



# Exercise

Children & young people

Gloucestershire  
County Council

**2024**

## Introduction

Physical activity has a huge potential to enhance our wellbeing; regular exercise can strengthen the heart, improve blood circulation, tone muscles, and enhance flexibility. Research also shows that physical activity can also boost self-esteem, mood, sleep quality and energy, as well as reducing risk of stress, and clinical depression.

People who exercise regularly have a lower risk of developing many long-term (chronic) conditions, such as heart disease, type 2 diabetes, stroke, and some cancers<sup>1</sup>.

The NHS recommends:

Children and young people need to do 2 types of physical activity each week:

- aerobic exercise
- exercises to strengthen their muscles and bones

Children and young people aged 5 to 18 should:

- aim for an average of at least 60 minutes of moderate intensity physical activity a day across the week
- take part in a variety of types and intensities of physical activity across the week to develop movement skills, muscles and bones
- reduce the time spent sitting or lying down and break up long periods of not moving with some activity. Aim to spread activity throughout the day.

This report will investigate exercise levels amongst children & young people in Gloucestershire and the wider impact on wellbeing exercise can bring.



## The Pupil Wellbeing Survey

The Pupil Wellbeing Survey (PWS) and Online Pupil Survey™(OPS) is a biennial survey that has been undertaken with Gloucestershire school children since 2006. Children and young people participate in years 4, 5 and 6 in Primary schools; years 8 and 10 in Secondary schools; and year 12 in Post 16 settings such as Sixth Forms and Colleges. A large proportion of mainstream, special and independent schools, colleges and educational establishments take part – representing 57% of pupils in participating year groups in 2024. The PWS asks a wide variety of questions about children's characteristics, behaviours and lived experience that could have an impact on their overall wellbeing. The 2024 PWS was undertaken between January and April 2024.

### Limitations and caveats of the survey

Not all children and young people who are resident in Gloucestershire attend educational establishments in the county and similarly not all

<sup>1</sup> NHS <https://www.nhs.uk/live-well/exercise/exercise-health-benefits/>

children and young people attending educational establishments in Gloucestershire are residents in the county. It is therefore important to remember this analysis is based on the pupil population not the resident population.

Gloucestershire is a grammar authority, has a number of notable independent schools and several mainstream schools very close to the county's boundary these all attract young people from out of county. This results in the school population (particularly at secondary phase) having slightly different characteristics, especially ethnicity, to the resident young people's population. 12.3% of Gloucestershire's resident population (2021 Census) were estimated to be from minority ethnic groups however 21.0% of Gloucestershire's school population were pupils from minority ethnic groups in January 2024 and 21.7% of the PWS cohort were pupils from minority ethnic groups in the 2024 survey.

Although a large proportion of the county's educational establishments took part in the survey some only had low numbers of students completing the survey in contrast others had high numbers. Although this doesn't impact the overall county analysis as demographics are represented as expected at this geography, analysis by district and education phase might only have certain demographic groups represented due to numbers of pupil take up (for example low numbers completing the survey in Tewkesbury at FE level), where FE provision is situated also impacts the survey as older students travel further to access FE provision.

Many other local authorities do a version of a Pupil Survey and where possible comparisons to Gloucestershire have been given. It is important to note that not all published surveys have comparable questions, and of those that are published sometimes only certain information is given which might be difficult to compare with Gloucestershire values. Surveys are often undertaken in different years to Gloucestershire, so they have been grouped to represent pre and post covid years. Survey cohorts vary in size dramatically in each LA, unfortunately base values aren't given so significance testing isn't possible.

## Analysis of deprivation

Schools can be categorised into statistical neighbour groups which cluster schools with pupils of a similar social profile within the same type of school (a similar level of deprivation, affluence or personal/family characteristics).

We use Ministry of Housing, Communities and Local Government (MHCLG) Indices of Multiple Deprivation (IMD) to determine the relative deprivation of pupils. The IMD is based on the home postcode of pupils (collected in the school census). This is aggregated to give an overall IMD score for the school, reflecting the deprivation levels experienced by pupils. The schools are then split into quintiles based on their scores: quintile 1 is the most deprived and quintile 5 is the least deprived in Gloucestershire.

In addition:

- Grammar/selective schools are compared to other grammar/selective schools in their phase without reference to the IMD.
- Independent schools are compared to other independent schools in their phase without reference to the IMD.
- Post-16 only/Further Education (FE) colleges are compared to all other Post-16 only colleges without reference to the IMD.
- Special and alternative schools are compared to all other schools of this type in the same phase without reference to the IMD.

