Lifestyle changes: A social psychological perspective with reference with cigarette smoking among adolescents

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This paper examines the implications of social psychological influences on smoking behaviour for models of prevention. The main factors associated with initiation to and maintenance of smoking are examined with particular reference to normative influences, expectations about consequences, and personality and social variables. Each of these factors will be shown to inform approaches to prevention. In turn, the evidence for the effectiveness of these prevention models is outlined. Finally, the major questions for further development of the approaches to prevention are examined.

Common-sense approaches to changes in life style have been shown to be notoriously wrong. The research demonstrating that smoking was likely to cause a range of diseases, including coronary heart disease (CHD) (Cleary & Shelley, 1983) was expected to change smoking behaviour in the long-term. It was commonly believed that established smokers were unlikely to be able to kick the habit, because of their addiction, but that young people would not take up the habit knowing that it could cause such negative outcomes. The result of the campaigns to stop smoking have shown that the common-sense view was wrong on both scores. Established smokers have found it relatively easy to discard their 'addiction', yet young people continued to behave 'irrationally' in taking up the smoking habit (Grube & Morgan, 1986). The current level of smoking *uptake* by adolescents is still quite similar to 25 years ago.

This pattern of outcomes might easily be predicted in terms of the effects of perceived consequences on behaviour (Bandura, 1986). The long-term consequences associated with smoking, such as lung cancer and health damage which were so strongly featured in the first anti-smoking

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campaigns, are so dim and distant in the lives of children and adolescents as to make them weak motivators. On the other hand, 'looking cool' and feeling more popular are short-term outcomes that are much more salient than the long-term effects.

This paper examines a number of issues related to the major factors associated with changes in behaviour of relevance to health, with particular reference to smoking among adolescents. We then illustrate how some of the findings indicate the potential for smoking prevention and describe the results of some of the interventions.

INFLUENCES ON ADOLESCENT SMOKING

A theoretical framework (Grube & Morgan, 1986) which would seem to predict and explain the initiation to and maintenance of smoking behaviour among adolescents is described in Figure 1. The factors are ordered from left to right to indicate the extent to which they are hypothesised to influence smoking directly or through other variables. The distal variables appear in the left hand column; these are thought to influence smoking only indirectly. Included in this category are genetic characteristics and background influences such as age, social background and gender. Variables of an intermediate nature appear in the middle columns. These include normative influences, expectancies regarding smoking use, attitude to smoking as well as perceived availability. Finally, the present model assumes that only two variables directly influence smoking, i.e., intention and habit.

The theoretical framework presented here has been heavily influenced by two theoretical positions, i.e., the theory of reasoned action (Ajzen & Fishbein, 1980) and cognitive social learning theory (Bandura, 1986). The theory of reasoned action assumes social behaviours like smoking are largely the result of rational decision making processes. Consistent with this assumption behavioural intentions are seen as to be one of the primary determinants of smoking. In turn, the theory proposes that intentions are the direct result of attitudes, expectancy value beliefs and normative influences.

However, the present model includes a wider range of variables than do these models. For example, the Azjen and Fishbein model has a particularly restrictive conception of the influences within the normative domain - a point which is discussed further below. The other significant difference is that the influences proposed here are regarded as being interactive in some cases, whereas Ajzen and Fishbein do not consider such effects.

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Figure 1. Hypothesised influences an adolescent substance use (reprinted with permission from Grube and Morgan, 1986, p.27).

DISTAL		INTERMEDIATE		IMMEDIATE
Background characteristics	*Personality/Values*	*Expectancy-Value Beliefs*	*Attitude*	*Behavioural Intention*
Gender	Value for independence	Perceived consequences	Evaluation of behaviour	Subjective likelihood
Geographic location	Extroversion/ sensation seeking	Evaluation of perceived consequences		
Age	Self-esteem			
	Tolerance of deviance			
	Internality-externality			
Physiological- Genetic *Factors*	*Social Bonding*	*Substance Use Environment*	*Perceived Availability Habit*	
Genetic bases for personality	Attachment to family	Behaviours of parents	Perceived access	Cognitive scripts
Susceptibility to drug	Attachment to peers	Behaviours of peers	Expected cost /resources	Conditioned behaviours
Susceptibility to addiction	Attachment to religion	Attitudes of parents	Knowledge	
	Attachment to school	Attitudes of peers		
		Social/legal sanctions		
		Media		
Socio-Cultural Factors	*Previous Behaviour*	*Dependency*	*Normative beliefs*	
Meaning and role of substance use	Past substance use	Tolerance	Perception of parental behaviour	
Cultural definitions		Physical dependence	Perception of peer behaviour	
		Adaptive dependence	Perception of parental attitudes	
			Perception of peers attitudes	

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A number of influences that are considered to be at the intermediate level of influence are examined here. In each case the evidence for the significance of the influence is examined and some implications for interventions are addressed.

