.8 hours). Changes in time spent on duty in recent years have been largely driven by large increases in on call hours since 2018/19. With the increase in average hours worked and fall in on call hours, now in line with 2019/20 levels, average on duty hours this year is similar to level reported in 2019/20 for Junior Other Ranks/Rates.

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, 2021/22

On average, Royal Navy personnel worked 49.2 hours per week, an increase of 2.8 hours since 2020/21. Over the same time period, time spent on call decreased by 4.0 hours, whilst time spent on duty has remained similar to 2020/21.

64.4 92.1 102.7 32.8 On 21.6 17.2 duty: On On 103.4 duty: duty: 63.8 hours 75.8 65.1 49.2 43.6 hours hours Royal Navy Sea Shore Work On call Breaks Off duty

Figure 2.1: Royal Navy personnel working patterns by location, 2021/22

In 2021/22, on average, sea-based personnel continue to spend considerably more time at work, on call and hence, on duty than shore-based personnel.

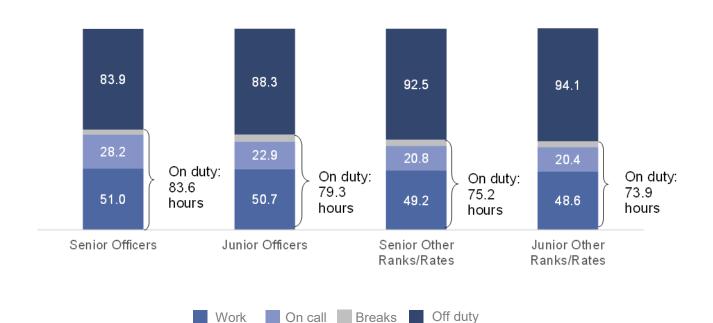


Figure 2.2: Royal Navy personnel working patterns by rank group, 2021/22

In 2021/22, Officers spent more time on duty, on average, than Other Ranks/Rates. On average, Senior Officers spent the most time on call and hence, on duty than the other rank groups. Senior and Junior Other Ranks/Rates report similar working patterns.

Table 2.1: Working patterns of Royal Navy personnel, 2020/21 - 2021/22

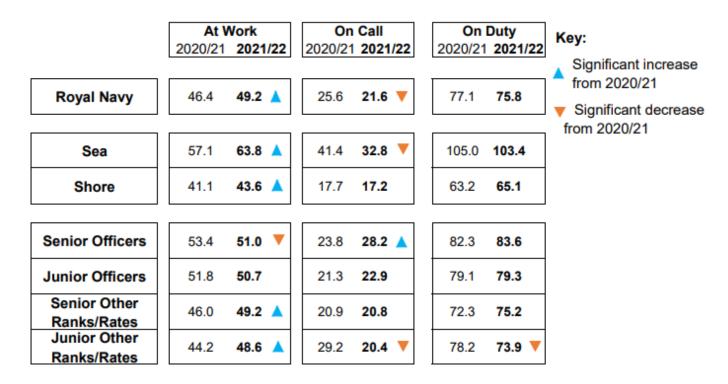
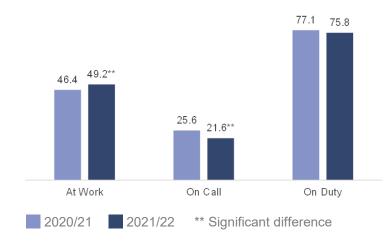


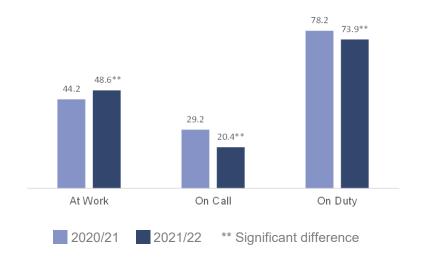
Figure 2.3: Working patterns of Royal Navy personnel, 2020/21 - 2021/22



The average time Royal Navy personnel spent at work (per week) increased this year by 2.8 hours since 2020/21.

Over the same time period, whilst average time spent on call has decreased by 4.0 hours, average time spent on duty remained at a similar level as 2020/21.

Figure 2.4: Working patterns of Junior Other Ranks/Rates in the Royal Navy, 2020/21 - 2021/22



The changes to Royal Navy working patterns this year have been largely driven by changes for Junior Other Ranks/Rates.

The average time spent on call and on duty has decreased since 2020/21 for Junior Other Ranks/Rates, however, the average time spent at work has increased by 4.4 hours.

2.2 Royal Navy excessive hours worked and spent on duty, 2021/22

Section 2.2 is based on the 486 Royal Navy personnel for whom a full week's data was available (47% of all valid responses).

