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Title: Symptoms of Depression, Anxiety and Post-Traumatic Stress among Coal Miners compared to others Occupational Groups in a Population Survey in the Appalachia Region

Organization: University of California, San Francisco.

Principal Investigator(s): Paul Blanc

Partnerships: Davis Research LLC, University of Illinois, Chicago

Focus Area: Injury and Disease Exposure and Risk Factors: Surveillance and Epidemiology Methods

SYNOPSIS

The seminal 2021 paper by Harris and colleagues reporting a very high prevalence of depressive symptoms, anxiety and post-traumatic stress disorder (PTSD) among coal miners in Appalachia seeking care for coal workers' pneumoconiosis (CWP) sounded the alarm that these mental health disorders may be at a crisis level among this population. Yet without further investigation, these findings cannot be generalized to the wider coal mining population that includes persons with and without CWP nor can they be compared to other occupational groups in the region.

Research Approach

We propose a population-based random-digit dial (RDD) survey of 1500 men aged 50 or over in the same Appalachian counties that we have previously surveyed successfully. The RDD approach is the method of choice to correctly estimate the true prevalence of depression, anxiety, and PTSD among coal miners, not limited to those seeking medical care for CWP. Because the survey will not select participants based on health status or work histories, it will allow for a comparison of the prevalence of these conditions among those with and without coal mining work histories. The survey will be conducted by Davis Research, our survey research collaborator on our other successful Alpha Foundation-supported studies. We will assess symptoms of depression, anxiety, and post-traumatic stress disorder (PTSD) using brief, widely-accepted, standardized survey instruments. We will use established score cut-offs, defining the presence or absence of these conditions dichotomously. The survey will also include specific items on PTSD associated with coal mining work-related events.

Impact of the Research

Our survey will generate reliable estimates of the prevalence of symptoms of depression, anxiety and PTSD among men aged 50 or over in Appalachia with or without a history of coal mining. This research will be impactful because it can establish that depression, anxiety, and PTSD among coal-miners represents a substantial burden for which health care services should be mobilized, accompanied by health care policies commensurate to this problem.

