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What influences Londoners' wellbeing, and what can help?

A study by the Mile End Institute at Queen Mary University of London and Centre for London

CENTRE FOR LONDON

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About the Authors

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Our research and events explore ways to make London even better. Our unique London-first point of view allows us to find fresh connections between issues and understand how they shape Londoners' lives. We're thinking about the city's Places, People, Prosperity, Power, and impact on the Planet. In all these areas, we're fiercely independent and consistently influential.

Our vision is a London that's successful and sustainable. A global city that works for all Londoners.

About the Mile End Institute at Queen Mary University of London

The Mile End Institute is Queen Mary University of London's primary centre for the study and public discussions of the major challenges facing British politics, policymaking, and public life. Established in 2015 under the patronage of Lord Hennessy of Nympsfield, it has hosted hundreds of public events, produced research papers and policy briefings. The Mile End Institute is run by a small core team, led by Professor Patrick Diamond (Director) and Tom Chidwick (Manager), and is supported by a substantial network of Visiting and Honorary Research Fellows and Professors.

As part of Queen Mary's ambition to be an 'anchor institution' in East London, the Mile End Institute also works with local communities and policymakers to tackle the key political and policy questions facing the East End and the East of England as a whole. In addition to our Polling London project which regularly surveys public opinion in the Capital, we regularly undertake research with the Centre for London and the University's Lifelong Health Team, and co-convene the East London Research Network.

About Understanding Society

Understanding Society, also known as the UK Household Longitudinal Study, is a panel survey based at the Institute for Economic and Social Research at the University of Essex. It follows respondents over time to give a long-term perspective on people's lives. In this report, we have used Understanding Society data on wellbeing and other aspects of people's lives which are associated with wellbeing.

The Understanding Society data is available for download from the UK Data Service at: https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=6614
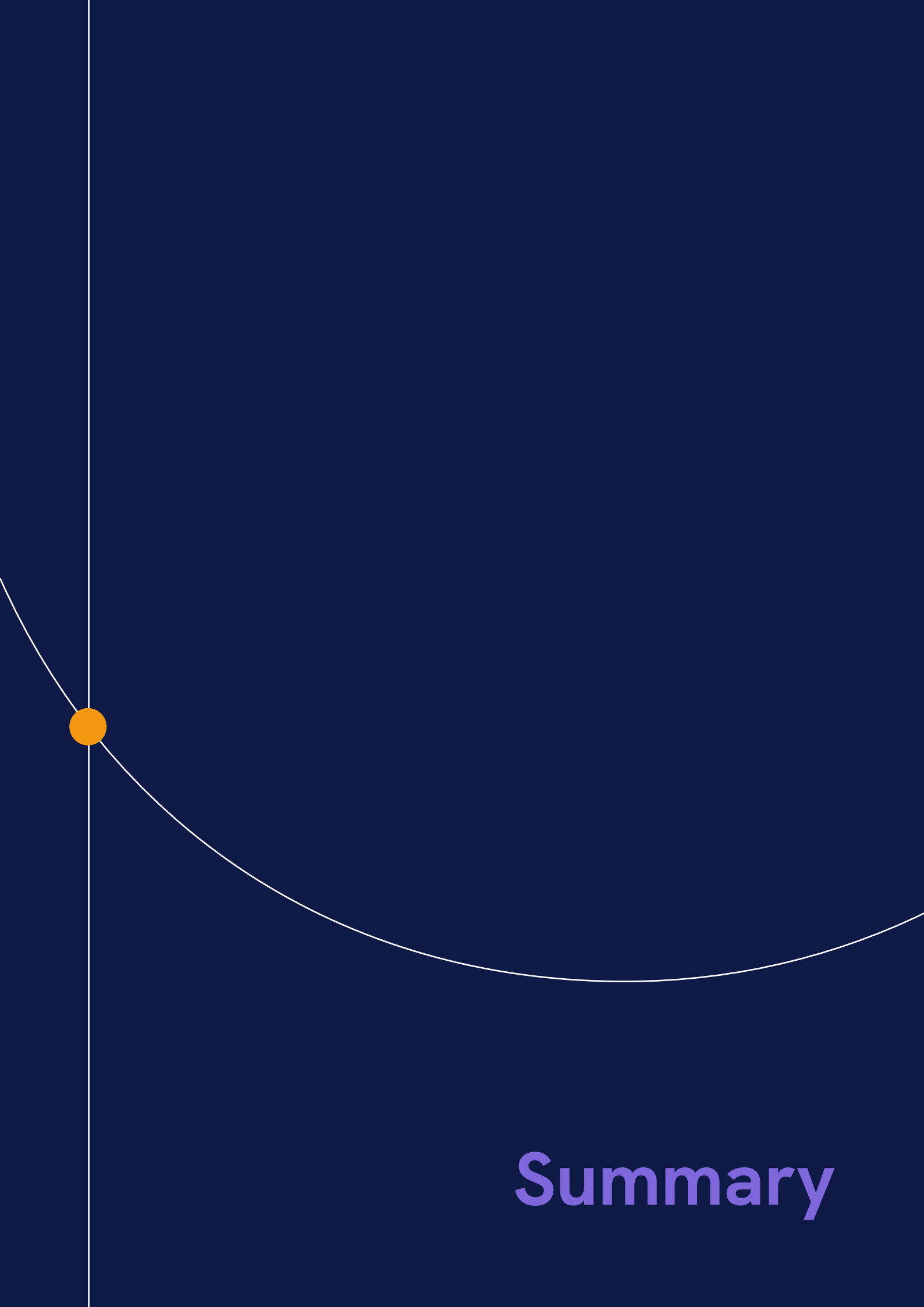
In addition to her authorship of this report, Claire Harding is also a member of the Strategic Oversight Committee for Understanding Society. Elizabeth Simon is also on the Understanding Society Data User Group. This has not influenced the findings of the report.

Acknowledgements

Summary

About this research

This report is about what influences Londoners' wellbeing and what can help. It was produced as a collaboration between a university, the Mile End Institute at Queen Mary University of London, and a think tank, Centre for London, because we want to combine academic rigor with practical policy proposals. The report uses data from Understanding Society, a large longitudinal study which asks the same people questions about their lives every few years.

The wellbeing measure used in this study is the Warwick-Edinburgh Mental Wellbeing Scale, which is a well-validated measure that asks people how much they agree with a series of positive statements about themselves over the last two weeks, such as "I have been feeling useful".

What we found

We know from existing research that individuals' wellbeing is influenced by a wide range of factors, like whether they work and what work they do, where they live, who they live with, how much money they have, and their personal characteristics like age and gender. Some previous research has suggested that people in London have lower levels of wellbeing than people who live in other parts of the country, on average, but our research did not find any differences in wellbeing for Londoners compared to others in the UK. However, we did find that moving house – whether you move in to or out of London – is associated with lower wellbeing.

Our analysis first looked at which groups of Londoners tend to have higher or lower levels of wellbeing. We found, for example, that retired people generally have higher wellbeing than people in work and that older people tend to have better wellbeing than younger people. But this kind of descriptive analysis cannot tell us whether it is being older, or not being in paid work, that really matters when it comes to wellbeing. So, we used a regression model to find out which factors have the most important influence on wellbeing overall, when we control for all other factors. Apart from personal factors which policymakers can't change, like age, our analysis found four areas which have a strong influence on Londoners' wellbeing:

- How satisfied people are with their leisure time.

- Whether people work, and if so, how much autonomy they have in how they do their work.

- How satisfied people are with their health.

- The level of neighbourhood social cohesion where people live.

Implementing policy changes in these areas could be effective in increasing the average level of wellbeing reported in London – we discuss this further below.

While some of the factors identified in our analysis affect all Londoners, some only affect certain groups, or have stronger impacts on some groups than others:

- The association between wellbeing and satisfaction with health is stronger for Londoners with a disability or long-term condition than for people who do not have a disability. The difference in average wellbeing scores between those who are and aren't satisfied with their health is also much larger for younger Londoners, than it is for older Londoners.

- The association between neighbourhood social cohesion and wellbeing is stronger for people with higher household incomes.

- Londoners who report low levels of workplace autonomy do not experience higher levels of wellbeing when they are satisfied with their leisure time, but Londoners who report higher levels of workplace autonomy do experience this.

These findings demonstrate that policymakers must be careful not to reinforce existing inequalities when they create new policies with the aim of improving wellbeing. While policy recommendations designed to improve leisure satisfaction would have no tangible effect in improving wellbeing for those who report experiencing low levels of workplace autonomy (who already have some of the worst wellbeing outcomes in the capital), doing so would better the wellbeing of Londoners who have high levels of workplace autonomy and who are already a relatively privileged group when it comes to wellbeing outcomes. Failure to recognise the differential effects that strategies to improve wellbeing are likely to have on different groups of Londoners may only further entrench 'gaps' in outcomes.

How policymakers should respond

In the last few years, we have seen more focus on wellbeing from parts of national, regional and local government. This is welcome and should be expanded to include a statutory duty for decision makers to consider how their policies will enhance wellbeing, as already exists in Wales and has been proposed in Scotland.

Looking specifically at the factors this research shows have an important influence on wellbeing:

Workplace autonomy and leisure time

- National government should legislate to ensure shift workers have adequate notice for shifts, so they are better able to plan their finances, childcare and leisure activities.

- Employers should work with staff to consider how they can improve workplace autonomy for their specific workplace.

- The Greater London Authority (GLA) should consider how to include in-work autonomy as part of the Mayor's Good Work Standard.

- Leisure service providers should consider how they can offer services at times and in ways which suit people with different work and leisure patterns.

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Satisfaction with health

- Service providers across the public and private sectors should use the social model of disability when designing services, adjusting their delivery so people with different needs can participate fully.

- Local authorities and the Greater London Authority (GLA) should continue to use public health tools to enhance local wellbeing, including developing healthy streets which encourage people to exercise, limiting the availability of unhealthy foods particularly to children, and reducing people's exposure to air pollution.

Neighbourhood social cohesion

- Local authorities and developers should ensure new and redeveloped neighbourhoods include spaces where people can relax and connect, including benches on high streets, and parks and green spaces which suit local people's needs.

- Government should adequately fund local authorities to deliver local services such as older people's day centres and children's centres, which have faced steep drops in funding in recent years.

- The Metropolitan Police should focus on building trust with local communities so the police can be seen as an ally by all communities in building local cohesion.

Despite the difficult funding environment and many other challenges facing decision makers, there has been good progress in many of these areas in the last few years. While most of our recommendations are not new, we hope the evidence we present for them will help policymakers focus their resources and make the argument for change.

Chapter 1
What the data tells us

Data and Methods

Understanding Society is a large-scale, nationally representative survey of the UK public which has been collecting data on a wide variety of topics through bi-annual interviews with individuals living in 40,000 sampled households since 2009.[1] This data is well-suited for exploring what influences Londoners' wellbeing not only because it includes a well-validated measure of psychological functioning and subjective mental wellbeing – the Warwick-Edinburgh Mental Wellbeing scale (see Table 1 for details)[2] – but also because it provides this high-quality data for a uniquely large sample of Londoners (N = 4,073[i]). While the most recent Understanding Society data release (Wave 12) covers the period January 2020-May 2022, our analysis largely utilises data collected between January 2018-May 2020 (Wave 10[ii]), as this was the most recent occasion at which responses to the Warwick-Edinburgh Mental Wellbeing scale items were elicited.