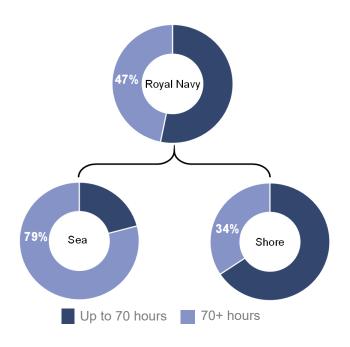
Overall, 21% of Royal Navy personnel worked more than 70 hours per week.

However, this differs greatly by location; 43% of personnel based at sea worked excessive hours compared to 12% of shore-based personnel.

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 <u>on duty</u> for the week surveyed by location, 2021/22



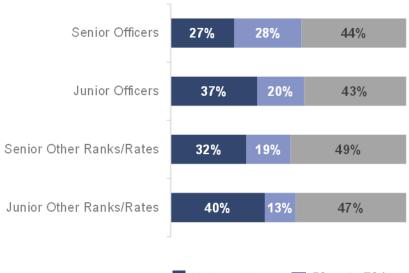
Overall, 47% of Royal Navy personnel spent more than 70 hours per week on duty.

A larger proportion of Royal Navy personnel located at sea (79%) spent more than 70 hours per week on duty than Royal Navy personnel on shore (34%).

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, 2021/22

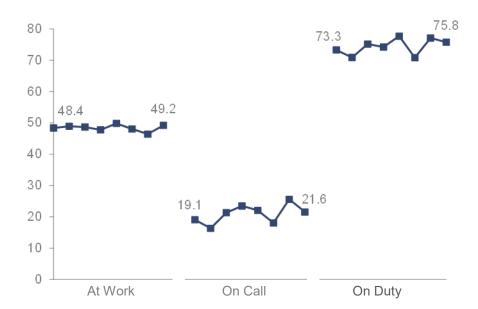


Senior Officers have the lowest proportion of personnel on duty for less than 50 hours per week (27%).

The proportion of personnel on duty for 70 hours or more per week is fairly similar across the rank groups.

2.3 Time series of Royal Navy working patterns, 2014/15 - 2021/22

Figure 2.7: Average weekly hours Royal Navy personnel spent at work, on call and on duty, 2014/15 - 2021/22

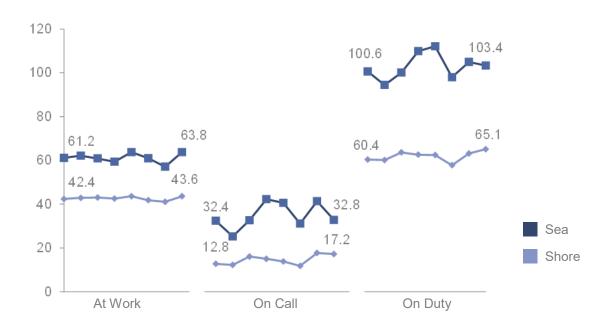


Average hours worked has increased by 2.8 hours to 49.2 hours this year and is now similar to 2018/19 and 2019/20 levels.

This year, average time spent on call decreased to 21.6 hours, following the sharp increase reported last year, and is now in line with levels reported between 2016/17 and 2018/19.

The time spent on duty this year remains similar to the level reported in 2020/21.

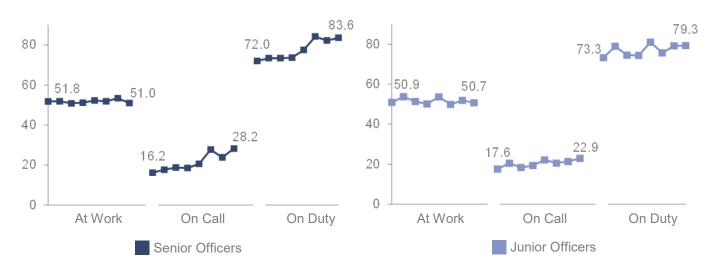
Figure 2.8: Average weekly hours Royal Navy personnel spent at work, on call and on duty by location, 2014/15 - 2021/22



Average hours on call and on duty for shore-based personnel is similar to levels reported last year (17.7 hours and 63.2 hours respectively). An increase in average work hours is seen for these personnel, it is now of a similar level to 2018/19 (43.7 hours).

Average hours worked for personnel based at sea has increased this year (63.8 hours) and is in line with levels reported between 2018/19 and 2019/20. More fluctuations are seen in the average on call and on duty hours across the time period reported here. Average hours on call have decreased this year (32.8 hours) and are in line with levels reported in 2014/15, 2016/17 and 2019/20. Average hours on duty this year (103.4 hours) are similar to those reported last year.

