

Article

Disability pay gaps in the UK: 2014 to 2023

Earnings statistics for disabled and non-disabled employees in the UK, using regression analysis to provide more insight into factors that affect pay.

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1 . Main points

In the UK in 2023:

- The pay gap between disabled and non-disabled employees was 12.7%, with a median hourly pay of £15.69 for non-disabled employees and £13.69 for disabled employees; this pay gap has remained relatively stable since 2014.
- The disability pay gap was wider for men (15.5%) than for women (9.6%), and for full-time employees (11.2%) than for part-time employees (4.1%).
- Employees who were limited a lot by their disability in their day-to-day activities had the widest disability pay gap (17.1%), followed by disabled employees who were limited a little (11.2%).
- Disabled employees with autism experienced one of the widest pay gaps (27.9%), along with disabled employees with epilepsy (26.9%) and severe or specific learning difficulties (20.3%).
- The disability pay gap narrowed but did not disappear for most impairment types after adjusting for personal and work characteristics; pay gaps for employees with autism, difficulty in seeing, and severe or specific learning difficulties narrowed the most.
- The factors that had the greatest impact were occupation, age, qualifications, and geography, when looking at the cumulative effect of characteristics on the disability pay gap.

The ongoing challenges with response rates, levels, and weighting approach mean that Annual Population Survey (APS)-based labour market statistics will be considered official statistics in development until further review. Because of increased volatility of APS estimates, estimates of change should be treated with additional caution. More information about the reclassification of APS statistics can be found in our [ONS letter to the Office for Statistics Regulation](#).

2 . Analysis of disability pay gaps

The disability pay gap is the difference between the median gross hourly earnings of disabled employees and of non-disabled employees. It is calculated as a percentage of median hourly earnings of non-disabled employees. A positive pay gap shows that the median hourly earnings of disabled employees are less than the median hourly earnings of non-disabled employees.

For this analysis, individuals are disabled if they have a physical or mental health condition or illness that reduces their ability to carry out day-to-day activities that has lasted, or is expected to last, 12 months or more. For more information on definitions used in this article, see [Section 8: Glossary](#).

Since our previous disability pay gaps publication published in 2022, we have introduced confidence intervals and statistical robustness statements. These improvements mean that comparisons with statements made in previous publications should be approached with caution.

3 . Disability pay gap in the UK

The disability pay gap in the UK was 12.7% in 2023. Disabled employees earned a median of £13.69 per hour and non-disabled employees earned a median of £15.69 per hour. The disability pay gap has remained broadly stable between 2014 and 2023 (Figure 1).

Figure 1: The disability pay gap was 12.7% in 2023 and this has remained relatively stable since 2014

Disability pay gap, UK, 2014 to 2023

4 . Disability pay gaps by characteristics

Pay gap by sex

Men experienced a wider disability pay gap (15.5%) than women (9.6%) in 2023. The median hourly pay for disabled men was £14.44, compared with £17.08 for non-disabled men. The median hourly pay for disabled women was £13.11, compared with £14.50 for non-disabled women.

Analysis in our [Gender pay gap in the UK: 2023 bulletin](#), using the Annual Survey of Hours and Earnings (ASHE), showed women tend to be paid less than men. However, our disability pay gap analysis shows that disabled men earn a median hourly pay similar to that of non-disabled women.

Figure 2: Men experienced a wider disability pay gap than women in 2023

Disability pay gap by sex, UK, 2014 to 2023

Pay gap by occupation

Employees in the “managers, directors and senior officials” occupation group had one of the widest disability pay gaps (11.1%). Employees in “elementary occupations” (1.3%), “sales and customer service occupations” (1.1%) and “caring, leisure and other service occupations” (0.0%) had some of the narrowest pay gaps (Figure 3). Minimum wage legislation likely contributes to the narrow disability pay gap for lower paid occupations.

Figure 3: Managers, directors and senior officials had one of the widest disability pay gaps in 2023

Disability pay gap by occupation, UK, 2023

Notes:

1. Confidence intervals communicate certainty. Confidence intervals are wider for occupations where fewer people with a disability are employed, indicating greater uncertainty. For more information see [Section 8: Glossary](#).
2. For quality information on the statistical robustness of these data, see our accompanying datasets.

