

Written evidence submitted by the Institute of Employment Studies (WBR0020)

Institute for Employment Studies (IES)

IES is an independent, apolitical, international centre of research and consultancy in public employment policy and HR management. It works closely with employers in all sectors, government departments, agencies, professional bodies, and associations. IES is a focus of knowledge and practical experience in employment and training policy, the operation of labour markets, and HR planning and development. IES is a not-for-profit organisation.

Reasons for submitting evidence

IES has conducted new research of direct relevance to one of the Inquiry's questions. Specifically, IES surveyed the primary care workforce DURING the COVID-19 pandemic.

The survey found low levels of resilience and psychological wellbeing among primary care staff. These staff provide the first point of contact in the healthcare system and includes general practice, community pharmacy, dental, and optometry (eye health) services.

Our results offer a snapshot view of staff perceptions of their own psychological well-being and resilience as the nation emerged from the first peak of the outbreak and demand for primary care NHS service increased. Our results are finalised but not yet published.

Summary of our research evidence

NHS England and NHS Improvement, in partnership with Royal College of General Practitioners (RCGP), commissioned IES to conduct the survey as a stand-alone element of a wider evaluation of its #LookingAfterYouToo coaching service. Our report, called *Wellbeing of Primary Care Workforce: Results from a snapshot survey conducted during the Covid-19 pandemic*, shares the results of the IES survey conducted across England during six weeks of the Covid-19 pandemic. Primary care workforce includes GPs, Nurses, Direct Patient Care, Admin/Non-Clinical staff working in General Practice, Dentists, Pharmacists and Optometrists in England, whether they are directly employed by the NHS or not.

The survey gleaned 2,826 responses. The findings showed:

- Resilience is at a level indicating 'low' ability to cope.
- Wellbeing is low.

- Perceived wellbeing and resilience were highest during the first week of the survey and lower in the last week - reflecting a downward trend over time (although this decline is not statistically significant).

Delving deeper on wellbeing, we found:

- Wellbeing differs between clinical professions, with GPs and nurses having higher well-being than other clinicians. However, all average reported levels are below pre-Covid whole population norm.
- Younger workers (18-44-year olds) on average reported lowest wellbeing, especially in the Midlands, North East and Yorkshire and North West regions of England.

As our hospitals begin to restore usual services and make preparations in case of future waves, primary care is the new NHS front-line in picking up the direct and indirect health impact of Covid-19 on the population. For primary care workers, the pandemic is a marathon not a series of sprints. When workers perceive demands as exceeding their capacity to adapt and cope effectively, they may experience high levels of stress.

The research conclusions indicated that:

- There is a clear need to help and support primary care workers during the current crisis and beyond. A particular challenge is the wellbeing of younger staff.
- A speedy ramping up of primary care staff mental wellbeing support services is needed, including for those not directly employed by the NHS.
- Support for local employers is indicated, so they take leadership responsibility for the health of staff, as well as the health of patients.

Good practice actions that employers of primary care workers might usefully take include:

- Increased investment in, and encouraging access to, psychological support, occupational health services and employee assistance programmes (EAPs).
- Address emotional concerns over family finances, public transport, energy and family health.
- Regular contact with line managers and between colleagues; rethinking staff performance and monitoring; and involving staff at all levels in reallocating tasks beyond the short term.
- Ensuring the set up in re-configured physical spaces is safe and ergonomic and that staff spending more time using screens take breaks, move around and take exercise.

FULL TEXT OF RESULTS REPORT FOLLOWS

Wellbeing and Resilience of the Primary Care Workforce: Results from a snapshot survey conducted during the Covid-19 pandemic

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Institute for Employment Studies Report No 552
17 August 2020



Institute for Employment Studies

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Acknowledgements

The authors are indebted to all the staff across Primary Care who took the time to respond to our survey. Whilst millions of UK workers were furloughed or working from home, primary care workers stepped outside their front doors and continued to deliver critical services. Their willingness to help with our research during a time of national crisis is much appreciated.

We extend a special thanks to the sponsors NHS England and NHS Improvement and the Royal College of General Practitioners without whose support and promotion of the survey the research would not have been possible. Particular thanks go to: Heather Simpson, Kate Tattershall and Tracy Matthews from NHS England and Improvement; Prof Mike Holmes from RCGP; Dr Andrew McDowell from TPC Health; and Kathy Ashton.

The authors would also like to thank a number of IES experts in wellbeing and resilience at work whom we had the benefit of consulting and whose research over many years has done so much to develop awareness of the need for employers to take leadership responsibility for health at work: Prof Stephen Bevan, Dr Sally Wilson and Dr Zofia Bajorek. Finally, we wish to thank our IES colleagues Jade Talbot, Steve O'Rourke and Sara Butcher who helped with the production of this report.

Finally, we wish to thank photographer Darren Casey, DCimaging, and staff at Haxby Group Practice and Act PR Ltd for their co-operation and agreement to use images.

Any views expressed are those of the authors and not necessarily those of IES as a whole nor the study sponsors.

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Summary

Context

NHS England and NHS Improvement (NHSEI), in partnership with Royal College of General Practitioners (RCGP), commissioned the Institute of Employment Studies (IES) in March 2020, to conduct an evaluation of its #LookingAfterYouToo coaching service.

The service was rapidly launched by NHSEI at end of April 2020 to support frontline primary care Workforce as it responded to the Covid-19 pandemic. It aims to provide an easy to access, individually-tailored coaching support service for frontline staff, to proactively support them through COVID-19 by providing opportunities to process experiences, develop coping skills, deal with difficult conversations and develop strategies for self-management in difficult circumstances.

One element of the evaluation was an initial 'baseline' snapshot survey of the perceived wellbeing and resilience of the frontline Primary Care Workforce. Since the survey results are of wider interest and usefulness, IES presents them here as a standalone cross-sectional survey.

Key Points

The survey had a total of 2,826 responses. It offers a snapshot view of staff perceptions of their own well-being and resilience as the nation emerges from the first peak of the outbreak and demand for primary care service increases.

The wellbeing findings set out in this report are compared with the pre-COVID whole population norm for wellbeing and estimated during-COVID whole population norm for wellbeing. This is because there is no suitable pre-COVID primary care workforce data regarding wellbeing. In addition, we found no suitable comparative pre-COVID or during-COVID norms for resilience. The findings reported therefore should be considered within this context. At summary level, the findings showed:

There was no statistically significant difference when comparing PC workforce with during-COVID estimated wellbeing norm. However, wellbeing is at a low level and below that of the pre-COVID whole population norm.

Resilience is at a level indicating 'low' ability to cope. As we found no suitable comparative pre-COVID or during-COVID norms so we cannot say if this result is better or worse than at other times or for other relevant groups.

Perceived wellbeing and resilience were highest during the first week of the survey and lower in the last week - reflecting a downward trend, as the pandemic progressed (although this decline is not statistically significant).

There was a dip in week 3 of the survey, which coincides with changes in HM Government guidelines from Stay at Home to Stay Alert on 10th May and published recovery strategy document on 11th May.

Delving deeper we found:

No overall regional differences in wellbeing and resilience.

No overall differences between direct patient facing roles or admin, non-clinical and managerial roles. However, wellbeing differs between clinical professions, with GPs and nurses having higher well-being than other clinicians.

Wellbeing and resilience both increased positively with age with 18-44-year olds reporting lowest wellbeing and younger people were worse hit.

Those in direct patient facing roles showed their 'dip' in week 3, whereas respondents in other roles dipped in week 4, suggesting a slight delay in the impacts for them.

Introduction

Primary Care entered the COVID-19 pandemic at a time of workforce challenges with ageing workforce; GP shortages and increasing public expectations.

This report shares the results of an IES survey carried out with staff across primary care in England during the COVID-19 pandemic. It offers a snapshot view of staff perceptions of their own well-being and resilience as the nation emerges from the first peak of the outbreak and demand for primary care service increases. As the survey was being conducted, three types of demand were combining: those who have delayed seeking help are now coming forward; new demands emerge created by the mental strain on the population of the lockdown itself; and practices anticipate re-starting and addressing backlog of routine activity. We know from research¹ that work contexts characterised by a fast pace of change, persistent uncertainty and intense workloads, place high demands on workers. When workers perceive environmental demands as taxing or exceeding their capacity to adapt and cope effectively, they may experience high levels of stress.

The announcement from HM Government on 18 March 2020² that schools across England would provide childcare for key workers was the first public indication that the nation would have to step up and do whatever they could to enable critical workers to work. Among other things, this increased focus on enhancing the wellbeing, resilience, and retention of all the nation's critical workers.

Particular roles bring their own set of specific demands but whilst the media attention initially focussed on ITU capacity and then care homes, Primary Care is now recognised as at the forefront for picking up the health impact of Covid-19 on the population. For Primary Care workers, the pandemic is a marathon not a series of sprints. We know resilience will become essential for the 125,000+ GPs, Nurses, Direct Patient Care, Admin/Non-Clinical staff working in General Practice, Dentists, Pharmacists and Optometrists in England³, whether they are directly employed by the NHS or not. Promoting positive mental health and general sense of wellbeing always matters at work but even more so during and following a pandemic. Without the necessary skills and support to cope successfully when under stress, workers may perform poorly. If they become unwell, with COVID-19 or other illnesses, the reality is that this will create additional pressure in the remaining workforce

¹ For example: Bowling NA, Alarcon GM, Bragg CB, Hartman MJ. *A meta-analytic examination of the potential correlates and consequences of workload*. *Work Stress* 2015; 29 pp95–113; Dahl MS. *Organizational change and employee stress*. *Manag Sci* 2010; 57 pp240–256; Schmidt S, Roesler U, Kusserow T, Rau R. *Uncertainty in the workplace: Examining role ambiguity and role conflict, and their link to depression—A meta-analysis*. *Eur J Work Organ Psychol* 2014;23 pp91–106.

² <https://www.gov.uk/government/speeches/pm-statement-on-coronavirus-18-march-2020> [accessed 28/06/2020]

³ General Practice Workforce March 2020 Quarterly Report, NHS Digital [<https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/final-31-march-2020>, accessed 25/06/2020]

and have an impact on patient care. Supporting their ability to stay well both during and beyond the pandemic is key to enabling continued delivery of high-quality patient care. Staff who stay well are more likely to be willing and able to carry on.

The pandemic period has already seen the accelerated adoption of digital transformation across general practice in England. Remote service provision, reorganisation of spaces to enable physical distance and getting to grips with new ways of working, including patient video consultations as standard, have been introduced at a scale and pace which would have been unimaginable only a few months before. Decisions being made now will determine the extent to which the pandemic acts as a catalyst to rethink how we conceptualise primary care work, workplaces, and the workforce. There are many challenges ahead, not least because of the potential for further outbreaks. In the meantime, we expect this report will assist with the future direction of travel to ensure the current primary care workforce is supported in today's primary care workplaces to deliver today's essential primary care services.

Method

Survey Design

This research utilised an online survey which included two psychometric measures, one of self-reported wellbeing and a second of self-reported resilience (see Appendix 1). The first time the survey was issued, primary care staff responding were asked to indicate the region they worked in and their role or roles within the NHS. In addition to these questions, the second time the survey was issued respondents were also asked to indicate their gender, age, ethnicity, and if they had a disability.