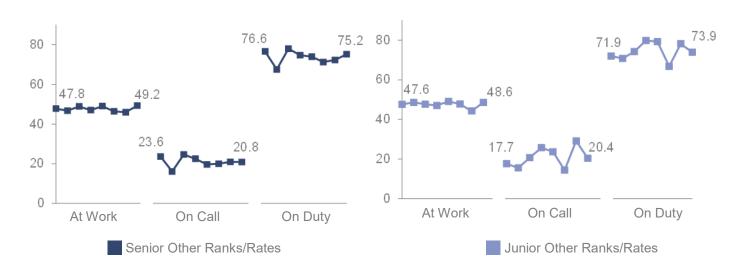
Figure 2.9: Average weekly hours Royal Navy Officers spent at work, on call and on duty by rank group, 2014/15 - 2021/22



Average hours worked for Senior Officers (51.0 hours) remains similar to previously reported levels between 2014/15 and 2019/20. Average hours on call has increased this year (28.2 hours) and is now in line with levels reported in 2019/20, at the highest record level since 2014/15. Average hours on duty has remained similar (83.6 hours) since the increase seen in 2019/20 (from 77.5 hours in 2018/19 to 84.2 hours 2019/20).

For Junior Officers, average hours worked, on call and on duty (50.7 hours, 22.9 hours, 79.3 hours respectively) have remained similar to levels reported in 2019/20.

Figure 2.10: Average weekly hours Royal Navy Other Ranks/Rates spent at work, on call and on duty by rank group, 2014/15 - 2021/22



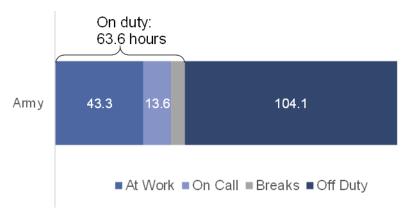
Average hours worked for Senior Other Ranks/Rates has increased by 3.2 hours this year to 49.2 hours bringing it in line with levels reported in 2018/19. Average hours on call has been largely stable since 2017/18.

Average hours worked for Junior Other Ranks/Rates has risen this year (48.6 hours), following the lowest recorded level reported last year, it is now in line with levels reported between 2014/15 and 2019/20. However, time spent on call has decreased by 8.8 hours to 20.4 hours this year, following a sharp increase of 14.7 hours last year and is now similar to levels reported in 2016/17. Following an increase of 11.4 hours last year (78.2 hours), average time spent on duty has also decreased this year (73.9 hours), returning to the level reported in 2016/17.

3.1 Army working patterns, 2021/22

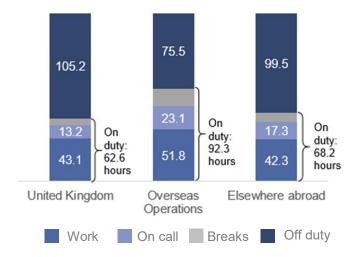
During 2021/22, personnel spent, on average, 63.6 hours per week on duty, similar to 64.0 hours last year, although time spent at work has increased by 3.3 hours compared to 2020/21.

Figure 3.1: Army personnel working patterns, 2021/22



On average, Army personnel worked 43.3 hours per week, higher than the 39.9 hours reported last year. Time spent on call fell from 17.9 hours last year. Average hours spent on duty remains similar to last year.

Figure 3.2: Army personnel working patterns by location, 2021/22



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.

On average, personnel who are deployed on overseas Operations continue to spend more time on duty (92.3 hours) than those based at other Army locations. This is a partly due to the high number of hours deployed personnel spend on call; the questionnaire defines all periods of off-duty/stand down when on exercise or operation as time spent on call.

