

Do Symptoms and Cognitive Problems Affect the Use and Efficacy of a Web-Based Decision Support System for Smokers With Serious Mental Illness?

Joelle C. Ferron, PhD,¹ Mary F. Brunette, MD,² Susan R. McGurk, PhD,³ Haiyi Xie, PhD,¹ Rochelle Frounfelker, MSSW, MPH,⁴ Judith A. Cook, PhD,⁵ Jessica A. Jonikas, MA,⁵ and Gregory J. McHugo, PhD¹

Objective: People with severe mental illnesses are more likely to have nicotine dependence than the general population and do not use effective cessation treatment when they try to quit. Previous research has shown that a web-based motivational decision support system tailored for this population is associated with increased use of evidence-based cessation treatment. This study examines how user characteristics, including cognitive functioning and psychiatric symptoms, impact use and outcomes of this website. **Methods:** One hundred twenty-eight smokers with severe mental illnesses were assessed at baseline for demographics, smoking characteristics, symptoms, cognition, and reading ability. They used the decision support system within 2 weeks of the baseline interview. Two months after use of the decision support system, researchers assessed participants' smoking behaviors, use of evidence-based cessation treatment, clinician contact, and other quitting behaviors. Analyses modeled the relationship of participant characteristics to (a) process outcomes, including time spent on the website, and (b) behavioral outcomes, including use of effective cessation treatment. **Results:** Thirty-two percent of smokers initiated one or more of the recommended treatments after using the decision support system and 51% demonstrated some kind of smoking cessation behavior. When controlling for cigarette use, symptoms, cognition, and other potential predictors, regression analysis showed that being older, having a diagnosis of a schizophrenia spectrum disorder, and cognitive impairment were associated with a greater amount of time spent in the motivation section. Older age and diagnosis of schizophrenia were associated with time spent in the decision support section. Controlling for multiple characteristics, participants' self-reported readiness to quit smoking was the only characteristic that predicted use of cessation treatment and other cessation behaviors over the following 2 months. **Conclusions:** Smokers with serious mental illness compensated for symptoms, old age, lower cognition, and lower reading capability by taking more time using the motivational decision support system. Following use, one-third of smokers engaged in treatment regardless of individual characteristics. The flexible design of this intervention may allow participants to tailor their use of it to meet individual needs. Future research should address both process and outcomes of motivational smoking cessation interventions. (*Journal of Dual Diagnosis*, 8:315–325, 2012)

¹Dartmouth Psychiatric Research Center, Department of Psychiatry, The Geisel School of Medicine at Dartmouth, Hanover, New Hampshire, USA

²Department of Psychiatry, The Geisel School of Medicine at Dartmouth, Concord, New Hampshire, USA

³Center for Psychiatric Rehabilitation, Boston University, Boston, Massachusetts, USA

⁴Thresholds-Dartmouth Research Center, Chicago, Illinois, USA

⁵Center on Mental Health Services Research and Policy, Department of Psychiatry, University of Illinois at Chicago, Chicago, Illinois, USA

Address correspondence to Joelle C. Ferron, PhD, Dartmouth Psychiatric Research Center, 85 Mechanic St., Suite B4-1, Lebanon, NH 03766, USA. E-mail: joelle.ferron@dartmouth.edu