Pay gap by working pattern

Employees working in full-time positions experienced a wider disability pay gap (11.2%) than employees in part-time positions (4.1%) in 2023. This was a stable trend between 2014 and 2023. The median hourly pay for disabled full-time employees was £15.00 in 2023, compared with £16.89 for non-disabled full-time employees. The median hourly pay for disabled part-time employees was £11.25, compared with £11.73 for non-disabled part-time employees.

Figure 4: Full-time employees consistently experienced a greater disability pay gap than part-time employees

Disability pay gap by working pattern, UK, 2014 to 2023

Notes:

1. Full-time and part-time employment is self-defined on the Labour Force Survey.

Pay gap by impairment severity

Disabled employees who reported being limited by their main impairment a lot in their day-to-day activities experienced a wider pay gap (17.1%) than disabled employees who were limited a little (11.2%) in 2023 (Figure 5). This trend was observed consistently across the period from 2014 to 2023.

Figure 5: Disabled employees who were limited a lot by their main impairment experienced the greatest disability pay gap

Disability pay gap by impairment severity, UK, 2014 to 2023

Notes:

1. The reference group for these data is “non-disabled: no long-lasting health condition”.

Pay gap by main impairment type

Some of the widest disability pay gaps were among employees whose main impairment type was autism (27.9%), epilepsy (26.9%), severe or specific learning difficulties (20.3%), or difficulty in seeing (20.3%) in 2023.

Figure 6: Disabled employees with autism had one of the wider disability pay gaps in 2023

Disability pay gap by main impairment type, UK, 2023

Notes:

1. “Progressive illness n.e.c. (not elsewhere classified)” includes cancer, multiple sclerosis, symptomatic HIV, Parkinson’s disease, muscular dystrophy, and other illnesses.
2. Confidence intervals communicate certainty. Confidence intervals are wider where the numbers of people in a category are smaller, indicating greater uncertainty. For more information, see [Section 8: Glossary](#).
3. The reduction in achieved sample sizes in the Annual Population Survey can particularly affect small segments of the population, which may include some of those listed here. For quality information on the statistical robustness of these data, see our [accompanying datasets](#).

5 . Adjusting for factors that affect pay

Variations in personal and work characteristics, such as age and occupation, influence pay disparities. These characteristics often differ between disabled and non-disabled people. For instance, disabled people tend to be older, as described in our [Disability, England and Wales: Census 2021 bulletin](#). This means the unadjusted pay gaps presented earlier may be related to these differences and not solely to disability status.

To isolate the effect of disability status from other influencing factors, we calculated “adjusted” pay gaps using a quantile regression model. This allows a like-for-like comparison, by estimating pay gaps as if the two groups had identical characteristics, except for disability status. For more detail, see [Section 9: Data sources and quality](#). See [Section 7: Data](#) on disability pay gaps for adjusted pay gaps presented by disability status, as well as by main impairment type.

After accounting for selected characteristics, the disability pay gap narrowed but persisted for most impairment types. The adjusted pay gap was greatest for individuals with epilepsy (14.7%), severe disfigurements, skin conditions and allergies (11.9%), and problems or disabilities connected with legs and feet (9.0%). This suggests that for workers with these impairments, disability status may contribute to the pay gap more than other pay-related factors.

The pay gap narrowed most for individuals with autism, from 27.9% to 8.2%, a reduction of 19.7 percentage points. Those with mental illnesses or other nervous disorders, severe or specific learning difficulties, and difficulty in seeing also saw notable reductions in the pay gap of 15.1 percentage points, 15.5 percentage points, and 17.5 percentage points, respectively. This suggests that for workers with these impairments, factors other than disability status contribute substantially to their respective pay gaps, which is consistent with our [Disability, England and Wales: Census 2021 bulletin](#).

Estimates of disability pay gaps by age, ethnic group, country, or region can be found in our [Raw disability pay gaps dataset](#).

Figure 7: Disabled employees with autism as their main impairment had one of the largest reductions in their pay gap after adjusting for other factors

Raw and adjusted disability pay gaps by main impairment, UK, 2023

Notes:

1. Non-disabled employees are the reference group for calculating the raw and adjusted pay gaps.
2. “Progressive illness n.e.c. (not elsewhere classified)” includes cancer, multiple sclerosis, symptomatic HIV, Parkinson’s disease, muscular dystrophy, and other illnesses.

6 . Factors that affect the disability pay gap

Using decomposition analysis, the factors that most explained the differences in median hourly pay between disabled and non-disabled employees were:

- occupation
- age
- highest qualification
- geography

This section considers the impact of these factors on the pay gap. Further detail of decomposition analysis can be found in [Section 9: Data sources and quality](#).