Figure 3.3: Army personnel working patterns by rank group, 2021/22

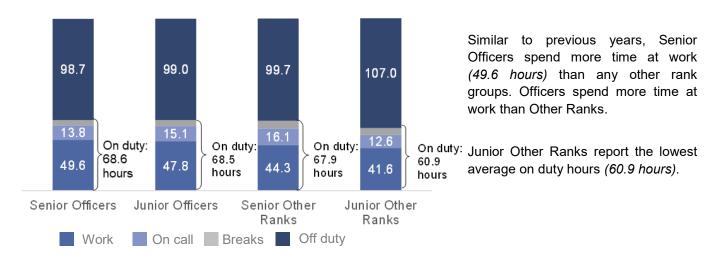


Table 3.1: Working patterns of Army personnel, 2020/21 - 2021/22

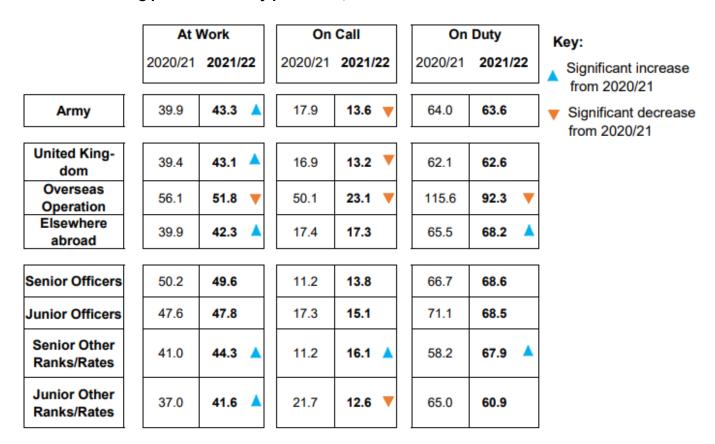


Figure 3.4: Working patterns of Army personnel, 2020/21 - 2021/22

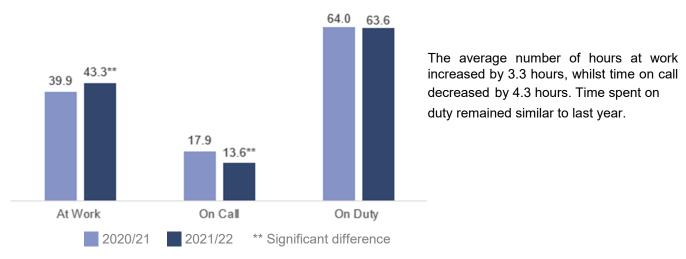
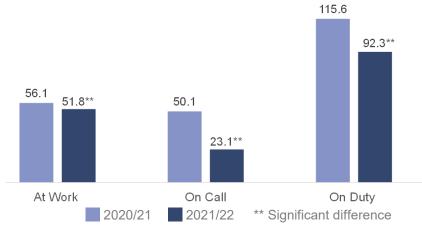


Figure 3.5: Working patterns of Army personnel deployed on overseas Operations, 2020/21 - 2021/22



This year, average hours worked has decreased by 4.3 hours to 51.8 hours for Army personnel deployed on overseas Operations. This follows an increase in hours worked last year. Time spent on duty has decreased by 23.3 hours to 92.3 hours for these personnel.

All time spent off-duty or on stand down whilst on exercise or operations is defined as on call. Time spent on call for personnel deployed on overseas Operations has decreased by 27.0 hours to 23.1 hours.

3.2 Army excessive hours worked and spent on duty, 2021/22

Section 3.2 is based on the 629 Army personnel for whom a full week's data was available (46% of all valid responses).

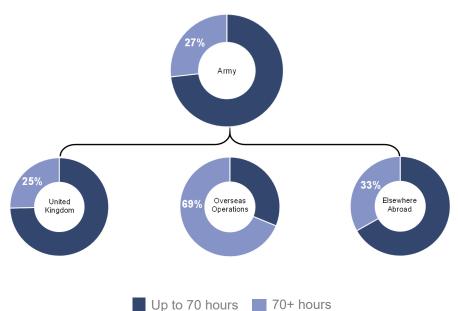
Overall, 5% of personnel spent more than 70 hours per week at work.

A larger proportion (22%) of personnel deployed on overseas Operations report working more than 70 hours per week compared to those based in other locations.

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, 2021/22



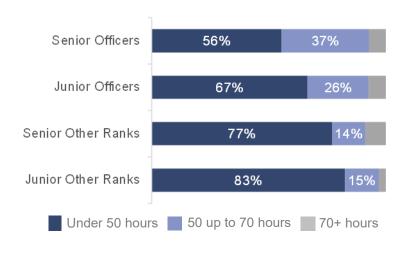
Overall, 27% of personnel report spending more than 70 hours per week on duty. A larger proportion (69%) of Army personnel deployed on overseas Operations report spending more than 70 hours per week on duty compared to Army personnel at any other locations.

This difference is 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 at work for Army personnel by rank group, 2021/22

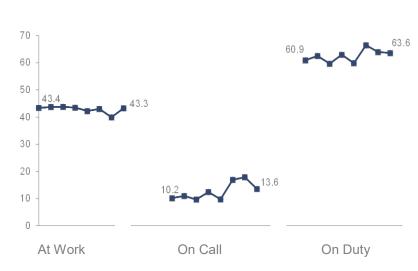


The proportion of personnel working excessive hours does not differ as much by rank as it does by location.

The majority of Senior Other Ranks (77%) and Junior Other Ranks (83%) report working less than 50 hours per week.

3.3 Time series of Army working patterns, 2014/15 - 2021/22

Figure 3.8: Army average weekly hours spent at work, on call and on duty, 2014/15 - 2021/22

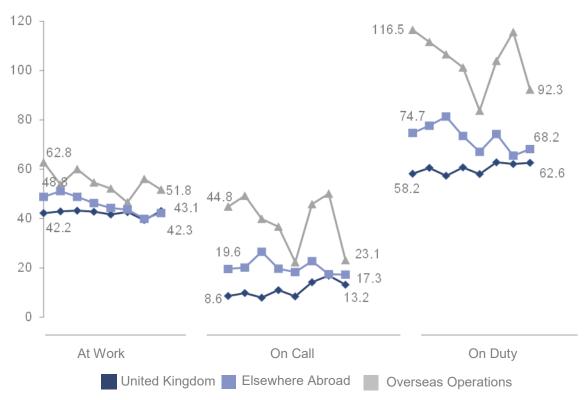


Average hours worked increased by 3.3 hours this year to 43.3 hours, following a fall in 2020/21, returning to levels reported in 2019/20.

