High smoking dependence linked to depression
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An international study coordinated by the University of Helsinki provides new information on the connection between symptoms of depression and smoking dependence. The results support the importance of understanding the reasons behind smoking dependence to be able to help depressed smokers to quit, and thus possibly relieve depression symptoms.

It has been widely reported that smoking is more common among the people suffering from depression than in the population in general. The actual mechanism of this association, however, remains unclear.

So far, studies about the association between smoking dependence and depression are very rare. This study, led by researchers from the University of Helsinki, focused on the different self-reported motivation factors for smoking. The work was carried out in collaboration with the Universities of Wisconsin and Missouri U.S., where the questionnaire was initially developed.

The study was based on more than 1400 Finnish twins who were smokers and provided smoking and depression information by responding to questionnaires. The results were published on February 24th in the esteemed scientific journal Addiction.

The study found that smokers who were more dependent were also more likely to be depressed. Of the different motives for smoking examined, the motives related to high levels of craving and automatic smoking behavior, as well as smoking to regulate emotional states were found to be the most strongly related to depression.

"Our results suggest that depressed persons are not smoking because of taste or taste-reward related to smoking. Rather, depression seems to be related to primary dependence motives and the regulation of mood," says Senior Researcher Maarit Piirtola, the first author of the study from the Institute for Molecular Medicine Finland at the University of Helsinki.

The unique twin study setting enabled the study team to rule out familial influences, including shared genetic vulnerability, by examining the association between depression and smoking dependence within twin pairs, especially within identical pairs.

According to Senior Researcher Tellervo Korhonen, who led the study, it is important to understand the individual underlying reasons that maintain smoking dependence, so that tailored and multidisciplinary smoking cessation support can be provided.

Even though this study gives strong new evidence about the relation between smoking dependence and depressive symptoms, the researchers highlight that this was a cross-sectional analysis. "Therefore, we could not show which happens first: smoking dependence or depression among daily smokers," says Professor and Research Director Jaakko Kaprio from the University of Helsinki.