Wellbeing measure

The well-validated Short Warwick-Edinburgh Mental Wellbeing Scale⁴ (WEMWBS) measured respondents' wellbeing using a 7-item scale scored from 1 (None of the time) to 5 (All of the time). Respondents were asked to select an answer to the statements based on their experiences over the last 2 weeks. Statements included 'I've been thinking clearly', and 'I've been dealing with problems well' (see Appendix 2 for full set of questions). The short WEMWBS is scored by summing respondents' answers and then converting the raw score into a metric score. Scores range from 7 to 35 with higher scores reflecting better mental wellbeing.

Previous research using the short WEMWBS estimated the UK population average in 2011 was 23.63 (NHS England's 2017 Health Survey⁵). In this report we refer to 23.63 as the 'Pre-Covid population average'. More recently, research used the short WEMWBS to assess wellbeing in the UK population early on during the Covid-19 pandemic (March 2020). The results showed an estimated average wellbeing score of 20.8⁶. In this report we refer to 20.8 as the 'During-COVID population average'. However, whilst these figures are included for context, it is important to note that these are not averages of the working population and certainly not of NHS primary care sector more specifically and so are not directly comparable with our results.

⁴ Short Warwick Edinburgh Mental Wellbeing Scale (SWEMWBS) © NHS Health Scotland, University of Warwick and University of Edinburgh, 2008, all rights reserved.

⁵Ng Fat, L., Scholes, S., Boniface, S., Mindell, J., & Stewart-Brown, S. (2017). Evaluating and establishing national norms for mental wellbeing using the short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS): findings from the Health Survey for England. *Quality of life research: an international journal of quality of life aspects of treatment, care and rehabilitation*, 26(5), 1129–1144. <https://doi.org/10.1007/s11136-016-1454-8>

⁶Smith, L., Jacob, L., Yakkundi, A., McDermott, D., Armstrong, N. C., Barnett, Y., López-Sánchez, G. F., Martin, S., Butler, L., & Tully, M. A. (2020). Correlates of symptoms of anxiety and depression and mental wellbeing associated with COVID-19: a cross-sectional study of UK-based respondents. *Psychiatry research*, 291, 113138. Advance online publication. <https://doi.org/10.1016/j.psychres.2020.113138>

Resilience measure

Resilience was measured using the Brief Resilience Coping Scale (BRCS). The scale includes 4 items scored on a 5-point Likert scale from 1 (None of the time) to 5 (All of the time). Statements included 'I look for creative ways to alter difficult situations' and 'Regardless of what happens to me, I believe I can control my reaction to it' (see Appendix 3 for full set of questions asked). The BRCS is scored by calculating the sum of each respondent's answers. Scores range from 4 to 20 and guidelines suggest scores of 4-13 reflect low resilient coping, 14-16 shows medium resilient coping, and a score of 17-20 indicates high resilient coping.

The BRCS is a validated scale that has the advantage of being very short. Using a short scale within surveys where responding is voluntary is beneficial as it is quicker to complete thereby reducing the burden on participants and ensuring a more complete sample of data for analysis. The BRCS was developed and tested within a sample of patients with rheumatoid arthritis in the USA in 2004⁷. The scale has since been validated in two pieces of research in Germany, the first with the general population in 2013⁸ and a second within a sample of first year medical students in 2017⁹.

Survey Implementation

The survey was hosted online by IES and promoted in two rounds via the NHS' usual internal communication routes to its primary care workforce (including weekly written briefings and mentions in weekly primary care webinars and twitter feeds). A total of 2826 completed responses were received. The first round of the survey was open from 23rd April 2020 to 7th May 2020 and there were 1,976 respondents. The second round of the survey was open from 12th May 2020 to 3rd June 2020 and there were a further 850 respondents.

Implementing a second round of the survey was designed to fulfil two purposes. Firstly, to boost the overall number of respondents. Secondly to enable data collection over a longer period of weeks during a fast-changing period for the workforce. On 10th May 2020 HM Government announced¹⁰ change in message from 'Stay at Home' to 'Stay Alert'. It was anticipated that this change may affect the day to day experience of key workers (e.g. as more people would be encountered on their journeys to work and workloads would increase as patients who had stayed away would present).

It is important to note a limitation of the approach. Respondents who took part in the first survey could also respond to the second survey, however as the initial questions of the two surveys were identical the researchers anticipated that most individuals would recognise that they had recently completed a similar survey and would not take part again. Moreover, if a small proportion were

⁷ Sinclair, V. G., & Wallston, K.A. (2004). The development and psychometric evaluation of the Brief Resilient Coping Scale. *Assessment*, 11 (1), 94-101. <https://www.ncbi.nlm.nih.gov/pubmed/14994958>

⁸ Kocalevent, R., Zenger, M., Hinz, A. et al. Resilient coping in the general population: standardization of the brief resilient coping scale (BRCS). *Health Qual Life Outcomes* 15, 251 (2017). <https://doi.org/10.1186/s12955-017-0822-6>

⁹ Heinen, I., Bullinger, M. & Kocalevent, R. Perceived stress in first year medical students - associations with personal resources and emotional distress. *BMC Med Educ* 17, 4 (2017). <https://doi.org/10.1186/s12909-016-0841-8>

¹⁰ <https://www.gov.uk/government/speeches/pm-address-to-the-nation-on-coronavirus-10-may-2020> [accessed 28/06/2020]

repeat respondents then the large size of the overall sample should mitigate against effects on the analysis.

Analysis Procedure

Analysis was conducted to assess similarities and differences in wellbeing and resilience scores firstly across NHS regions and roles, and then by characteristics such as gender and age, and over time. Analysis by gender, age, ethnicity, and disability was limited by the small samples within these groups. Data are reported only where there were more than 10 respondents in a group.

Wellbeing and resilience were examined for the overall sample, by age, gender, ethnicity, and disability, and over time. The analysis then explored differences between NHS regions, looking specifically between genders and over time. Differences between individuals working in different roles were investigated at two levels: between those working in Direct Patient Care (DPC) and Administration, Non-Clinical or Managerial (ANM) roles by age, gender, and over time, and then within each of those role groups (for DPC only due to small samples within ANM).

Where possible, significance testing was used to identify whether there were meaningful differences between groups based on an 'independent variable' such as region or age. Statistical analysis was only conducted where there were more than 30 respondents per group, therefore some analysis was not possible due to the small samples within the demographic variables. If a result is statistically significant then it can be concluded, with confidence, that the difference is very likely to be truly associated with that variable rather than owing to chance. A higher level of significance indicates an increased probability the observed difference in responses between groups did not happen by chance. Significance is measured by a 'p value', the lower the p value, the less likely it is that the result has been produced by chance.

Whilst the significance level demonstrates the likelihood of a difference being due to the independent variable, the 'effect size' shows the extent of the difference between groups. The effect size associated with a significant test is represented by Cohen's d and is interpreted on a scale using benchmark figures; less than 0.2 = no meaningful effect, 0.2 = small, 0.5 = medium, 0.8 = large.

Survey respondents

The survey had a total of 2,826 responses. Region and role information was collected from all respondents. The highest proportion of respondents worked in the Midlands (19%), or South East (19%; see Table 1). There were fewer responses from individuals who worked in London (8%), the North West (13%), and the North East and Yorkshire (13%).

Table 1: Frequency of respondents across NHS regions

NHS Region	N	Per cent
Midlands	488	19.2
South East	476	18.7
South West	362	14.3
East of England	342	13.5
North East and Yorkshire	334	13.1

North West	328	12.9
London	210	8.3
Total	2540	100.0

Source: IES survey, 2020

Respondents indicated the role or roles they worked in within primary care. More than half reported working in a direct patient role (55%), and 48 per cent reported working in an administration, non-clinical, or managerial role (see Table 2). Within DPC, nearly a third of respondents were GPs (30%), while 16 per cent worked in nursing and healthcare, and 7 per cent worked in pharmacy. Of individuals who reported working in an ANM role, the largest group were practice managers (18%), followed by other manager (10%), and administrative staff (9%).

Table 2: Frequency of respondents across roles

Role	N	Per cent of Cases
Direct Patient Care	1563	55.4%
GP	842	29.9%
Nursing and Health Care	459	16.3%
Pharmacy	183	6.5%
Advanced Practitioners	42	1.5%
Other Health Care Professionals	63	2.2%
Admin/Non-clinical/Managerial	1347	47.8%
Practice Manager	509	18.0%
Other Manager	276	9.8%
Administrative Staff	257	9.1%
Receptionists	197	7.0%
Medical Secretary	79	2.8%
Managing Partner	54	1.9%
Data Management Staff	42	1.5%
Clinical Director	36	1.3%
HR Manager	35	1.2%
Facilities Management	25	.9%
Finance Staff	15	.5%
Finance Director	14	.5%
HR Staff	12	.4%

Multi-response variable

Source: IES survey, 2020

Demographic data was obtained only from individuals responding to the second round of the survey (N=850). Of this sample 84 per cent were female, 87 per cent were white, and 95 per cent were not disabled (see Table 3). Approximately two thirds of respondents were aged 45-54 years (36%), or 55-64 years (31%).

Table 3: Sample characteristics

Characteristic	N	Per cent
Gender		
Female	706	83.9
Male	126	15.0
I do not wish to disclose	9	1.1
Total	841	100.0
Age		
18-24	21	2.5
25-34	81	9.5
35-44	146	17.2
45-54	305	35.9
55-64	259	30.5
65+	17	2.0
I do not wish to disclose	20	2.4
Total	849	100.0
Ethnicity		
White	723	87.0
Asian	55	6.6
Black	16	1.9
Other Ethnicity	9	1.1
I do not wish to disclose	21	2.5
Total	831	100.0
Disability		
No	803	95.1
Yes	30	3.6
I do not wish to disclose	11	1.3
Total	844	100.0

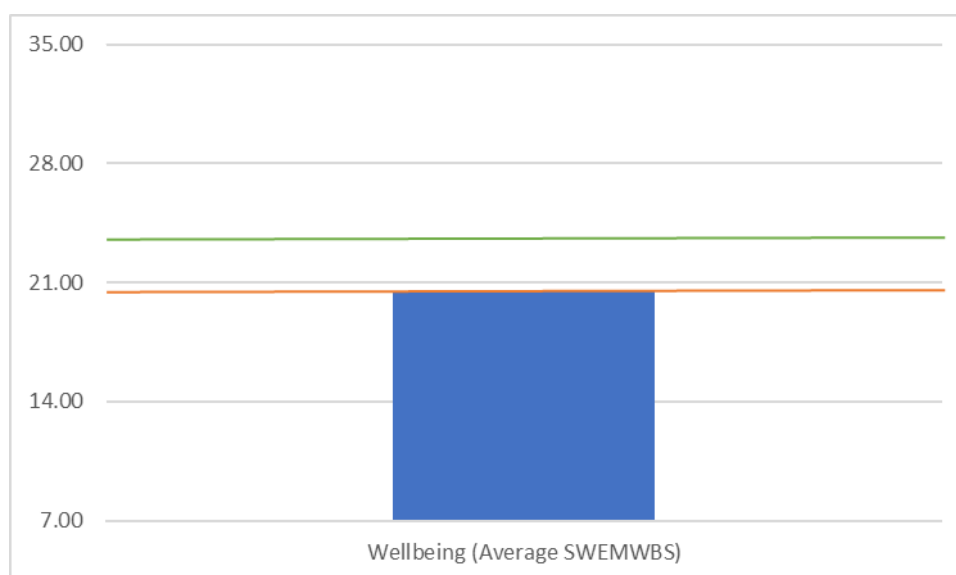
Source: IES survey, 2020

Results

Wellbeing

As can be seen in Figure 1.1. below, respondents showed an average wellbeing score of 20.5. Detailed tables of results supporting this section can be found in Appendix 4. Average wellbeing score of 20.5 is below that of the pre-Covid whole population norm reported in 2017 (23.63) and similar to a recent during-COVID whole population estimate. The during-Covid figure was estimated at a time when over nine million workers were furloughed or supported on the Coronavirus Job Retention Scheme and Self Employment Income Support Scheme and when two million households made new claims to Universal Credit in two months¹¹. One might expect a whole population estimate to have low psychological well-being during pandemic and that would include key workers such as front-line primary care staff.