Figure 8: For most employees, occupation and age contributed most to adjusting the pay gap between disabled and non-disabled employees

Cumulative contributions to the difference in raw and adjusted pay gaps, UK employees, UK, 2023

Notes:

1. Charts show the average effects of each characteristic on pay, which, when combined, give the adjusted pay gap.
2. Cumulative contributions of differences between raw and adjusted pay gaps for other impairment types are presented in our associated datasets.
3. Contributions were individually rounded. As such, they will not sum to the difference between the raw and adjusted pay gaps.

Occupation

The model controls for occupation by adjusting pay levels to those working in professional occupations, such as doctors, scientists, or teachers. This group is used as the reference group, because it is the largest major occupation groupings and had one of the highest median hourly earnings in 2023 (£23.35), according to estimates from the Annual Survey of Hours and Earnings (ASHE) described in our [Employee earnings in the UK: 2023 bulletin](#).

Looking at the impairment types with the largest narrowing in the pay gap after adjustment, occupation had one of the greatest contributions to this reduction. Disabled employees with the following main impairments saw the largest contributions from occupation when adjusting:

- severe or specific learning difficulties (-17.9 percentage points)
- autism (-15.3 percentage points)
- epilepsy (-13.6 percentage points)

A greater share of employees working in professional occupations tends to equate to higher pay, so impairments with a smaller proportion of employees in these occupations would result in a narrowing of the pay gap after adjusting for occupation.

Age

Pay typically increases as employees age, because of more experience within the labour market. This is demonstrated in our model, which estimates that after adjusting for all characteristics in the model, median pay increases by 3.5% for each year a person ages. Any difference between the age profiles of disabled and non-disabled employees will make differences in pay more difficult to isolate. This trend was also observed in our [Employee earnings in the UK: 2023 bulletin](#).

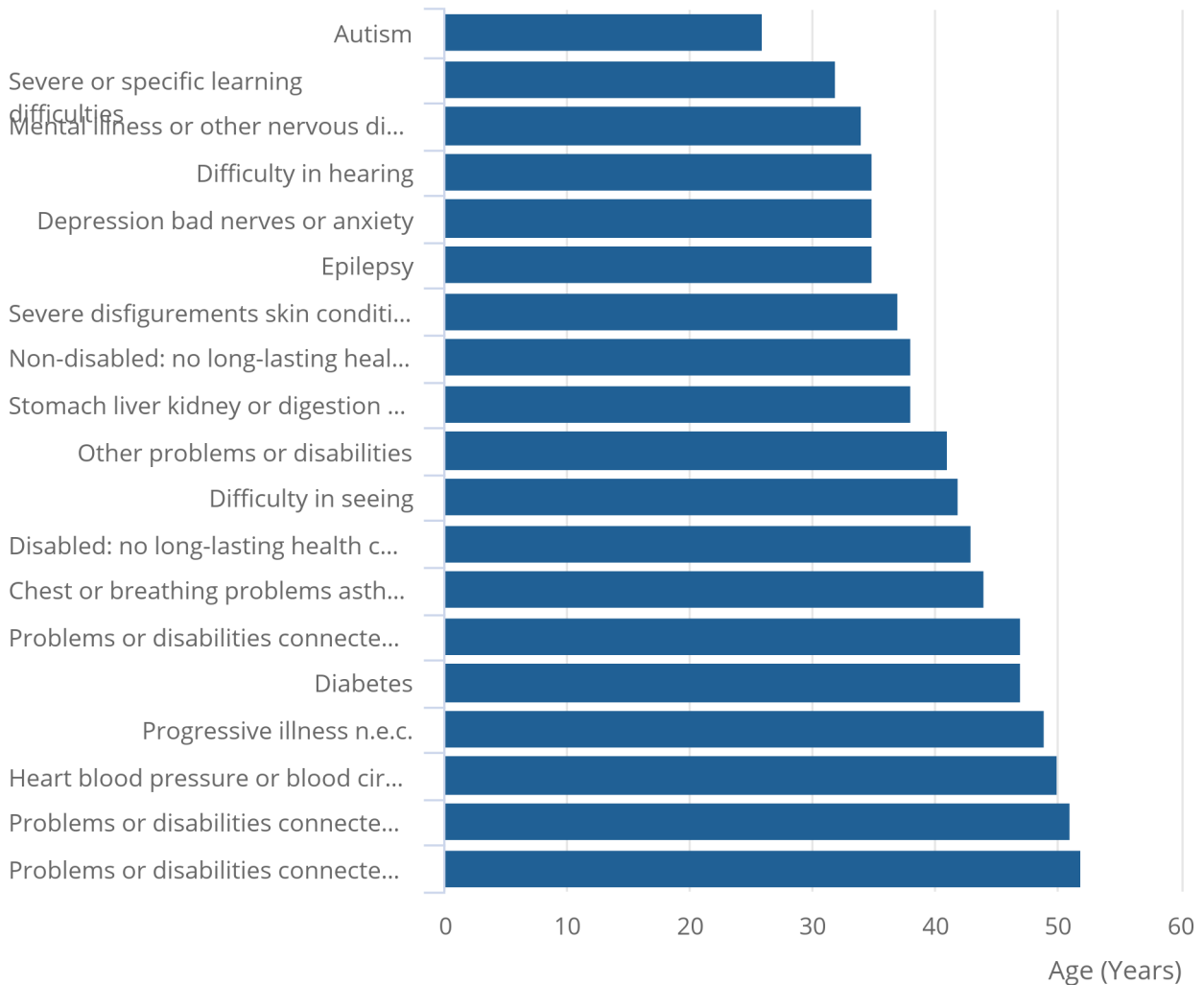
For the main impairments with the lowest median ages, controlling for age narrowed the pay gap the most. For example, disabled employees with autism had a median age of 26 in 2023. Adjusting for age contributed to a 4.9 percentage point reduction in the pay gap for these employees. In contrast, impairments with a higher median age actually saw a widening of the pay gap after adjusting for age.

