Rates of cigarette smoking among adults in the United States have remained relatively stable over the past several years. While approximately 30-40% of smokers make a serious quit attempt each year, less than 10% are able to quit permanently. Evidence from studies of adolescent smoking behavior and other substances of abuse suggest that the presence and influence of alternative reinforcers, a construct of Behavioral Economic Theory, may contribute to the likelihood of successful smoking cessation in adults. This investigation examines the behavioral economics of smoking cessation within a smoking cessation clinical trial and evaluates how depressive symptoms interact with behavioral economic variables to predict smoking cessation.

A sample of 469 smokers, enrolled in a trial that provided counseling and 8 weeks of 21mg nicotine patches, was analyzed. Alternative reinforcers and depressive symptoms were assessed during the treatment period and examined as predictors of 7-day point prevalence abstinence, verified with breath carbon monoxide, 8 weeks after the quit date. Controlling for nicotine dependence and age of smoking initiation, participants who were abstinent at week 8 showed a greater increase in substitute reinforcers (Wilks’ Lambda = 0.945, F[3,353] = 6.9, p < .001) and greater decreases in complementary reinforcers (Wilks’ Lambda = 0.967, F[3,353] = 3.97, p=.008) and depressive symptoms (Wilks’ Lambda = 0.978, F[3,350] = 2.66, p=.048) from baseline to week 8 compared to participants who were smoking at week 8. There was no significant interaction between changes in alternative reinforcers and changes in depressive symptoms on week 8 abstinence rates. These results provide novel, preliminary support for the use of Behavioral Economic Theory in understanding adult smoking cessation, which could inform future treatments and guidelines.