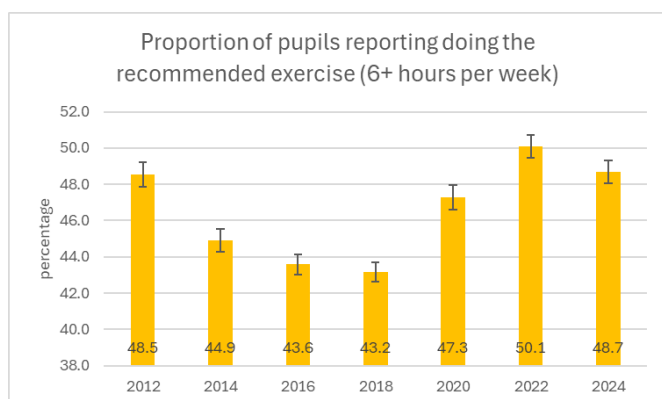


## Levels of exercise

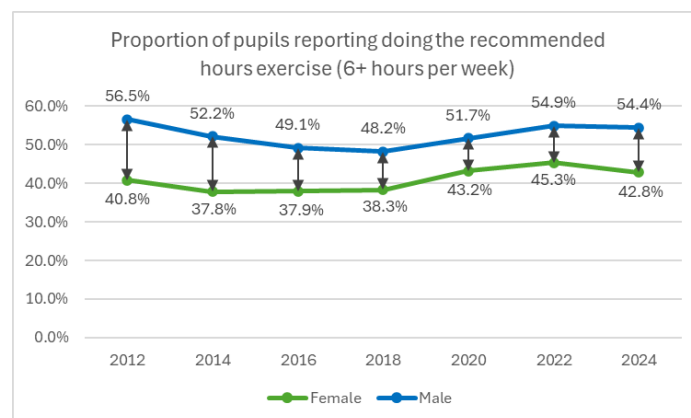


In 2024 48.7% of all pupils completing the PWS reported doing the recommended level of physical activity (6+ hours).

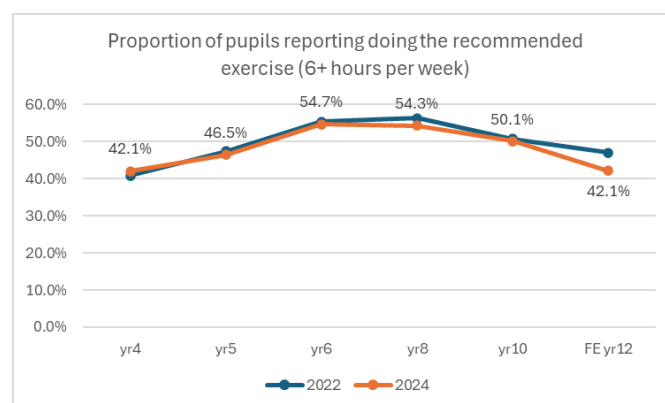
The levels of exercise of pupils in Gloucestershire had been falling between 2012 and 2018; however, this increased significantly between 2018 and 2022. Exercise levels have reduced significantly in 2024.



Girls and young women are less likely to report doing the recommended amount of exercise than boys and young men. Since 2012 the gap between the sexes had been reducing however, from 15.7 percentage points in 2012 to 9.6 percentage points in 2022. During the period levels of exercise in girls and young women has been increasing slowly whereas there was a significant drop in the level of exercise in boys and young men between 2012 and 2018. Since 2022 exercise levels reported by boys and young men has stabilised and that in girls and young women has started to reduce again.



Levels of exercise change as a child gets older. In 2024 the peak participation overall occurs in Y6 (54.7%) and Y8 (54.3%). Historically increased proportions of pupils reporting doing the recommended exercise appeared to be attributable to an increase in levels in older pupils (Y10 and Y12). However, the reduction between 2022 and 2024 appears to be due to a drop in Y12 pupils exercising. Levels of reported exercise tends to rise year on year from Y4 to Y8 and then declines.



Although similar, the trend is not observed in the same way by males and females.

