



Physical inactivity and productivity

INSIGHTS

A joint research project between Midlands Engine and Coventry University has examined the link between physical inactivity and productivity in the Midlands.

Physical inactivity is linked to increased rates of overweight and obesity, musculoskeletal issues and mental health problems. These conditions are leading causes of absenteeism and presenteeism in the workplace, thereby reducing productivity. The effects of physical inactivity on productivity in the Midlands have never been specifically examined.

Physical inactivity refers to a lack of moderate-to-vigorous physical activity in a person's lifestyle. People are typically classified as physically inactive if they are not meeting the Chief Medical Officer's Physical Activity Guidelines for Health, published in 2019 which advises:

- 150 minutes of moderate physical activity or
- 75 minutes of vigorous physical activity, or
- a combination of the two (1 minute of vigorous physical activity is equivalent to 2 minutes of moderate physical activity).

Productivity is a measure of how efficiently a society converts work and other resources into products and services that improve people's lives.

For the purposes of this report, productivity is defined by individuals' efficiency at delivering goods and services and completing their assigned tasks in the workplace.

The full report is available via the [Midlands Engine Resource Library](#) and [Intelligence Hub](#)

Why is this issue important?

The Midlands Engine area is facing a **productivity gap of £86.3bn**, and this has increased annually by 4.8% (or +£4.0bn). Subregional productivity data from ONS shows that, in 2021, unsmoothed GVA per hour worked was £33.80 for the Midlands Engine area. Not only did this decline from 2020 (by 0.5%), there was a shortfall against the UK unsmoothed figure of £4.88.

Data from the ONS Annual Population Survey highlights labour market challenges in the Midlands Engine area. 27.4% of the working age population was economically inactive due to sickness. This was a 2.0 percentage point increase from the previous annual period.

Health, confidence, motivation and preparedness for work remain barriers for those entering the labour market, and some leave the labour market early due to health problems that could be the result of physical inactivity. Physically activity, exercise and participation in sport helps develop personal and social skills of benefit to the workplace including teamwork, self-discipline, resilience, time management, perceived self-efficacy and self-esteem.

In contrast, physical inactivity is associated with higher prevalence of musculoskeletal issues such as back pain, and mental health problems such as depression. These problems can lead to individuals becoming overweight and even obese. These conditions combined are leading causes of absenteeism (defined as failure to report for or remain at work as scheduled, regardless of the reason) and presenteeism (defined as the act or culture of employees continuing to work, but not fully functioning or performing their duties, because of an illness, injury, exhaustion, or other conditions).

The primary aim of this research was to understand the link between physical inactivity and productivity in the Midlands. The research was commissioned to influence local and national government policy to start taking seriously the negative impacts of physical inactivity on labour market outcomes.

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Methodology

This research was completed in three interrelated work packages:

1. Rapid review

A rapid review of literature was compiled to learn about the current local and national context and to glean knowledge of key issues. Using search terms in relevant databases, nearly 2000 articles were selected, all of which were then checked for relevance.

2. Online survey

Primary data collection was undertaken by distributing an online survey in the region and nationally. Questions were informed by key issues identified in the rapid review and respondents were asked about the extent to which they agreed or disagreed with statements relating to the influence of physical inactivity on productivity and other labour market outcomes.

3. Focus groups

Participants who completed the survey were invited to attend an online focus group. This gave them the opportunity to discuss their survey responses further with peers, leading to a consensus as to whether physical inactivity can influence productivity and other labour market outcomes.

Key facts and figures

Rapid review

A rigorous and systematic literature search identified 22 peer-reviewed studies that explored the link between physical activity, physical inactivity, sedentary behaviour and/ or sport on labour market outcomes to some extent. The aim of the rapid review was to answer the research question, 'Does physical inactivity reduce labour market participation and productivity?'. Unfortunately, this review alone could not provide a definitive answer to this question due to discrepancies in research design, methods and outcomes measured.

This is not a failure on the part of the research team, nor of the Midlands Engine or Active Partnerships for asking the wrong question, but due to an insufficient volume of studies with appropriate study designs and data for some outcomes.

