



Coffee Break Companion

“Learn what the latest research says about adolescent substance abuse in the time it takes to have your coffee break”



The Article

Title: Assessing the feasibility of using contingency management to modify cigarette smoking by adolescents

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Introduction

Many people who currently smoke started before turning eighteen. In addition, adolescents who smoke are more likely to report using other drugs and to report binge drinking. The majority of adolescent smokers reported they would like to quit and 55% said they had tried to quit once in the past year. Smoking rates among high school students are still high even though they have declined over the past few years.

Methods that are successful with adult smokers do not seem to work for adolescents, such as nicotine replacement therapy. Most contingency management best practice research has been done with adult drug users. This study is one of the few that has actually looked at using contingency management with adolescents.

Participants

Twenty-two adolescent daily cigarette smokers participated in the four-week intervention. They all reported a desire to quit and had tried to quit an average of two times before. The majority of the adolescents were Caucasian males and the mean age was 16.5 years. The researchers obtained consent from the legal guardians and the adolescents provided assent to participate.

Measures

The adolescents were randomly assigned to two different groups: abstinence or attendance. All of them were told to smoke as they normally would for the two weeks prior to the intervention. On the Friday of each of those weeks the adolescents provided baseline Carbon Monoxide (CO) samples by blowing through a small handheld device that gave immediate results. This technique correlates strongly with recent cigarette smoking even though it does not guarantee detection of all smoking. The researchers distributed educational materials to all participants and they told the adolescents to use “willpower” to quit. Throughout the intervention, adolescents reported on their “desire to smoke” and “physical need to smoke” on four-point scales. Each intervention session lasted for about ten minutes where they were given any vouchers they had earned.

The vouchers used in this study were redeemable at a local department store. Adolescents in either group were eligible to receive the same number and total dollar amount of vouchers. The only difference was that those in the abstinence group were rewarded when their CO samples were less than six points per million (ppm). The adolescents in the attendance group were rewarded for each session they attended regardless of CO level. Participants in each group received a \$5.00 voucher each time they met the requirements. If they were abstinent or attended for the entire week they received a bonus voucher at the end of the first week for \$10.00, \$20.00 the second, \$30.00 the third, and \$40.00 the fourth. If they failed to abstain or attend for a whole week, the next bonus voucher they were eligible for decreased to \$10.00. The adolescents received a \$10.00 voucher regardless of CO level, if they participated in a follow-up after one month.

Results

There was no significant difference between the two groups in regards to completion of the study. More participants from the attendance group participated in the follow-up visit. Adolescents in the abstinence group were significantly more likely to have CO samples that were less than six ppm. The majority of adolescents in each group were able to have a week of continuous abstinence, however, relapse rates for the week after the period of abstinence were considerably lower for those in the abstinence group. Adolescents in the abstinence group reported less desire to smoke and a greater physical need to smoke throughout the intervention. Both groups were able to reduce their smoking but those who were rewarded for being abstinent had more periods of abstinence, a higher percentage of low CO samples, and lower average CO levels throughout.

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