Figure 9: Disabled employees with autism had one of the lowest median ages

Median age of employees by main impairment, UK, 2023

Figure 9: Disabled employees with autism had one of the lowest median ages

Median age of employees by main impairment, UK, 2023



Source: Annual Population Survey from the Office for National Statistics

Highest qualification level

Qualifications also contribute to the difference between the adjusted and raw pay gaps. The model adjusts the level of pay to those who have a degree or equivalent as their highest level of qualification, because employees with these qualifications tend to have higher pay.

Differences in the proportion of people who have higher qualifications by main impairment type could explain the large contributing effect seen in the model. The effect of qualification may be smaller here, as age has been factored in previously. Younger people are more likely to have a degree or equivalent than older people.

Geography

Pay varies geographically in the UK, with employees living in different parts of the country doing similar jobs earning different wages. The model uses London as the reference group because it is the most populated region. Adjusting the model by geography increases the conditional median pay, as London has higher pay than any other region.

Disability prevalence varies by region, as shown by [data from the Department for Work and Pensions Family Resources Survey](#). It ranged from 31% in the North East of England to 15% in London from 2022 to 2023. So, controlling for geography may affect the disability pay gap. Most of the main impairment types did show a narrowing of their disability pay gap after controlling for geography in our model. However, the magnitude of this tended to be small. This might be because the effect of geography has already been accounted for in the previous controls for occupation and qualification level, given that these also vary by geography.

7 . Data on disability pay gaps

[Raw disability pay gaps, UK](#)

Dataset | Released on 17 October 2024

Median pay and raw disability pay gap estimates across different characteristic breakdowns, using Annual Population Survey (APS) data.

[Disability pay gaps, regression models, UK](#)

Dataset | Released on 17 October 2024

Results from a pay regression model and the factors that affect it across different disability breakdowns, using Annual Population Survey (APS) data.

[Adjusted disability pay gaps and decomposition, UK](#)

Dataset | Released on 17 October 2024

Adjusted disability pay gap estimates across different characteristic breakdowns, using Annual Population Survey (APS) data.

[Disability pay gaps, employee characteristics, UK](#)

Dataset | Released on 17 October 2024

Analysis of employee proportions across characteristic breakdowns and median age, using Annual Population Survey (APS) data.

8 . Glossary

Adjusted pay gap

An adjusted pay gap is a pay gap that is estimated from the predicted pay after controlling for all confounders, according to the statistical model.

Confidence intervals

We include [confidence intervals](#) in the figures reported in this article and in our accompanying datasets. This is a measure of the statistical precision of an estimate and shows the range of uncertainty around the calculated estimates.