Online survey

Of the 148 participants who completed the survey, 23 resided in the East Midlands and 85 resided in the West Midlands.

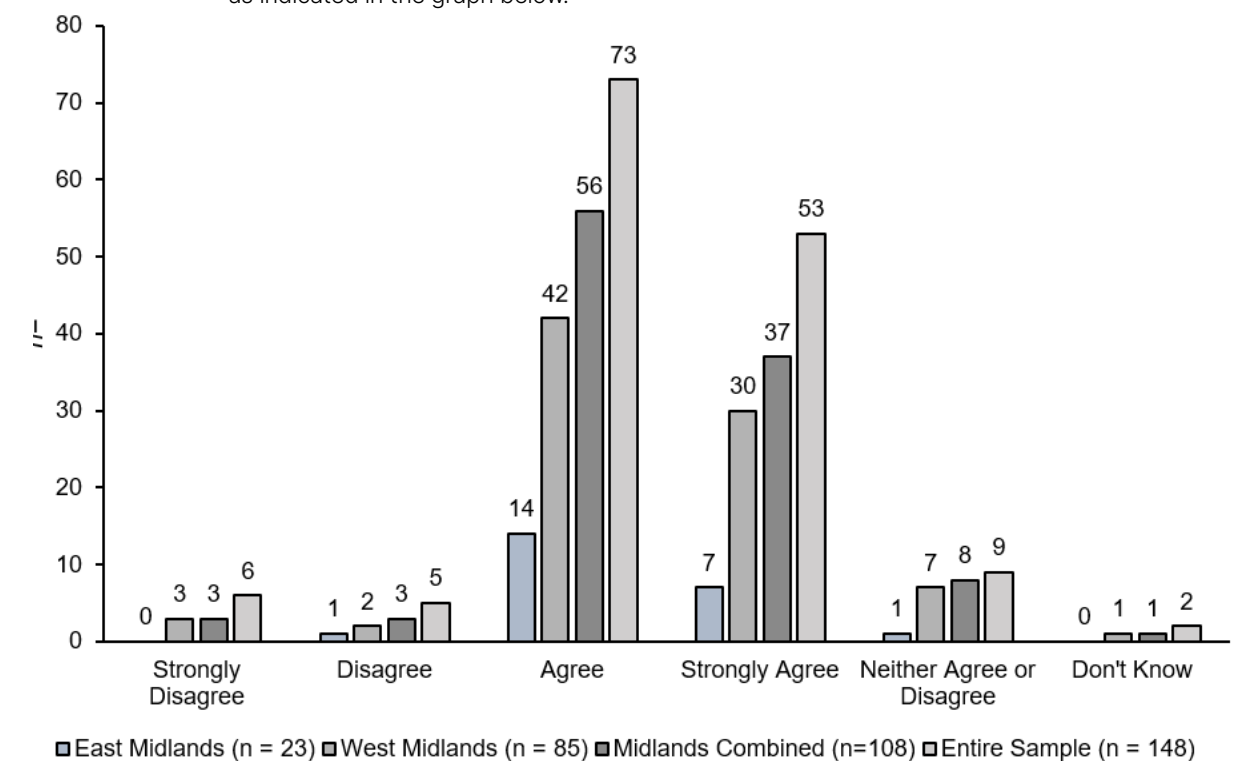
Findings for the response to the question: 'To what extent do you agree with the statement - "Being physically inactive for an extended period reduces productivity at work"?' were as indicated in the graph below.

The figure shows that 85.1% of the entire (national) sample agreed or strongly agreed that being physically inactive reduces productivity at work.

From the Midlands sample, 86.1% also agreed or strongly agreed with the statement (84.7% West Midlands and 91.3% East Midlands). Conversely, only 7.4% of the national sample disagreed or strongly disagreed with the statement, compared with 5.6% of the Midlands sample (5.9% West Midlands and 4.3% East Midlands).