Figure 1.1: Average wellbeing score compared to pre-COVID whole population norm and during-COVID estimated whole population norm¹²



¹¹ IES, Learning and Work Institute, Reform, Impetus, Youth Futures, the Association of Colleges, the Employment Related Services Association, the Recruitment and Employment Confederation and the Institute for Employability Professionals. (May 2020). Help Wanted: Getting Britain Back to Work, Institute for Employment Studies. https://www.employment-studies.co.uk/system/files/resources/files/Help_Wanted_Getting_Britain_Back_to_Work.pdf [accessed 28/06/2020]

¹² The minimum and maximum scores for the scale are 4.0 and 35.0, respectively.

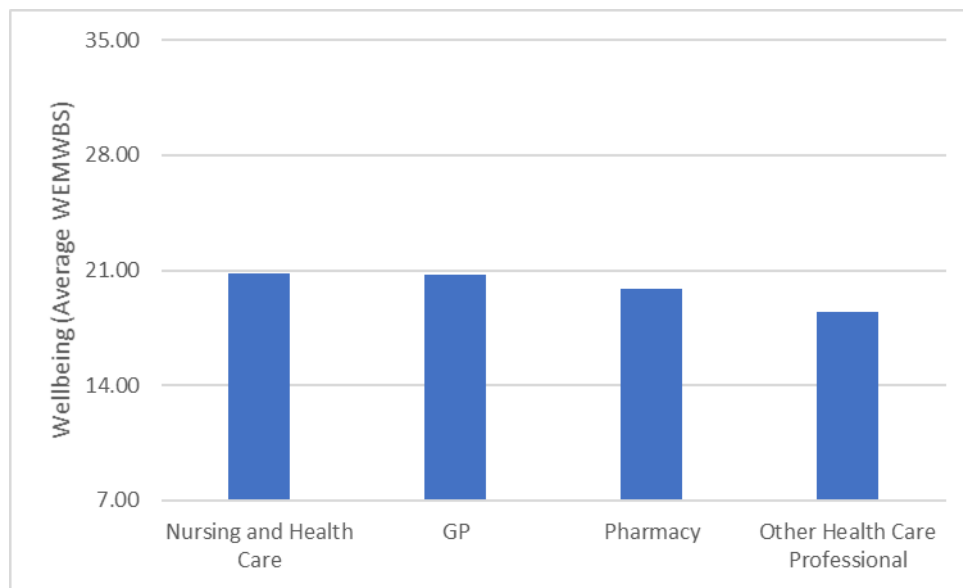


Source: IES survey, 2020

Wellbeing by role

Further analysis was undertaken with data of respondents who reported working in only one role within Direct Patient Facing Care (DPC). Individuals who reported working in two or more roles within DPC (N=35) were excluded from the analysis. Average wellbeing scores were significantly different between individuals in different DPC roles (see Figure 1.2 below). Other Health Care Professionals reported significantly poorer wellbeing compared to GPs and those working in Nursing and Health Care. The effect sizes suggest role within DPC had a medium effect on wellbeing. Details of the analysis can be found in Appendix 4 (see Tables 22 and 23).

Figure 1.2: Wellbeing scores of individuals working in Direct Patient Care Roles¹³



Source: IES survey, 2020

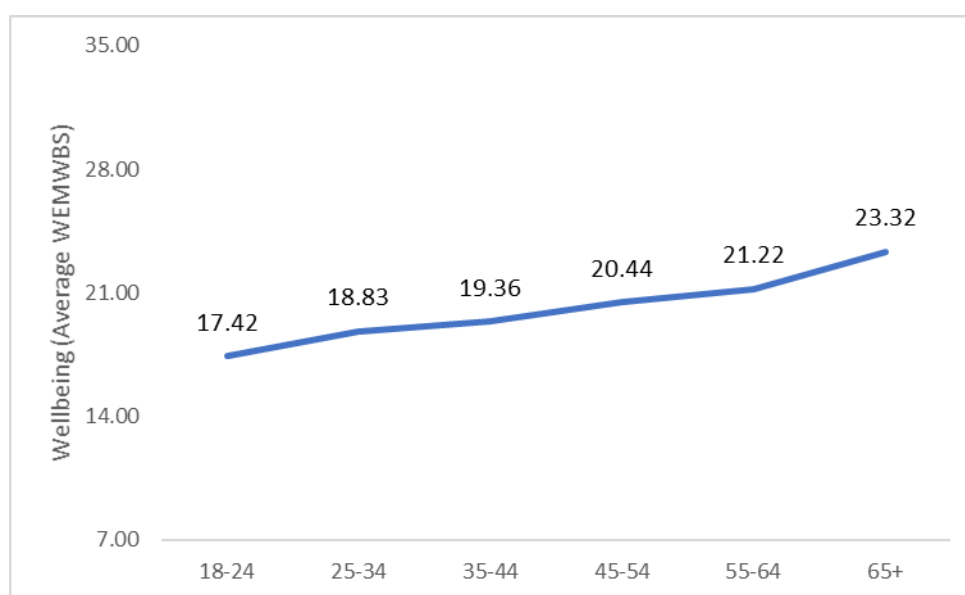
A similar analysis was conducted using the data of respondents who reported working in only one role within Admin, non-clinical and managerial (ANM). Individuals who reported working in two or more roles within ANM (N=146) were excluded from the analysis. There were no significant differences in wellbeing scores between individuals working in different ANM roles. Further details can be found in Appendix 4 (see Table 29).

¹³ The minimum and maximum scores for the scale are 4.0 and 35.0, respectively.

Wellbeing by age group

Further analysis showed wellbeing increased significantly with age (see Figure 1.3 below). Group comparisons revealed that individuals aged 65+ reported significantly higher wellbeing scores compared to those aged 18-24, 25-34, and 35-44 years. Individuals aged 55-64 also reported significantly better wellbeing scores than those aged 18-24, 25-34, and 35-44 years. Individuals aged 45-54 reported significantly higher wellbeing scores compared to individuals aged 18-24 years. The size of the effect of age on wellbeing scores can be interpreted as medium to large. Details of this analysis can be found in Appendix 4 (see Table 14 and 15).

Figure 1.3: Average wellbeing scores by age group¹⁴



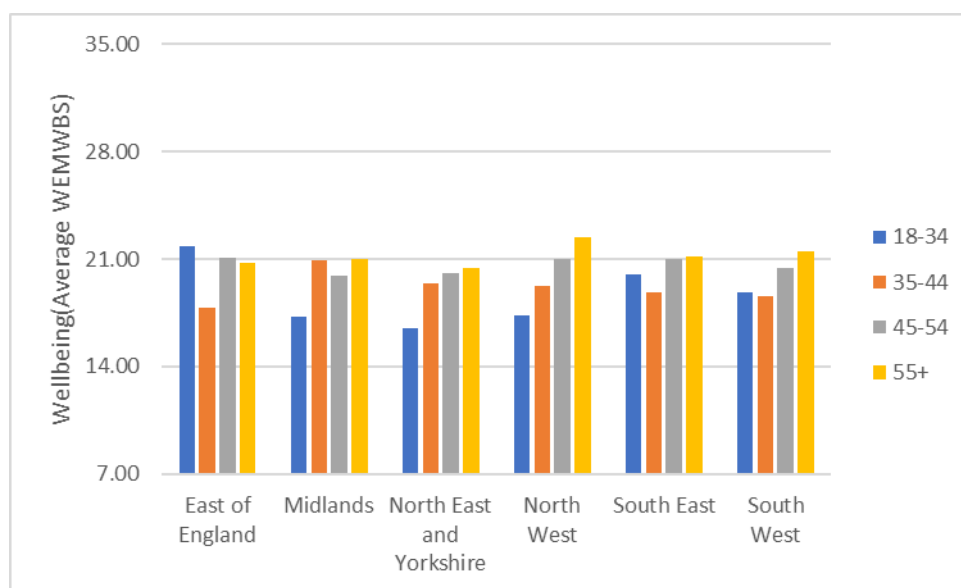
Source: IES survey, 2020

Wellbeing of the younger workforce across regions

The results showed that across NHS regions, wellbeing and resilience scores tended to be lower for younger respondents. In the Midlands, the North East and Yorkshire, and the North West, respondents aged 18-34 years showed the lowest average wellbeing scores within their region (see Figure 1.4). The data for the London region were not reported due to the small samples within this group.

¹⁴ The minimum and maximum scores for the scale are 4.0 and 35.0, respectively.

Figure 1.4: Wellbeing scores between age groups across regions¹⁵



Source: IES survey, 2020

Differences in wellbeing scores between age groups in the Midlands, the North East and Yorkshire, and the North West were significant. Group comparisons showed that, in the Midlands 18-34-year olds had significantly poorer wellbeing compared to those aged 35-44 and 55+. In the North East and Yorkshire, respondents aged between 18 and 34 years showed significantly poorer average wellbeing compared to those aged 45-54 and 55+. In the North West, respondents aged 18-34 had significantly poorer average wellbeing compared to those aged 45-54 and 55+. Individuals aged 35-44 also had significantly poorer average wellbeing compared to respondents aged 55+. The size of the effects suggest age had a medium to large influence on wellbeing in the Midlands, North East and Yorkshire and North West.

In the East of England, South East, and South West, the poorest wellbeing was reported by respondents aged 34-45 years (see Figure 1.4). The differences in wellbeing scores across age groups in the East of England were statistically significant, however comparisons showed no significant differences between groups. This is likely due to the small sample size affecting the power of the analysis to detect a difference. There were also no significant differences in wellbeing scores across age groups in the South East or South West. Further details of this analysis are presented in Appendix 4 (see Tables 16 and 17).