The estimated pay gap is considered not statistically significant if the confidence interval crosses through zero, meaning the interval ranges from a negative value to a positive value. Differences between groups are considered not statistically significant if the confidence intervals for those two groups overlap. For more technical information on the robustness of estimates, please see our [accompanying datasets](#).

Confounder

A confounder is a variable that affects both the dependent (predictor) and independent (outcome) variables, causing a non-genuine relationship between these variables.

Disability

In this article, we use the [Government Statistical Service \(GSS\) harmonised "core" definition of disability](#). This defines an individual as disabled if they have a physical or mental health condition or illness that reduces their ability to carry out day-to-day activities that has lasted, or is expected to last, 12 months or more. This definition is designed to reflect the legal definitions that appear in the [Equality Act 2010](#).

Disability pay gap

The disability pay gap is the difference between the median gross hourly earnings of non-disabled and disabled employees. It is calculated as a percentage of median hourly earnings of non-disabled employees. For example, a positive 5% disability pay gap would denote that the median hourly earnings for disabled employees is 5% less than median hourly earnings of non-disabled employees. A negative 5% pay gap would denote that the median hourly earnings for disabled employees is 5% more than median hourly earnings of non-disabled employees. For more information on the methodology used for calculating pay gaps, see [Section 9: Data sources and quality](#).

Main impairment type

To explore differences within the disabled employee population, we have provided analysis by main impairment type. An individual can report having a main impairment, but not be defined as disabled according to the Equality Act, because of how the question is asked. For this reason, the parts of our analysis that are broken down by impairment type use non-disabled employees with no main impairment as the reference group. The options of disabled employees with a main impairment are included, but non-disabled with a main impairment are not included as options. When assessing the sample counts provided in our accompanying datasets, caution should be taken when interpreting the number of people with an impairment because they refer to main impairment, rather than all impairments.

Modelling effect

The modelling effect is the difference between the raw pay gaps and modelled pay gap.

Some reasons for the modelling effect are:

- the predicted pay assumes that pay is only determined by the variables in the model
- the random error in pay
- the model predicts the median pay for an employee, but there will be people earning above or below this estimate in the economy

Raw pay gap

A raw pay gap is a pay gap that is estimated from observed pay data collected from respondents.

Severity

The ability of disabled people to carry out day-to-day activities is self-reported as "limited a lot" or "limited a little" by their impairment. Respondents were asked "Does your condition or illness reduce your ability to carry out day-to-day activities?" and the responses "yes, a lot" and "yes, a little" were taken to indicate severity of disability.

9 . Data sources and quality

This article contains estimates based on the Annual Population Survey (APS). More quality and methodology information (QMI) is available in our [APS QMI](#).

Coverage

Estimates are based on employees aged 16 to 64 years. The APS does not collect disability status of people under 16 and only collects disability status in a restricted way (only at first contact) for people aged 65 and over. The questions asked in England and Wales about disability status are from Census 2021, whereas the Scotland and Northern Ireland questions are from the 2011 census. Therefore, they are not directly comparable.

As a form of outlier treatment, we have removed the top 1% and bottom 2% of the pay distribution from our data. This is because the earnings data collected from the APS are known to be subject to greater recall error than data collected from the Annual Survey of Hours and Earnings (ASHE), a business survey.

Strengths and limitations

Earnings analysis is primarily done using ASHE data. As a business survey, ASHE captures more accurate earnings information than the APS because businesses can consult their payroll. Earnings information collected on the APS is self-reported, and therefore subject to greater recall error. However, the APS collects a broader range of personal and household characteristics than ASHE, which broadens its uses.

During and following the coronavirus (COVID-19) pandemic period, ASHE (and by proxy APS) showed some divergence from other earnings data sources, such as our Average Weekly Earnings and Earnings, and employment from Pay As You Earn, Real Time Information. Please see our [Comparison of labour market data sources methodology](#) for reasons why we expect to see differences in the data sources.

Earnings information from the APS is only collected from a subset of employees. It therefore has a lower total sample for earnings analysis than ASHE, at approximately a third of respondents. See [Volume 3: Details of LFS variables of our Labour Force Survey user guide](#) for more information.

There are ongoing challenges with response rates, levels, and weighting approach on the APS. Because of increased volatility of APS estimates, estimates of change should be treated with additional caution. We have tried to minimise the effect of this on usage of data by including confidence intervals and statistical robustness statements for all estimates in this article.