More than one in ten (12.8%) of the entire sample answered neither 'agree or disagree' or 'don't know' to the statement, with the figure for the Midlands being 8.3% (9.4% West Midlands and 4.3% East Midlands).

Overall, there is a considerable agreement within the sample that being physically inactive reduces productivity at work.



Focus groups

Three focus groups were conducted with 11 participants (six male and five female). The focus groups lasted between 48 and 95 minutes.

Overall, a high proportion of participants agreed or strongly agreed with the statement: "Being physically inactive for an extended period reduces productivity at work".

"I'm not that surprised to read that most people would agree there is that link between physical inactivity and lower decreased productivity."
(P03, female, focus group #1)



Many participants recalled instances of how they could apply the statement to their own lives, fitting in physical activity before, during, or after work hours and experiencing positive effects on workplace productivity. Two examples are as follows:

"If I've done something [physical activity] in the morning and feel great, have a shower, sit down in front of the computer, I can get a lot done."
(P11, male, focus group #3)

"I might go to the gym at lunchtime. I work up until lunchtime, I go to the gym, and it just gives me a chance to sort of, as it says there, refocus, reset. This is what I'm going to do in the afternoon. I've got a set period of time in the afternoon to get what I need to done."
(P08, male, focus group #2)

Participants recalled varied benefits, including more enthusiasm, better stamina, more energy and focus, and being more willing to be put in time and energy, sharper, more alert, energised and focused, uplifting their mood.

Consensus on all statements related to productivity and labour market outcomes was reached.

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Plausibility statements

Findings from all three work packages, are presented in the full technical report, enabling the research team to make the following statements:

Statement 1
It is plausible that physical inactivity can reduce productivity.

Data from studies included in the rapid review was suggestive of such a link, while 85.1% of the entire sample from the survey agreed or strongly agreed that being physically inactive reduces productivity at work. Consensus was reached in the focus groups that it is plausible that physical inactivity can reduce productivity.

When interpreting the Midlands data specifically, 86.1% also agreed or strongly agreed with the statement that being physically inactive for an extended period reduces productivity at work (84.7% West Midlands and 91.3% East Midlands), so we can also be confident that this statement is plausible for the Midlands.

Statement 2
It is plausible that physical inactivity can increase absenteeism.

Based on data from numerous studies included in the rapid review, coupled with the fact that 61.5% of our entire survey sample agreed or strongly agreed that being physically inactive increases absenteeism and consensus was reached at the focus groups, it is plausible that physical inactivity can increase absenteeism.

When interpreting Midlands data specifically, more than half (57.4%) of the Midlands sample (56.5% West Midlands and 60.9% East Midlands) also agreed or strongly agreed with the statement so we can also be confident that this statement is plausible from a Midlands-only perspective.

Statement 3
It is plausible that physical inactivity can increase presenteeism.

Based on data from numerous studies included in the rapid review, and 62.8% of our entire survey sample agreeing or strongly agreeing that being physically inactive increases presenteeism and consensus reached at the focus groups, it is plausible that physical inactivity can increase presenteeism.

Nearly two thirds (63.0%) of the Midlands sample (61.2% West Midlands and 69.9% East Midlands) also agreed or strongly agreed with the statement so we can also be confident that this statement is plausible from a Midlands-only perspective.

Statement 4
It is not clear if physical inactivity can increase the likelihood of unemployment.

Whilst evidence is presented in the rapid review which suggests that being physically active or playing sport can increase your earning potential, there is insufficient evidence to comment on unemployment per se.

Only 37.8% of the entire sample agreed or strongly agreed that being physically inactive for an extended period increases the likelihood of being unemployed. Whilst consensus was reached at the focus groups there was some dissonance presented in the supporting quotes.

It was found that 39.8% of the Midlands sample (41.2% West Midlands and 34.8% East Midlands) also agreed or strongly agreed with the statement, so it is not clear if physical inactivity can increase the likelihood of unemployment from a Midlands-only perspective.

Statement 5
It is not clear if physical inactivity can increase the likelihood of leaving the job market early.