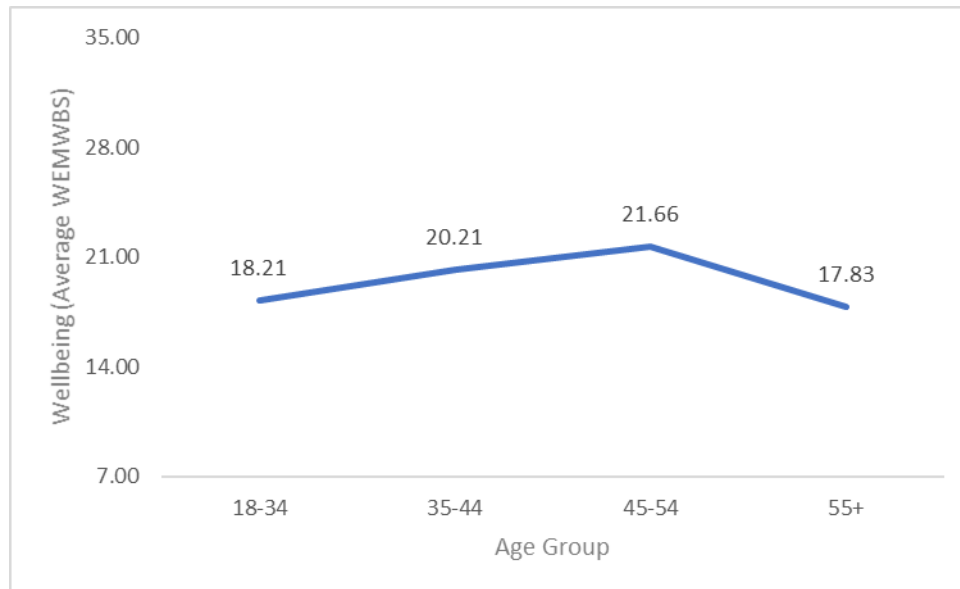
Variation between age groups within Direct Patient Care roles

Average wellbeing also varied with age within difference DPC roles (Figure 1.5). Within Pharmacy the poorest wellbeing scores were presented by the youngest and oldest groups of respondents, while those aged 45-54 showed the highest wellbeing. The differences in average wellbeing scores of those working in Pharmacy were significant. Group comparisons revealed that wellbeing scores of those aged 55 and over was significantly lower than that of individuals aged 45-54 years. The size of

¹⁵ The minimum and maximum scores for the scale are 4.0 and 35.0, respectively.

the effect suggests age had a large impact on wellbeing scores for respondents aged 45-54 and 55+. Conversely for GPs, the youngest and oldest groups showed the highest average wellbeing scores compared to those aged 35-44 and 45-54 years. However, the differences across age groups of wellbeing and resilience scores for GPs was not significant. The details of this analysis can be found in Appendix 4 (see Tables 18 and 19).

Figure 1.5: Wellbeing by age within Pharmacy¹⁶



Source: IES survey, 2020

Wellbeing by Gender, Ethnicity, and Disability

There were no significant differences in wellbeing scores between gender, ethnicity, and disability groups (see Table 4 below). This is potentially due to the small samples within these groups, specifically, male, and disabled respondents, and those from an ethnic minority group. Further details are provided in Appendix 4 (see Table 20).

Table 4: Average wellbeing scores

Characteristic	N	Mean
Gender		
Male	126	20.81
Female	703	20.27
Age		
18-24	21	17.42
25-34	81	18.83
35-44	146	19.36

¹⁶ The minimum and maximum scores for the scale are 4.0 and 35.0, respectively.

	45-54	304	20.44
	55-64	257	21.22
	65+	17	23.32
Ethnicity			
	Asian	55	20.97
	White	722	20.36
	Mixed	8	20.19
	Black	16	20.07
Disability			
	No	800	20.37
	Yes	30	19.77

Source: IES survey, 2020

Wellbeing between genders within NHS regions

In the East of England and London average wellbeing was higher for female respondents compared to male respondents (see Table 5). Whereas, in the Midlands and South East men presented higher wellbeing scores. The difference in wellbeing between genders across all regions was most pronounced in the Midlands. It was not possible to explore the differences in wellbeing using significance testing because of the small number of male respondents. Moreover, data for the North East and Yorkshire and the South West are not reported because of the small sample size.

Table 5: Average wellbeing scores by gender

Region		N	Mean
East of England	Female	76	20.55
	Male	20	19.90
London	Female	46	19.79
	Male	15	18.94
Midlands	Male	28	21.33
	Female	140	19.90
North West	Female	120	20.82
	Male	14	20.81
South East	Male	18	21.71

Female 105 20.3

Source: IES survey, 2020

Wellbeing between genders within NHS roles

There were no significant differences in wellbeing scores between genders for those working in DPC. See Appendix 4 (Table 21) for further details of this analysis). Average wellbeing scores were similar across genders for those working in ANM roles. Significance testing was not used to analyse the differences due to the small sample of male respondents.

Wellbeing between genders within Direct Patient Care roles

Male GPs showed slightly higher average wellbeing compared to female GPs. Within pharmacy, female respondents showed slightly higher wellbeing compared to male respondents. Significance testing was not used to analyse the differences due to the small sample of male respondents. Further details are presented in Appendix 4 (see Table 22).

Comparisons Across NHS Regions

There were no significant differences in wellbeing scores between regions (see details in Appendix 4). However, respondents in the South East, London, and the South West showed the highest average wellbeing scores, while those in the North East and Yorkshire showed the poorest average wellbeing (see Table 6 below).

Table 6: Average wellbeing Scores across NHS Regions

Region	N	Mean
South East	476	20.59
London	208	20.58
South West	362	20.57
East of England	340	20.47
North West	328	20.22
Midlands	487	20.19
North East and Yorkshire	333	20.14
Total	2534	20.39

Source: IES survey, 2020

Women's wellbeing across regions

Analysis of the differences in wellbeing scores between regions was only possible between female respondents, as the samples of male respondents were too small. For women, the results showed no significant difference in wellbeing scores between regions. Further details of this analysis can be found in Appendix 4 (see Table 25).

Wellbeing by age groups between roles

The analysis explored if individuals of the same age group presented different wellbeing depending on if they worked in Direct Patient Care (DPC) or Admin, Non-Clinical and Managerial (ANM). There were no significant differences in wellbeing or resilience scores for any age group across DPC and ANM roles. Details of this analysis are presented in Appendix 4 (see Table 26).

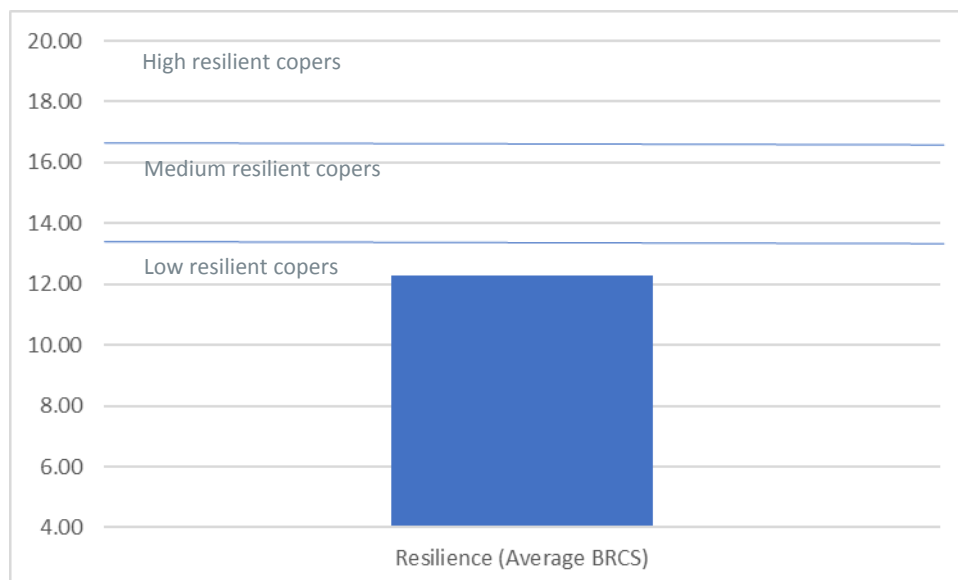
Women's wellbeing between roles

It was only possible to investigate the differences in wellbeing scores between female respondents across roles, as the samples of male respondents were too small. The results showed there were no significant differences in wellbeing scores between those in DPC and ANM roles. Looking specifically at ANM roles, the analysis showed there were no significant differences in wellbeing between female respondents across roles. Further details can be found in Appendix 4 (see Table 27). The sample of women working in DPC roles was too small to use significance testing to assess the differences.

Resilience

Resilience data of the overall sample showed respondents had an average resilience score of 12.03. According to the Brief Resilience Scale designers, this suggests the sample were low resilient copers (see Figure 1.6). We found no suitable comparative pre-COVID or during-COVID norms so we cannot say if our result is better or worse than would have been found at other times or for other comparable groups. Detailed tables of results for this section can all be found in Appendix 5. Minimum and maximum scores for this scale are 4.0 and 20.0 respectively

Figure 1.6: Average resilience score, compared to levels indicated by Brief Resilience Coping Scale



Source: IES survey, 2020

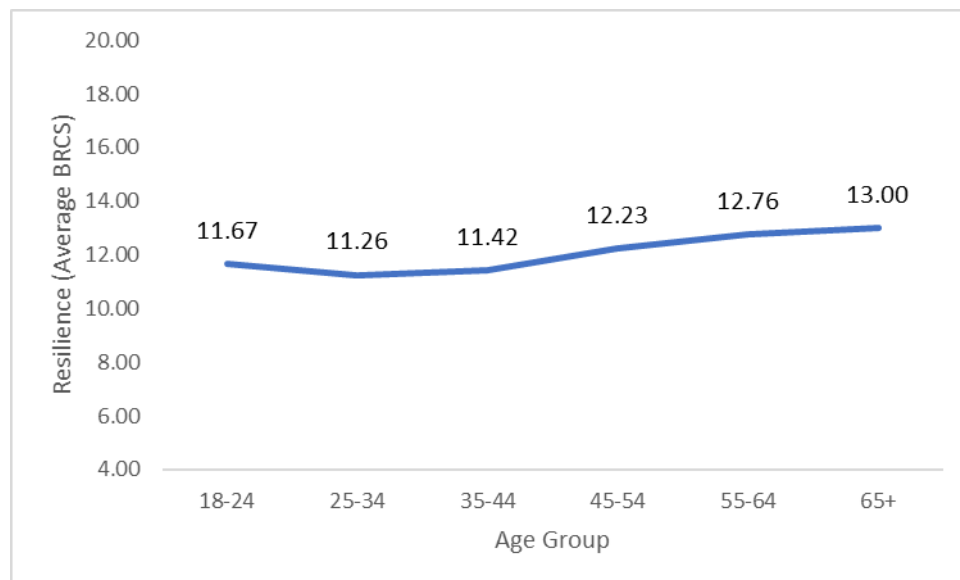
Resilience by role

Further analysis showed no significant differences in resilience scores between individuals working in different Direct Patient Facing (DPC) roles, nor between individuals working in different Admin, Non-clinical and Managerial (ANM) roles. Further details of this analysis are presented in Appendix 5 (see Tables 39 and 45).

Resilience by age

Analysis showed resilience scores also increased significantly with age (see Figure 1.7). Group comparison tests revealed individuals aged 55-64 were significantly more resilient than those ages 25-34, or 35-44 years. The results showed there was a small to medium effect of age on resilience scores for these groups. See Appendix 5 (Tables 31 and 32) for further details.

Figure 1.7: Average resilience scores¹⁷ by age group



Source: IES survey, 2020

Resilience of the younger workforce across regions

In the Midlands, the North West and the South West, resilience was poorest amongst those aged 18-34 years and appeared to increase with age (see Figure 1.8). The results showed that average resilience scores varied significantly by age group in the Midlands. Group comparisons showed 18-34-year olds had significantly lower resilience scores, on average, compared to those aged 35-44, 45-54, and 55+. The effect sizes suggested age had a medium to large effect on resilience in the Midlands. However, in the North West and South West differences in resilience across age groups were not significant. The data for the London region were not reported due to the small samples within this group.