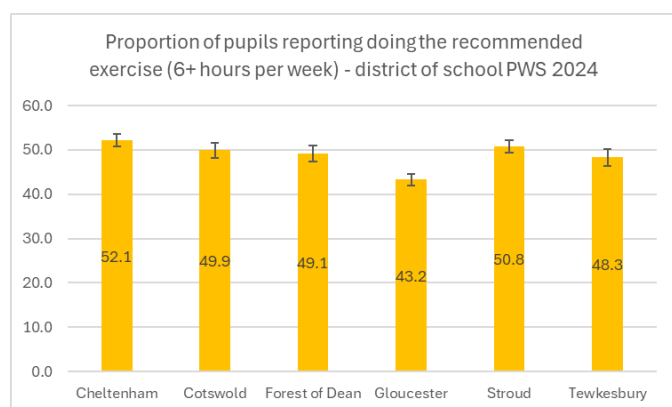
During primary school exercise levels increase for children of both sexes as they get older at a similar rate. In 2024 as previously, the peak female exercise level is observed in Y6 (50.7%) and then declines steadily during secondary school and Y12, with the lowest in Y12 (32.9%).

In contrast male exercise levels continue to increase into the early years at secondary school, and although it starts to reduce after Y8 (62.9%) the decline is much less pronounced in males compared to females; exercise levels in Y10 and Y12 males are in line or above those reported by Y4 and Y5 males.

Across the districts in Gloucestershire exercise participation varies. Reported levels of children and young people doing the recommended amount of



exercise in 2024 was highest in pupils attending schools in Cheltenham district (52.1%). A significantly lower proportion of children and young people in Gloucester district (43.2%) reported doing the recommended amount of exercise than the other districts. Exercise participation trends also vary across the districts, notable increases in exercise participation were observed between 2018 and 2022 in Cheltenham, Cotswold and Stroud districts. However, in Gloucester, Tewkesbury and the Forest of Dean districts there is a more consistent level of exercise participation in the period. Between 2022 and 2024 only Tewkesbury district saw an increase in exercise participation, Gloucester and Forest of Dean pupils had stable exercise participation and the other districts saw a reduction.



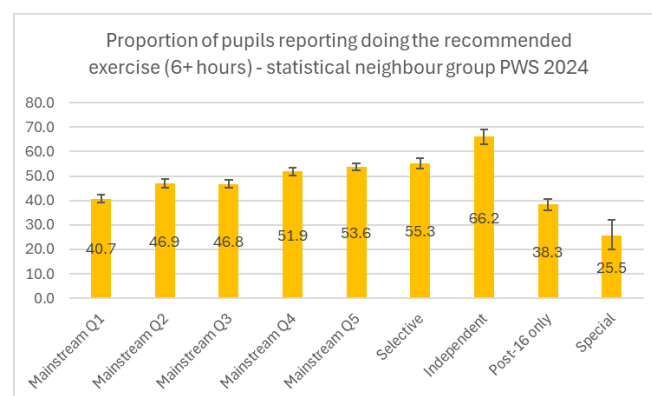
Schools can be separated into Statistical Neighbour groups, these group together schools with pupils with a similar social profile in the same type of school (a similar level of deprivation, affluence or personal/family characteristics).

We use Ministry of Housing, Communities and Local Government (MHCLG) Indices of Multiple Deprivation (IMD) to determine the relative deprivation of pupils at schools. The IMD based on the home postcode of pupils (collected in the School Census) is aggregated to give an overall IMD score for the school, reflecting the deprivation levels experienced by pupils. This is then split into quintiles. Quintile 1 is the most deprived and Quintile 5 is the least deprived in Gloucestershire.

- Grammar/selective schools: are compared to other grammar/selective schools in their phase without reference to the IMD.
- Independent schools: are compared to other independent schools in their phase without reference to the IMD.

- Post 16 only colleges: are compared to all other post 16 only (FE) colleges without reference to the IMD.
- Special and alternative schools: are compared to all other schools of this type in the same phase without reference to the IMD.

There is a link between doing the recommended exercise and deprivation. In 2024 pupils in independent schools reported a significantly higher level of exercise than any other group (66.2% doing the recommended amount, although this was a reduction on 2022, 72.9%). This may be attributed to having better accessibility to active pursuits in terms of time, location and financial accessibility.



Children & young people at Special schools reported the lowest level of exercise (25.5% did the recommended amount). Research suggests children and young people with a disability are less likely to report doing the recommended level of exercise and to find it harder to access appropriate activity and exercise<sup>2</sup>.