The survey highlighted that 64.9% of the entire sample agreed or strongly agreed that employers would believe that being physically inactive increases the likelihood of leaving the job market early and consensus was reached at the focus groups. However, there was an extreme lack of data from studies in the rapid review that specifically examined people leaving the job market early, so firm conclusions cannot be drawn.

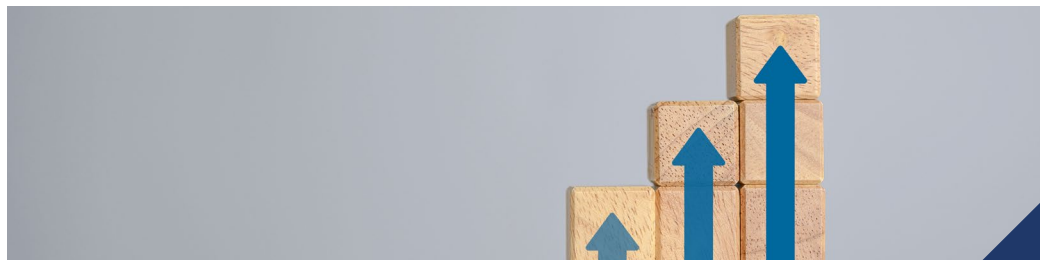
It was found that 62.0% of the Midlands sample (64.7% West Midlands and 52.2% East Midlands) also agreed or strongly agreed with the statement so we can also be confident that it is not clear if physical inactivity can increase the likelihood of leaving the job market early from a Midlands-only perspective.

Statement 6
It is plausible that active commuting and workplace wellbeing schemes/interventions can be effective in increasing physical activity and reducing sedentary behaviour.

There was substantial evidence from the rapid review that active commuting, workplace interventions and the provision of standing desks can be effective in increasing physical activity and reducing sedentary behaviour. It was highlighted that 76.4% of our entire survey sample would welcome interventions that enable physical activity and/or reductions in sedentary behaviour in the workplace.

These figures were 74.1% of participants from the Midlands (71.8% West Midlands and 82.6% East Midlands). Only 6.1% of the entire sample said they would not welcome these opportunities, and 6.5% for the Midlands sample (8.2% West Midlands and 0% East Midlands) so we can also be confident that this statement is plausible for the Midlands.





Future research recommendations

There is a clear lack of data that would enable the analysis of people who meet physical activity guidelines for health against those who did not meet guidelines (i.e. the physically inactive) for outcomes such as productivity, absenteeism, presenteeism and health outcomes, so research in this area is encouraged.

Recommendations

The following provides a series of recommendations for action following the publication of this report.

Recommendation 1

Disseminate the findings of this full technical report and distribute the shorter insight report to key stakeholders and local businesses. Evidence and opinion indicate that physical activity can improve workplace productivity, notwithstanding the survey findings identifying that workplaces may have a degree of moral and ethical obligation to support its staff which can ultimately improve job satisfaction and staff retention.

Recommendation 2

Engage with government to increase awareness of these issues once the findings of the following [consultation are published](#).

Recommendation 3

Seek opportunities to further support universities and academics, including identifying small seed corn funds that can lead to larger research bids to notable bodies.

Conclusion

This programme of research, funded by the Midlands Engine and supported by local Active Partnerships, looked to explore and understand the link between physical inactivity and productivity in the Midlands. Through a programme of research that has included three work packages we are able to state that:

- **It is plausible that physical inactivity can reduce productivity and increase absenteeism and presenteeism**
- **It is not clear whether physical inactivity can increase the likelihood of unemployment or leaving the job market early**
- **It is plausible that active commuting and workplace wellbeing interventions can be effective in increasing physical activity and reducing sedentary behaviour**

We would now encourage the findings of this report to be disseminated to regional partners and parliamentary stakeholders. The research team encourages the academic community to undertake high-quality research in the areas where a paucity of data has been identified, e.g. comparing active versus inactive people, and we will be pursuing further research funding to inform important lines of enquiry. With greater evidence, it is anticipated that engagement with government will lead to action to prevent physical inactivity negatively influencing workplace productivity.