

Are you sitting actively?

Not all sedentary behaviours are the same when it comes to mental health

Evidence Brief 21, April 2022

Excessive sedentary behaviour has been linked with poor mental health, including depression. But while much of the research on this area treats all sedentary behaviours as one activity, it may be that the importance of *what we do when we sit* has been overlooked.

Global data shows that adults are typically sitting for nearly five hours a day. For children, the focus is often on reducing recreational screen time. Indeed, more than half of all adolescents are watching more than two hours of television per day on weekends.

Separate sittings

Sedentary behaviour includes a range of activities: reading, gaming, home and office work, and travelling in vehicles. Each of these activities have distinct characteristics. How we classify and measure different sedentary behaviours is important to understanding their impact.

Some studies have attempted to group these behaviours by the way we divide our days – for instance, in leisure, travelling, at work and so on. However, within 'leisure', some behaviours – such as TV viewing – are associated with developing depressive symptoms. Other behaviours – such as computer use in adults and video games in adolescents – are not associated with depression, and can even be protective.

When it comes to mental health, therefore, a more helpful classification is one based on the level of mental activity or passivity during the time spent sitting.

From adolescence to adulthood

Data from the 1970 British Cohort Study showed that a higher level of mentally-passive sedentary behaviour during adolescence (at 16 years) was associated with elevated psychological distress during adulthood (at 42 years). There was no link between more mentally-active sedentary behaviour and later psychological distress.

And data from the Millennium Cohort Study showed that mentally-passive sedentary behaviour during early adolescence (11 years) was associated with higher depressive symptoms in later adolescence (at 15 years). Mentally-active sedentary behaviour at 11 was not associated with later depressive symptoms.



Mentally active sedentary behaviours:

- homework and office work
- driving a vehicle
- reading
- video games and interactive social media



Mentally passive behaviours:

- watching television or videos online
- relaxing
- sitting as a transport passenger



Brief in brief

- Excessive sedentary behaviour has been linked with poor mental health, including depression.
- Sedentary behaviour includes a wide range of behaviours, both mentally active and passive, and they have different associations with mental health indicators.
- Promotion of better mental health should focus on reducing mentally-passive sedentary behaviours.
- Research should find new ways to collect data that better distinguish between different types of sedentary behaviours.

Possible pathways: BMI and self-rated health

Research from adults and adolescents using the 1970 British Cohort Study and the Millennium Cohort Study also sought to investigate possible factors that could explain at least part of the harmful associations between mentally-passive sedentary behaviour and depressive symptoms.

In adolescents, Body Mass Index (BMI) partly explained the association, as did self-rated health in adults. In other words, this suggests that mentally-passive sedentary behaviour may lead to higher BMI (for adolescents) and lower self-rated health (for adults). This in turn could lead to higher depressive symptoms among adolescents and psychological distress among adults.

More important for girls

Research has found gender differences for the association between sedentary behaviour and depressive symptoms among adolescents. Mentally-passive sedentary behaviour is associated with depressive symptoms among girls, but not among boys.

This finding may indicate that other non-sedentary behaviours (e.g. physical activity) can be more important in the context of risks and protective factors for depressive symptoms among boys.

Priorities for future research

- Analyses of the association between sedentary behaviour and mental health outcomes should consider the different types of sedentary behaviour rather than just a single indicator of total sitting time.
- Currently, most commonly used questionnaires only include overall sitting time. This means the distinct associations of different behaviours with mental health outcomes may be underestimated.
- Research should therefore incorporate questionnaires that enable a distinction to be made between different types of sedentary behaviour.

Priorities for public health action

- Interventions to reduce sedentary behaviour should focus on behaviours that impact mental health. This may involve replacing mentally-passive sedentary behaviour with physical activity or with mentally-active sedentary behaviour.
- Increases in screen time caused by the COVID-19 pandemic are a particular cause of parental anxiety. However, refocusing screen time on mentally active activities may be more productive than attempts to place strict limits on total screen time.
- Interventions that target associated health factors (such as BMI and self-rated health) may also be helpful in reducing the connection between sedentary behaviour and poor mental health outcomes.

References

- Fully linked and referenced version of this Brief at www.cedar.iph.cam.ac.uk/resources/evidence
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