Table 1: The Warwick-Edinburgh Mental Wellbeing Scale

Here are some statements about feelings and thoughts. Please select the answer that best describes your experience of each over the last 2 weeks.			
Item 1	I've been feeling optimistic about the future.	Responses to all items recorded as: 1 = none of the time, 2 = rarely, 3 = some of the time, 4 = often, 5 = all of the time	Responses to all items summed to give a total score ranging 7-35. Higher scores = higher levels of wellbeing.
Item 2	I've been feeling useful.		
Item 3	I've been feeling relaxed.		
Item 4	I've been dealing with problems well.		
Item 5	I've been thinking clearly.		
Item 6	I've been feeling close to other people.		
Item 7	I've been able to make up my own mind about things.		

Existing research has shown a wide range of environmental, social, behavioural and socio-demographic factors – including health, age, income, gender, housing tenure, relationship status, social networks, leisure time, employment status, working conditions and geographical location – are important determinants of wellbeing outcomes.[3] For example, it is well-established that those in good health[4] and those with high incomes[5] tend to have better wellbeing; although the positive effect of income on wellbeing has been shown to plateau at a certain income threshold. However, there is also abundant evidence to suggest that low incomes are associated with poorer health outcomes. Living on a low income may have adverse health effects, as a result of living in cold or damp conditions or difficulties in sustaining a healthy diet, for example, but poor health can also impact incomes by preventing

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i   While our sample included 4,073 Londoners in total, our regression analysis is based only on the 2,496 Londoners who provided valid responses to all survey items of interest (see Table 2).

ii   The exceptions to the rule are the data on Londoners' perceptions of local crime and neighbourhood social cohesion, which are drawn from Understanding Society Wave 9 (fielded January 2017-May 2019).

individuals from working.[6] If we are to learn more about the determinants of Londoners' wellbeing and consider how we might enact policy that improves these outcomes, it is essential that we identify whether it is really Londoners' income or health that matters more in shaping their wellbeing, for example. The importance of disentangling the effects of each of the key determinants of wellbeing is further underscored by the close linkage of many of these factors. Consider for instance the strong associations between gender and income, leisure time and employment status, and health and age.

We use multiple regression analysis to identify the key determinants of Londoners' wellbeing. This statistical technique allows us to build a mathematical model of wellbeing which quantifies the association of a range of environmental, social, behavioural, and socio-demographic factors with Londoners' wellbeing outcomes, after taking into account (or more technically adjusting for) the effects of all other model variables. To ensure we obtain the best possible estimates of the independent influence of each such factor in shaping Londoners' wellbeing, we include in our regression model indicators of as many of the key determinants of wellbeing identified in existing research that the information collected as part of the Understanding Society initiative allowed (see Table 2 for details of all model variables, except wellbeing). Our regression results not only allow us to isolate the individual contributions made by each variable in shaping Londoners' wellbeing, but to comment on the relative size and strength of these effects, and therefore to determine which factors have the most important influences on Londoners' wellbeing.

Table 2: Key determinants of wellbeing included in multiple regression analysis

Determinant of wellbeing	Variable type	Variable Coding
Age	Numeric	Age in years at time of interview
Gender	Categorical	Male, female[iii]
Household income	Numeric	Gross household income in GBP in month before interview (log transformed[iv])
Employment status (including level of workplace autonomy)	Categorical	Employed in job with high level of autonomy, employed in job with average level of autonomy, employed in job with low level of autonomy, retired, other[v]
University education	Categorical	At least a Bachelors degree (or equivalent), no university degree
Children in household	Categorical	Children in household, no children in household
Ethnic group	Categorical	White British background, Asian background, black background, mixed background, other non-white background, other white background
Disability status	Categorical	Has a disability, does not have a disability[vi]
Satisfaction with health	Categorical	Satisfied, not satisfied

Determinant of wellbeing	Variable type	Variable Coding
Housing tenure	Categorical	Owns outright, owns with mortgage, rents privately, rents via housing association or local authority
Marital status	Categorical	Married or in civil partnership, single, other
Country of birth	Categorical	UK, outside UK, no information on country of birth
Satisfaction with leisure time	Categorical	Satisfied, not satisfied
Whether expects to have to move home in next year	Categorical	Expects to move, does not expect to move
Religious affiliation	Categorical	Belongs to a religion, does not belong to a religion
Volunteering behaviour	Categorical	Has volunteered in past year, has not volunteered in past year
London Subregional Partnership	Categorical	London subregional partnership respondents resided in at time of interview. Central London Forward, Local London, South London Partnership, West London Alliance[vii]
Local crime score	Numeric	Score ranging from 1-5 indicating respondent's sense of the extent of criminal activities in their neighbourhood, higher scores indicate lower perceived levels of crime[viii]
Neighbourhood social cohesion score	Numeric	Score ranging from 1-5 indicating respondent's sense of social cohesion in their neighbourhood, higher scores indicate greater cohesion[ix,7]
Satisfaction with local doctors' services Satisfaction with local police services Satisfaction with local leisure services	Numeric	Percentage of Understanding Society respondents living in the respondent's borough of residence who reported feeling satisfied with each these services

Results

Before estimating our regression model, we performed some preliminary descriptive analyses to explore how Londoners' wellbeing compared to those residing in other areas. This was motivated by the fact that existing research has shown London to report some of the lowest average wellbeing scores in the UK.[9] Table 3 shows the average wellbeing scores for Understanding Society respondents residing in each of the UK's 12 Government Office Regions at Wave 10 (2018-2019), in descending order, and demonstrates that while Londoners' are far from reporting the highest average levels of wellbeing, they are also far from reporting the worst outcomes.

Table 3: Ranking average wellbeing scores across UK Government Office Region

Government office region	Average wellbeing score
Northern Ireland	25.13
Scotland	24.57
South West	24.56
East of England	24.54
South East	24.54
London	**24.54**
East Midlands	24.47
North West	24.45
Yorkshire and the Humber	24.20
West Midlands	24.16
North East	24.15
Wales	23.96

We also used the full longitudinal potential of the Understanding Society data to explore whether moving in to, and out of, London led to substantial changes in reported levels of wellbeing. If there was something specific about living in London that worsened wellbeing outcomes, we would expect to see individuals' wellbeing declining after they moved into London and improving when they moved out of the capital. However, we didn't see this pattern. In fact, we found wellbeing decreased after both kinds of move[x], which suggests it is the experience of relocating itself that has a negative impact on wellbeing, rather than the experience of living or not living in London.

The results of our regression analysis revealed that many of the environmental, social, behavioural, and socio-demographic factors in Table 2 had statistically significant effects on Londoners' wellbeing[xi]. That is, these

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x   It is worth noting that moving to London, on average, led to a 0.452-point decrease in reported wellbeing scores while moving out of London only reduced wellbeing scores by 0.142-points, on average, so there is perhaps some evidence to suggest that moving to London has a more negative impact on wellbeing than moves to other parts of the UK.

xi   Under the 10% threshold for statistical significance, which was used as a benchmark throughout this analysis.

variables had effects on Londoners' wellbeing which were so strong that they could not be explained by chance alone. We found the following variables all had important effects in shaping the wellbeing of those living in the capital, even after controlling for the effects of other model variables (see Appendix B for a more detailed description of these effects and Appendix C for full regression tables):

- gender

- employment status (including workplace autonomy)

- having a university education

- ethnic group

- disability status

- satisfaction with health

- country of birth

- satisfaction with leisure time

- religious affiliation

- neighbourhood social cohesion.

But which of these variables play the most influential role when it comes to shaping Londoners wellbeing?

Four variables play a particularly big role in shaping Londoners' wellbeing

Figure 1: Relative importance of model variables in explaining Londoners' wellbeing

% of total model variation in Londoners' wellbeing explained by each variable
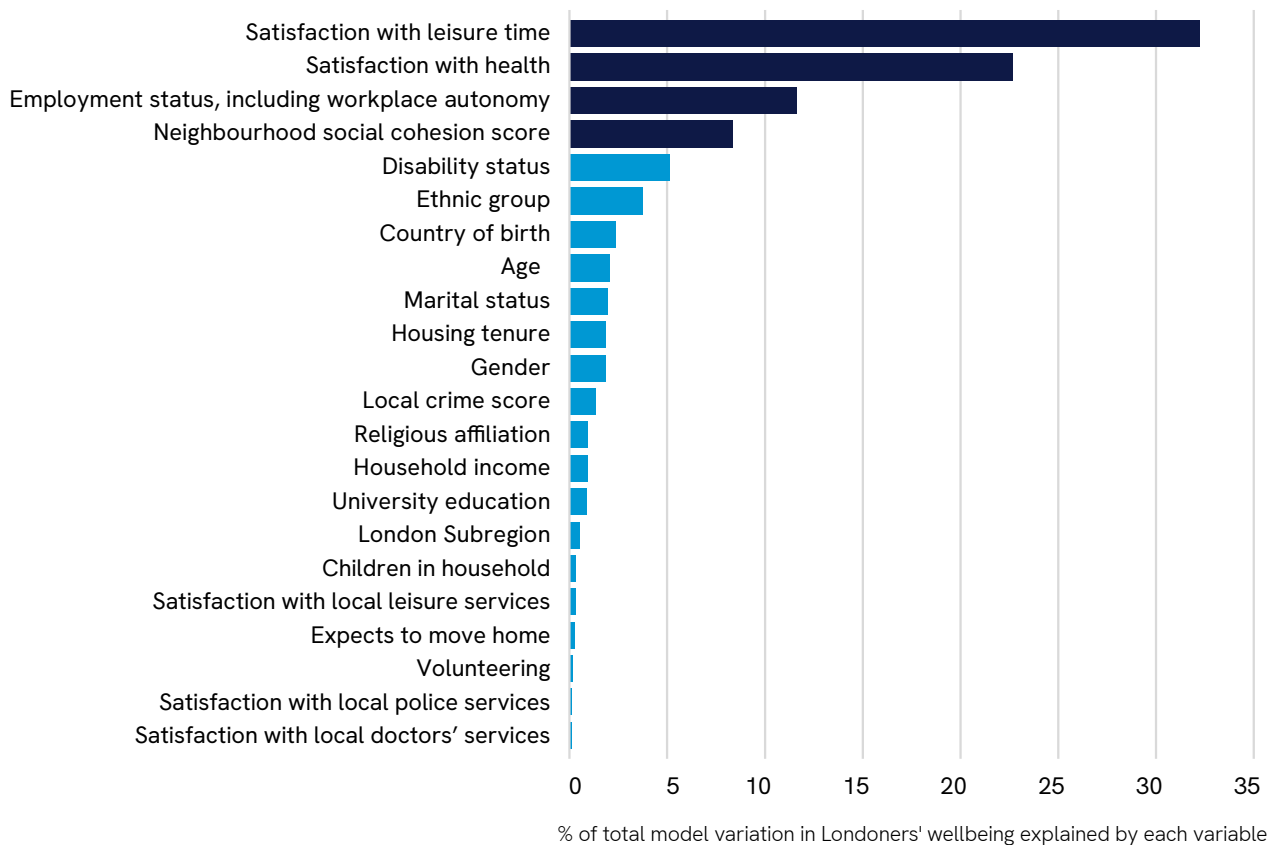
To address this question, we used our regression model to rank each variable according to the proportion of the total model variation in Londoners' wellbeing outcomes it explains. Figure 1 clearly shows satisfaction with leisure time had the most important influence on Londoners' wellbeing, with this variable accounting for more than 30% of the total variation in wellbeing outcomes explained by our regression model. Three other variables – satisfaction with health, employment status (including workplace autonomy) and neighbourhood social cohesion – were also particularly influential, explaining approximately 23%, 12% and 8% of the total model variation in Londoners wellbeing respectively. Taken together, these four variables were able to account for almost 75% of the total variation in wellbeing outcomes explained by our regression model. As such, the remainder of this section seeks to shed light on the effects of these four key determinants of Londoners' wellbeing. That is not to say these are the only factors which have important influences in determining wellbeing, but rather that these are particularly strong determinants of Londoners' wellbeing which should be considered in the debate about how to enact policy that improves outcomes across the city.