NORMATIVE INFLUENCES

There are least two types of normative influence that are influential. *Perceived approval* consists of beliefs about the extent to which parents or peers may approve or disapprove of a particular behaviour while *behavioural norms* consist of beliefs about the extent to which significant others engage in the behaviour themselves. The various kinds of normative beliefs may or may not be consistent with each other. Parents, for example, may be seen as proscribing smoking for their children while at the same time conveying social acceptance of this behaviour through their own smoking. A study by Grube, Morgan and McGree (1986) examined the relative importance of behavioural norms and perceived approval in the context of the smoking behaviour of Irish school children and college students. In both samples, it was clear that behavioural norms were distinct from perceived approval. Furthermore, they were better predictors of smoking behaviour. The important implication of this is that the research that has failed to consider behavioural norms may have led to an under-estimation of the contribution of normative influences as determinants of behaviour, since the results may have been due to the fact that only measures of perceived approval were included.

From the point of view of cigarettes smoking, an important question concerns the extent to which the influences associated with normative influences *change* during adolescence. This was the focus of the study by Morgan and Grube (1989) with a sample of 3000 Irish post-primary school pupils. The results showed that normative influences on smoking behaviour increased up to age 15-16 years and then declined. This curvilinear pattern seemed to have been largely due to the rise and decline of peer influences over these years. Interestingly, however, the influence of parents (both in terms of parental example and approval) was constant over this period.

Given that peer influence has been established as a major facet of normative influences, most of the studies have lacked a rationale regarding how peers should be identified and how predictions might be made on the relative influence of one group of age-mates as opposed to another. Morgan and Grube (1991) proposed that influence would depend heavily on closeness of peer relationships. In a longitudinal study, they sought to determine the extent to which persons identified as the ‘best friend’ and

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'other good friends' and ' young people my age' are important influences in adolescent smoking and other substance use. In support of the closeness hypothesis the influences associated with peers identified by respondents as friends were better predictors of smoking than those of same-aged peers while the person identified as the best friends was especially influential. However, there were important differences in the peer influences associated with maintenance of smoking as opposed to initiation. It emerged that several good friends were influential (through example and approval) in initiation while the best friend had a critical role in the maintenance of smoking behaviour.

NORMATIVE EDUCATIONAL APPROACHES TO PREVENTION

These approaches arc based on the evidence described above on the relationship between normative support for smoking and actual smoking behaviour. In general, normative education programmes are designed to make salient to young people the message that prevailing norms regarding smoking are more conservative than many young people think is the case. The components of normative education often include providing indicators that smoking is not as widespread among peers as children may think, encouragement for young people to make public commitments not to smoke and the depiction of smoking as socially unacceptable.

A recent study by Hansen and Graham (in press) showed that correcting erroneous perceptions among students about the prevalence and acceptability of alcohol, actually deterred the onset of alcohol consumption. Specifically, it was shown that normative education reduced the incidence of drunkenness and the prevalence of alcohol problems among students in junior high schools in California. Furthermore, Hansen and Graham have demonstrated that such education was more effective than other treatments in reducing the onset of drinking behaviour.

While these initial tests of the effects of normative education are worthwhile and would seem to be especially promising in delaying the onset of smoking, some considerations about the nature of peer influence are worth considering. First, the evidence reviewed above suggests that information about same-age peers should have relatively little influence compared to the closer peer group (friends and the 'best friend'). A second important factor to note is that there is a well-documented bias whereby people to perceive their own opinions and behaviours as more typical than they are in reality. This research on the so-called 'false-consensus effect' (Rodin & Salovey, 1989) has also demonstrated that beliefs about the prevalence of behaviours like smoking and drinking are not easily modified

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among substance users. In other words, while it is easy to convince nonsmokers that smoking is unacceptable and that only a minority of the same-aged population indulge in the habit, the deeper significance of the behaviour for smokers may make them less ready to accept the veracity of such assertions. Thus, while it may well be that establishing conservative norms may indeed be an effective means for bringing about a reduction in adolescent smoking, there would seem to be a real difficulty providing information that is credible enough to create such norms.