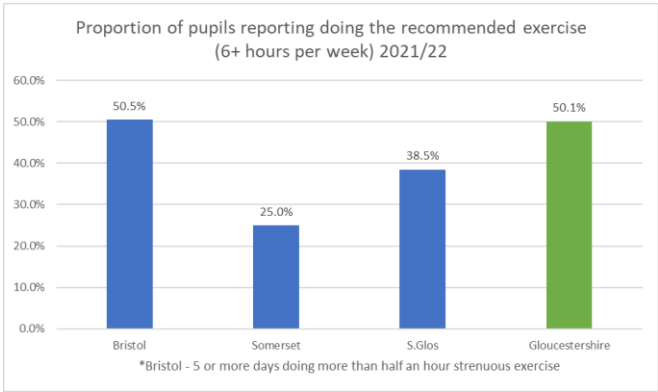
Schools where the majority of pupils live in IMD quintile 1 report significantly lower levels of exercise, those schools where the majority of pupils live in IMD quintile 5 and those at Selective

<sup>2</sup>Public Health England 2020

schools had significantly higher levels of exercise. This suggests children and young people experiencing the highest deprivation are the least likely to report doing the recommended level of exercise. This could be attributable to lack of affordability of sports equipment/exercise clothing, subs/fees for classes or sports clubs, cultural social constraints, or schools putting more focus on improving academic achievement in the most deprived areas.

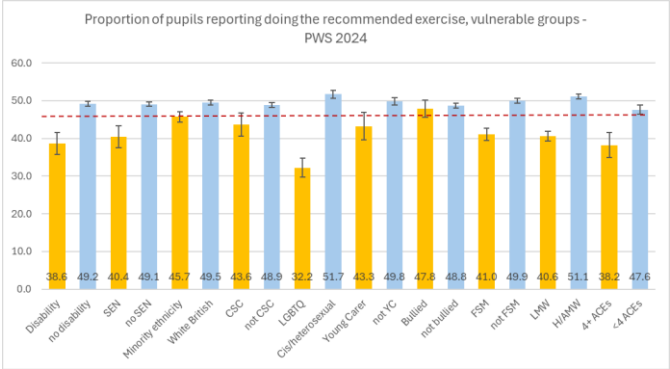
### Benchmarking levels of exercise

It appears a higher proportion of pupils in Gloucestershire do the recommended exercise than those in 2 of the comparator authorities, Somerset and South Gloucestershire, but is in line with exercise levels in Bristol.



### Disparities in participation

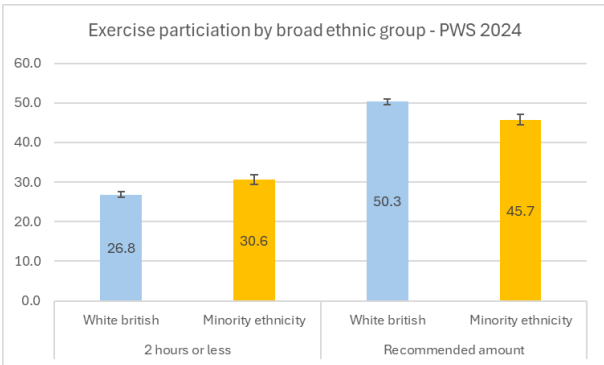
Some children & young people are less likely to report doing the recommended amount of exercise per week. As shown previously girls and young women and pupils living in the most deprived areas have a lower proportion reporting doing the recommended amount of exercise. Participation levels in children with vulnerable characteristics<sup>3</sup> is also lower than the overall participation levels; these are significantly lower in children reporting all vulnerabilities compared to their less vulnerable peers except those who were bullied regularly.



Young people who identified as non-heterosexual or transgender reported the lowest activity levels, significantly lower not just than the average but than all other vulnerable groups.



Exercise levels varies across different ethnic groups, broadly children and young people from minority ethnic groups are significantly less likely to report doing the recommended amount of exercise and statistically more likely to report doing little or no exercise.



Both these trends are driven by certain ethnic groups within the broad groups. Children and young people are significantly more likely to report doing little or no exercise if they are:

- Black African
- South Asian (Pakistani, Bangladeshi, Indian)

<sup>3</sup> Vulnerable characteristics include – disability, SEN, known to CSC, LGBTQ+, young carer, those regularly bullied, eligible for FSM, those with LMW, those reporting 4+ ACEs

Children and young people significantly less likely to report doing the recommended amount of exercise if they are:

- South Asian (Pakistani, Bangladeshi, Indian)
- Other Asian background
- Black African