The effects of each of these four key determinants of wellbeing (after controls for all other model variables) are visualised in Figure 2, where the wellbeing scores of the average Londoner who lives in areas characterised by differing levels of neighbourhood social cohesion, who has differing levels of satisfaction with their leisure time and their health, and different kinds of employment status, are plotted.

Employment status (including workplace autonomy)

Figure 2A demonstrates that Londoners employed in jobs with high levels of workplace autonomy typically exhibit considerably, and statistically significantly, higher levels of wellbeing than both those employed in jobs with comparably low levels of workplace autonomy and those in the other employment category. The lack of overlap in the confidence intervals for the wellbeing estimates of these groups indicate these differences – which are fairly large, amounting to average wellbeing scores which are approximately two points higher for Londoners employed in jobs with high levels of workplace autonomy than for those in low autonomy jobs and those in the other employment category – are not merely a chance finding. While, on average, those Londoners who are retired, or who work in jobs with average levels of workplace autonomy, have slightly better wellbeing outcomes than those employed in jobs with comparably low levels of workplace autonomy and those in the other employment category, and somewhat worse wellbeing outcomes than Londoners employed in jobs with high levels of workplace autonomy, none of these other employment status-based differences were found to be statistically significant.

These findings indicate that implementing measures which afford Londoners in low autonomy employment more flexibility to determine their job tasks, work pace, work manner, task order and work hours could offer one route to improving wellbeing outcomes in the capital. Those in the 'other' employment category also have relatively poor outcomes and some (such as those who are not in work) will not be helped by measures to increase autonomy, so we must look for alternative solutions. This issue is discussed in more detail in the recommendations section below.

The effects of the four key determinants of Londoners' wellbeing

Figure 2A: Effect of Employment Status (including Workplace Autonomy) on Londoner's Wellbeing
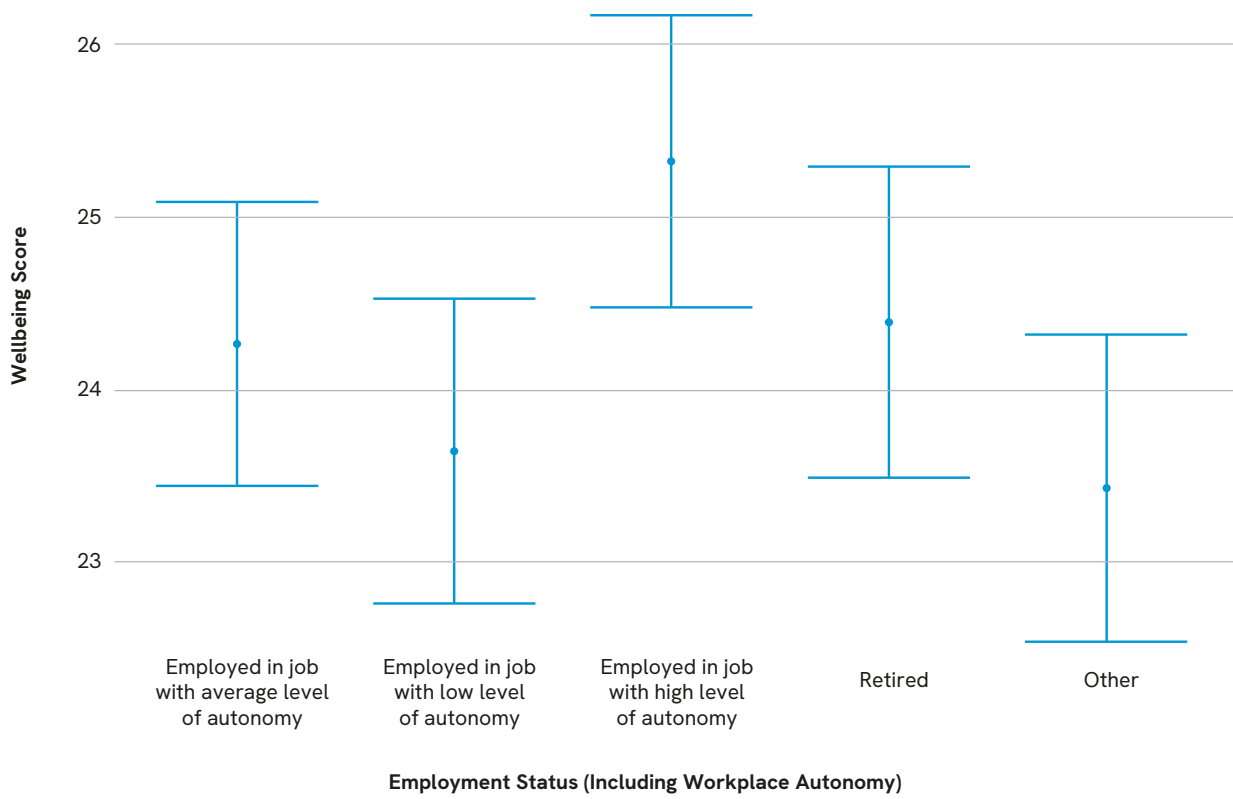
Figure 2B: Effect of Neighbourhood Social Cohesion on Londoner's Wellbeing
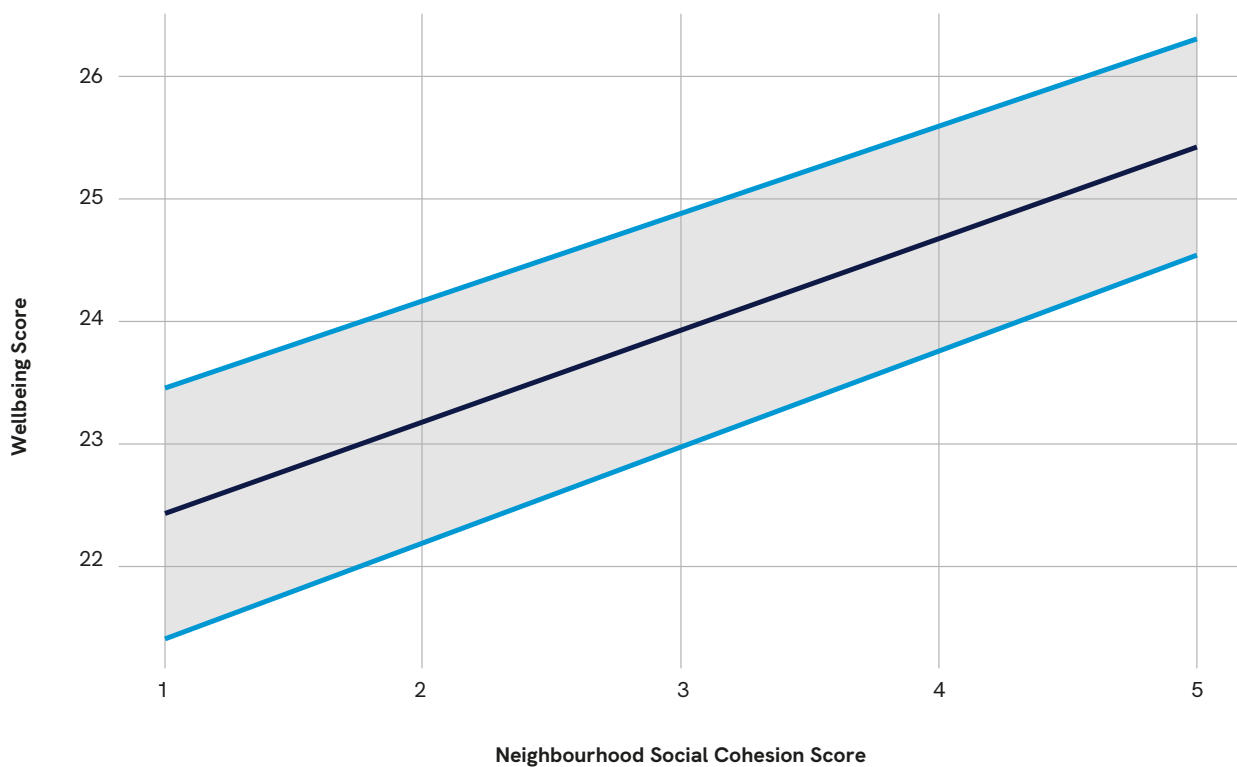
Figure 2C: Effect of Satisfaction with Health on Londoners' Wellbeing
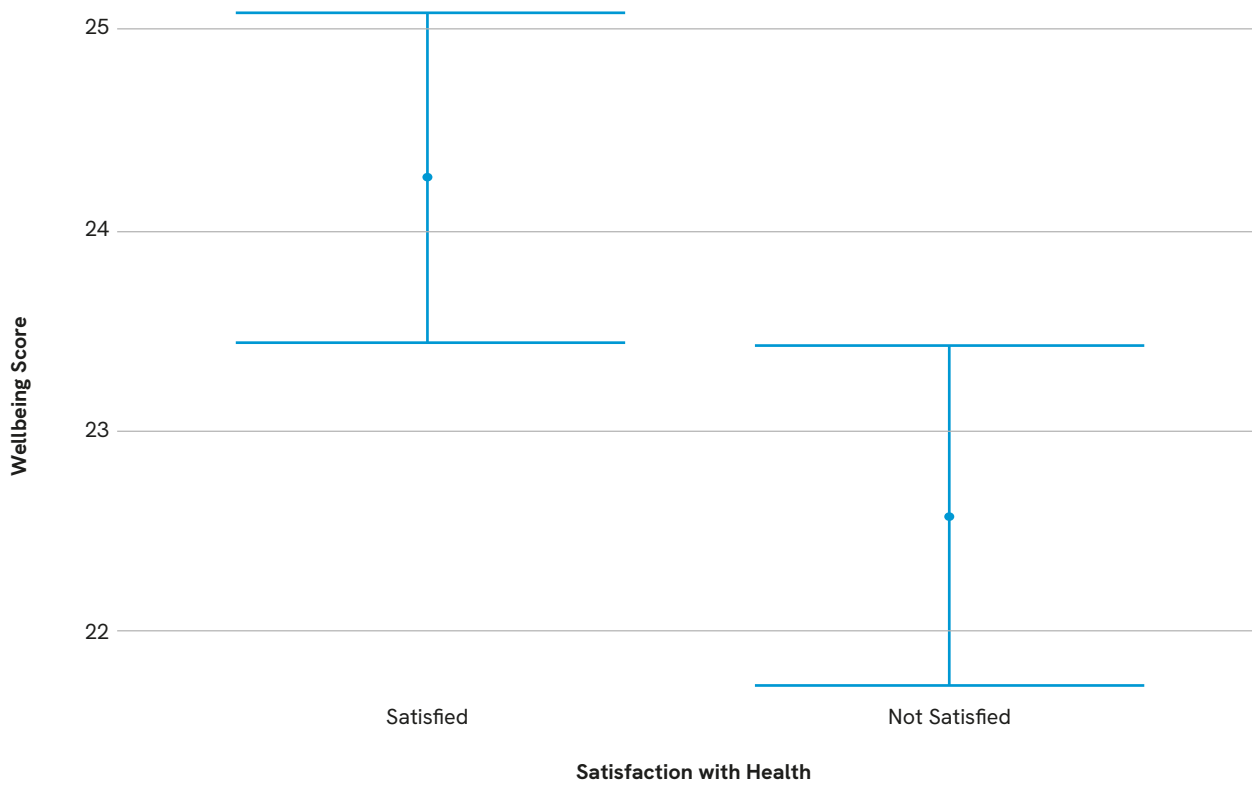
Figure 2D: Effect of Satisfaction with Leisure Time on Londoners' Wellbeing
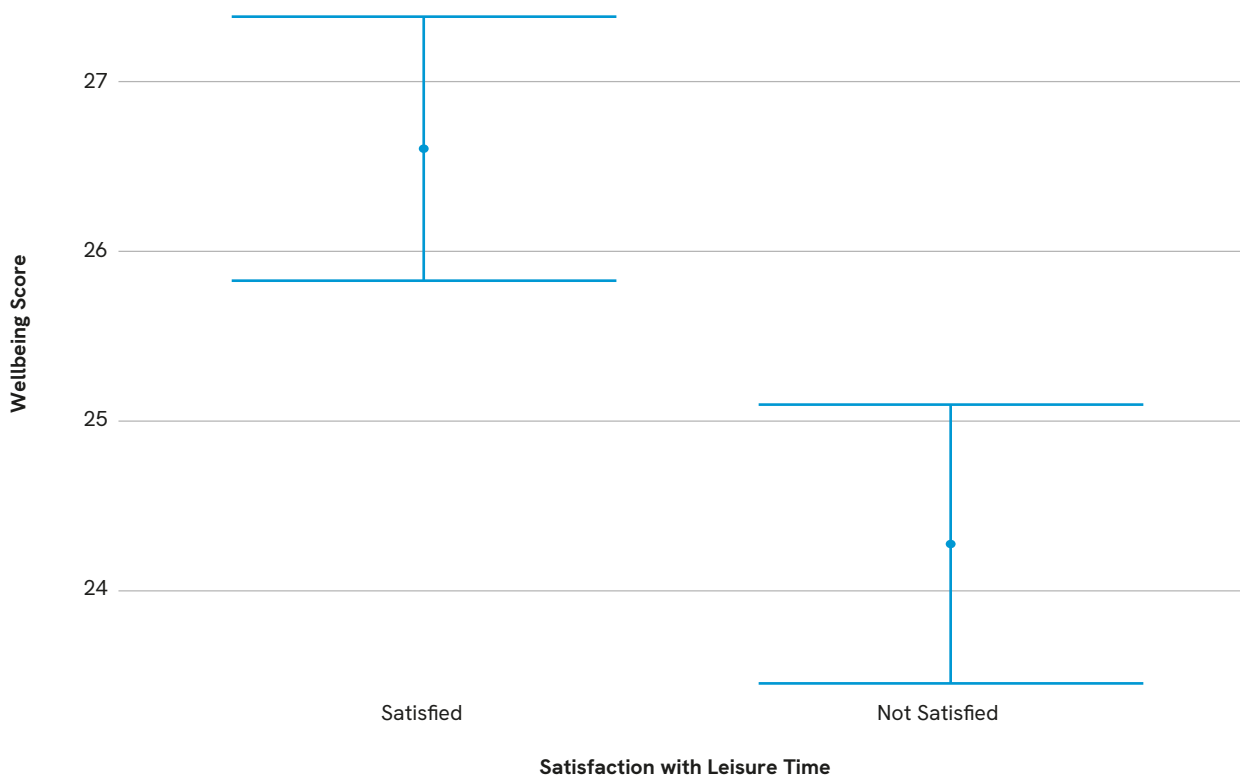
Satisfaction with leisure time

