Secondary school-kids who use speed and ecstasy seem to be prone to subsequent depression, indicates research of almost 4000 teens published online in the *Journal of Epidemiology and Community Health*.

The findings were independent of previous bouts of depressive symptoms or other drug use, the research showed.

The popularity of meth/amphetamine (speed) and MDMA (ecstasy) has spread from clubbers and the rave scene to the general population, including secondary school children, with both drugs often taken at the same time, say the authors.

But concerns have been mounting that these synthetic drugs may cause long term neurological damage, particularly when the brain is still in development, as it is during adolescence.

The authors tracked the mental health of a sample of 3880 secondary school children living in disadvantaged areas of Quebec, Canada, between 2003 and 2008.

When they were aged 15 to 16 (grade 10) they were quizzed about their use of ecstasy and speed, and their mental health was then assessed a year later (grade 11) using a validated scale.

The use of speed was more common, with 451 (11.6%) of the sample admitting to taking it, while 310 (8%) of the sample admitted to taking
ecstasy while in grade 10.

The following year around one in seven of the teens (15%) scored at the upper end of the scale for depressive symptoms (CES-D score of 16 or more).

After taking account of previous depressive symptoms and other drug use, those who used either drug were between 60% and 70% more likely to exhibit heightened depressive symptoms than those who used neither.

And those who used both drugs-6.7% of the sample-were almost twice as likely to have these symptoms as those who used neither drug, suggesting that there are "additive or synergistic adverse effects of concurrent use," say the authors.

They add that their findings back those of other studies looking at long term use of synthetic drugs.

"Our results provide, to the best of our knowledge, the first compelling evidence that recreational [ecstasy] and [speed] use places typically developing secondary school students at greater risk of experiencing depressive symptoms," they write.

They concede that the contribution of this type of drug use to depression is "relatively modest," but caution: "Modest contributions can have significant clinical implications from a population health perspective."

And they suggest that further research is needed to ascertain whether these effects are the result of neurological damage and whether the adolescent brain is particularly vulnerable to the effects of synthetic drugs.