¹⁷ Minimum and maximum scores for this scale are 4.0 and 20.0 respectively

Figure 1.8: Resilience scores¹⁸ between age groups across regions



Source: IES survey, 2020

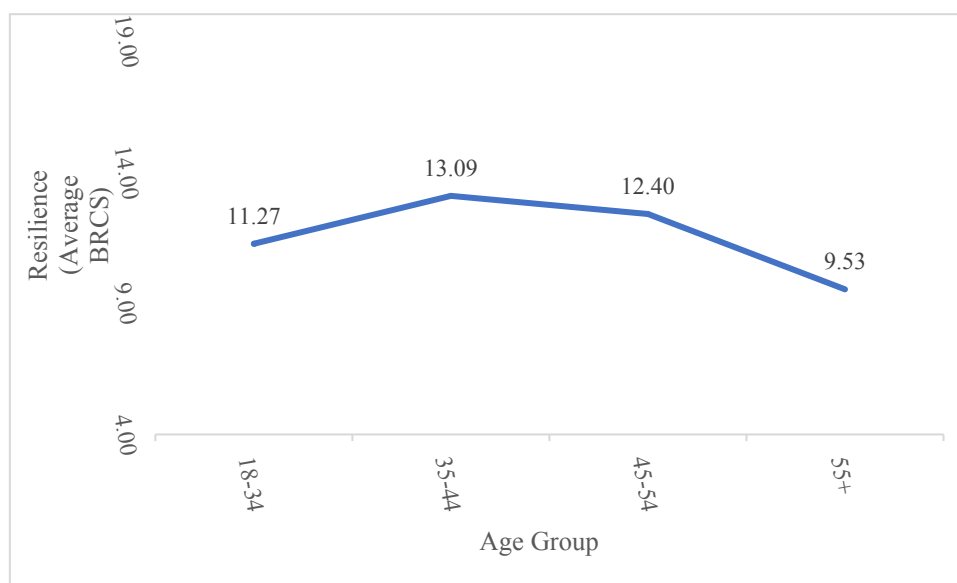
In the East of England, North East and South East, respondents aged 35-44 years presented the poorest average resilience scores within their region (see Figure 1.8). Differences in resilience scores across age groups in the East of England were statistically significant, and group comparisons revealed that individuals aged 35-44 years had significantly lower resilience scores than those aged 45-54 and 55+ years. The size of the effects suggested age had a medium to large effect on resilience in the East of England. Average resilience scores across age groups in the North East and Yorkshire and the South East were not significantly different. The details of this analysis can be found in Appendix 5 (see Tables 33 and 34).

Resilience by age within Direct Patient Care roles

Analysis also showed that resilience scores of pharmacists varied significantly with age (see Figure 1.9). Comparison tests revealed that individuals aged 55+ had significantly lower resilience scores compared to those aged 35-44, and 45-54 years. The effect sizes showed that age had a large influence on resilience for these age groups. For GPs, the highest average resilience scores were presented by those aged 35-44 and 45-54 years. However, the differences across age groups of resilience scores for GPs was not significant. See Appendix 5 (Tables 35 and 36) for further details of this analysis.

¹⁸ Minimum and maximum scores for this scale are 4.0 and 20.0 respectively

Figure 1.9: Resilience¹⁹ by age group within Pharmacy



Source: IES survey, 2020

Resilience by Gender, Ethnicity, and Disability

There were also no significant differences in average resilience between gender, ethnicity, or disability (see Table 7). Again, this could be because of the small samples within these groups. Details of this analysis can be found in Appendix 5 (see Table 37).

Table 7: Average resilience scores

Characteristic	N	Mean
Gender		
Male	126	12.48
Female	703	12.10
Age		
18-24	21	11.67
25-34	81	11.26
35-44	146	11.42
45-54	303	12.23
55-64	258	12.76
65+	17	13.00
Ethnicity		
White	722	12.21

¹⁹ Minimum and maximum scores for this scale are 4.0 and 20.0 respectively

	Asian	55	12.11
	Black	15	12.07
Disability			
	Yes	30	12.53
	No	800	12.17

Source: IES survey, 2020

Resilience between genders within NHS regions

In general, across regions male respondents reported higher resilience scores compared to female respondents (see Table 8). Except for individuals who reported working in London, where female respondents reported higher resilience scores than men. It was not possible to use significance testing to investigate the differences in resilience between genders across NHS regions due to the small number of male respondents and the data for the North East and Yorkshire and the South West are not reported because of the small sample size.

Table 8: Average resilience scores by gender

Region		N	Mean
East of England	Male	20	12.65
	Female	76	11.68
London	Female	46	11.76
	Male	15	10.20
Midlands	Male	28	12.36
	Female	140	12.11
North West	Male	14	13.43
	Female	120	12.38
South East	Male	18	12.56
	Female	104	11.88

Source: IES survey, 2020

Resilience between genders within NHS roles

There were no significant differences in resilience scores between genders for respondents working in DPC. Average resilience scores were similar across genders for those working in ANM roles.

Significance testing was not used to analyse the differences due to the small sample of male respondents. Further details are presented in Appendix 5 Further details are presented in Appendix 5 (see Table 38).

Resilience between genders within Direct Patient Care roles

Male GPs showed slightly higher average resilience compared to female GPs (see Appendix 5, Table 39). Within pharmacy, male respondents showed slightly higher resilience than female pharmacists. Significance testing was not used to analyse the differences due to the small sample of male respondents.

Comparisons Across NHS Regions

There were no significant differences in resilience scores between regions. However, resilience was also highest, on average, in the South West, South East, and London, and lowest in the North East and Yorkshire (see Table 9). Further details of this analysis can be found in Appendix 5.

Table 9: Average resilience Scores across NHS Regions

Region	N	Mean
South West	362	12.51
South East	475	12.42
London	210	12.41
Midlands	487	12.17
North West	328	12.16
East of England	340	12.11
North East and Yorkshire	333	12.02
Total	2535	12.26

Source: IES survey, 2020

Women's resilience across regions

Analysis of the differences in resilience scores between regions was only possible between female respondents, as the samples of male respondents were too small. For women, the results showed no significant difference in resilience scores between regions. The details of this analysis can be found in Appendix 5 (see Table 41).

Resilience by age groups between roles

The analysis explored if individuals of the same age group presented different resilience depending on if they worked in Direct Patient Care (DPC) or Admin, Non-Clinical and Managerial (ANM). There were no significant differences in resilience scores for any age group across DPC and ANM roles. Further details are presented in Appendix 5 (see Table 42).

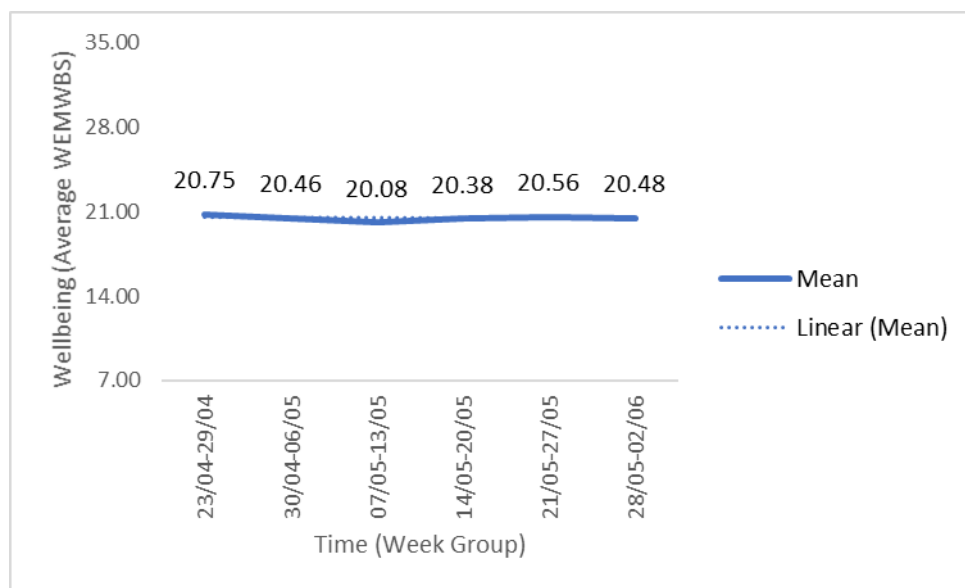
Women’s resilience between roles

It was only possible to investigate the differences in resilience scores between female respondents across roles, as the samples of male respondents were too small. The results showed there were no significant differences in resilience scores between those in DPC and ANM roles. Looking specifically at ANM roles, the analysis showed there were no significant differences in resilience scores between female respondents across roles. The details of this analysis are provided in Appendix 5 (see Table 43). The sample of women working in DPC roles was too small to use significance testing to assess the differences.

Changes Over Time

There were no significant differences in wellbeing and resilience scores over time (see Appendix 4 and 5 for further details). The findings showed average wellbeing and resilience scores were both highest during the first week of the survey and lower in the last week reflecting a downward trend over time (see Linear (Mean) Figure 2.1 and 2.2). Both measures also showed decreases in week 3, in which average wellbeing was at its lowest point and resilience at its second lowest.

Figure 2.1: Wellbeing²⁰ over time

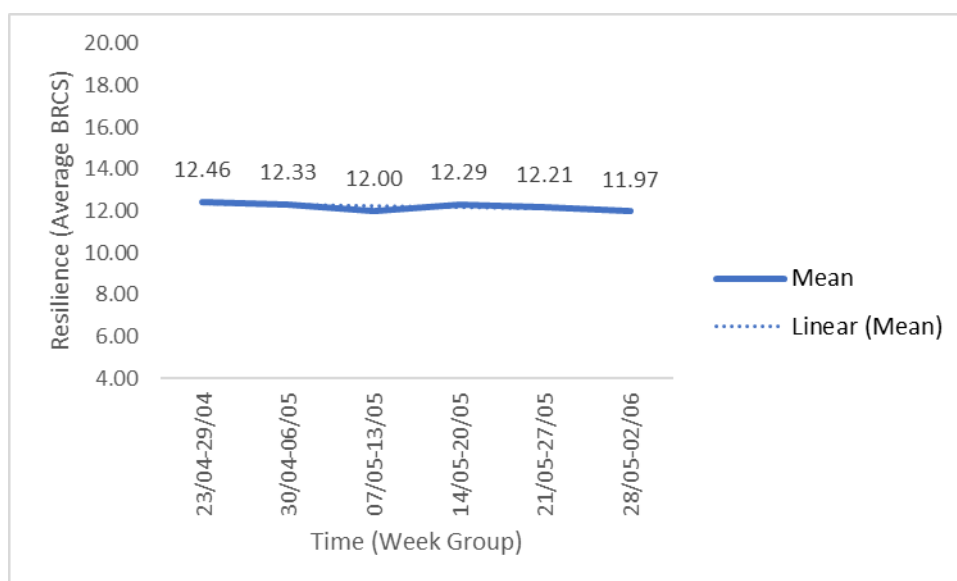


Source: IES survey, 2020

Figure 2.2: Resilience scores²¹ over time

²⁰ The minimum and maximum scores for the scale are 4.0 and 35.0 respectively

²¹ Minimum and maximum scores for this scale are 4.0 and 20.0 respectively



Source: IES survey, 2020

Changes over time across NHS regions

In general, average wellbeing scores decreased over time, apart from the North West and South West regions (see Table 10). In the East of England, London, the Midlands the North East and Yorkshire, and the South East wellbeing scores reduced slightly between week 1 and week 3 of the survey. The East of England and South East showed some recovery in week 4, and London, the Midlands and the North East and Yorkshire exhibited increases by week 5. However, in week 6 the South East showed its lowest average wellbeing score across all weeks. Conversely, the North West and South West regions showed their poorest wellbeing scores in week 1, and then these scores increased over time.