This year (13.6 hours), average hours spent on call decreased by 4.3 hours after the highest recorded levels reported in 2019/20 and 2020/21. It is now similar to 2017/18 above levels recorded between 2014/15 and 2016/17.

Fluctuations are seen across the levels of average hours spent on duty (since 2014/15). The average on duty hours reported this year (63.6 hours) remain similar to the level reported last year.

Figure 3.9 Army average weekly hours spent at work, on call and on duty by location, 2014/15 - 2021/22

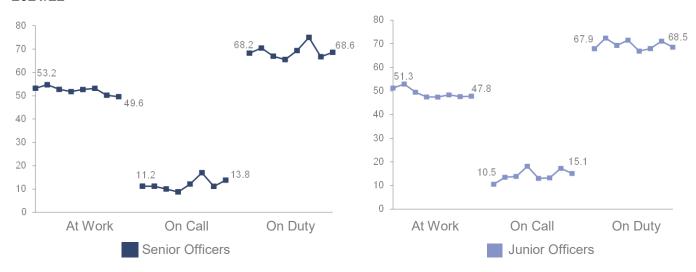


Average hours worked for personnel based in the UK and elsewhere abroad has increased this year, following the lowest levels recorded last year (39.4 hours for UK, 39.9 hours for elsewhere abroad). For personnel based in the UK (43.1 hours) they report levels similar to that of 2019/20 and 2014/15 – 2017/18. For personnel based elsewhere abroad (42.3 hours), they report a level similar to 2019/20 and below levels reported between 2014/15 and 2018/19 (ranging from 44.3 hours to 51.1 hours). Time spent on call and on duty for personnel based in the UK (13.2 hours on call, 62.6 hours on duty) are of a similar level to 2019/20. This year time spent on duty for personnel based elsewhere abroad (68.2 hours) is in line with levels reported in 2018/19 and 2019/20. Time spent on call has remained similar since 2017/18 for these personnel.

Following an increase of 9.5 hours last year, average hours worked for personnel on overseas Operations (51.8 hours) has decreased this year by 4.3 hours, reverting to levels between 2017/18 and 2018/19. Time spent on duty and on call for personnel on overseas Operations (92.3 hours on duty, 23.1 hours on call) has decreased following increases in 2019/20 and 2020/21 (of a total increase of more than 20 hours) and are now of similar levels reported in 2018/19. Personnel on overseas Operations continue to spend considerably more hours on duty, than those based in other locations.

18

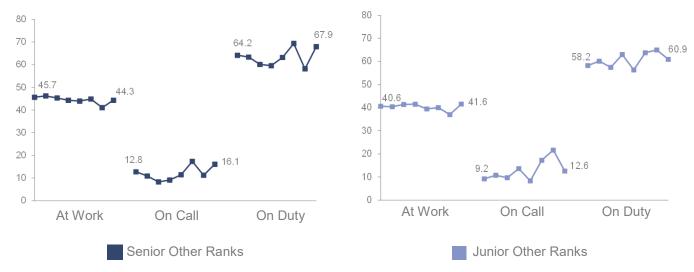
Figure 3.10: Army average weekly hours spent at work, on call and on duty by Officers, 2014/15 - 2021/22



Senior Officers reported a lowest record level of average work hours in 2020/21, which remains similar this year (49.6 hours). Its level is now below levels reported between 2014/15 and 2019/20 (ranging from 51.8 hours to 54.7 hours). Following increases in 2019/20 and decreases in 2020/21, average time spent on call and on duty for Senior Officers (13.8 hours on call, 68.6 hours on duty) remained similar to last year and both are now in line with levels reported in 2018/19.

Average hours worked for Junior Officers (47.8 hours this year) has been stable since 2017/18. Similarly, time spent on call and on duty for Junior Officers (15.1 hours on call, 68.5 hours on duty) have remained at similar levels since 2018/19 and 2016/17 respectively.

Figure 3.11: Army average weekly hours spent at work, on call and on duty by Other Ranks, 2014/15 - 2021/22



After reporting the lowest recorded levels of average work hours reported last year (since 2014/15) (41.0 hours for Senior Other Ranks and 37.0 hours for Junior Other Ranks), average hours worked for both Senior and Junior Other Ranks have risen this year (44.3 hours and 41.6 hours) and are now back in line with levels reported in 2019/20.