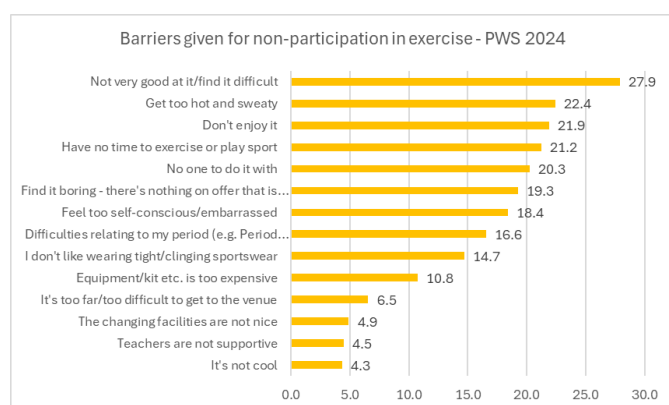
Pupils from white Western European backgrounds (other than white British) were significantly more likely to report doing the recommended exercise.

## Barriers to exercise

The reasons children give as to why they don't exercise vary. 28.3% of respondents to the survey reported doing little or no exercise per week, (less than 2 hours). This may be due to:

- Cultural norms
- Accessibility to activity
- Don't enjoy it/poor perception of exercise
- Embarrassed
- Can't afford to
- Don't have time to

The most common reason for not exercising given in 2024 by those who did less than 2 hours exercise per week was that they *weren't good at it* (27.9%), followed by they *Get too hot and sweaty* (22.4%) they *don't enjoy exercise* (21.9%), and *Have no time to exercise or play sport* (21.2%).



This suggests perception of being 'good' or 'bad' at exercise and by proxy how others perceive your ability is a key factor in whether children and young people engage in exercise and physical activity.



For both sexes the most common reason for non-participation in exercise was that they *weren't good at it*, however the second most given reason, given by 26.6% of girls and young women, was that they had *Difficulties relating to my period (e.g. Period symptoms, such as heavy bleeding, abdominal cramps and headaches, lack of period/sanitary product)*.

Girls and young women were twice as likely to say they didn't exercise because they were embarrassed (24.2%) than boys and young men (11.1%) and twice as likely to say they didn't exercise because *I don't like wearing tight/clinging sportswear* (18.5% vs. 9.4%). The proportion of pupils reporting they didn't exercise because of feeling embarrassed was also significantly higher in those who identified as LGBTQ+ (46.7%) and those with low mental health (33.4%). Embarrassment when exercising increased with age and was highest in Y10 pupils (31.0%) – suggesting changes to the body during puberty may be a key barrier to exercise.

Around a fifth of pupils reported not exercising because they didn't have time, this was highest in pupils who identify as LGBTQ+ where 30.2% said they didn't have time to exercise.

Lack of affordability being a barrier to exercise increased with age – this may have been due to less timetabled sports time in secondary schools leading to older young people needing to access sports through independent clubs and leisure centres. Immediately after the pandemic in spring 2022, lack of affordability was spread more evenly across the year groups however in 2024 this has returned to the previous trend. The proportion of pupils reporting affordability was an issue to accessing activity and exercise was highest in those identifying as LGBTQ+ and young carers.



In contrast those who said they didn't exercise because it made them too hot and sweaty reduced with age. The group reporting the highest proportion not exercising because of being too hot and sweaty was those who reported being seriously bullied – 27.9% said this was a barrier compared to 21.9% in those not bullied.

The main reasons for non-participation do not appear to have changed much over time, however the inclusion of issues with their period in 2024 as a barrier to exercise has changed the reasons given by girls and young women..

Around three quarters of all children and young people said they would like to do more exercise in 2024, this has been similar since 2018. Over 80% of those who did the recommended amount of exercise said they found it easy to be physically active compared to less than a third of those who did little or no exercise.

38.3% of children say they use active transport choices to travel to school (walking, scooting/skateboarding, cycling) a slight reduction on 2022, 41.5%. This has changed little over time - 41.6% of pupils reported using active transport to travel to school in 2012. Incorporating activity into travel to school could increase activity levels in children and young people who find it hard to access other forms of exercise and activity.



Cultural norms in specific communities such as modest female clothing in some religious communities may create or be perceived to create a barrier to exercise.

Accessibility to appropriate clothing such as sports bras or sanitary products may also create a barrier to exercise. There was no significant difference where girls and young women reported issues with their period was a barrier to exercise participation between broad ethnic groups. However,

Bangladeshi pupils were significantly more likely to say issues with their period were a barrier to exercise than white British pupils.

A higher proportion of girls and young women from minority ethnicity groups reported not going to school because they didn't have sanitary products available (3.7% vs. 2.9%) than their White British peers.