Even after controlling for all other model variables, Figure 2D shows that Londoners who are satisfied with their leisure time tend to have wellbeing scores which are around 2 points higher (26.5) than those who are not satisfied with their leisure time (24.5). Clearly then, improving Londoners' satisfaction with their leisure time could offer an effective route to improving wellbeing outcomes in the capital.

Of course, satisfaction with leisure time is not necessarily correlated with the amount of leisure time people actually have – this distinction, and the policy choices it could lead to, is discussed more fully in the policy section below.

Londoners who are satisfied with their leisure time tend to have higher wellbeing

Figure 3: Londoners' wellbeing by satisfaction with leisure time and employment status (including workplace autonomy)

- Employed, in job with average level of autonomy
- Employed, in job with low level of autonomy
- Employed, in job with high level of autonomy
- Retired
- Other
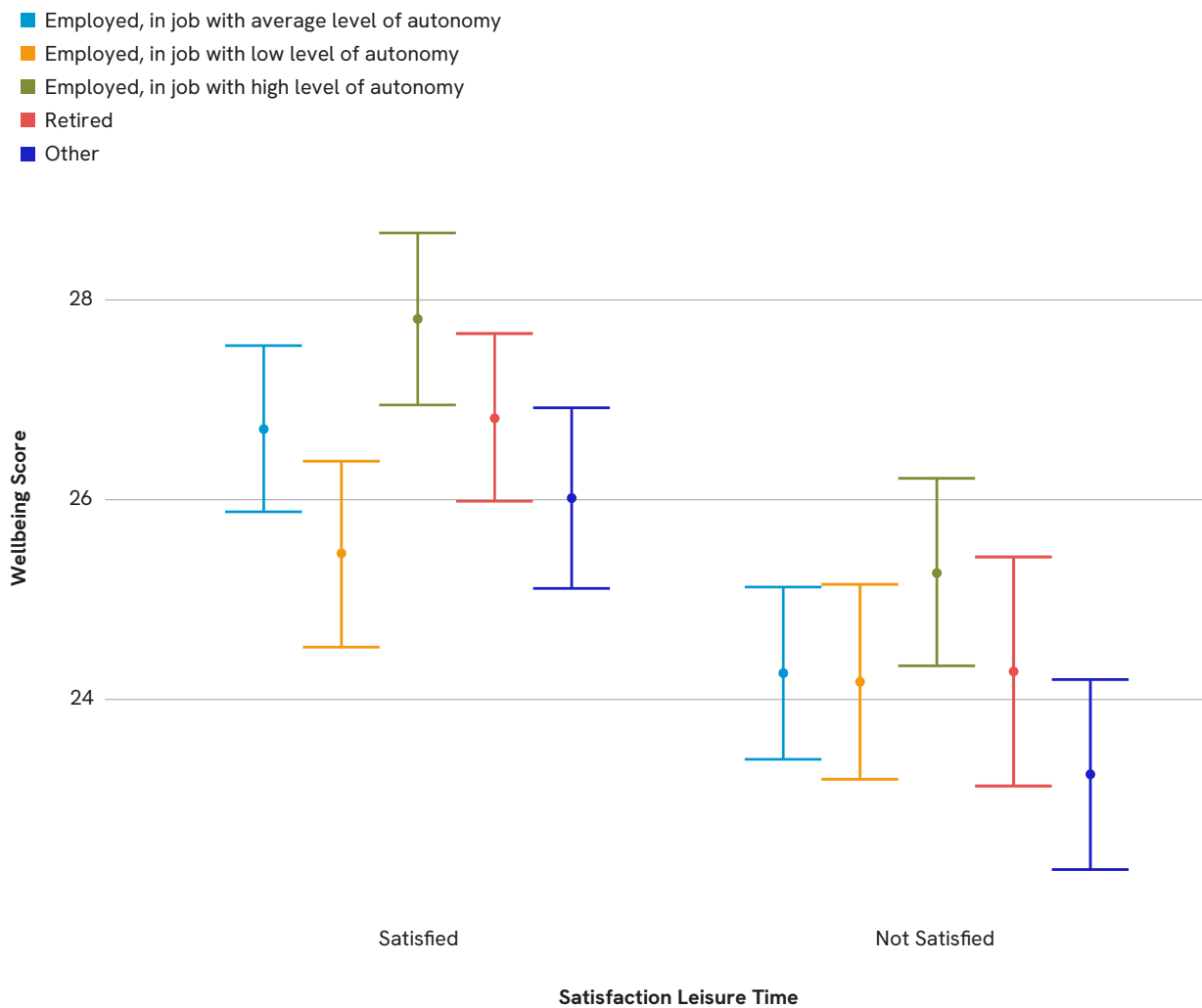
Importantly, our analysis revealed that the association of leisure time with wellbeing differed for Londoners with different kinds of employment status and levels of workplace autonomy. This is illustrated in Figure 3, which shows that although there is a general trend whereby those who are satisfied with their leisure time tend to exhibit higher levels of wellbeing than those who are not (as in Figure 2D), this pattern does not hold true for all employment groups. Londoners who are employed in jobs with low levels of workplace autonomy and are satisfied with their leisure time have slightly higher wellbeing scores (just over 25) than those who are not satisfied with this (just over 24), on average. That said, the overlap of the confidence intervals which represents these groups indicates that we cannot be certain this difference is not simply a chance finding. We find no evidence that Londoners who are employed in jobs with low levels of workplace autonomy will have better wellbeing outcomes if they are satisfied with their leisure time, as we do for those with all other kinds of employment statuses. As such, taking steps to bolster Londoners' satisfaction with their leisure time is only likely to improve wellbeing outcomes for those who are employed in jobs with average, or greater, levels of workplace autonomy, and those who are retired or otherwise not in employment, or if it happens alongside work to increase autonomy.
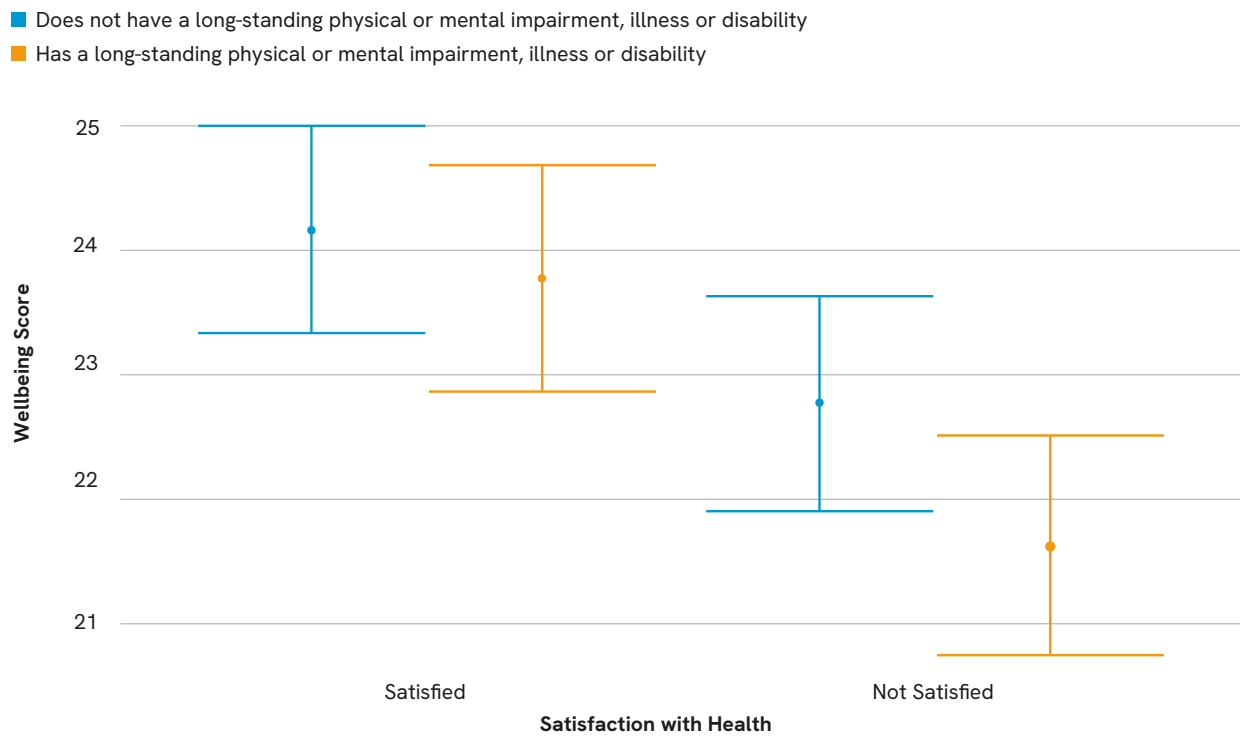
Satisfaction with health