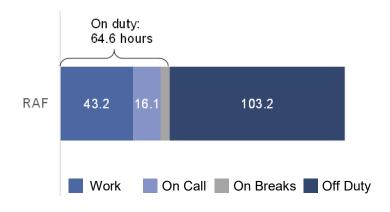
Following decreases reported last year (11.2 hours on call, 58.2 hours on duty), average time spent on call and on duty for Senior Other Ranks have both risen this year (16.1 hours on call, 67.9 hours on duty) and are now similar to levels reported in 2019/20.

Average time spent on duty (60.9 hours in 2021/22) remains similar since 2019/20 for Junior Other Ranks. Average on call hours have decreased by 9.1 hours this year (12.6 hours) following the highest recorded levels reported in the past two years since 2014/15 (17.3 hours in 2019/20, 21.7 hours in 2020/21). It is now back in line with the level reported in 2017/18.

4.1 RAF working patterns, 2021/22

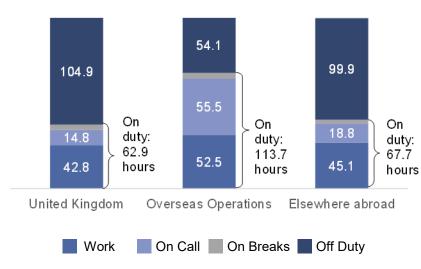
On average, RAF personnel worked 43.2 hours per week, an increase of 1.8 hours since last year returning to 2019/20 levels.

Figure 4.1: RAF working patterns, 2021/22



On average, RAF personnel have spent 64.6 hours on duty, an increase of 2.5 hours from last year.

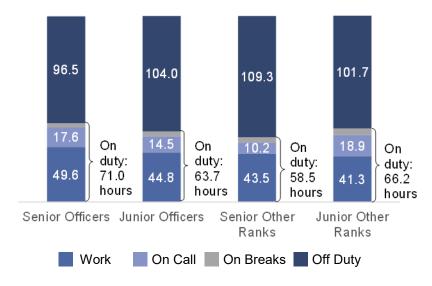
Figure 4.2: RAF working patterns by location, 2021/22



Personnel who are deployed on overseas Operations continue to spend more time on duty (113.7 hours) than those based at other RAF locations.

This is a largely due to the nature of work during overseas Operations coupled with the high number of hours deployed personnel spend on call; the questionnaire defines all periods of off duty/stand down when on exercise or operation as time spent on call.

Figure 4.3: RAF working patterns by rank group, 2021/22



Senior Officers report the highest average weekly hours worked (49.6 hours) whilst Junior Other Ranks report the lowest (41.3 hours).

Senior Other Ranks report fewer hours spent on call, on average, than other rank groups.

Senior Officers report the highest amount of time spent on duty amongst all rank groups, whilst Senior Other Ranks report the lowest amount of time spent on duty.

Table 4.1: Working patterns of RAF personnel by rank group, 2020/21 - 2021/22

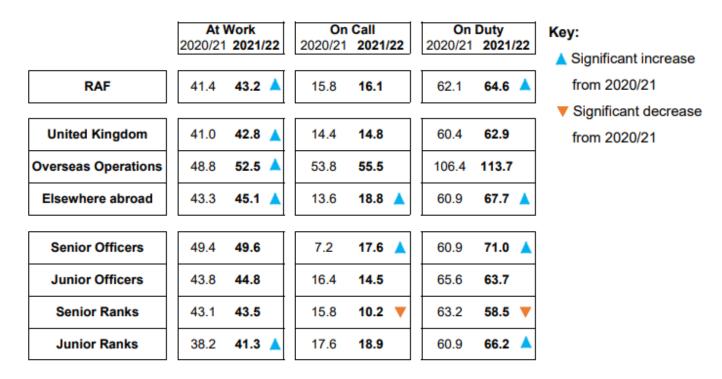
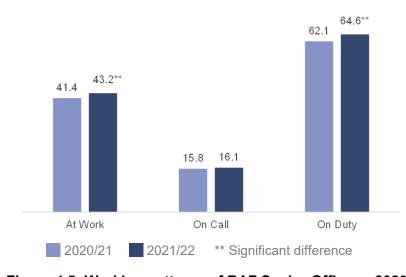
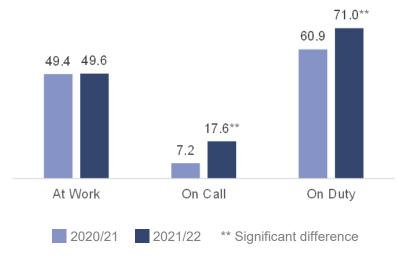


Figure 4.4: Working patterns of RAF personnel, 2020/21 - 2021/22



The average hours RAF personnel spent on call (16.1 hours) remain similar to last year whilst the average hours RAF personnel spent at work (43.2 hours) and on duty (64.6 hours) have increased.