## Wider outcomes of exercise



Exercise has many direct physical benefits, it also indirectly impacts physical health as those who do the recommended amount of exercise also report making other healthy life choices and behaviours; these associations are likely to be bi-directional.

Children and young people who reported doing the recommended amount of exercise were significantly more likely to say they eat 5+ portions of fruit and veg a day than those who do little or no exercise (29.8% vs. 16.9%) and were also significantly more likely to report they had healthy food available at home (88.3% vs. 75.6%).

They are also less likely to smoke regularly (1.4% vs. 1.8%).

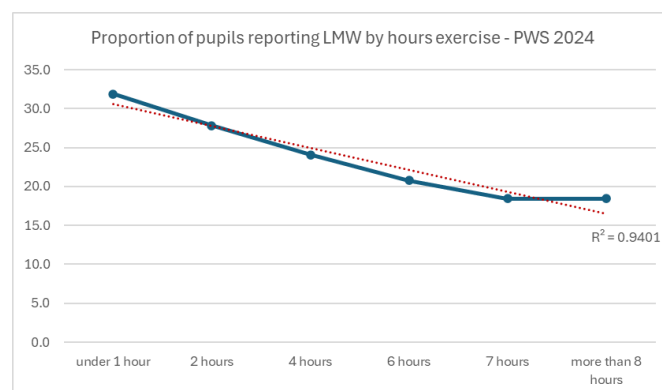
Research<sup>4</sup> suggests exercise can stimulate good brain development and increase learning capability. In 2024 children and young people who did the recommended exercise were significantly more likely to report enjoying school (59.2% vs. 54.1%), trying their best at school (82.1% vs. 77.3%) and learning a lot at school (71.6% vs. 68.2%) than those who did little or no exercise.

Those who exercised were slightly less likely to report missing at least 10% of school sessions in the previous term (31.1% vs. 33.1%) than those who did little or no exercise.

Feeling fitter and in control of your weight is also likely to contribute to body positivity and confidence. In the survey 56.4% of those who did the recommended level of exercise also reported feeling confident (vs. 43.4% of those who did little or no exercise) and 55.4% said they'd been feeling

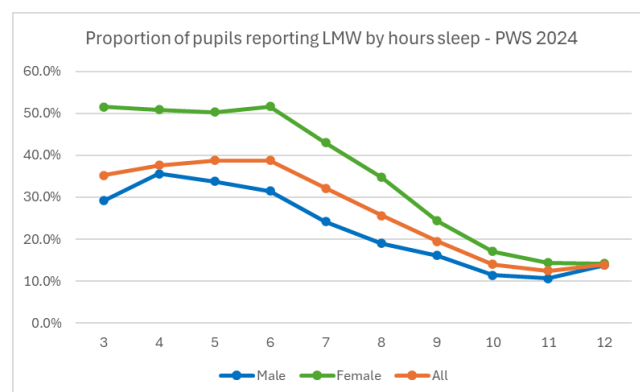
good about themselves compared to 46.1% of those who didn't exercise.

Increasingly the importance of exercise on mental wellbeing is being recognised. In 2024 the proportion of children and young people reporting low mental wellbeing reduced as physical activity increased. This trend suggests there is a strong correlation between physical activity and mental wellbeing. This trend was also observed in all surveys since 2018.



Getting the right amount of sleep has also been shown to have a big impact on children and young people's mental wellbeing, particularly for girls.

Children and young people who did not have the recommended hours sleep were significantly more likely to report low mental wellbeing (26.8%) compared to those who did get the recommended hours sleep (16.7%).

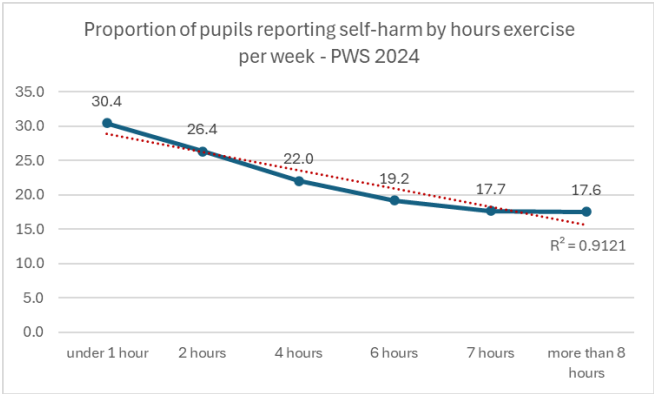


Exercise can help with sleep patterns; those who reported doing the recommended amount of exercise were significantly more likely to report getting the recommended amount of sleep than those who did little or no exercise (53.1% vs. 48.7%).

