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Smoking Behavior Investigation in Students of Isfahan Medical University Iran

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Abstract: Using the tobacco is a worldwide problem and the leading causes of preventable deaths in the United State. Epidemiological researches on adolescent tobacco use has focused on external behavioral influences such as the smoking behavior of friends and parents and tobacco advertising, to predict smoking behavior of adolescent. This was a cross- sectional study to test some constructs of BASNEF model as a common theory in understanding and predicting the intention of 100 smoker students of Isfahan Medical University in prevention of smoking. The samples were randomly selected from the smoker students of schools of Isfahan University. For data analysis, Descriptive statistics, Chi- square, ANOVA and spearman test were used. All participants were male. The age of them ranged from (20-30) years old. About 52% of friends of students and 31% of their parents and family members were smoker. There was significant difference between the attitude of students and Subjective Norms (PV<0.025). The accessibility of cigarette and other Enabling Factors increased 79%smoking in students. To reduce exposure to environmental tobacco, it would restrict youth access to cigarettes, reduce modeling of smoking and send clear messages about peers and parental disapproval of smoking. Using health education theories (BASNEF model) can over come the problems.

Key words: Students, subjective norm, enabling factor, cigarette, adolescent

INTRODUCTION

Using the tobacco is a worldwide problem and the leading causes of preventable deaths in the United State (Rowe, 2000).

Epidemiological research on adolescent tobacco use has focused on external behavioral influences such as the smoking behavior of friends and parents and tobacco advertising, to predict smoking behavior of adolescent.

Several studies have shown that, young smokers perceive greater social support for smoking and less social pressures against smoking than do nonsmokers (Bauman *et al*., 1990; Chassin *et al*., 1990; Garmiene *et al*., 2006; Grube *et al*., 1984). As results of some studies parents studies and the respondent 's own education had the strongest effects on daily smoking. If both parents of the respondent were smokers, then the respondent was most likely to be a smoker too. Kestila *et al*. (2006), the vast majority of research on family influences in smoking among non-American Indian populations examines the relative contribution of parents and peer influences in smoking onset (MeGee *et al*., 2006; Fergusson *et al*., 1995; Oygard *et al*., 1995; Wang *et al*., 1995; Cowdery *et al*., 1997; Askson, 1997; Williams, 1997; Disterfan *et al*., 1998; Flay *et al*., 1998). Overall the findings suggest that peer influences are stronger, but family influences are significant, particularly in the earlier stages of smoking (US Department, 1994).

Many other studies have generally found positive relationship between older sibling smoking and youth onset (Den exter *et al*., 2006; Botvin *et al*., 1992; US Department, 1994; Dappen *et al*., 1996). Also many researches have posited a variety of mechanisms for how family members, particularly parents, influences youth smoking. Parent use of tobacco, for example may contribute to children's use through direct modeling of smoking behavior (Jackson *et al*., 1997).

Previous research has demonstrated that antismoking norms and attitudes are related to lower smoking prevalence (Hansen, 1991; Botvin *et al*., 1998; Epstien *et al*., 1999). Adolescent perceptions of social norms are reflected in their attitudes toward smoking and their perceptions of smoking prevalence among their peers. The perceptions that there social benefits to smoking is indicative of how an adolescent perceives social norms regarding tobacco use and adolescent perceiving social benefits to smoking have been found to be more likely to smoke (Epstien *et al*., 2000; Sun *et al*., 1998; Klesges *et al*., 1998; Wang *et al*., 1998).

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Epidemiological research on adolescent smoking has focused on the smoking behavior of family and social networks as predicators of smoking update (Wang *et al*., 1995; Bauman *et al*., 1990; Urberg *et al*., 1990; Farkas *et al*., 1999). Several studies have taken this concept further and have examined not only behavior but also the strength of parental attitudes about smoking as a predictor of adolescent smoking (Disterfan *et al*., 1998; Sargeat, 2001; Anderson *et al*., 2002). These studies have found that strong parental statements against smoking can be protective against adolescent smoking. As adolescence progresses, parental influence dose not decrease in relative to the influence of friends (Bauman, 2001). Therefore, it is necessary to simultaneously consider the smoking behavior of friends and parents, as well as the value placed on their opinions, in assessing smoking among adolescents.