Normative education approaches have some extremely important implication for teachers, parents and health professionals involved with efforts to reduce behaviours like smoking, drinking and other drug use. Many interventions suggest that these behaviours (i.e., underage drinking and adolescent smoking) are very prevalent. Usually such information is considered to be 'neutral information' that provides a context for later skill training and/or information about consequences. What is not frequently realised is that such information may indicate that there are supporting norms for such behaviour among young people and this in turn may have the effect of reducing positive effects that the programme might otherwise have had. Thus, the information on normative influences may not only indicate the direction for programmes for prevention but may also suggest components of such programmes that should be *avoided.*

EXPECTATION OF CONSEQUENCES

Expectations relating to consequences have two components. Firstly, there is the perception of the likelihood that a given behaviour will have specific personal consequences for the individual and secondly there is the evaluation of these consequences. An example of the first component would be the probability that a young person thinks that smoking will harm their health, while the second component refers to their judgement about the importance of such consequences, i.e., how important damaging their health is to them. Two distinctions are important in the consideration of the effects of consequences, i.e., between long-term and short-term consequences and between positive and negative outcomes. 'Damage to health' and 'becoming addicted' are relatively long-term consequences of smoking while 'having bad breath' or 'smelly clothes' are outcomes that tend to occur in the short-term as a result of smoking. All of these outcomes are negative in the sense that they are undesired consequences. In contrast, outcomes such as 'becoming popular', 'forgetting one's troubles' and 'looking cool' can be regarded as positive consequences since they are part of the motivation for smoking behaviour.

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The relationship between beliefs about consequences and smoking behaviour have been substantiated in a number of studies. For example, smokers are less likely than nonsmokers to believe that smoking increases their chances of getting lung cancer and harms their health. Conversely, they are more likely to believe that it will increase their popularity, make them feel more relaxed and help them concentrate (Bauman & Chenoweth, 1984). Similarly, smokers evaluate the negative consequence of smoking less negatively than do nonsmokers and the positive consequences more positively (Budd & Spencer, 1984).

While these results are predicted by most rational and commonsense analyses of smoking there are two findings that may be of special relevance. These concern the relative importance of short-term as opposed to long-term consequences of smoking. A number of studies (e.g., Grube, McGree & Morgan, 1984) have shown that beliefs about short-term consequences tend to be more strongly associated with smoking than are beliefs about long-term consequences. Thus, the belief that cigarettes will lead to smelly breath is a stronger predictor of smoking than the belief that smoking damages health. The other interesting point is that differences between smokers and nonsmokers in beliefs about health consequences do not come about when the smoking of *others* rather than own smoking was the focus (Kristiansen, Harding & Eiser, 1983). It emerged that smokers were just as likely as nonsmokers to believe that smoking was related to cancer or cardiovascular disease for others. This finding reinforces the importance of investigating personalised beliefs rather than general beliefs. This outcome ties in with the work on perception of risk and vulnerability. The general finding is that people tend to underestimate their own risk relative to other people for illnesses and other negative life events (Rodin & Salovey, 1989). This can have important consequences for health since perceived susceptibility is associated with greater motivation for prevention.

Research on consequences has important implications for prevention. One systematic approach to deterring the onset of smoking is to provide young people with direct evidence of the physiological consequences of smoking (Perry, Killeen, Tetch, Slinkard & Danaher, 1980). In some of the studies, attachment to a heart monitor has been used to demonstrate that smoking cigarettes increases heart rate and blood pressure. In other studies the undesirable effects of other substances use for family and other interpersonal relationships have been demonstrated (Ellickson, 1984).

A recent study featuring a strong emphasis on short and long-term consequences examined was carried out in primary schools in disadvantaged areas of Dublin (Morgan, Doorley, Hynes & Joy, in press). The

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programme included integration with other school subjects as well as parental involvement and visits by Health Board personnel. Compared to matched control groups, the classes in which the programme was piloted showed less positive attitudes towards smoking and greater awareness of the dangerous consequences of smoking

PERSONALITY AND SOCIAL FACTORS

In addition to the normative influences and beliefs about consequences, a range of other factors are known to be associated with smoking behaviour among adolescents. Much attention has been given to the relationship between smoking and various kinds of problem behaviour. For example, several studies have shown that young people who smoke at a relatively early age tend to be involved in other deviant behaviours such as drinking, illicit drug-use and truancy (Jessor & Jessor, 1977). In addition, in those studies that have examined attitudes towards deviance, it has been shown that acceptance of deviant behaviour tends to relate quite strongly to smoking behaviour (Brook, Whiteman & Gordon, 1983).

