

# BREAK FREE

with

**OSCAR BAMUHIGIRE**

## Can smoking affect one's academic performance?

**Q** Dear Counsellor, Most of the children who smoke cigarettes in school also have bad grades. Does smoking affect one's academic performance?

Arnold, Kampala

**A** Dear Arnold, There are many reasons as to why children who smoke may have bad grades.

In most cases, such children may have other emotional or mental illnesses, which the school may view as indiscipline. These disorders can affect their academic performance.

Smoking itself can affect the academic performance of those who are underage, because of the effect that nicotine has on the developing brain.

Nicotine is a mood-altering drug; it is not surprising that its effects on the brain are not that different from those of other drugs or alcohol.

According to a 2011 study, published in the journal, *Neuropsychopharmacology*, the more a teenager smokes, the less active a certain brain region, called the prefrontal cortex (PFC), becomes.

This brain region deals with what we call "executive functions", which include basic cognitive processes such as decision-making, attentional control, cognitive inhibition, inhibitory control, working memory, cognitive flexibility, planning and fluid intelligence (reasoning and problem solving)

This is a brain region that is still developing structurally and

functionally in adolescents.

"As the prefrontal cortex continues to develop during the critical period of adolescence, smoking may influence the trajectory of brain development and affect the function of the prefrontal cortex" Prof. Edythe London, a senior author of the study, said.

She further explained that this effect on the development of the prefrontal cortex, can cause poor decision-making in teens as a result of immature cognitive control during adolescence.

"Such an effect can influence the ability of youth to make rational decisions regarding their well-being and that includes the decision to stop smoking." London said,

She further said: "As the prefrontal cortex continues to develop during the critical period of adolescence, smoking may influence the trajectory of brain development, affecting the function of the prefrontal cortex.

In turn, if the prefrontal cortex is negatively impacted, a teen may be more likely to start smoking and to keep smoking instead of making the decision that would favour a healthier life."

The researchers also observed that this kind of damage is reversible with early intervention, which may prevent the teen smoker, who may be smoking due to peer influence, from progressing into an addict.

**Oscar has about 20 years of continuous sobriety and 18 years experience as an addiction counsellor**

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