Table 10: Average wellbeing scores over time across regions

	Week 1 23/04-29/04	Week 2 30/04-06/05	Week 3 07/05-13/05	Week 4 14/05-20/05	Week 5 21/05-27/05	Week 6 28/05-02/06
East of England	21.05	20.25	19.86	20.54	20.84	
London	21.80	20.50	19.56	19.27	19.87	
Midlands	20.87	20.01	19.86	19.38	21.17	21.02
North East and Yorkshire	20.43	20.44	19.42	19.63	19.97	
North West	19.71	19.86	20.38	20.90	20.75	
South East	20.73	20.45	20.04	21.52	20.48	19.45
South West	20.21	20.79	20.70	20.36	19.64	

Source: IES survey, 2020

Similarly, average resilience scores tended to decrease over time, except for those in the North West and South West regions (see Table 11). In the East of England, London, the Midlands and the South East, average resilience scores fell between week 1 and week 3 of the survey. These drops in resilience show some recovery in week 4 in the East of England, London, and the South East, and by week 5 for the Midlands. Although scores in the South East and London fall again in week 5. Scores appear to increase over time in the North West particularly, but also in the South West region.

Table 11: Average resilience over time across regions

	Week 1 23/04- 29/04	Week 2 30/04- 06/05	Week 3 07/05- 13/05	Week 4 14/05- 20/05	Week 5 21/05- 27/05	Week 6 28/05- 02/06
East of England	12.68	12.06	11.28	11.78	12.71	
London	12.97	12.76	11.36	12.22	11.00	
Midlands	12.58	12.10	11.88	11.87	12.47	12.17
North East and Yorkshire	12.17	12.00	12.04	11.50	12.74	
North West	11.80	12.11	12.23	12.36	12.56	
South East	12.52	12.51	11.94	13.27	10.90	11.73
South West	12.04	12.69	12.48	12.71	12.57	

Source: IES survey, 2020

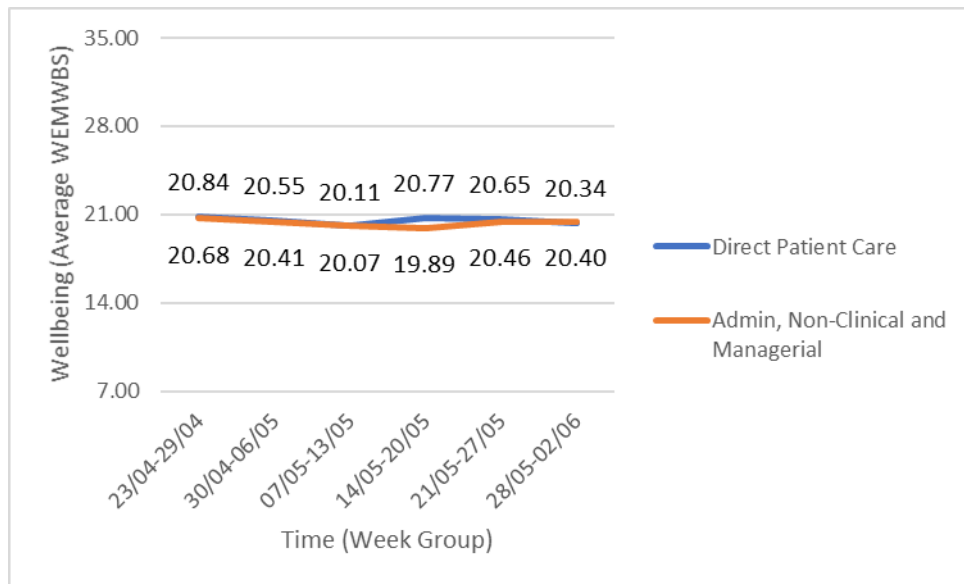
Changes over time by roles

Wellbeing

Over time, average wellbeing scores in both role groups decreased (see Figure 2.3). In both DPC and ANM groups, average wellbeing was highest in the first week of the survey. In DPC, wellbeing showed a fall in week 3, whereas within ANM the lowest average wellbeing was in week 4.

Figure 2.3: Wellbeing²² between roles across time

²² The minimum and maximum scores for the scale are 4.0 and 35.0 respectively



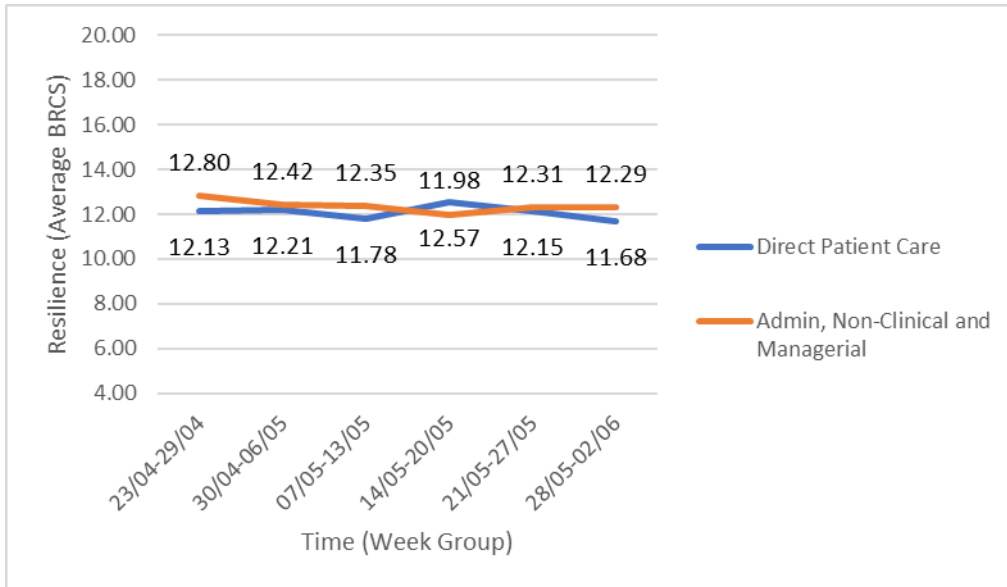
Source: IES survey, 2020

Resilience

Average resilience scores between role types over time followed a similar pattern to wellbeing scores. Resilience was highest in the first week of the survey and then decreased, with those working in DPC roles presenting poorest resilience in week 3 and those in ANM roles in week 4 (see Figure 2.4).

Figure 2.4: Resilience²³ across time between roles

²³ Minimum and maximum scores for this scale are 4.0 and 20.0 respectively



Source: IES survey, 2020

Conclusion

Our findings have been drawn from over 2,800 respondents to a survey conducted during six weeks of the 'lockdown' as England emerges from the first peak of the COVID-19 outbreak and demand for primary care services increases. Psychological wellbeing is low and low ability to cope spanned regions and roles. This is a challenge for the health and care system to continue to address.

There is a clear need to better help and support primary care workers during the current crisis and beyond. A challenge is the wellbeing of younger staff.

Our survey did not explore the reasons for these responses nor what might be done help improve the wellbeing or resilience of primary care staff. However, primary care workers may be less well connected into existing staff wellbeing services (in comparison to their secondary care colleagues). We know that perceived wellbeing is an indicator of other problems to come, such as increased absence and increased turnover. As the nation's non-key workers switch from emergency fix, working from home or furloughed mode to longer term return to work or looking for new work mode, exhausted primary care staff will perhaps be starting to reflect on their own working futures.

A speedy ramping up of primary care staff psychological wellbeing support services is needed, including for those not directly employed by the NHS.

Our survey raises questions which practitioners and researchers need to explore further. These questions are not only about staff wellbeing. There is also a need to better understand the drivers of staff wellbeing in the new context. Job design, collective reflection on what has been learnt, ways of working, sense of belonging to the wider NHS family and especially the behaviour of line managers are likely to be important. Specific questions which NHS England and NHS Improvement should continue to explore include:

- Are staff aware to what extent new ways of working in primary care likely to become permanent or likely to continue to change at pace? How will working differently for an extended period affect the Primary Care workforce? Are employers locally involving their staff in conversations about these matters?
- What is the toil this period is taking on primary care staff? Are staff storing up a whole load of anxiety and stress which will now need to be addressed beyond the 'temporary fixes' approach that has understandably prevailed during the immediate response to first wave of the pandemic?
- How can local employers be supported in taking leadership responsibility for health at work? How can employers better engage with existing NHS staff wellbeing services and new services as they come on-line?
- How might the wellbeing of primary care workforce be brought into clearer focus?

Support for local employers is indicated, so they take leadership responsibility for the health of staff, as well as the health of patients.

In the mean-time good practice actions employers of primary care workers might usefully take include:

- Increased investment in, and encouraging access to, mental health support, occupational health services and employee assistance programmes (EAPs)
- Addressing emotional concerns over family finances, public transport, energy, work-life balance, and family health
- Holding up work motivation including through regular contact with line managers and between colleagues; rethinking staff performance and monitoring; and involving staff at all levels in reallocating tasks beyond the short term
- Ensuring the set up in re-configured physical spaces is safe and ergonomic and that any staff spending more time than previously using screens take breaks, move around, and take exercise.

As sponsors of this survey and the #LookingAfterYouToo coaching service for primary care staff, NHS England and NHS Improvement and Royal College of General Practitioners are aware that primary care workforce wellbeing and resilience is an issue. Our survey findings provide confirmation of this. We hope that this report will now be useful in helping to set out the issues and act as a catalyst to promote and extend existing interventions, create new interventions and facilitate change across the sector that supports the nation's front-line primary care workers.

Appendix 1 - Categories of NHS roles used

The NHS role variable was a multiple response question so respondents could select as many options as necessary. Roles were divided into Direct Patient Care (DPC) and Admin, Non-Clinical and Managerial (ANM; see Table 12).

Table 12: Breakdown of NHS role variable

	Direct Patient Care	All Admin/Non-Clinical/ Managerial roles
		Clinical Director
		Managing partner
GPs	Partner	Practice Manager
	Salaried GP	Finance Manager
	Trainee	HR Manager
	Retainer	Other Manager
	Locum	Finance Staff
		HR Staff
Nursing and Health Care	Nursing Partners	Data Management Staff
	Advanced Nurse Practitioner	Medical Secretary
	Advanced Clinical Practitioner	Receptionists
	Practice Nurse	Facilities Management
	Nursing Associate	Administrative Staff
	Health Care Assistant	Apprentices
	Phlebotomist	
Pharmacy	Pharmacy Technician	
	Community Pharmacist	
	Practice Pharmacist	
	Dispenser	
Advanced Practitioners	Physiotherapist	
	Paramedic	
	Physician Associate	

Other Health Care Professionals	Dentist
	Optometrist
	Podiatrist
	Therapist (counsellor/OT/other)
	Apprentices
	Social Prescribing Link Worker
	IAPT Staff
	Dietician

Source: IES survey, 2020

Appendix 2 - Wellbeing scale used

Short Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)

Please rate how often each of the following statements has applied to you over the last two weeks.

I've been thinking clearly.

I've been dealing with problems well.

I've been feeling useful.

I've been feeling close to other people.

I've been feeling optimistic about the future.

I've been feeling relaxed.

I've been able to make up my own mind about things.

Appendix 3 - Resilience scale used

Brief Resilience Coping Scale (BRCS).

Please rate how often each of the following statements has applied to you over the last two weeks.

1. I look for creative ways to alter difficult situations.
2. Regardless of what happens to me, I believe I can control my reaction to it.
3. I believe I can grow in positive ways by dealing with difficult situations.
4. I actively look for ways to replace the losses I encounter in life.

