

THE DIFFERENTIAL IMPACT OF BELIEFS ON  
INTENTIONS TO TRY AND INTENTIONS TO ADOPT CIGARETTES\*

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Abstract

Intentions to try a cigarette were predicted significantly better by the Ajzen and Fishbein model when the attitudinal and normative components were operationalized in terms of beliefs specifically related to "trying" than when operationalized by beliefs specifically related to "smoking," and intentions to smoke were predicted significantly better by the model when the components were operationalized in terms of beliefs related to "smoking" than when operationalized by beliefs related to "trying." The magnitude of the differences was so small however that Fishbein's suggestions for improvements in the content of smoking prevention programs, aimed at adolescents, do not appear to be warranted.

Much of the recent research on consumer choice is influenced by the conceptual framework of cognitive social psychology. This framework emphasizes the importance of beliefs, attitudes, and intentions as the most immediate determinants of behavior.

Trial versus Adoption

In applying this approach the assumption is implicit that the beliefs which underlie attitudes, which in turn underlie intentions, which in turn underlie brand purchase behavior (Fishbein and Ajzen, 1975), are the same beliefs which underlie trial of a brand. See Green and Srinivasan (1978), Green and Wind (1973), and Wilkie and Pessemier (1973) for instances of this implicit assumption in conjoint analysis, multidimensional scaling, and multiattribute attitude modeling. This assumption may not always be correct however. As Fishbein has observed, the set of beliefs which underlie one type of behavior may be irrelevant to another type of behavior:

"there are a large number of beliefs that are material for any given smoking decision. It is important to realize, however, that a belief that may be material to one smoking decision (e.g., starting to smoke) may be immaterial to another (e.g., continuing to smoke)..." (Fishbein, 1977, p. 24).

If the beliefs which underlie trial of a product are in fact different from those which underlie adoption or purchase, this could have important implications for policy. In the case of cigarette smoking for instance, the best appeals to use in prevention programs aimed at adolescents may be quite different if the objective is to dissuade adolescents from trying a cigarette than if the objective is to dissuade them from becoming a cigarette smoker. The difference in objectives is particularly important in the case of cigarette smoking where trial is often tantamount to becoming a smoker due to the physiological (Goodman, 1968; Schachter, 1977)

and psychological dependence producing properties of cigarettes (Russell, 1974). (A fact unbeknown to most adolescents.)

In a recent and comprehensive review of the public literature on consumer beliefs and attitudes towards cigarette smoking, Fishbein came to the conclusion that although anti-smoking campaigns have played a major role in reducing generic demand for cigarettes, many anti-smoking campaigns failed "primarily due to (a) the selection of inappropriate arguments and/or (b) a failure to select a sufficient number of appropriate arguments" (Fishbein, 1977, p. v).

Purpose of Study

This distinction between "trying" or "smoking" is one aspect of the more general issue of "correspondence" which has been raised in the application of the Ajzen and Fishbein model (Ajzen and Fishbein, 1975). According to Fishbein and Jaccard (1973), a behavioral intention involves four distinct aspects: an action, the object toward which the action is directed, the situation in which the action occurs, and the time at which the action occurs. Predictions of intentions using the Ajzen and Fishbein model are expected to be greater when a high correspondence exists, along these four aspects, between the attitudinal and normative components of the model and intentions. Previous research has already demonstrated the effect of correspondence with respect to the object (Davidson and Jaccard, 1975; Fishbein and Jaccard, 1973) and with respect to situational (as well as object) aspects (Schlegel, Crawford, and Sanborn, 1977). This study investigated the effects of correspondence with respect to alternative actions, trying and smoking, directed toward the same object, cigarettes.

Method

Respondent Selection

To provide an appropriate test of the hypothesis, adolescents, who are presently in the stage when cigarette smoking typically is initiated, were selected as respondents. Bynner (1969) reported a progressive increase in smoking rates over the period from ages 11-15 (4% at age 11, 9% at age 12, 17% at age 13, 27% at age 14, and 38% at age 15). Although some surveys (Adult Use of Tobacco, 1975) provide evidence that smoking began in some cases as early as age 6, we selected students in grades six through twelve. All 4620 students in one county school system in a mid-western state were investigated.

Questionnaire Design and Administration

Attitude toward the act (Aact) was derived by multiplying subjects' beliefs about the consequences of the behavior by their evaluation of those beliefs. Thirteen belief items were generated by a review of the relevant literature and these beliefs were pilot tested with a

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separate but similar sample of students. Following Fishbein's (1977) recommendations, all beliefs were stated in a personally relevant way rather than in terms of the general consequences of the behavior of interest. Subjects indicated their degree of belief for each item on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree."<sup>1</sup> Parallel forms of each of the 13 beliefs were constructed for "smoking" and for "trying" (e.g., "If I smoke (try) cigarettes I will feel good."). Beliefs were evaluated on a 5-point Likert scale ranging from "very bad" to "very good." (e.g., "If I feel good that will be:").

Normative beliefs concerning four different referents' expectations for smoking behavior were measured on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The four referents were: friends, parents, best friend, and steady boy/girl friend. (e.g., "My friends think that I should smoke (try) cigarettes."). Parallel forms were constructed for "smoking" and "trying."