Figure 2C demonstrates that Londoners who report feeling satisfied with their health typically report wellbeing scores that are approximately 2 points higher (24.5) than those who are not satisfied with their health (22.5), even after controls.

As might be expected, the association of Londoners' satisfaction with their health and their wellbeing scores varies in line with individuals' disability status. This is demonstrated clearly in Figure 4. For those who do not report having a long-standing physical or mental impairment, illness or disability, satisfaction with health does not appear to have a statistically significant effect on wellbeing (see the overlapping confidence intervals for these groups in Figure 4). We find no evidence to suggest that Londoners who do not have a disability or long-standing condition have better wellbeing if they are satisfied with their health, than if they are not. We find the opposite, however, for those Londoners who do report having a disability or long-standing condition – where those who are satisfied with their health, on average, report statistically significantly higher wellbeing scores than those who are not.

We also find the association of Londoners' satisfaction with their health and their wellbeing scores varies by age (see Figure 5). For Londoners who are satisfied with their health, age has almost no effect on wellbeing – with the average wellbeing score of a 25-year-old Londoner who is satisfied with their health virtually no different to the average of a 90-year-old Londoner in this same group. On the contrary, age has an important, and highly statistically significant, positive impact on wellbeing for Londoners who are not satisfied with their health. This means that while the average 25-year-old Londoner who is not satisfied with their health has a wellbeing score of just over 22, this figure rises to around 23.8 for the average 90-year-old Londoner in this group. This finding is likely to reflect a social comparison effect whereby 'individuals judge their own abilities and functioning in comparison with the abilities of their age peers'.[9] Younger people experience a considerably greater negative wellbeing impact of poor health than older people as they tend to compare their own health against that of a younger, and therefore typically healthier, group. This interpretation of the findings presented in Figure 5 is further supported by the diminishing distance between the average wellbeing scores of Londoners who are, and are not, satisfied with their health across the age spectrum.

Londoners with a disability tend to report higher wellbeing if they feel satisfied with their health

Figure 4: Londoners' wellbeing by satisfaction with health and disability status

■ Does not have a long-standing physical or mental impairment, illness or disability
■ Has a long-standing physical or mental impairment, illness or disability

Age has a positive impact on wellbeing for Londoners who are not satisfied with their health

Figure 5: Londoners' wellbeing by age and satisfaction with health

—— Satisfied with health   - - - Not satisfied with health
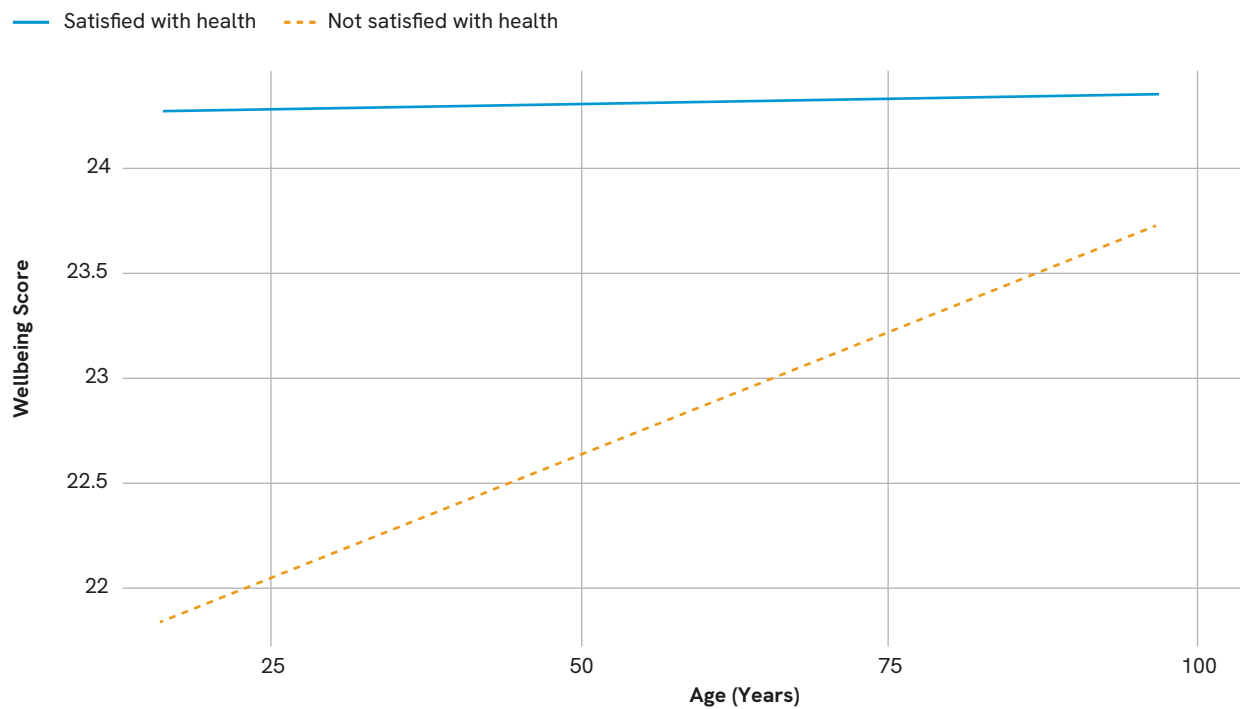
These findings are important and indicate that interventions designed to improve satisfaction with health among Londoners with disabilities and long-standing conditions, as well as young people, would provide an effective means of improving the equity of wellbeing outcomes in the capital.

Neighbourhood social cohesion

Even after controlling for all other variables in our model, Figure 2B shows that Londoners living in areas with the lowest levels of social cohesion (1), on average, have substantially, and statistically significant, lower wellbeing scores than those Londoners living in areas with the highest levels of social cohesion (5); we find high levels of neighbourhood social cohesion have a protective effect on Londoners' wellbeing. The difference amounts to an approximately 3-point wellbeing score increase across the full spectrum of social cohesion scores, from lowest to highest.

Neighbourhood social cohesion improves wellbeing, and this relationship is stronger for those on higher than lower incomes

Figure 6: Londoners' wellbeing by neighbourhood social cohesion and household income

Household income (log transformed):

