

Contributions of Behavioral and Social Sciences Research (BSSR) to Improving Health

The Public Health Problem

480,000 Approximately 480,000 deaths are attributed to cigarette smoking every year, including deaths from exposure to secondhand smoke.¹

1 in 5 Approximately 1 in 5 Americans uses tobacco products.² Most long-term tobacco users began using these products prior to 18 years of age and continue to use them throughout their lives.³

\$300B The annual smoking-attributable economic costs in the United States are estimated at \$300 billion, including costs of medical care and of lost productivity due to premature death and to secondhand smoke exposure.⁴

Smoking is known to increase an individual's risk for several cancers and other conditions, including the following:

- Cardiovascular disease
- Chronic obstructive pulmonary disease
- Lung, liver, and colorectal cancer
- Diabetes
- Stroke
- Asthma
- Tuberculosis
- Birth defects during pregnancy
- Age-related macular degeneration
- Cataracts
- Erectile dysfunction

BSSR Health Impacts

Policy Interventions

Public policy interventions have had significant effects on tobacco use. Smoke-free environments not only reduce exposure to secondhand smoke, but also de-normalize tobacco use.⁵ Increasing the price of tobacco products through taxation has been shown to prevent smoking initiation, promote cessation, and reduce prevalence and intensity of tobacco use among youth and adults users.⁶ Although not as widely implemented, contingency management programs that pay smokers during the difficult early stages of quitting are very effective, although additional treatments are needed to sustain effects over time.⁷



Cognitive Behavioral Therapy

Treatments based on Cognitive Behavioral Therapy (CBT)⁸ are highly effective for smoking cessation.⁹ One study found that approximately 17% of individuals undergoing CBT treatment quit smoking through a 6-month timepoint, compared to only 6 percent of individuals receiving a control non-CBT therapy.¹⁰ CBT combined with medication is a standard treatment for smoking cessation and can improve abstinence rates through a 12-month follow-up, compared to medication treatment alone.¹¹



Acceptance and Commitment Therapy (ACT)

Acceptance and Commitment Therapy (ACT) helps individuals recognize and change their relationship to internal triggers of smoking, such as cravings and withdrawal. Some studies have found that ACT helped individuals achieve quit rates of approximately 30% 12 months after treatment.¹² ACT may be particularly efficacious for smoking cessation in populations with moderate to severe mental illness.¹³



School-Based Tobacco Prevention

Because many lifetime tobacco users start before age 18, school-based smoking abstinence programs may generally mitigate tobacco use. Approximately 65% of evidence-based school programs have a long-term impact on reducing tobacco use in school-aged children.¹⁴



Digital Interventions

Digital interventions provide continuous behavioral support that is not achievable in live interactions and that has demonstrated success at increasing quit rates. A meta-analysis found that increased interaction with phone counseling services (also called quitlines) can increase an individual's chance of quitting by 20-60%, depending on the study.¹⁵ Texting campaigns, such as txt2stop, have also been successful in improving smoking cessation rates.¹⁶



References and Definitions

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- 3 National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. (2014). [The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General](#). Centers for Disease Control and Prevention. [\[Back\]](#)
- 4 Centers for Disease Control and Prevention. (Updated 2021). [Economic Trends in Tobacco](#). [\[Back\]](#)
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- 6 National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. (2014). [The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General](#). Centers for Disease Control and Prevention. [\[Back\]](#)
- 7 Office of the Surgeon General. (2020). [Smoking Cessation: A Report of the Surgeon General](#). U.S. Department of Health Services. [\[Back\]](#)
- 8 CBT is a structured form of talk therapy that helps individuals become aware of inaccurate or negative thought patterns so that they can change those patterns and respond to challenging situations in a more effective way.
– Definition adapted from the Mayo Clinic [\[Back\]](#)
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