There is also evidence that *social bonding* to conventional institutions has a restraining influence on smoking (Kaplan, Martin & Robbins, 1984). The social bonding perspective suggest that if an individual has a commitment to a social institution, then they are less likely to engage in behaviours that are deviant and rebellious. In the context of adolescent smoking, this idea has been explored in relation to commitment to family, school, church and religion. The basic idea is that to the extent that an individual values membership of those institutions, he or she will be less likely to be involved in various kinds of antisocial behaviour. While smoking per se is not illegal, smoking by young people can be considered to be deviant and likely to be influenced by adherence to the norms of such institutions.

The available literature strongly supports the finding that commitment to school is negatively related to smoking behaviour. Studies in France and Israel by Adler and Kandel (1981) showed that interest in schoolwork and rated importance of such activities were negatively related to frequency of smoking. Grube and Morgan (1986) also found that Dublin students rated importance of school and their rating of own academic achievement were both negatively related to smoking. Similar findings are presented by Ensminger, Brown and Kellam (1982) who note however that the relationship with commitment is stronger for other substances (including alcohol and illegal drugs) than for cigarette smoking.

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RISK-FOCUSED INTER VENTIONS

A relatively promising approach to the prevention of adolescent substance use is through a risk-focused intervention (Hawkins, Catalano & Miller, 1992). Such an approach requires a number of steps: (i) identification of high-risk factors for substance use, (ii) identification of the strategies that are effective in reducing such risk factors, and (iii) application of such methods to high-risk groups. For example, low family bonding, problem behaviours, tolerance of deviance and perceived peer approval have all been shown to be related to increased substance abuse. If strategies could be identified to reduced these factors, then by implication these same strategies could be used to prevent substance use, including smoking.

It must be admitted that few studies have gone through all of the steps required in this approach. Moreover, many risk factors are either not amenable to modification (e.g., genetic factors) or extremely difficult to change (e.g., parental behaviour). However, various studies taken together testify to the promise of the approach. There is considerable evidence that aggression and other problem behaviours in the primary school years are associated with increased risk of substance use during adolescence. In turn, it has been suggested that educational strategies designed to enhance social competencies during childhood might reduce the risk of later drug abuse (Hawkins et al., 1992). For example, it might be that children who are aggressive and disruptive are rejected by their peers because they are deficient in basic interpersonal skills that can be taught. Social competence promotion approaches have used a number of methods. For example, socially rejected youths have been taught social interaction skills to increase the frequency of their social interactions (Ladd & Asher, 1985). However, while such programmes have been tested in relation to their effects on short-term outcomes, such as adjustment at school and relationship with peers, only a small number of studies have examined effects on later substance use.

This approach to prevention of the onset of smoking merits attention. A risk-focused basis is not concerned with short-term consequences or with quick and easy manipulations. Rather, it attempts to prevent the onset of problems by addressing the developmental factors that are crucially related to substance-abuse problems. The real difficulties with the approach lie in the fact that the factors being addressed are extremely difficult to control since they involve matters like parental behaviours, enhancement of school-achievement and learning to use alternatives to aggression. It merits considerably more research attention in the future.

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CONCLUSIONS AND FUTURE DIRECTIONS

A number of conclusions are warranted on the basis of the studies reviewed above. Firstly, the understanding of the processes underlying the uptake of smoking by young people has resulted in systematic effort to prevent its onset. This constitutes a considerable advance on the mere information approach of 20 years ago. Secondly, and in line with the multi-determined nature of smoking, no single approach has been demonstrated to be vastly superior to any other. A great deal seems to depend on the effectiveness of the delivery of the programme. A related point is that some programmes, supposedly based on one kind of influence, may have their impact in ways additional to those predicted by the programme's focus. For example, it has been argued that social skills are effective because they draw attention to the conservative nature of norms surrounding such behaviour.

Finally, the question of the interaction of educational measures with other approaches should be examined. Educational approaches are geared to influencing the demand for cigarettes and other substances; there are grounds for thinking that curtailment of the supply of cigarettes to very young people might be a worthwhile initiative. In fact, the law in relation to sale of cigarettes to young people is rather strong. Under Section 3 of the Tobacco (Health and Protection) Act 1988 of the Republic of Ireland, any person '...who sells or makes available any tobacco products to a person under the age of 16 years, whether for his own use or otherwise...shall be guilty of an offence (carrying a) Penalty £500.' In addition, Section 4 of the same Act forbids the selling of cigarettes other than in packs of 10 or 20. Obviously important questions concern the enforcement of these laws. In our view, the existing laws could make an important contribution to reducing the supply of cigarettes to young people. Besides the effectiveness *per se* of such a measure, there would be important consequences for perceived norms about smoking. Thus legal initiatives and health promotion strategies incorporating a social-psychological perspective may provide complementary strategies in the reduction of cigarette smoking among adolescents.

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