Figure 4.5: Working patterns of RAF Senior Officers, 2020/21 - 2021/22



Average hours spent on call and on duty increased by 10.3 and 10.0 hours respectively for RAF Senior Officers this year following large decreases last year. Changes in working patterns are likely to be due, in part, to COVID-19.

4.2 RAF excessive hours worked and spent on duty, 2021/22

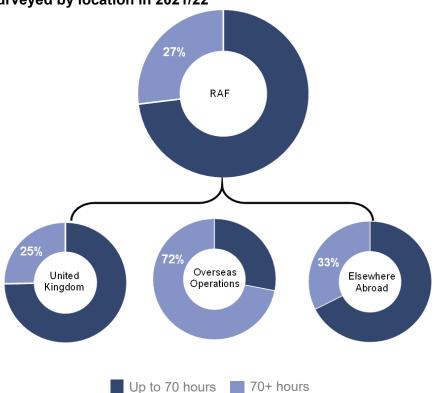
Section 4.2 is based on the 533 RAF personnel for whom a full week's data was available (53% of all valid responses).

Overall, 3% of RAF personnel worked excessive hours in 2021/22.

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 <u>on duty</u> for the week surveyed by location in 2021/22



A larger proportion of RAF personnel deployed on overseas Operations (72%) spent more than 70 hours per week on duty than RAF personnel at other locations.

This difference is largely due to the greater amount of time those based overseas on Operations spend on call (55.5 hours) than at other locations; (UK: 14.8 hours, Elsewhere abroad: 18.8 hours). 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 RAF personnel.

Figure 4.7: Distribution of hours on duty of RAF personnel by rank group, 2021/22

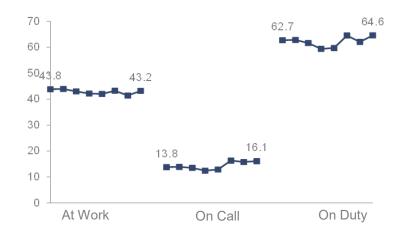


Whilst the proportions of personnel on duty for less than 50 hours varies, Senior Officers are most likely to spend between 50 and 69.9 hours on duty compared to all other rank groups.

4.3 Time series of RAF working patterns, 2014/15 - 2021/22

Overall, time spent at work has been fairly stable historically ranging from 41.4 to 43.9 hours. Following a decrease last year, time at work reverted back to levels in 2019/20.

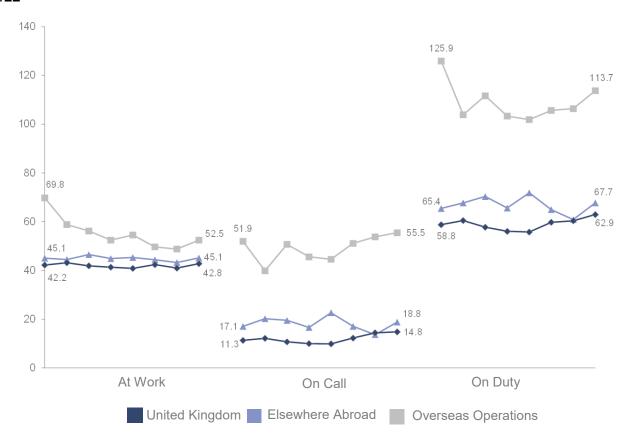
Figure 4.8: RAF average weekly hours spent at work, on call and on duty, 2014/15 - 2021/22



Following a decrease last year, average time spent at work (43.2 hours) has returned to 2019/20 level.

Following large increases in both on call and on duty hours in 2019/20, average on call hours this year remain at the highest recorded levels from 2014/15 - 2021/22. On duty hours is similar to 2019/20 levels.

Figure 4.9: RAF average weekly hours spent at work, on call and on duty by location, 2014/15 - 2021/22

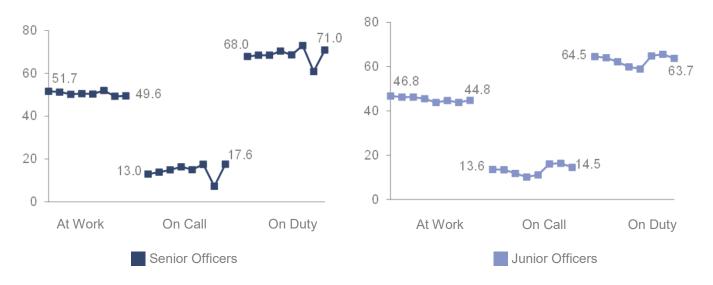


Average hours worked by personnel based in the UK have been fairly stable historically, ranging between 40.9 and 43.2 hours. Average time spent on call has remained similar and stayed above levels reported between 2014/15 and 2018/19 (ranged from 9.9 to 12.2 hours). Together with the levels reported last year, average time spent on duty remained at the highest levels recorded in this time period.

