Understanding Adolescent Beliefs and Intention to Smoke: the Effect of Antismoking Information

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The paper considers the effect of antismoking school presentations on adolescent beliefs and intention to smoke. Using the theory of reasoned action as the theoretical basis, the objective is to explore linkages between prior beliefs about smoking and future intention to smoke. In particular, the research explores how antismoking interventions, which explore short-term issues such as unpleasant smelling clothes and bad breath and long-term issues such as the impact on health, affect beliefs about smoking, which then impact upon smoking intentions. The analysis shows the efficacy of certain anti-smoking messages upon beliefs and behavioral intentions in the 12 to 14 year old age group. The implications for the design of antismoking communications targeting adolescents are considered.

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EXTENDED ABSTRACT

Cigarette consumption has been the subject of growing interest among academics and public policymakers. A primary concern has been the efficacy of antismoking campaigns and messages (Netemeyer, Andrews, and Burton 2005; Pechmann Goldberg, and Reblin 2003; Peracchio and Luna 1998; Smith and Stutts 2003; Wolburg, 2004). Authors suggest that exposure to antismoking information and messages may enhance prior beliefs about smoking and thus affect smoking-related behavioral intentions and attitudes. However, others argue that adolescents’ exposure to antismoking messages or information has little effect on smoking behavior or smoking-related beliefs (Pechmann and Ratneshwar 1994). Researchers have been also concerned with the factors which influence smoking (Pechmann and Knight 2002; Stanton, Barnett, and Silva 2004). These include family smoking habits, peer pressure, parental factors, antismoking information and cigarette advertising (Harakeh et al. 2004; Smith and Stutts 1999), prior smoking behavior (Collins et al. 1987) prior beliefs and attitudes (Peracchio and Luna 1998) and behavioral intention. Many studies have measured intention to smoke cigarettes, some reporting an association between intention to smoke and current smoking status. Others suggest that intention is a significant predictor of later smoking behavior (Stanton et al. 2004). Behavioral intention models, including the theory of reasoned action (Fishbein and Ajzen 1975) which incorporates behavioral intention to perform a behavior, has been used to predict adolescent smoking behavior (Chassin et al. 1984; Harakeh et al. 2004). The theory suggests that actual behavior is determined by a person’s intention to perform the behavior which in turn is determined by attitudes (beliefs about behavior) and subjective norms (Fishbein and Ajzen 1975). Thus attitudes are said to be determined by prior beliefs about a behavior based on knowledge about the benefits or dangers of cigarette consumption. Heightened knowledge resulting from exposure to tobacco advertising or antismoking messages and information has been found to affect prior beliefs about the advantages and disadvantages of smoking among adolescents (Higgins and Bargh 1987). In the context of the theory of reasoned action, individuals’ intention to smoke is affected by what others think about smoking.

Using the theory of reasoned action as the theoretical basis, the focus of this study is to explore the effect of antismoking school presentations on adolescent beliefs and intention to smoke. The objective is to explore linkages between prior beliefs about smoking and future intention to smoke. The context for the research was a school-based intervention similar to the approaches recommended by the Centre for Disease control as potentially effective means of communicating with adolescents. Interventions that address individual attitudes with respect to tobacco have been recommended in adolescent anti-smoking campaigns (Castrucci et al. 2002), since attitudes can influence initiation and continuation of smoking behavior (Botvin et al. 1998). Research respondents represented pupils from six schools in England who took part in a three-stage anti-smoking program designed to teach adolescents to resist social pressure and refuse tobacco when offered. The respondents, who were aged 12-14, took part in a single, participative forty-minute presentation made by a trained counselor. Respondents were also provided with information packs to take away and all of the pupils attending the sessions were asked to complete questionnaires. A three-step research process was devised which fitted around the presentation. Stage one involved the completion of a questionnaire a week before the intervention presentation. Pupils were asked to respond to a series of statements which tested their knowledge of smoking hazards. Immediately after the intervention, pupils were asked to respond to a set of identical questions about smoking effects and their attitudes towards smoking (stage 2). One month after the presentation respondents were asked to respond to the same series of questions as stages one and two (stage 3).

A total of 1300 questionnaires were received for all three stages. Adolescents’ beliefs about smoking were captured by nine items derived from a scale used in a previous study in Australia. Each item was treated as independent following reliability analysis which indicated low $r^2$ values and correlations among items. In line with previous research (Stanton et al. 2004) adolescents’ intention to smoke was measured by a single categorical item. The analysis was conducted in two phases. The first phase involved generalised linear modeling to detect the independent variables (prior beliefs about smoking) explaining the variance in the dependent variable (intention to smoke) at each stage of the study. Different combinations of the independent variables were grouped and tested on the basis of goodness of fit (Deviance). The second phase of the analysis used the significant independent variables emerging from the first phase to determine the functional form of the models expressed as Poisson log-linear. Model coefficients were derived to examine the effects of prior beliefs on intention to smoke at each stage of the study. Non-response was also estimated by comparing pupils who participated in all three stages with those that did not (Lin and Schaeffer 1995). Findings indicated that there are no significant differences between the two groups of respondents.

The findings of the analysis reflected the positive impact of the anti-smoking presentation in that more adolescents agreed about smoking’s harmful effects at stage 3 of the study compared to stage 1. In addition, the positive effect of adolescents’ belief about smoking’s harmful effects on their intention to smoke was highlighted since the majority of respondents indicated in all three stages that they do not intend to smoke in the future. This is consistent with the theory of reasoned action in that a link is demonstrated between prior beliefs and intention to smoke (Fishbein and Ajzen 1975). In addition, the findings reveal the importance of specific message content in determining the effectiveness of anti-smoking interventions. For the age group studied in this research, the impact of smoking on health and ability to play sport, has been shown to be particularly powerful. This has implications for message design in future anti-smoking interventions and communications. Future research should explore the detailed make up and efficacy of such messages for different target groups. An improved understanding of the extent to which these messages impact upon long-term views about smoking is also required.
REFERENCES


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