What messages are influencing people's knowledge and attitudes and how does that contribute to changes in behavior? Research from the communication and behavioral change sciences makes clear that this is a complex issue and evidences shows that the clearer message on a concrete topic, the more audience can relate to it and the higher change that knowledge increase. Research in social sciences has shown that knowledge on a topic may increase, people may even change attitude, but that step to improved behaviors and practice is depending on a complex set of social and psychological factors. Hubley introduced the BASNEF model for understanding behaviors in health communication: Beliefs, Attitudes, Subjective Norms and Enabling Factors (Hubley and Johan, 1993).

Individual beliefs about consequences of certain behavior and the value placed on each consequence leads to personal attitude or judgment. Attitudes combined with subjective norms contribute to behavioral intention. Subjective norms are beliefs about what behaviors other influential people would wish the person to perform. Enabling factors such as income, housing, water supply, agriculture and sanitation should be available so that the intention leads to a change in behavior.

The influences on behavior and communication actions needed in BASNEF model are explained:

Influences and action needed: Belief attitudes culture, values, traditions, mass communication programmes to modify (individual) media, education, experiences beliefs and values. Subjective norms family, community, social network, communication directed at persons in (Community) cultures, social change, power family and community who have Structure, peer pressure influence Enabling Factors income/ poverty, sanitation services, programmes to improve income, (inter sectoral) women's status, inequalities, sanitation provision, situation of women, employment, agriculture housing, skill training.

The BASNEF model is one of the most widely used models in public health theoretical framework. It can explain health behavior modification and can function as a foundation for health education.

The BASNEF model has four constructs: Beliefs, attitude, subjective norms and enabling factors. This model is used for studding the behavior and planning for changing the behavior. We assessed the content and concurrent validity of some of constructs of BASNEF model to change the behavior of students of Isfahan Medical University who smoke. In our study we used 2 constructions of model (Subjective norms and enabling factors) that are considered to be more relevant to the health behavior changes.

The purpose of this study, was testimg the BASNEF model in understanding and predicting the intention of students in prevention of smoking. So investigated the influence of various factors associated with smoking behavior among a randomly selected samples of Isfahan Medical University students.

MATERIALS AND METHODS

This was a cross-sectional study to test some constructs of BASNEF model as a common theory in understanding and predicting the intention of 100 smoker students of Esfahan Medical University in prevention of smoking in 2006. The samples were randomly selected from the smoker students of schools of University. The smoker student was who had smoked at least one cigarette per day in last month. Data were collected by using a researcher making questionnaire, all of which were completed by interview. The BASNEF model is one of the most widely used models in public health theoretical framework. It can explain health behavior modification and can function as the foundation for health education.

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BASNEF model constructs were measured using five- point Likert scales (strongly agree =5 through disagree = 1). The attitude, subjective norm and enabling factors constructs were measured by summing participant's responses(range 20-100 for every constructs). Content validity was established by four experts who were either academic staff or researcher in the field of smoking and health education. No reliability testing was performed. To determine the internal Reliability, a Cronbach's alpha was calculated for each scale (α = 0.65 for attitude scale, α = 0.85 for subjective norm scale and α = 0.76 for enabling factors scale). All data which were collected transferred directly into SPSS (statistical package for social sciences). For data analysis, descriptive statistics, Chi- square, ANOVA and spearman test were used and level of confidence interval was 95%.

We obtained informed consent from all participants; in addition, the participants were assured that their responses were confidential.

RESULTS

The major focus of this investigation was subjective norms, attitude and enabling factors influences in students smoking, that those are three constructs of BASNEF model. All participants were male. The age of them ranged from (20-30) years old.

The results are shown in Table 1. The mean grade scores of attitude of students, that their friends and their teachers were smoker, was more than students that their parents were smoker(72 via 64). There was significant difference between the attitude of students and subjective norms (pv<0.025). Friends play more direct roles in students smoking. For example, friends give them cigarette and some times buy cigarettes for them. In most cases, it is not the parents who buying cigarettes, for the teens, but friends. So in this study 52% of students were smoker by friends, that 44% of them were smoker after arriving the university (Table 2). There was significant difference between the smoking of students and their time of initiating to cigarette smoking (pv<0.004).

Data about enabling factors showed that 76% of students, began smoking, after arriving the university (Table 3). The most reason in beginning the smoking is: Cigarette accessibility and selling the cigarette in dormitory. The chi-square test showed a significant difference between Enabling factors and time of initiating the cigarette (pv<0/004). The attitudes of students in different field were not same. the mean grade scores of students' attitude in the field of public health was more than the others (80/8), the lowest mean grade scores of attitude was about students in the field of physiotrapy (64) Table 3. These is significant difference between the attitude of students and their fields with pv<0/005.