<sup>4</sup> 2019 University of Granada  
<https://digibug.ugr.es/handle/10481/60810?locale-attribute=en>



The proportion of young people (Y8-Y12) who said they had ever self-harmed was significantly lower for those who did the recommended hours exercise (18.2%) than those who did little or no exercise (27.8%), indeed the amount of exercise seems to be strongly correlated to likelihood of self-harming.



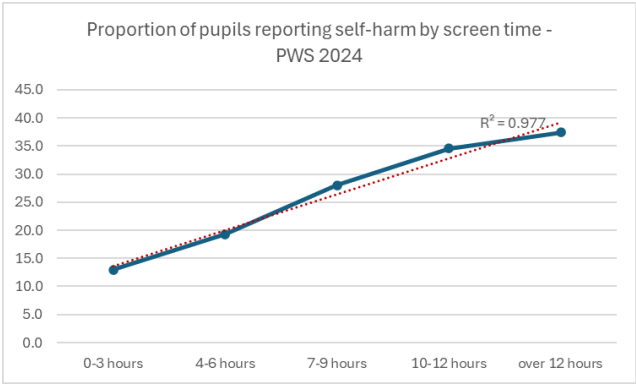
The impact of exercise on likelihood to self-harm seems to be more pronounced in young women where there is a 12.4 percentage point difference between those doing no exercise and those doing 7+ hours per week compared to a 6.0 percentage point difference observed in young men.

This highlights the importance of promoting exercise in teenage women.

In 2024 there was an increase in pupils reporting self-harm who reported doing over 8 hours exercise per week observed in both males and females. This is a change in the historic trend and may point to an increase in self-harm behaviours in groups most likely to do a lot of exercise.

Another emerging issue linked to mental wellbeing and self-harm risk is screen time; with research showing greater screen time being correlated to an increase in the likelihood of self-harm.

In 2024 the proportion of children and young people reporting self-harming increased as the amount of screen time did (R value 0.9).

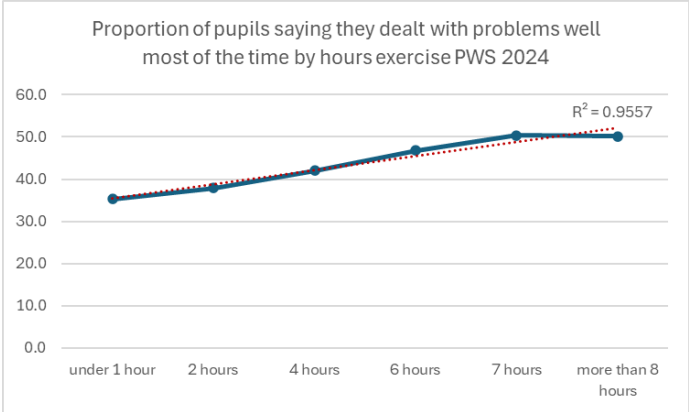


Those who reported doing the recommended level of exercise were more likely to have average screen time use compared to those who did little or no exercise. Over 1 in 3 of those who did little or no exercise (less than 1 hour per week) reported having 7+ hours screen time a day compared to less than 1 in 4 of those who did a lot of exercise (8+ hours exercise per week).

Relationship between exercise and screen time PWS 2024		
	Screen time per day	
Hours exercise per week	0-6 hours	7+ hours
under 1 hour	59.8%	37.9%
2 hours	67.5%	30.6%
4 hours	72.7%	25.9%
6 hours	75.2%	23.5%
7 hours	77.0%	21.6%
More than 8 hours	75.5%	23.1%

Resilience is a key skill that is more important for our children and young people than ever. Recent global shocks such as the coronavirus pandemic have given all children and young people huge challenges to face and resilience or the ability to cope with adversity positively and move forwards is vital.

Those who exercise were more likely to report feeling able to deal with problems well 'often/all of the time' than those who did little or no exercise.