——— Low   - - - - Average   · · · · High
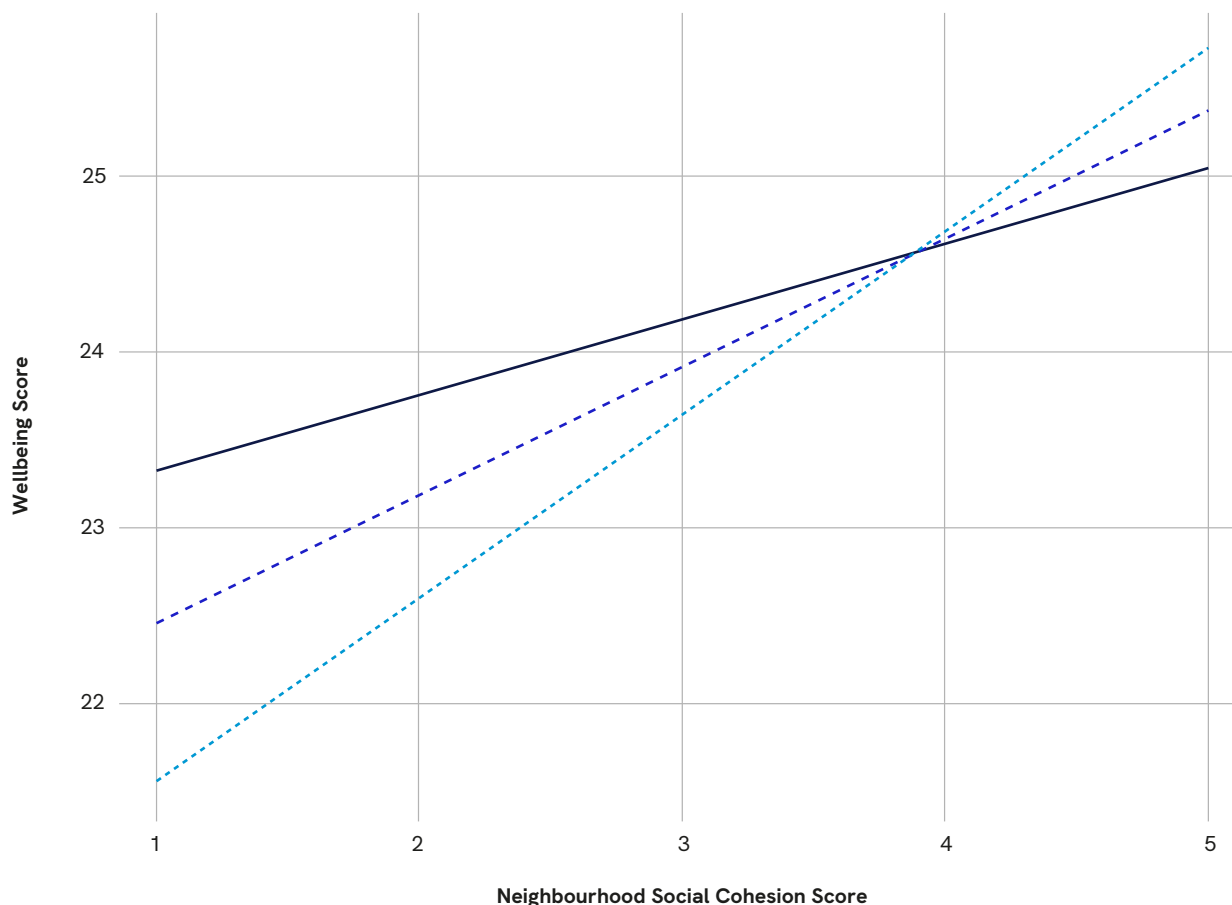
However, we also find evidence to suggest the protective effect of neighbourhood social cohesion on wellbeing is somewhat stronger for Londoners with high, and average, levels of household income than it is for those with lower levels of household income. This is clearly reflected in the fact that the high- and average-income groups have steeper slopes in Figure 6 than the low-income group. Interestingly, this pattern means that, on average, Londoners with low household incomes have better wellbeing outcomes than those with average- and high- household incomes in areas of low neighbourhood social cohesion. It is only in areas with high levels of social cohesion (4+) where Londoners who are better-off financially begin to exhibit even slightly better wellbeing outcomes than those who have the lowest household incomes. These findings indicate that while efforts to improve neighbourhood social cohesion can be expected to be effective in improving the overall level of wellbeing in London, such initiatives are likely to have disproportionate benefits for Londoners with higher levels of household income, as it is typically among this high household income/low cohesion group where we observe the lowest reported levels of wellbeing.

Summary

Our regression model enables us to delineate between the most important determinants of wellbeing among Londoners. We identify four key drivers of wellbeing in the capital: satisfaction with leisure time, satisfaction with health, employment status (including levels of workplace autonomy) and neighbourhood social cohesion. We argue that policy interventions which seek to affect wellbeing in these four dimensions are likely to have the greatest impact in improving overall levels of wellbeing across the capital and should therefore be a core priority for policymakers at local, sub-regional/ London and national levels. Policymakers must, however, be attentive to the differential effects satisfaction with leisure time, satisfaction with health, employment status and neighbourhood social cohesion have on wellbeing for different groups and be mindful not to reinforce existing inequalities when creating recommendations designed to improve wellbeing.

Chapter 2
How policymakers should respond

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This chapter is about what policymakers and others can do to improve Londoners' wellbeing, based on the specific modifiable factors that our research showed have the strongest influence on Londoners' wellbeing. The findings are based in part on three roundtables held by the Mile End Institute at Queen Mary University of London and Centre for London in June 2023 with experts in each topic area.

Our aim here has not been to evaluate all possible policy areas related to these topics, but instead to highlight areas which we and expert stakeholders believe should be particular priorities in London in the 2020s.

Over the last 15 years governments in the UK - both national and at the devolved level - have taken a much greater interest in bringing the concept of wellbeing into the heart of the policymaking agenda. There has been significant investment in the measurement of wellbeing over time, and a willingness to consider that what matters in policymaking isn't just economic growth, but citizens' life satisfaction and psychological health. The Office for National Statistics (ONS) now tracks subjective wellbeing levels across the population, while the Greater London Authority (GLA) is working on its own measurement framework. A number of London boroughs have launched ambitious programmes to track wellbeing data at ward level, using the information to make better informed decisions about the allocation of resources, and about planning and design.[10] Policymakers at all levels of governance are being encouraged to use wellbeing as a metric in making decisions about spending and regulation.

Making wellbeing an explicit goal of public policy

We need to be much more ambitious about applying wellbeing to public policy, especially in London where there are major inequalities between groups. There are particular challenges around improving wellbeing in our capital city given the pressures of living in a relatively crowded urban environment characterised by: relatively high housing costs; higher than average levels of crime; and challenges to family life because of economic and time pressures on parents.

There should be an overarching statutory duty - mirroring legislation introduced in Wales and proposed in Scotland[11] - that requires public bodies and agencies in London to demonstrate that they are maximising their contribution towards the achievement of wellbeing goals.

Work, workplace autonomy and leisure time

The policy recommendations in this section are about how people use their time, both outside work and during their working hours (if they are in employment). They relate to our findings about employment status, work autonomy and leisure time satisfaction.

Workplace autonomy

Workplace autonomy is about how much control people feel they have over how they do their work. It is not necessarily about how much work they do - indeed, our findings do not show a link between hours worked and wellbeing (see Appendix D). Workplace autonomy can be about the hours and locations that people work (also called flexible working) and about how much choice people have about how they do their work, such as the order in which they complete their tasks. Hybrid working and working four-day weeks are two much discussed forms of flexible working but may only be relevant to a minority of workers, whereas flexible working and workplace autonomy can be relevant in different ways to all workers.

For all employment

- To give workers more choice and control over how they work, employers should work with their teams, through trade unions, employee forums, or other structures, to understand staff priorities for work autonomy and to develop and test solutions for their specific workplaces.

- In some cases, new technologies such as software to assist with rostering may help with this.

- Employers should train and support managers to talk about autonomy and job design with their teams, communicate about it with all staff, and model flexible working from the top.[12]

- The GLA should consider how to include in-hours autonomy in the Mayor's Good Work Standard.

For specific roles

Autonomy looks different for those in different job roles and is easier to achieve in some roles than others - but employers in all sectors can look to ways to improve autonomy for their workforce. These are some examples of methods that advocacy and employer groups have recommended for different types of role:

For frontline, on site roles (like nurses and warehouse operatives):

- Employers should consider staff involvement in rostering shifts and task allocation, including delegating decisions to small teams where possible.[13]

For social care roles:

- Employers should use job design approaches with their teams to enhance autonomy and productivity. Councils should, where possible, commission organisations which prioritise collaborative working with staff.[14]

For gig economy and shift work roles:

- Zero hours contracts can be suitable for people who require significant flexibility, but they should only be used where both employer and employee agree there is no suitable alternative.

- Government should introduce and enforce minimum notice periods for shifts, with compensation if these are missed. This would allow employees to know when they will be working so they can plan their leisure time, spending and, where relevant, their childcare/caring roles accordingly.[15]

- If Government do not do this, the GLA should update the Good Work Standard to include notice for shifts as a requirement to achieve the "fair pay and condition" pillar.[16]

Leisure time

Our results show wellbeing is strongly associated with satisfaction with leisure time. We do not know how much leisure time people have, and this is a difficult question to address in surveys as defining leisure is not always easy. This is particularly the case for parents and carers: in different circumstances they may perceive activities such as taking a child to football or having lunch with elderly parents as care/parenting, leisure, or a combination of the two.[17]

Some of the recommendations above for work autonomy could also improve people's leisure satisfaction, especially where they lead to people having more time off, more predictable time off, or time off at times that suits the activities they would like to do.

Childcare and adult social care

- Activity providers should consider whether they can provide childcare during leisure, fitness and adult learning activities, and work with their audiences to find out how they would like this to be delivered and what information they would need in order to use it effectively.

- Government should adequately fund social care to allow more frequent and reliable respite breaks for informal carers.[18]

Sport, fitness and physical activity

- Providers should consider whether they can offer cheaper sessions at less popular times of day, or for specific groups such as key workers, to ensure that leisure facilities are available to people who have to work non-standard hours.

- Where possible, employers should consider how they can offer leisure and health promotion services to staff which suit their working pattern, such as on-site gyms or gym memberships.[19]

- Local authorities should consider the best ways to deliver leisure services in new developments through section 106/infrastructure levy contributions.

- Commissioners should evaluate concessionary and free leisure schemes, such as free swimming and gym access, to ensure that they are making the maximum difference to their target audience and to minimise deadweight loss.

Universal basic income?

Proponents of Universal Basic Income (UBI) argue that it could increase leisure time, and reduce stress, by guaranteeing people enough income to afford a decent life. The arguments for and against UBI are complex: it seems unlikely that it could be set at a high enough rate that many people would be able to significantly increase their leisure time, especially in expensive cities like London, but it could reduce the stress associated with low or fluctuating income, and so give people more of a sense of work autonomy and the "headspace" to enjoy their leisure time.[20]

Health

Our findings show that Londoners who are satisfied with their health tend to have better wellbeing scores than Londoners who are not satisfied with their health. This differential is larger for younger Londoners and much smaller for Londoners who are above retirement age – indicating that having a poor perception of health has a more harmful effect on wellbeing for younger Londoners than it does older Londoners. This association is also stronger for Londoners who have a disability or long-term health condition than for Londoners who do not.

Just as people's satisfaction with their leisure time does not necessarily tell us how much leisure time they have, satisfaction with health does not necessarily tell us about people's objective state of health. Our data shows that people with a disability or long-term condition who are satisfied with their health have higher wellbeing than those with a disability or long-term condition who are not satisfied with their health: a person with multiple long-term conditions may feel that they are managing them well and that they are able to live their life the way they want to. That said, improving people's health by either creating a healthier environment or improving access to health care might also improve health satisfaction.

The social model of disability

Some people with disabilities feel that it is not their disability that stops them from living the life they want to, but the environment they live in. This is also called the social model of disability.[21] For example, a person who uses a wheelchair may be able to use the train easily when there are suitable ramps and lifts, but if these are not available, they will not be able to use the train: the problem is not with them but with the station architecture. One way to improve people's satisfaction with their health could be to remove the barriers that prevent people with long-term health conditions or disabilities from accessing transport, services, jobs or homes.

There are many examples of ways to do this, depending on individuals' access needs and what they want to achieve. Some include:

- Making public transport and public spaces accessible to people who use wheelchairs or find it hard to walk by providing appropriate level platforms, ramps and lifts and ensuring they work.[22]

- Making websites accessible to people with visual impairments by including options to change the way that text is displayed and suitable alt-text for visual images.[23]

- Making museums and galleries accessible to people who are neurodiverse, for example by providing autism-friendly visitor slots where noise and light is reduced, offering a quiet room, and using clear signage.[24]

Some of these changes can also have a positive impact on people who do not have disabilities. For example, adding ramps and lifts to stations helps people who have heavy luggage or who are travelling with young children.