Appendix 4 – Tables of statistical analysis of wellbeing scores

Introduction

Appendix 4 presents the detailed results of the statistical analysis of wellbeing scores. The average wellbeing score is presented in Table 13 followed by significance testing and where necessary multiple comparison tests to determine group differences. This includes a breakdown of:

- Scores by age groups (Tables 14 & 15), and by age groups across regions (Tables 16 & 17), roles (Tables 18 & 19) and by gender, ethnicity, and disability (Table 20)
- Differences between those in direct patient facing roles and admin, non-clinical and managerial roles (Tables 21 & 22) and within patient facing roles (Table 23)
- Analysis over time is presented in Table 24.

Appendix 4 also reports the detailed results of the significance testing conducted for wellbeing scores. This includes:

- Differences between NHS regions and a breakdown of scores between regions by gender (Table 25)
- Differences between NHS roles broken down by age groups (Table 26), gender (Table 27), and over time (Table 28)
- Differences between different admin, non-clinical and managerial roles (Table 29).

Average wellbeing

Table 13: Average wellbeing scores

N	Mean	SD	Minimum	Maximum
2818	20.48	4.66	7.00	35.00

Source: IES survey, 2020

Average wellbeing by age group

The results showed wellbeing increased significantly with age (Welch's F (5, 95.256)=9.676, p<.000; see Table 14 and 15).

Table 14: Average wellbeing scores by age group

	N	Mean	SD
Age group			

18-24	21	17.42	2.97
25-34	81	18.83	5.30
35-44	146	19.36	4.26
45-54	304	20.44	4.43
55-64	257	21.22	5.03
65+	17	23.32	4.36

Source: IES survey, 2020

Table 15: Multiple comparisons of wellbeing scores by age groups

Age Group		MD	p	d
45-54	18-24	3.02	.002	.8
55-64	18-24	3.8	<.000	.92
	25-34	2.39	.006	.46
	35-44	1.86	.001	.4
65+	18-24	5.9	.001	1.58
	25-34	4.49	.011	.93
	35-44	3.96	.022	.92

Source: IES survey, 2020

Average wellbeing scores by age group across regions

The age groups 18-24 and 25-34, and 55-64 and 65+ were pooled for this analysis due to small samples. Differences in wellbeing scores across age groups were significant in the Midlands ($F(3,163)=3.526$, $p=.016$), the North East and Yorkshire (Welch's $F(3,31.488)=7.377$), and the North West (Welch's $F(3,56.573)=6.917$, $p<.000$; see Table 16 and 17). The differences in wellbeing scores across age groups in the East of England were statistically significant ($F(3,91)=2.749$, $p=.047$), however comparisons showed no significant differences between groups possibly due to the small sample size. There were also no significant differences in wellbeing scores across age groups in the South East (Welch's $F(3,51.869)=2.333$, $p=.085$) or South West (Welch's $F(3,26.617)=1.403$, $p=.264$).

Table 16: Average wellbeing score by age group across regions

	N	Mean	SD
East of England			
18-34	13	21.81	6.10
35-44	20	17.82	2.88
45-54	35	21.07	5.09

	55+	27	20.73	4.25
Midlands				
	18-34	22	17.28	5.28
	35-44	33	20.93	5.37
	45-54	62	19.94	4.49
	55+	50	20.97	4.35
North East and Yorkshire				
	18-34	13	16.49	2.15
	35-44	14	19.44	5.06
	45-54	40	20.11	3.34
	55+	17	20.44	5.24
North West				
	18-34	18	17.30	3.73
	35-44	23	19.22	4.31
	45-54	38	20.97	4.10
	55+	56	22.44	5.97
South East				
	18-34	16	19.97	4.09
	35-44	22	18.83	3.04
	45-54	47	21.04	5.19
	55+	37	21.19	4.97
South West				
	18-34	11	18.85	6.55
	35-44	11	18.58	3.30
	45-54	31	20.38	3.40
	55+	24	21.53	5.77

Table 17: Multiple comparisons of wellbeing scores between age groups by NHS region

Region	Age Group		MD	<i>p</i>	<i>d</i>
Midlands	18-34	35-44	-3.66	.029	.69
		55+	-3.69	.014	.76
North East and Yorkshire	18-34	45-54	-3.6	<.000	1.29
		55+	-4	.046	.99
North West	18-34	45-54	-3.7	.01	.94
		55+	-5.1	<.000	1.03
	35-44	55+	-3.2	.046	.62

Average wellbeing scores between age groups by DPC roles

The age groups 18-24 and 25-34, and 55-64 and 65+ were pooled in the following analysis due to small samples. The differences in average wellbeing scores of those working in Pharmacy were significant ($F(3,64)=3.67$, $p=.017$; see Table 18 and 19). The differences across age groups of wellbeing scores for GPs were not significant (Welch's $F(3,62.608)=1.42$, $p=.245$).

Table 18: Average wellbeing scores between age groups within DPC

		N	Mean	SD
GP	18-34	18	22.02	7.02
	35-44	44	20.31	3.87
	45-54	87	19.83	3.94
	55+	71	21.05	4.38
Pharmacy	18-34	15	18.21	4.16
	35-44	11	20.21	3.79
	45-54	25	21.66	4.43
	55+	17	17.83	4.03

Source: IES survey, 2020

Table 19: Multiple comparisons of wellbeing scores between age groups in DPC

Role	Age group	MD	<i>p</i>	<i>d</i>
Pharmacy	55+ 45-54	-3.84	.024	.91

Source: IES survey, 2020

Average wellbeing by gender, ethnicity, and disability

There were no significant differences in wellbeing scores between gender ($t(160.845)=-1.057$, $p=.292$), ethnicity (Comparison of White and all other ethnicity categories pooled; $t(800)=-.590$, $p=.555$) and disability groups ($t(828)=-.671$, $p=.503$; see Table 20).

Table 20: Average wellbeing score by gender, ethnicity, and disability

	N	Mean	SD
Gender			

	Female	703	20.27	4.66
	Male	126	20.81	5.34
Ethnicity				
	White	722	20.36	4.68
	Asian	55	20.97	5.21
	Black	16	20.07	5.68
Disability				
	Yes	30	19.77	4.71
	No	800	20.37	4.79

Source: IES survey, 2020

Differences in wellbeing scores between DPC and ANM

The results showed no significant difference in wellbeing scores between individuals who worked solely in DPC compared to those who worked only in ANM roles ($t(2720)=1.394$, $p=.163$; see Table 21). There were no significant differences in wellbeing scores between genders for those working in DPC ($t(126.563)=-.332$, $p=.741$).

Table 21: Average wellbeing score between genders in DPC and ANM

	Role	N	Mean
Direct Patient Care			
	Gender		
	Male	92	20.71
	Female	353	20.51
Admin, Non-Clinical and Managerial			
	Gender		
	Male	29	20.68
	Female	332	19.98

Source: IES survey, 2020

Average wellbeing scores in DPC roles

Advanced practitioners were excluded from the following analysis due to small sample size. Average wellbeing scores were significantly different between individuals in different DPC roles (Welch's $F(3,227.810)=8.679$, $p<.000$; see Table 22 and 23).

Table 22: Average wellbeing scores in DPC roles

	N	Mean	SD
Nursing and Health Care	428	20.79	4.67
GP	835	20.73	4.74
Male	71	21.22	5.48
Female	149	20.15	3.78
Pharmacy	177	19.90	4.27
Female	50	19.9	4.45
Male	18	19.09	4.45
Other Health Care Professional	55	18.46	3.47

Source: IES survey, 2020

Table 23: Multiple comparisons of wellbeing scores between roles in DPC

Role		MD	p	d
Other Health Care Professionals	GP	-2.27	<.000	.55
	Nursing and Health Care	-2.33	<.000	.57

Source: IES survey, 2020

Average wellbeing scores over time

There were no significant differences in wellbeing over time ($F(5,2812)=.959$, $p=.442$; see Table 24).

Table 24: Average wellbeing scores over time

	N	M	SD
Week			
23/04-29/04	668	20.75	4.71
30/04-06/05	1185	20.46	4.61
07/05-13/05	303	20.08	4.49
14/05-20/05	400	20.38	4.93
21/05-27/05	194	20.56	4.38
28/05-02/06	68	20.48	4.94

Average wellbeing between regions

There were no significant differences in wellbeing scores between NHS regions ($F(6,2527)=.704$, $p=.646$).

Average wellbeing of female respondents between NHS regions

There were no significant differences in wellbeing scores of female respondents between NHS regions ($F(6,625)=1.166$, $p=.323$; see Table 25).

Table 25: Average wellbeing scores of female respondents between regions

	N	Mean	SD
North West	120	20.82	5.22
East of England	76	20.55	5.09
South West	69	20.31	4.75
South East	105	20.30	4.64
Midlands	140	19.90	4.36
London	46	19.79	4.02
North East and Yorkshire	76	19.22	3.78

Average wellbeing within age groups between roles

There were no significant differences in wellbeing scores between DPC and ANM roles for 18-34 year olds ($t(97)=1.04$, $p=.301$), 35-44 year olds ($t(138)=1.752$, $p=.082$), 45-54 year olds ($t(294)=1.610$, $p=.109$), or those aged 55+ ($t(213.734)=-1.115$, $p=.266$; see Table 26).

Table 26: Average wellbeing scores by age group between DPC and ANM roles

	N	Mean	SD
18-34			
DPC	46	18.91	5.73
ANM	53	17.91	3.80
35-44			
DPC	70	19.99	4.09

45-54	ANM	70	18.71	4.51
	DPC	175	20.76	4.69
55+	ANM	121	19.91	4.01
	DPC	153	21.05	4.54
	ANM	114	21.76	5.56

Source: IES survey, 2020

Average wellbeing of female respondents between roles

The difference between wellbeing scores of female respondents between DPC and ANM roles was not significant ($t(683)=1.477$, $p=.140$; see Table 27). Within ANM, there were no significant differences in female respondent's resilience scores between roles ($F(3,256)=.832$, $p=.477$).

Table 27: Average wellbeing scores of female respondents between roles

	N	Mean	SD
Direct Patient Care	353	20.51	4.54
Admin, Non-Clinical, and Managerial	332	19.98	4.77
Receptionist	41	21.18	5.25
Other Manager	63	20.32	5.09
Practice Manager	106	20.16	4.77
Administrative Staff	50	19.59	4.24

Source: IES survey, 2020

Average wellbeing scores across time between DPC and ANM

Table 28: Average wellbeing scores across time between DPC and ANM

		N	Mean	SD
Direct Patient Care	Week			
	23/04-29/04	379	20.84	4.88
	30/04-06/05	582	20.55	4.70
	07/05-13/05	159	20.11	4.56
	14/05-20/05	203	20.77	4.72
	21/05-27/05	101	20.65	4.30
	28/05-02/06	44	20.34	5.26

Admin, Non-Clinical and Managerial	1.00	23/04-29/04	267	20.68	4.51
	2.00	30/04-06/05	561	20.41	4.56
	3.00	07/05-13/05	129	20.07	4.60
	4.00	14/05-20/05	190	19.89	5.06
	5.00	21/05-27/05	86	20.46	4.54
	6.00	28/05-02/06	21	20.40	4.29

Source: IES survey, 2020

Average wellbeing scores in ANM roles

The groups HR staff, facilities management, finance director and apprentice were excluded from the following analysis due to small sample size. There were no significant differences in wellbeing scores between individuals working in different ANM roles ($F(9,1162)=.689, p=.720$; see Table 29).