Our blog [Decoding the gender pay gap: how a Bletchley Park codebreaker helped explain a strange paradox](#) shows that results for sub-groups of the population often do not appear to reconcile with results for the total population when considering the pay gap estimates.

Weighting

The income weight for the APS is based on six calibration groups. Standard Occupational Classification (SOC) is used as a calibration group in the income weights. Since 2020, it has been updated from SOC 2010 to SOC 2020. More information on this can be found in [Volume 6: APS user guide of our Labour Force Survey user guide](#).

Weights for estimates from 2012 to 2019 are based on our population projections. For 2020 to 2023, changes to the weighting have been introduced. This was in response to the impacts of the coronavirus (COVID-19) pandemic on APS data collection, as described in our [Data collection changes methodology](#).

The weighting methodology for the APS has been updated to overcome any biases introduced, with new populations using growth rates from HM Revenue and Customs' Real Time Information (RTI). We also introduced non-response bias adjustment to better reflect the socioeconomic makeup of the population. For more information, see our [Labour Force Survey \(LFS\) weighting methodology](#). From October 2023 onwards, the LFS has returned to the original methods and weighting using in the 2012 to 2019 period.

Decomposition analysis

We used decomposition analysis to examine the cumulative effect of each factor, to better understand differences between the raw and adjusted pay gaps. Pay was predicted for all employees according to our model, based on their characteristics. We predicted a modelled median pay for each group and estimated a modelled pay gap.

To investigate the effect of each characteristic, we controlled for each factor in sequence to remove its effect on pay, and then recalculated the pay gap. This created a set of pay gaps, to answer the following questions: "What would the pay gap be if everyone worked in the same occupation?" and "What would the pay gap be if everyone worked in the same occupation and had the same level of qualification?". We repeated this until all factors in the model are controlled for, giving us the adjusted pay gap. The process is affected by the order in which a factor is controlled for, so an average effect over multiple orders of asking these questions is used to present the effect.

Regression model methodology

We have used quantile regression (QR) to model the logarithm of a respondent's pay against disability status and other factors, or confounders. We have used the log of pay to improve the interpretation of the coefficients, as QR is a distribution-free methodology. The model coefficients represent the change in $\log(\text{pay})$ for each unit increase in the predictor variable. We then take the exponential of the coefficient to calculate the estimated percentage change in median pay.

For example, if the estimate of the coefficient of a variable, x_1 , is 0.1 then the effect on pay is:

$$\exp 0.1 = 1.105$$

This shows that each additional unit of x_1 increases pay by 10.5%, with all other variables held constant.

It is not possible to explain all the variation in pay using our model. Some of the unexplained variation can be down to confounders not measured in our dataset, or assumptions around the relationship between the dependent variable and the confounders.

Reference levels for categorical variables were selected if they had the highest proportion of respondents in that category, for example, non-disabled for disability status, or if they were a natural choice that would aid interpretation, for example, single for marital status. We have included interaction terms for sex and working pattern (because of the effect of working pattern on the gender pay gap), ethnicity and country of birth (to account for differences between migrants and non-migrants within each ethnic group), and disability and main impairment.

While median pay generally increases with age, this relationship is not linear. In the APS, median pay increases with age until the mid-50s, when it starts to decrease. Both age and age squared are used in the model to approximate for a non-linear relationship between age and $\log(\text{pay})$.

Pay gaps methodology

Raw pay gaps

Raw pay gaps are calculated as follows:

$$\text{RawPayGap} = \frac{\text{median (Not Equality Act Disabled)} - \text{median (Equality Act Disabled)}}{\text{median (Not Equality Act Disabled)}} \times 100$$

Adjusted pay gap

Adjusted pay gaps are calculated as follows:

$$\text{AdjustedPayGap} = 100(1 - \exp(\beta_{dis} + \beta_{health} + \beta_{disxhealth}))$$

is the coefficient from the model.

10 . Related links

[Ethnicity pay gaps, UK: 2012 to 2022](#)

Article | Released 29 November 2023

Earnings statistics for different ethnic groups, using regression analysis to provide more insight into factors that affect pay, using data from the Annual Population Survey over the time period 2012 to 2022.

[Gender pay gap in the UK: 2023](#)

Bulletin | Released 1 November 2023

Differences in pay between women and men by age, region, full-time and part-time, and occupation.

[Diversity in the labour market, England and Wales: Census 2021](#)

Article | Released 25 September 2023

How labour market outcomes differ across various subgroup populations in England and Wales.

11 . Cite this article

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