Improving health services

One way to improve people's satisfaction with their health is to improve the services available to them when there is a problem: for example, a person who is waiting for a hip replacement is likely to have lower satisfaction with their health than a person who has had an operation and is recovering; and a person who spent a lot of time trying to book an appointment is likely to have lower satisfaction with their health than someone who is able to book one easily without waiting too long.

Improving health services depends both on the level of resources and how these resources are deployed. This is a vast topic of study and debate - too

big to do justice to here - but it is worth noting that the link between health outcomes and health spending is not straightforward, with some studies showing there is a clear correlation and others that suggest this correlation is weak or absent.[25]

Healthier environments

It is estimated that a significant majority of health outcomes are the result of the environment people live in rather than a lack of preventative health services in the NHS.[26]i This is particularly important for discussions about wellbeing because of the cyclical relationship between health and wellbeing: poor wellbeing can cause health to decline, for example because people are not able to prioritise their health or diet when they are under strain, but poor health can also cause wellbeing to decline, for example if people are not well enough to work and miss out on both potential earnings and the social opportunities of employment.

As with improving health services, there is a vast literature on ways to create healthier environments. Some key areas include:

- Making it easier for people to make healthy food choices. This can include making unhealthier foods more expensive (for example through the Soft Drinks Industry Levy, which could be extended[27]), making healthier foods cheaper (possibly through an extension of the "Healthy Start" scheme[28]), providing free school meals to a wider group of children (they are being extended to all primary-age children in London next year but it is not clear if this will continue[29]), or using planning powers to restrict the availability of unhealthy takeaway food near schools or other locations such as youth centres, parks, or reducing their density in any given place.[30]

- Making it easier for people to exercise. This could include making streets safer and more pleasant for walking and cycling by restricting car journeys in a local area, creating segregated bike routes, providing more seating for people to take a break while walking (especially important for some older and disabled Londoners).[31] It can also be through improving access to sports and leisure facilities - an issue discussed above.

- Reducing people's exposure to air pollution. This can be through making it easier to walk and cycle, improving access to public transport, making it harder to drive, and encouraging people to switch to electric vehicles.[32] It should also include reducing pollution from woodburning stoves, which is a growing problem.[33]

- Reducing people's unhealthy stress - some stress is normal and inevitable, but when people live under prolonged stress it can damage their health. At the moment, many people in London are experiencing stress because of the cost of living crisis, and it is possible this could be reduced through improvements to people's working lives (discussed above), reducing poverty through changes to the benefits system, or interventions which reduce the housing and other living costs faced by low-income Londoners.

Neighbourhood social cohesion

Our research found that people who reported higher levels of social cohesion in their neighbourhoods had greater levels of wellbeing. We also found that the wellbeing of people in higher income households is more sensitive to the level of social cohesion in their neighbourhood; compared to those on lower incomes, for those on higher incomes who said social cohesion is lower, their wellbeing scores were lower, and vice versa.

The measure of social cohesion we used comes from the perspective of individual respondents, rather than some external or objective measure. This

means that we only know that a person's sense of their area being socially cohesive matters – we can't be sure how much that is determined by the objective fact of how socially cohesive an area is, though the two are likely to be strongly related. Nonetheless, someone who lives in an area where other people often meet with and speak to each other might view the community as lacking cohesion if that person is unaware of local groups or events or feels unwelcome at them.

Make public spaces more accessible and useful

Neighbourhoods with accessible public spaces – from well-lit, wide pavements that enable and encourage people to walk through the neighbourhood, to green spaces and community centres where people can stop at to rest – will facilitate more social interactions. We heard in our roundtables that developers can contribute to this by creating more spaces where people can relax, like gardens designed to meet the needs of specific groups such as neurodivergent people.

Research by the Loneliness Lab identifies key principles for designing places where people live, work and play so they support social cohesion.[34] These include:

- Taking the lead from local people in identifying the elements of the local built environment that help or hinder connection.

- Accommodating people's different physical, social and cultural needs and aspirations.

- Using an iterative process to learn what works and put learning into action.

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There are some examples of this happening, but additional costs can be hard to meet in London where land prices are high. Nonetheless, we heard that many boroughs are demanding more from developers, especially when it comes to commercial developments – those used for business purposes rather than housing.

Providing funding to local organisations to maintain community spaces can help increase the number of spaces available to local people and community activities. The Mayor's Community Spaces at Risk programme provided £750,000 which organisations could apply for to protect at-risk spaces such as grassroots cultural centres, social clubs, youth, education and other spaces valued by local communities.[35] Described as a fund to support organisations through the pandemic, it has since closed.

While many of the most effective improvements to public space are costly, some meaningful changes can involve making different use of existing space. For instance, public art can enhance people's sense of identity and belonging by fostering social interaction, narrating shared stories, and providing a focal point for discussions about the community.[36]

Provide more resources to public services and charities serving the community

- One way to enable more people to interact with others in their neighbourhood is to provide better services and activities in the area.

- Youth clubs or older people's day centres can provide opportunities for people to meet one another and socialise in a safe setting.

- Yet funding for many such services has fallen in recent years – local authority spending on youth services in England fell by 74 per cent in the decade to 2020/21.[37]

- Early intervention children's services such as children's centres, youth and family support services have seen their funding by local authorities fall by half in the same decade – a result of cuts in funding from national government.[38]

- The provision of services should also be attuned to the needs of the local people who are most likely to benefit from them by providing a range of services and activities, at a range of times, and ensuring that local people have opportunities to find out about how to take part.

  - For example, people with certain characteristics are more likely than others to report experiencing loneliness – for instance, younger adults (aged 16 to 24), women, and people in poor health.[39]

However, some barriers to spending time interacting with neighbours – such as constraints on leisure time – will mean that without other changes (such as addressing the affordability of childcare), some people will find it more difficult than others to do so.

Improve policing in London

Some of the experts we spoke to suggested it should be a priority to increase how safe people feel in their neighbourhood. Community policing, by improving the visibility of the police and increasing engagement with the community, is associated with improved social cohesion.[40] While the number of police officers across England is similar to a decade ago, the number of police community support officers (PCSOs), whose role is to support the police by providing a visible and accessible uniformed presence in communities, has fallen by half.[41] With the Metropolitan Police put under special measures last year,[42] and facing historically low public trust,[43] an increased focus on community policing to strengthen neighbourhood connections between

officers and residents could be an important part of changes to improve policing in London. However, any such attempt should be accompanied by the police becoming more representative and more accountable in their roles as London's guardians.[44]

Meaningfully engage people in local decisions

Each neighbourhood will have its own unique dynamics. Attempts to improve the opportunities for social connection in a place must be designed arm-in-arm with local people – not just informing people about what's available, but consulting them, involving them in decisions, creating deliberative forums and even collaborating in the design and delivery of spaces and services. For more discussion about different models of public participation in placemaking, see Centre for London's previous report *Community Town Centres*.[45]

Conclusion

This report has set out what influences Londoners' wellbeing, and how we might respond through policy changes. We hope the evidence and ideas it presents are of use to decision makers as they grapple with the challenge of trying to improve wellbeing outcomes in a complex and rapidly changing world.

If you are a policymaker considering how to improve population wellbeing, or a researcher working on related data, we'd love to hear from you – please get in touch with either the Mile End Institute or Centre for London.

Appendices:

Appendix A: Mapping London Subregional Partnerships onto London Boroughs

London Subregional Partnership	London Boroughs Incorporated
Central London Forward	Camden, City of London, Hackney, Haringey, Islington, Kensington and Chelsea, Lambeth, Lewisham, Southwark, Tower Hamlets, Wandsworth, Westminster
Local London	Barking and Dagenham, Bexley, Bromley, Enfield, Greenwich, Havering, Newham, Redbridge, Waltham Forest
South London Partnership	Croydon, Kingston upon Thames, Merton, Richmond upon Thames, Sutton
West London Alliance	Barnet, Brent, Ealing, Hammersmith and Fulham, Harrow, Hillingdon, Hounslow

Appendix B: Mapping London Subregional Partnerships onto London Boroughs

Variable	Statistically Significant Effect on Londoner's Wellbeing After Controlling for All Other Variables?	Interpretation of Variable's Independent Effect on Londoner's Wellbeing After Controlling for All Other Variables (Refer to Model 1 in Appendix C)
Age	N	Age had no effect on Londoners' wellbeing after controlling for all other variables.
Gender	Y	On average, women in London have wellbeing scores which are 0.556 points lower than men's.
Household income	N	Household income had no effect on Londoners' wellbeing after controlling for all other variables.
Employment status (including workplace autonomy for those in employment)	Y	Compared to those who are employed in jobs where they have average levels of workplace autonomy, those in jobs with low levels of autonomy tend to exhibit considerably lower levels of wellbeing, while those in jobs with high levels of autonomy typically have much higher levels of wellbeing. On average, those employed in low autonomy jobs have wellbeing scores 0.623 points lower than those in jobs with average levels of autonomy. Those Londoners in high autonomy jobs, however, have wellbeing scores which are 1.059 points higher than those working in jobs with average levels of autonomy.

Those who are not working, but not retired, also have significantly worse wellbeing outcomes than those employed in jobs with average levels of autonomy. Typically, their wellbeing scores are 0.834 points lower than those working jobs with average levels of autonomy. |
| University education | Y | On average, those Londoners with university degrees have wellbeing scores which are 0.357 points higher than those who do not. |
| Children in household | N | The number of children living in an individuals' household had no effect on Londoners' wellbeing after controlling for all other variables. |

Variable	Statistically Significant Effect on Londoner's Wellbeing After Controlling for All Other Variables?	Interpretation of Variable's Independent Effect on Londoner's Wellbeing After Controlling for All Other Variables (Refer to Model 1 in Appendix C)
Ethnic group	Y	Londoners from Asian backgrounds tend to have lower wellbeing scores than their white British counterparts, with wellbeing scores 0.548 points lower, on average. On the other hand, those from black backgrounds typically report higher levels of wellbeing than white British individuals – with Londoners from black backgrounds, on average, reporting wellbeing scores 0.969 points higher than Londoners from white British backgrounds. No other statistically significant ethnic differences were detected.
Disability status	Y	Those Londoners with longstanding illnesses and impairments report wellbeing scores which are 0.719 points lower, on average, than those for individuals who do not report having any disabilities.
Satisfaction with health	Y	On average, those Londoners who reported they were satisfied with their health had wellbeing scores 1.685 points higher than those who were not satisfied with their health.
Housing tenure	N	Housing tenure had no effect on Londoners' wellbeing after controlling for all other variables.
Marital status	N	Marital status had no effect on Londoners' wellbeing after controlling for all other variables.
Country of birth	Y	Those Londoners who were not born in the UK report wellbeing scores 0.715 points higher than those who were born in the UK, on average.
London subregion	N	The subregion of London within which individuals live had no effect on their wellbeing after controlling for all other variables.
Satisfaction with leisure time	Y	On average, those Londoners who reported they were satisfied with their leisure time had wellbeing scores 2.348 points higher than those who were not satisfied with their leisure time.
Expects to have to move home in next year	N	Whether, or not, Londoners expected to have to move home in the next year had no effect on their wellbeing after controlling for all other variables.
Satisfaction with local doctors' services	N	Satisfaction with local doctors' services had no effect on Londoners' wellbeing after controlling for all other variables.
Satisfaction with local police services	N	Satisfaction with police services had no effect on Londoners' wellbeing after controlling for all other variables.
Satisfaction with local leisure services	N	Satisfaction with local leisure services had no effect on Londoners' wellbeing after controlling for all other variables.
Religious affiliation	Y	Londoners who reported that they did not belong to a religion reported wellbeing scores 0.420 lower than those who were affiliated with a religion, on average.
Volunteering behaviour	N	Whether or not individuals were engaged in volunteering had no effect on Londoners' wellbeing after controlling for all other variables.
Neighbourhood social cohesion score	Y	On average, each 1-point increase in neighbourhood social cohesion leads to a 0.748-point increase in Londoners' wellbeing scores. Given our neighbourhood social cohesion score runs from 1 (lowest levels of cohesion) to 5 (highest levels of cohesion), this represents nearly a 3-point different in average wellbeing scores between those Londoners living in areas with the highest and lowest levels of social cohesion.
Local crime score	N	Perception of crime in the local area had no effect on Londoners' wellbeing after controlling for all other variables.