Table 29: Average wellbeing scores in ANM roles 12

Role	N	Mean	SD
Receptionists	134	20.99	4.82
Managing Partner	36	20.92	4.38
HR Manager	13	20.84	4.58
Clinical Director	28	20.77	3.54
Other Manager	235	20.54	4.94
Practice Manager	474	20.40	4.57
Medical Secretary	59	20.18	5.70
Administrative Staff	171	20.09	4.67
Data Management Staff	17	19.36	2.95

Source: IES survey, 2020

Appendix 5 - Tables of statistical analysis of resilience scores

Introduction

Appendix 5 presents the detailed results of the statistical analysis of resilience scores. The average resilience score is presented in Table 30 followed by significance testing and where necessary multiple comparison tests to determine group differences. This includes a breakdown of:

- Scores by age groups (Tables 31 & 32), and by age groups across regions (Tables 33 & 34), roles (Tables 35 & 36) and by gender, ethnicity, and disability (Table 37)
- Differences between those in direct patient facing roles and admin, non-clinical and managerial roles (Table 38) and within patient facing roles (Table 39)
- Analysis over time is presented in Table 40.

Appendix 5 also reports the detailed results of the significance testing conducted for wellbeing scores. This includes:

- Differences between NHS regions and a breakdown of scores between regions by gender (Table 41)
- Differences between NHS roles broken down by age groups (Table 42), gender (Table 43), and over time (Table 44)
- Differences between different admin, non-clinical and managerial roles (Table 45).

Average resilience

Table 30: Average resilience scores

N	Mean	SD	Minimum	Maximum
2820	12.3	3.63	2.00	20.00

Source: IES survey, 2020

Resilience by age group

Analysis showed resilience scores also increased significantly with age (Welch's $F(5, 92.933)=3.697$, $p=.004$; see Table 31 and 32).

Table 31: Average resilience scores by age group

N	Mean	SD
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Age				
18-24	21	11.67	3.76	
25-34	81	11.26	3.22	
35-44	146	11.42	3.59	
45-54	303	12.23	3.47	
55-64	258	12.76	4.09	
65+	17	13.00	3.95	

Source: IES survey, 2020

Table 32: Multiple comparisons of resilience scores by age groups

Age Group		MD	p	d
55-64	25-34	1.5	.01	.41
	35-44	1.34	.009	.35

Source: IES survey, 2020

Resilience scores by age group across regions

The age groups 18-24 and 25-34, and 55-64 and 65+ were pooled for this analysis due to small samples. The results showed that average resilience scores varied significantly by age group in the Midlands (Welch's $F(3,70.748)=4.32$, $p=.007$) and East of England ($F(3,91)=3.417$, $p=.021$; see Table 33 and 34). Average resilience scores across age groups in the North West ($F(3,131)=1.299$, $p=.277$), North East and Yorkshire (Welch's $F(3,32.982)=1.279$, $p=.298$), the South East ($F(3,117)=.216$, $p=.885$), and the South West ($F(3,73)=.727$, $p=.539$) were not significantly different.

Table 33: Average resilience score by age group across regions

	East of England	N	Mean	SD
	18-34	13	12.15	3.44
	35-44	20	9.55	3.12
	45-54	35	12.26	3.91
	55+	27	12.89	3.99
Midlands	18-34	22	9.95	2.94
	35-44	33	12.45	3.92
	45-54	62	12.29	3.39
	55+	50	12.70	3.87
North East and Yorkshire	18-34	13	11.00	2.74

	35-44	14	10.86	2.35
	45-54	40	12.33	3.38
	55+	17	12.00	4.65
North West				
	18-34	18	11.39	2.79
	35-44	23	11.70	3.81
	45-54	38	12.47	3.50
	55+	56	13.07	4.14
South East				
	18-34	16	12.25	4.52
	35-44	22	11.45	3.29
	45-54	46	12.17	3.46
	55+	37	12.11	4.07
South West				
	18-34	11	11.18	3.28
	35-44	11	12.73	3.74
	45-54	31	12.52	3.10
	55+	24	13.08	4.14

Source: IES survey, 2020

Table 34: Multiple comparisons of resilience scores between age groups by NHS region

Region	Age Group	MD	<i>p</i>	<i>d</i>	
Midlands	18-34	35-44	-2.5	.045	.72
		45-55	-2.3	.019	.74
		55+	-2.7	.009	.8
East of England	35-44	45-44	-2.71	.053	.77
		55+	-3.34	.016	.93

Source: IES survey, 2020

Average resilience scores by age across DPC roles

The age groups 18-24 and 25-34, and 55-64 and 65+ were pooled in the following analysis due to small samples. Resilience scores of pharmacists varied significantly with age ($F(3,64)=3.488$, $p=.021$;

see Table 35 and 36). The differences across age groups of resilience scores for GPs were not significant ($F(3,216)=1.761, p=.156$).

Table 35: Average resilience scores between age groups within DPC

		N	Mean	SD
GP	18-34	18	12.06	2.92
	35-44	44	11.20	3.32
	45-54	87	11.77	3.30
	55+	71	12.65	3.74
Pharmacy	18-34	15	11.27	3.81
	35-44	11	13.09	4.18
	45-54	25	12.40	2.60
	55+	17	9.53	3.18

Source: IES survey, 2020

Table 36: Multiple comparisons of resilience scores between age groups in DPC

Role	Age group		MD	p	d
Pharmacy	55+	35-44	-3.56	.035	.96
		45-54	-2.87	.037	.99

Source: IES survey, 2020

Resilience by gender, ethnicity, disability

There were no significant differences in average resilience between gender ($t(163.447)=-.982, p=.328$), ethnicity ($t(828)=.523, p=.601$), or disability ($t(799)=-.156, p=.876$; see Table 37).

Table 37: Average resilience score by gender, ethnicity, and disability

		N	Mean	SD
Gender	Male	126	12.48	4.05
	Female	703	12.10	3.65
Ethnicity	White	722	12.21	3.67

	Asian	55	12.11	3.76
	Black	15	12.07	4.03
Disability				
	Yes	30	12.53	3.62
	No	800	12.17	3.73

Source: IES survey, 2020

Differences in resilience scores between DPC and ANM

There was no significant difference in resilience scores between individuals who worked in ANM roles and those who worked in DPC ($t(2723)=-1.763$, $p=.078$; see Table 38). There were no significant differences in resilience scores between genders for respondents working in DPC ($t(129.267)=-.259$, $p=.796$).

Table 38: Average resilience scores between genders in DPC and ANM

		N	Mean
Direct Patient Care			
Gender			
	Male	92	12.24
	Female	353	12.12
Admin, Non-Clinical and Managerial			
Gender			
	Male	29	12.97
	Female	332	12.11

Source: IES survey, 2020

Average resilience scores in DPC roles

There were no significant differences in resilience scores between individuals working in different DPC roles ($F(3,1490)=1.610$, $p=.185$; see Table 39).

Table 39: Average resilience scores in DPC roles

Direct Patient Care Role	N	Mean	SD
Nursing and Health Care	426	12.37	3.54
GP	835	12.20	3.63
	Male	71	12.41
	Female	149	11.68

Other Health Care Professional	55	11.95	3.46
Pharmacy	178	11.69	3.51
Male	18	11.94	3.76
Female	50	11.34	3.41

Source: IES survey, 2020

Average resilience scores over time

There were no significant differences in resilience scores over time ($F(5,2814)=.798$, $p=.551$; see Table 40).

Table 40: Average resilience scores over time

	N	M	SD
Week			
23/04-29/04	669	12.46	3.56
30/04-06/05	1186	12.33	3.63
07/05-13/05	303	12.00	3.77
14/05-20/05	400	12.29	3.68
21/05-27/05	194	12.21	3.63
28/05-02/06	68	11.97	3.57

Source: IES survey, 2020

Average resilience between regions

There were no significant differences in resilience scores between NHS regions ($F(6,2528)=.957$, $p=.453$).

Average resilience of female respondent between NHS regions

There were no significant differences in wellbeing scores of female respondents between NHS regions ($F(6,624)=.845$, $p=.535$; see Table 41).

Table 41: Average resilience scores of female respondents between regions

	N	Mean	SD
South West	69	12.61	3.59
North West	120	12.38	3.86

Midlands	140	12.11	3.53
South East	104	11.88	3.70
London	46	11.76	3.18
East of England	76	11.68	3.83
North East and Yorkshire	76	11.62	3.25

Source: IES survey, 2020

Average resilience within age groups between roles

There were no significant differences in resilience scores between DPC and ANM roles for 18-34 year olds ($t(97)=-.316$, $p=.753$), 35-44 year olds ($t(138)=1.251$, $p=.213$), 45-54 year olds ($t(293)=.786$, $p=.432$), or those aged 55+ ($t(266)=-1.753$, $p=.081$; see Table 42).

Table 42: Average resilience scores by age group between DPC and ANM roles

		N	Mean	SD
18-34				
	DPC	46	11.24	3.41
	ANM	53	11.45	3.31
35-44				
	DPC	70	11.81	3.53
	ANM	70	11.04	3.76
45-54				
	DPC	174	12.37	3.32
	ANM	121	12.05	3.71
55+				
	DPC	154	12.40	3.85
	ANM	114	13.27	4.30

Source: IES survey, 2020

Average resilience of female respondents between roles

The difference between resilience scores of female respondents between DPC and ANM roles was not significant ($t(662.062)=.032$, $p=.971$; see Table 43). Within ANM, there were no significant differences in female respondent's resilience scores between roles ($F(3,256)=1.052$, $p=.370$).

Table 43: Average resilience scores of female respondents between roles

	N	Mean	SD
Direct Patient Care	353	12.12	3.45
Admin, Non-Clinical, and Managerial	332	12.11	3.89
Receptionist	106	12.58	4.17
Other Manager	63	12.43	3.92
Practice Manager	41	12.34	3.64
Administrative Staff	50	11.40	3.93

Source: IES survey, 2020

Average resilience scores across time between DPC and ANM

Table 44: Average resilience scores across time between DPC and ANM

		N	Mean	SD
	Week			
Direct Patient Care	23/04-29/04	379	12.13	3.47
	30/04-06/05	582	12.21	3.70
	07/05-13/05	159	11.78	3.85
	14/05-20/05	203	12.57	3.41
	21/05-27/05	101	12.15	3.56
	28/05-02/06	44	11.68	3.41
Admin, Non-Clinical and Managerial	1.00 23/04-29/04	268	12.80	3.65
	2.00 30/04-06/05	563	12.42	3.56
	3.00 07/05-13/05	129	12.35	3.76
	4.00 14/05-20/05	190	11.98	3.94
	5.00 21/05-27/05	86	12.31	3.73
	6.00 28/05-02/06	21	12.29	3.77

Source: IES survey, 2020

Average resilience scores in ANM roles

The groups HR staff, facilities management, finance director and apprentice were excluded from the following analysis due to small sample size. There were no significant differences resilience scores between individuals working in different ANM roles ($F(9,1163)=1.725, p=.079$; see Table 45).

Table 45: Average resilience scores in ANM roles

Role	N	Mean	SD
Managing Partner	36	13.25	3.63
Clinical Director	28	13.21	3.47
Practice Manager	476	12.72	3.71
Other Manager	235	12.56	3.56
Receptionists	133	12.32	3.73
HR Manager	13	12.31	3.99
Administrative Staff	171	12.09	3.63
Medical Secretary	59	11.39	3.79
Data Management Staff	17	10.94	3.23

Source: IES survey, 2020