



Having HIV Tied to Greater Link Between Depressive Symptoms and Death

This is from a large study of U.S. veterans followed for extensive periods.

April 17, 2019 By [Benjamin Ryan](#)

Among U.S. veterans followed for extensive periods, having HIV is associated with a stronger association between depressive symptoms and a risk of death.

Publishing their findings in *HIV Medicine*, researchers analyzed data on 129,140 members of the Veterans Aging Cohort Study (VACS) who were followed between April 2003 and September 2015. The study defined depression as either a diagnosis of depression or a score of at least 10 on the Patient Health Questionnaire (PHQ)-9 assessment of depressive symptoms.

The average age of the cohort members was 50 years old. More than 90 percent were men, and 50 percent were Black. The median follow-up time was 10.7 years.

Sixteen percent of the veterans had a diagnosis of major depression upon entry into VACS. Among those with major depressive disorder, 32 percent had HIV. Thirty percent of those who had depression according to the PHQ-9 were HIV positive.

By the end of the study's follow-up, 24 percent of the cohort had died, for a death rate of 25 deaths per 1,000 cumulative years of follow-up. Among the HIV-negative cohort members, the death rate per 1,000 cumulative years of follow-up was 20.2 deaths among those without a depression diagnosis and 22.7 deaths among those with a depression diagnosis. Among the HIV-positive cohort members, the death rate per 1,000 cumulative years of follow-up was 36.9 deaths and 39.4 deaths among those with and without a depression diagnosis, respectively.

After adjusting the data for the cohort members' HIV status, the study authors found that a depression diagnosis was associated with a 9 percent increased death rate. This association persisted when the researchers further adjusted the data to account for differences in various demographics and other health conditions. However, the increased death rate was attenuated to 4 percent.

When conducting this analysis separately between those with and without HIV, the investigators

found that among people without HIV, a depression diagnosis was associated with a 6 percent increased risk of death. This association was statistically significant, meaning it is unlikely to have been driven by chance. Among those with HIV, a depression diagnosis was associated with a 4 percent increased risk of death, although this association was not statistically significant.

When the researchers adjusted the data to account for differences in behavioral factors, mental health diagnoses and depression treatment, they found that this totally attenuated any association between depression and risk of death, regardless of the veterans' HIV status.

Compared with those who had a PHQ-9 score below 10, those with a score of 10 or above had a 17 percent increased risk of death when the investigators adjusted the data only for HIV status. This association persisted when the study authors further adjusted the data for various other factors.

In an analysis stratified by HIV status, a PHQ-9 score of 10 or higher was not associated with an increased risk of death among those without the virus. Among HIV-positive individuals, a PHQ-9 score of 10 or above, compared with a score below 10, was associated with a 24 percent increased risk of death. Adjusting the data for behavioral factors, mental health diagnoses and depression treatment had little attenuating effect on this association.

To read a press release about the study, [click here](#).

To read the study abstract, [click here](#).