Table 1: Distribution of mean grade scores of attitude of students and their subjective norms

Subjective norms	N	Mean of attitude	SD
Friends	52	72.44	13.49
Parents and family member	31	64.00	15.89
Teachers	17	72.24	11.64
Total	100	69.79	14.38

pv<0/025

Table 2: Distribution of subjective norms related to cigarette smoking initiation time

	Cigarette smoking initiation time		
Subjective norms	Before from university	After from university	Total
Friends	8	44	52
Parents and family members	14	17	31
Teachers	2	15	17
Total	24	76	100

pv<0/004

Table 3: Distribution of enabling factors of students and their cigarette smoking initiation time

Cigarette smoking initiation time/ Enabling factors	Before arriving the university	After arriving the university	Total
Easy access to cigarette	14	30	44
Cheapness the cigarette	8	5	13
Free for smoking in dormitory	2	6	8
Selling the cigarette in dormitory	0	35	35
total	24	76	100

pv<0/004

DISCUSSION

The results go some ways towards clarifying the nature of the influences on smoking behavior. In this study the importance of friends opinions appears to high light the impact of having friends who smoke. In the case of behavioral example the peer group carried most influence. Parent attitude carried the lowest weight in comparison to friends and peers attitude.

The finding of this study, are not consistent with the observations of Hirschi (1969) as the finding, that peers and friends bonding was unrelated to smoking, is especially interesting since Hirschi' s study found that bonding to peers was related negatively to delinquency.

The participants of this study were in age of 20-30 years old and initiating smoking by them was after arriving to university (8% before university and 44% after university). These data are shown that peers and friends influence is more than parents. The results are in agreement with those of Krosnick and Judd (1982) who found that peer influence was relatively greater among

Table 4: Distribution of mean grade scores of attitude of students and their fields

Attitude/Fields	N	Mean	S.D
Medical	24	63.8	15.4
Density	11	68.2	12.1
Pharmacology	17	71.7	14.2
Public health	15	80.8	10.5
Management	2	65	7.1
Physiotherapy	14	64	19.1
Nursing	20	70.1	14.3
Else of field	7	66.9	10.8
Total	100	69.8	14.4

pv<0/005

14 years old than among 11- years olds. It is also interesting to note that parental influences were similar at both age levels in the Krosnick and Judd (1982) study.

In contrast, the finding of Chassin *et al.* (1986) seems to suggest that the magnitude of parent and peer influences do not differ significantly between 12- and 17-year olds. However, Chassin *et al.* (1986) focused on changing in smoking status at different age levels. The results of studies that carried out in students of a high school in city of Zabol (Godarzi *et al.*, 2004) and students of medical school of Mashad (Hasanzadeh,2002), showed that peers influence was relatively greater than parents, that are consistent with our results.

The results showed that enabling factors (Cigarette accessibility, selling the cigarette in dormitory, cheapness the cigarette and being ready in smoking) are influence factors in smoking of students.

> Our results about enabling factors is consistent with the observations of Michlle *et al.* (2000), who described many of the teens obtained their first cigarette from an adult relative-usually taking one without permission. This relatively risk-free access to cigarettes may contribute to earlier first tries than if a young person lives in a home with limited access to cigarettes.

Abdullah *et al.* (2005) and Fergusson *et al.* (1995), found that because the age at which a child first tries a cigarette predicts regular smoking, later in life, any intervention which delay smoking initiation may lead to prevalence of smoking. Many of other studies are consistent with our results, as much of the recent efforts to prevent teen smoking focuses on building individual resistance to social influences, changing peer norms, counter advertising and restricting youth access to cigarettes through public policy initiatives (Abdullah *et al.*, 2005; US Department, 1994; Center for Disease Control and Prevention, 1999b; Glantz, 1996). The Table 4 showed the mean grade scores of students in different fields, that there is a significant difference between the fields of students and their attitude to smoking.

There was not any study about the fields of students and their attitude to smoking, that those results be compared.

CONCLUSION

Finally, to reducing exposure to environmental tobacco, it would restrict youth access to cigarettes, reduce modeling of smoking and send clear messages about peers and parental disapproval of smoking. Using health education theories can over come the problems. The BASNEF model has potential for changing the behavior of peoples in prevention and reducing the smoking.

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