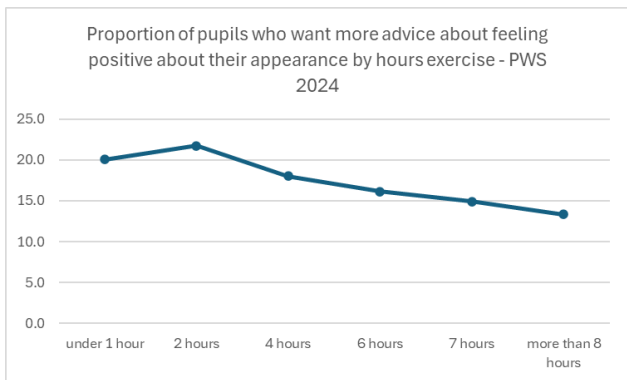
Sport and exercise can also be a key place to make and enjoy friendships or be supported by a trusted adult. 61.2% of those who do the recommended amount of exercise said they were good at making and keeping friends, and 65.7% said they did exercise to be with their friends (vs. 43.9% and 57.3% of those who didn't exercise).

Pupils who did the recommended hours exercise were significantly more likely to say they had someone to turn to if they had a problem than those who did little/no exercise (85.4% vs. 82.7%).

### Excessive exercise

Sometimes exercise can become an unhealthy if it becomes an excessive habit. Excessive exercise is sometimes classified as a form of self-harm particularly when coupled with extreme dieting.

Of those who reported exercising 8+ hours per week 16.4% also said they wanted more information about losing weight. This was the lowest proportion by level of exercise but still may indicate an unhealthy relationship with exercise. 1 in 7 of those who did 8+ hours exercise per week said they wanted more information about 'Feeling positive about my appearance' compared to 1 in 4 overall.

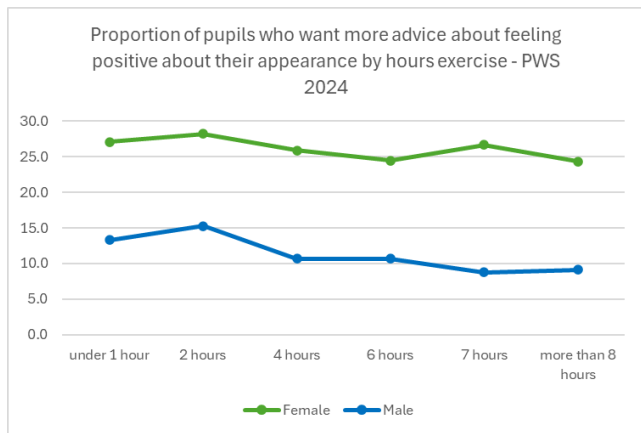


Whilst this indicates a positive association between exercise and body image it hides the difference between the sexes and it is still concerning that a sizable number of those who do a lot of exercise may still be unhappy with their

appearance and may indicate a level of body dysmorphia.

Girls and young women were more likely to report they wanted more information about feeling positive about their appearance than boys and young men.

It is clear the correlation between exercise and not wanting information about feeling positive about their appearance is driven by boys and young men who were also more likely to be doing higher hours of exercise.



Whilst the proportion of boys and young men wanting information about feeling positive about their appearance reduced as exercise levels increased, the proportion of girls and young women who wanted the same advice was more stable regardless of the amount of exercise they did; although, it was lowest in those who did 8+ hours per week.

1 in 5 of those who did 8+ hours of exercise per week reported low mental wellbeing and 17.6% reported ever self-harming.





## Summary

- Around half of the children and young people in Gloucestershire report doing the recommended amount of exercise per week
  - Boys and young men are more likely to do the recommended amount of exercise than girls and young women
  - Exercise participation had been increasing since 2018 but this has reversed in 2024
  - Levels of exercise in girls and young women has been increasing but is now decreasing, participation rates in boys and young men have plateaued
  - Significantly fewer children and young people in Gloucester district reported doing the recommended amount of exercise than in the other districts
  - Children and young people in Independent, Selective and schools where the majority of pupils lived in the least deprived areas were most likely to do the recommended amount of exercise
  - Children and young people at special schools and schools where the majority of pupils lived in the most deprived areas were least likely to do the recommended amount of exercise
- recommended amount of exercise than their White British peers
  - Perception of not being 'good' at exercise is the biggest barrier to participation. A quarter of girls and young women said their period was a barrier to exercise.
  - ¾ of children and young people said they wanted to do more exercise
  - Exercise appears to have a positive correlation with mental wellbeing
  - Exercise and other healthy behaviours such as eating healthily are strongly linked
  - The increase in exercise participation in older young people following the pandemic has reversed in 2024



- Children and young people with vulnerable characteristics were less likely to do the recommended amount of exercise, particularly those who identified as LGBTQ+
- Minority ethnicity children and young people were less likely to do the