Appendix C: Full Table of Regression Results, Variables' Effects on Londoners Wellbeing

Model 1 is a regression model which includes all key determinants of wellbeing listed in Table 2 and no interaction effects. Models 2-5 are as Model 1, but each includes a different kind of interaction effect – as illustrated in Figures 3-6. In all cases except the discussions of interaction effects (in the explanations of Figures 3-6, where the results of Models 2-5 are referred to, as appropriate) this report refers to the results of Model 1.

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	23.19***	23.20***	23.27***	23.64***	11.74*
	(2.897)	(2.895)	(2.900)	(2.901)	(4.908)
Age (years)	0.009	0.009	0.009	0.001	0.009
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Sex, female (ref: male)	-0.556**	-0.552**	-0.560**	-0.558**	-0.555**
	(0.170)	(0.170)	(0.170)	(0.170)	(0.170)
Household income (log transformed)	0.203	0.207	0.203	0.194	1.548**
	(0.128)	(0.128)	(0.128)	(0.128)	(0.483)
Low autonomy job (ref.: medium autonomy job)	-0.623*	-0.616*	-0.092	-0.609*	-0.613*
	(0.270)	(0.269)	(0.373)	(0.269)	(0.269)
High autonomy job (ref.: medium autonomy job)	1.059***	1.054***	1.009**	1.061***	1.075***
	(0.252)	(0.252)	(0.374)	(0.252)	(0.252)
Retired (ref: medium autonomy job)	0.125	0.109	0.015	0.107	0.059
	(0.339)	(0.339)	(0.522)	(0.339)	(0.340)
Other (ref: medium autonomy job)	-0.834**	-0.797**	-1.005**	-0.848**	-0.816**
	(0.266)	(0.267)	(0.370)	(0.266)	(0.266)
University education, degree (ref: no degree)	0.357.	0.364.	0.344.	0.354.	0.386*
	(0.189)	(0.189)	(0.189)	(0.189)	(0.189)
Children in household (ref: no children)	-0.202	-0.207	-0.217	-0.199	-0.196
	(0.204)	(0.204)	(0.204)	(0.204)	(0.204)
Ethnic group, Asian background (ref: white British)	-0.548*	-0.569*	-0.565*	-0.546*	-0.533.
	(0.273)	(0.273)	(0.273)	(0.273)	(0.273)
Ethnic group, black background (ref: white British)	0.969***	0.965***	0.940**	0.967***	0.968***
	(0.286)	(0.286)	(0.286)	(0.286)	(0.286)
Ethnic group, mixed background (ref: white British)	0.046	0.010	0.091	0.070	0.049
	(0.381)	(0.382)	(0.382)	(0.381)	(0.381)
Ethnic group, other background (ref: white British)	0.190	0.163	0.125	0.134	0.192
	(0.575)	(0.574)	(0.575)	(0.575)	(0.574)
Ethnic group, other white (ref: white British)	-0.116	-0.115	-0.096	-0.119	-0.101
	(0.338)	(0.338)	(0.338)	(0.338)	(0.338)
Disability status, has a disability (ref: does not have a disability)	-0.719***	-0.389	-0.721***	-0.726***	-0.720***
	(0.199)	(0.260)	(0.199)	(0.198)	(0.198)

	Model 1	Model 2	Model 3	Model 4	Model 5
Health satisfaction, not satisfied (ref: satisfied)	-1.685***	-1.393***	-1.679***	-2.780***	-1.675***
	(0.199)	(0.248)	(0.198)	(0.527)	(0.198)
Tenure, own with mortgage (ref: own outright)	0.045	0.057	0.034	0.016	0.052
	(0.242)	(0.242)	(0.242)	(0.242)	(0.242)
Tenure, private rent (ref: own outright)	0.399	0.424	0.397	0.363	0.410
	(0.321)	(0.321)	(0.321)	(0.321)	(0.320)
Tenure, Local Authority/Housing Association rent (ref: own outright)	-0.147	-0.129	-0.127	-0.157	-0.123
	(0.286)	(0.286)	(0.286)	(0.286)	(0.286)
Marital status, other (ref: married/civil partnership)	0.076	0.103	0.053	0.039	0.020
	(0.274)	(0.274)	(0.274)	(0.274)	(0.274)
Marital status, single (ref: married/civil partnership)	-0.313	-0.313	-0.335	-0.327	-0.347
	(0.239)	(0.239)	(0.239)	(0.239)	(0.239)
Country of birth, no information (ref: born in UK)	0.401	0.412	0.365	0.390	0.393
	(0.305)	(0.305)	(0.305)	(0.305)	(0.304)
Country of birth, not in UK (ref: born in UK)	0.715**	0.701**	0.711**	0.725**	0.695**
	(0.225)	(0.225)	(0.225)	(0.225)	(0.225)
Subregion, Local London (ref: Central London Forward)	0.289	0.287	0.278	0.292	0.305
	(0.233)	(0.233)	(0.233)	(0.233)	(0.233)
Subregion, South London Partnership (ref: Central London Forward)	-0.240	-0.247	-0.246	-0.224	-0.225
	(0.297)	(0.297)	(0.297)	(0.297)	(0.297)
Subregion, West London Alliance (ref: Central London Forward)	0.002	0.028	-0.015	0.001	0.052
	(0.264)	(0.265)	(0.264)	(0.264)	(0.265)
Leisure satisfaction, satisfied (ref: not satisfied)	2.348***	2.373***	2.434***	2.325***	2.347***
	(0.189)	(0.189)	(0.318)	(0.189)	(0.188)
Expect to have to move, yes (ref: no)	-0.036	-0.029	-0.044	-0.031	-0.047
	(0.268)	(0.268)	(0.268)	(0.268)	(0.268)
Satisfaction with doctor's services in local area	-0.326	-0.357	-0.322	-0.324	-0.288
	(0.367)	(0.367)	(0.367)	(0.366)	(0.366)
Satisfaction with police services in local area	0.142	0.145	0.141	0.138	0.140
	(0.099)	(0.099)	(0.099)	(0.099)	(0.099)
Satisfaction with leisure services in local area	-0.562	-0.560	-0.573	-0.553	-0.547
	(0.360)	(0.360)	(0.360)	(0.359)	(0.359)
Religious affiliation, does not belong to religion (ref: does)	-0.420*	-0.411*	-0.430*	-0.412*	-0.423*
	(0.190)	(0.190)	(0.190)	(0.190)	(0.189)
Volunteered in past year, yes (ref: no)	0.032	0.036	0.021	0.053	0.048
	(0.214)	(0.214)	(0.215)	(0.214)	(0.214)
Neighbourhood social cohesion score	0.748***	0.748***	0.745***	0.738***	4.076***
	(0.118)	(0.118)	(0.118)	(0.118)	(1.158)
Local crime score	0.180	0.174	0.173	0.189	0.162
	(0.155)	(0.155)	(0.155)	(0.155)	(0.155)

	Model 1	Model 2	Model 3	Model 4	Model 5
Disability status * health satisfaction		-0.747*			
		(0.380)			
Age * health satisfaction				0.022*	
				(0.010)	
Low autonomy * satisfied with leisure time			-1.154*		
			(0.535)		
High autonomy * satisfied with leisure time			0.082		
			(0.502)		
Retired * satisfied with leisure time			0.099		
			(0.562)		
Other * satisfied with leisure time			0.317		
			(0.484)		
Log household income * neighbourhood social cohesion score					-0.400**
					(0.138)
N	2,496	2,496	2,496	2,496	2,496
Adjusted R2	0.2355	0.2364	0.2366	0.2367	0.2378
*** p < 0.001; ** p < 0.01; * p < 0.05., . p < 0.10					

Appendix D: Testing Significance of Hours Worked, Workplace Autonomy and Employment Status as Predictors of Londoners' Wellbeing

We tested three different specifications of our final regression model; one which included a simple employment status variable, one which used a variant of this employment status variable which accounted for job hours worked and one which included information on workplace autonomy. We did so in order to test whether work hours, workplace autonomy, or neither, had important effects in determining Londoners' wellbeing.

The table below reports the results of this preliminary testing. For simplicity, only the coefficients and standard errors of the three employment status variables included in different specifications of our regression model are reported here, however, these models did also include all other control variables as details in Table 2 in the main text.

As shown below, the number of hours worked per week had no statistically significant effect on Londoners' wellbeing. Those Londoners who work 35 hours per week or less, and those who work 51 hours or more per week, report wellbeing scores which are no different to those who work between 36 and 50 hours per week. On the other hand, we see workplace autonomy has large, and statistically significant, effects on Londoners wellbeing outcomes – with those with low autonomy tending to report considerably worse wellbeing scores than those with average levels of autonomy and those with high levels of autonomy showing the opposite pattern, on average. For this reason, we chose to use the version of the employment status variable which included information on workplace autonomy (for those in employment) - rather than the employment status only version or the one with information on job hours - in our analysis.

	Employment status only model	Employment status including hours worked model	Employment status including workplace autonomy model
Employment status, other (ref: employed)	-0.880***		
	(0.243)		
Employment status, retired (ref: employed)	-0.059		
	(0.317)		
Works 35 hours or less per week (ref: works 36-50 hours per week)		0.060	
		(0.343)	
Works 51 hours or more per week (ref: works 36-50 hours per week)		0.132	
		(0.295)	
Retired (ref: works 36-50 hours per week)		0.024	
		(0.390)	
Other (ref: works 36-50 hours per week)		-0.790*	
		(0.336)	
Low autonomy job (ref: medium autonomy job)			-0.623*
			(0.270)
High autonomy job (ref: medium autonomy job)			1.059***
			(0.252)
Retired (ref: medium autonomy job)			0.125
			(0.339)
Other (ref: medium autonomy job)			-0.834**
			(0.266)

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