In 2020/21, personnel working elsewhere abroad reported the lowest amount of work (43.3 hours), on call (13.6 hours) and on duty (60.9 hours) hours in this recorded time period (2014/15 - 2021/22). This year, all levels reverted back to 2014/15 - 2019/20 levels.

For personnel on overseas Operations, average hours worked increase from last year and is now similar to 2017/18 and 2018/19 levels. This year, time spent on duty for personnel on overseas Operations is similar to last year and 2016/17 level. Time spent on call has remained similar since 2019/20 (51.1 hours).

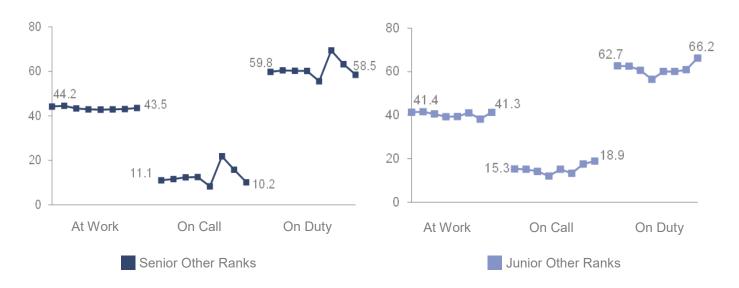
Figure 4.10: RAF average weekly hours spent at work, on call and on duty by Officers, 2014/15 - 2021/22



Average time spent at work for Senior Officers remain similar to last year and levels between 2016/17 to 2018/19. Time spent on call, and hence time spent on duty fell sharply (to 7.2 hours and 60.9 hours respectively) for Senior Officers in 2020/21, falling below all previous levels reported here (since 2014/15). Both of them have now reverted back to levels reported in 2019/20. These changes may be due, in part, to the impact of COVID-19.

Average hours worked has been fairly stable for Junior Officers since 2017/18. Time spent on call, and hence on duty increased in 2019/20 and have remained similar.

Figure 4.11: RAF average weekly hours spent at work, on call and on duty by Other Ranks/Rates, 2014/15 - 2021/22



Average hours worked for Senior Other Ranks has been very stable over the recorded time period since 2014/15 (ranging from 42.8 hours to 44.5 hours). However, following increases of more than 13 hours in 2019/20 in both time spent on call and on duty, they have started to fall back (10.2 hours on call, 58.5 on duty in 2021/22) to previous years' levels and are now similar to levels reported in 2018/19.

Average hours worked for Junior Other Ranks fell to 38.2 hours in 2020/21, this year (41.3 hours), its level is similar to 2019/20 and between 2014/15 and 2016/17. Junior Other Ranks report the highest recorded level of average time spent on call and on duty this year (since 2014/15).

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. This year, paper and online surveys were both used to collect responses throughout the two waves of data collection. Approximately half of the personnel in the sample were sent a questionnaire in November 2021, the other half were sent a questionnaire in March 2022. Whilst both paper and online surveys were offered to personnel from the same sample, some points of contact requested an online option only, relevant personnel were only sent an online survey. Data collection for paper survey ran from November 2021 up to June 2022.

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 2021/22

| | Sample size | All valid responses | Valid response rate |
|-----------------------|----------------|---------------------|---------------------|
| Tri-Service | 19,508 | 3,408 | 17% |
| Royal Navy | 8,097 | 1,033 | 13% |
| Army | 6,388 | 1,285 | 20% |
| RAF | 3,598 | 996 | 28% |
| Deployed survey trial | 1,425 | 94 | 7% |

| Paper valid responses | Online valid responses | | |
|-----------------------|------------------------|--|--|
| 683 | 2,725 | | |
| 263 | 770 | | |
| 241 | 1,125 | | |
| 179 | 830 | | |
| 16 | 78 | | |

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 19,508 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 online survey. Combining the responses from the online and paper surveys, the response rate has increased from 13% last year to 17% this year.

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. CWP Survey 2021/22 was in field between November 2021 to June 2022, when COVID-19 continued to feature heavily in daily life but national restrictions were being eased. The survey 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 the paper and online surveys 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 <u>Army Basing Programme (ABP)</u> 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

| | 2014/15 | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| Army | 164 | 109 | 143 | 122 | 55 | 75 | 205 | 190 |
| RAF | 199 | 144 | 189 | 139 | 38 | 147 | 78 | 120 |
| Total | 363 | 253 | 332 | 261 | 93 | 222 | 283 | 310 |

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.

This year, 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. 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.

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.

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 RAF. However, the margin of error of hours worked for RAF was +/- 0.69 hours and +/- 0.97 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 +/- 1.39 for Army On Call averages to +/- 1.60 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:

Population size of strata (p)

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.

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. 2021/22, 2020/21 vs. 2021/22. 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

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

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.

Unsociable 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

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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