According to the World Health Organization and the International Labor Organization, every year over 745 thousand people die worldwide due to overworking. The mental health problem contributing to these deaths is work addiction (also often called workaholism). The prevalence rate estimates for work addiction are 7-8%. Besides death, work addiction leads to perceived stress, job burnout, and deteriorated work engagement. This study aimed to investigate how symptoms of work addiction cooccur with dimensions of perceived stress, job burnout, and work engagement. The sample comprised 676 working Poles: 476 females (70.4%), 191 males (28.3%), and nine individuals who did not report their gender (1.3%). Their mean age was 36.12 years (SD = 11.23), ranging from 20 to 79. Data collection was based on convenience sampling and took place from January 2014 to July 2016. The psychological variables were measured with the Bergen Work Addiction Scale, the Perceived Stress Scale, the Maslach Burnout Inventory – General Survey, and the Utrecht Work Engagement Scale. The network analysis was carried out following the guidelines for estimating psychological networks from cross-sectional data. The results showed four direct relationships between symptoms of work addiction and dimensions of perceived stress, job burnout, and work engagement. Use of work for mood modification purposes (mood modification symptom) co-occurred with perceived stress and absorption dimension of work engagement. The negative influence of work on an individual's health (problems symptom) co-occurred with the exhaustion dimension of job burnout. Experiencing stress when being prohibited from work (withdrawal symptom) co-occurred with the absorption dimension of work engagement. The results obtained with network analyses are congruent with theoretical considerations regarding the relationships between work addiction and the three phenomena. Further studies should investigate whether the observed relationships are causal and could be influenced.