Could ADHD drugs reduce the risk of early death? Unpacking the findings from a new Swedish study

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Attention-deficit hyperactivity disorder (ADHD) can have a considerable impact on the day-to-day functioning and overall well-being of people affected. It causes a variety of symptoms including difficulty focusing, impulsivity and hyperactivity.
For many, a diagnosis of ADHD, whether in childhood or adulthood, is life changing. It means finally having an explanation for these challenges, and opens up the opportunity for treatment, including medication.

Although ADHD medications can cause side effects, they generally improve symptoms for people with the disorder, and thereby can significantly boost quality of life.

Now a new study has found being treated for ADHD with medication reduces the risk of early death for people with the disorder. But what can we make of these findings?

**A large study from Sweden**

The study, published this week in *JAMA*, was a large cohort study of 148,578 people diagnosed with ADHD in Sweden. It included both adults and children.

In a cohort study, a group of people who share a common characteristic (in this case a diagnosis of ADHD) are followed over time to see how many develop a particular health outcome of interest (in this case the outcome was death).

For this study the researchers calculated the mortality rate over a two-year follow up period for those whose ADHD was treated with medication (a group of around 84,000 people) alongside those whose ADHD was not treated with medication (around 64,000 people). The team then determined if there were any differences between the two groups.

**What did the results show?**
The study found people who were diagnosed and treated for ADHD had a 19% reduced risk of death from any cause over the two years they were tracked, compared with those who were diagnosed but not treated.

In understanding this result, it's important—and interesting—to look at the causes of death. The authors separately analyzed deaths due to natural causes (physical medical conditions) and deaths due to unnatural causes (for example, unintentional injuries, suicide, or accidental poisonings).

The key result is that while no significant difference was seen between the two groups when examining natural causes of death, the authors found a significant difference for deaths due to unnatural causes.

**So what's going on?**

Previous studies have suggested ADHD is associated with an increased risk of *premature death* from unnatural causes, such as injury and poisoning.

On a related note, *earlier studies* have also suggested taking ADHD medicines may reduce premature deaths. So while this is not the first study to suggest this association, the authors note previous studies addressing this link have generated mixed results and have had significant limitations.

In this new study, the authors suggest the reduction in deaths from unnatural causes could be because taking medication alleviates some of the ADHD symptoms responsible for poor outcomes—for example, improving impulse control and decision-making. They note this could reduce fatal accidents.

The authors cite a number of studies that support this hypothesis,
including research showing ADHD medications may prevent the onset of mood, anxiety and substance use disorders, and lower the risk of accidents and criminality. All this could reasonably be expected to lower the rate of unnatural deaths.

**Strengths and limitations**

Scandinavian countries have well-maintained national registries that collect information on various aspects of citizens' lives, including their health. This allows researchers to conduct excellent population-based studies.

Along with its robust study design and high-quality data, another strength of this study is its size. The large number of participants—almost 150,000—gives us confidence the findings were not due to chance.

The fact this study examined both children and adults is another strength. Previous research relating to ADHD has often focused primarily on children.

One of the important limitations of this study acknowledged by the authors is that it was observational. Observational studies are where the researchers observe and analyze naturally occurring phenomena without intervening in the lives of the study participants (unlike randomized controlled trials).

The limitation in all observational research is the issue of confounding. This means we cannot be completely sure the differences between the two groups observed were not either partially or entirely due to some other factor apart from taking medication.

Specifically, it's possible lifestyle factors or other ADHD treatments such as psychological counseling or social support may have influenced
the mortality rates in the groups studied.

Another possible limitation is the relatively short follow-up period. What the results would show if participants were followed up for longer is an interesting question, and could be addressed in future research.

What are the implications?

Despite some limitations, this study adds to the evidence that diagnosis and treatment for ADHD can make a profound difference to people's lives. As well as alleviating symptoms of the disorder, this study supports the idea ADHD medication reduces the risk of premature death.

Ultimately, this highlights the importance of diagnosing ADHD early so the appropriate treatment can be given. It also contributes to the body of evidence indicating the need to improve access to mental health care and support more broadly.

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