Behavioral intentions concerning each of the two behaviors, smoke and try, were measured on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." (e.g., "I plan to smoke (try) cigarettes a year from now.").

Smoking status was measured on a 6-point scale: (1) "I have never smoked a cigarette, not even a few puffs." (2) "I have smoked a cigarette or a few cigarettes 'just to try' but I have not smoked in the past month." (3) "I no longer smoke but in the past I was a regular smoker." (4) "I smoke regularly but no more than one cigarette a month." (5) "I smoke regularly but not more than one cigarette a week." (6) "I smoke more than one cigarette a week."

The questionnaire was group administered by a research team whose members were unaffiliated with the school system. Respondents were instructed that their responses would be kept strictly confidential.

### Results

As expected, a significant percentage of these respondents had experienced cigarette smoking but most were still at the stage when the decision to try a cigarette and the decision to become a smoker was imminent. For purposes of analysis all respondents who endorsed Item 1 ("I have never smoked a cigarette, not even a few puffs.") were classified as "nonsmokers." The percent of nonsmokers in grades 6 to 12 were: 65.8, 55.8, 47.3, 37.1, 35.5, 28.7, and 27.7. Only the results for the nonsmokers are reported here.

To test the hypothesis, the procedure used by Schlegel, Crawford, and Sanborn (1977) was adopted. (All analyses were performed on a randomly selected 2/3 of the sample. Predictions to the remaining 1/3 "hold out" sample showed R very close to those obtained in the main sample.) Intentions to smoke and intentions to try cigarettes were each predicted by multiple regression using corresponding and noncorresponding beliefs. That is, intentions to try (smoke) were predicted by beliefs relating to both trying and smoking. Predictions were generated for each of two grade levels, middle school (6, 7, 8) and high school (9, 10, 11, 12). The multiple

<sup>1</sup>In our pilot testing, likelihood scales were used to measure both intentions and beliefs, but this caused difficulty among the younger subjects. For this reason a Likert scale was adopted for both intentions and beliefs.

correlation coefficients and beta weights for each component of the model are presented in Table 1. The model significantly predicted intentions in every condition, but as hypothesized, when the intentions measure and the beliefs corresponded the accuracy of prediction was significantly higher in every case ( $p < .05$ ).

TABLE 1

PREDICTION OF INTENTIONS USING CORRESPONDING AND NONCORRESPONDING BELIEFS

| Grade Level          | Intentions Specific to |       |
|----------------------|------------------------|-------|
|                      | Smoke                  | Try   |
| <u>Middle School</u> |                        |       |
| <u>Smoke</u>         |                        |       |
| R                    | .39**                  | .33** |
| $\beta$ Aact         | .25**                  | .20** |
| $\beta$ NB           | .25**                  | .21** |
| (649) <sup>a</sup>   |                        |       |
| <u>Try</u>           |                        |       |
| R                    | .36**                  | .39** |
| $\beta$ Aact         | .14**                  | .12** |
| $\beta$ NB           | .31**                  | .35** |
| (649)                |                        |       |
| <u>High School</u>   |                        |       |
| <u>Smoke</u>         |                        |       |
| R                    | .43**                  | .33** |
| $\beta$ Aact         | .24**                  | .22** |
| $\beta$ NB           | .30**                  | .20** |
| (500)                |                        |       |
| <u>Try</u>           |                        |       |
| R                    | .39**                  | .37** |
| $\beta$ Aact         | .10**                  | .18** |
| $\beta$ NB           | .36**                  | .30** |
| (500)                |                        |       |

<sup>a</sup>Number of subjects

\*  $p < .05$

\*\* $p < .01$

Moreover the pattern of beta weights across conditions changed as corresponding or noncorresponding beliefs were used. When intentions to smoke were predicted by beliefs relating to smoking the Aact and NB components were found to be equally important for middle schoolers and NB was slightly more important for high schoolers. But when intentions to smoke were predicted by beliefs relating to trying, NB was of greater importance among middle schoolers and high schoolers. Similarly, when intentions to try were predicted by beliefs relating to trying the NB component was of greater importance than the Aact component for both middle and high schoolers. But when intentions to try were predicted by beliefs relating to smoking the two components were of equal importance for both middle and high schoolers.

### Discussion

The results supported the hypothesis at a "statistically significant" level, but the absolute magnitude of the difference was very small in every case. Fishbein's (1977) suggestion that promotional messages designed to dissuade adolescents from smoking would be improved if these messages were highly specific therefore do not receive strong support from this study. On the other hand, the change in the pattern of relative importance of the Aact and the NB components does suggest

differences of practical significance, depending upon the beliefs used. For instance the greater importance of the NB component for trying a cigarette suggests that appeals directed at this component might be more effective than appeals directed at the attitudinal component.

Perhaps the more important result of this study, however, is the relatively small percentage of variance (19%) explained by the Ajzen and Fishbein model in even the best condition (for intentions to smoke among high school students). This poor performance of the model occurred even though great effort was made to identify beliefs and referents relevant to smoking behavior and these beliefs were expressed in personally relevant terms as suggested by Fishbein (1977). More research is required to identify those variables which explain the variability not accounted for by the Ajzen and Fishbein model.

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