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ORIGINAL ARTICLE

Young People Smokers' Reactions on Peer Influence Not to Smoke

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ABSTRACT

Background: Peers exert influence not to smoke but little is yet known on how this affects young people's behavior and cognitions. *Objectives:* This experimental study investigates the impact of two types of peer influence not to smoke on the verbalized attitudes and responses of daily-smoking young people. *Methods:* Two conditions were conducted: 1) a peer confederate stating three times that s/he had quit smoking and was glad to have done so (covert peer influence); 2) a peer confederate making similar statements, but urging to quit smoking (overt peer influence). The participant performed a music task with the peer in order to disguise the true nature of the experiment. Thirty-one daily-smoking young people (16–24 years) participated; 44 responses in the overt and 34 responses in the covert condition were analyzed in a discourse analysis. *Results:* The participants in the covert condition were more elaborative about smoking, i.e., taking an active role in a dialogue about the experiences of the peer or the participant in quitting smoking while in the overt condition participants showed more passive resistance, i.e., not showing an intention to follow the advice but avoid causing the peer embarrassment or discomfort. Open resistance, i.e., demonstration of being well-informed and indicating the redundancy of the advice, does not significantly differ in these two conditions but occurs, for both, primarily at the third discouragement. *Conclusions:* Overt and frequent discouragement seems to be less effective in stimulating young people to take an active role in the dialogue with their peers about smoking.

KEYWORDS

Late adolescents; young adults; tobacco smoking; overt peer influence; covert peer influence; experiment

Introduction

Tobacco use causes health problems and is related to disease and mortality (Eriksen, Mackay, & Ross, 2012). Aside from the prevention of smoking, it is necessary to focus on smoking cessation, especially among young people (i.e., adolescents and young adults). Peers' opinions and behaviors play an important role. Previous studies show peer influence to smoke is an important determinant of young people's initiation and continuation of smoking, partially among adolescents (Avenevoli & Merinkangas, 2003; McVicar, 2011; Simons-Morton & Farhat, 2010). Nevertheless, peers also exert influence to not smoke (Urberg, Shyu, & Liang, 1990), but little is known on how these antismoking messages delivered by peers affect young people's behavior and cognitions. Moreover, the Western cultural climate is increasingly negative toward smoking as is reflected in antismoking campaigns being broadcasted by the media. In order to develop and improve health promotion strategies for smoking cessation, we need to gain further insight into how smokers react to antismoking messages in a social environment. This study focuses on how peer discouragement (i.e., antismoking messages delivered by peers) affects cognitions of young people who smoke.

Peer discouragement and young people's smoking

Limited data exists in the impact of antismoking messages delivered by peers. Most attention has been paid to the content and effectiveness of antismoking messages and advertisements in formal campaigns. The majority of these messages have been targeting predominantly the attitudes of individuals and, to a lesser extent, social norms and self-efficacy (Cohen, Shumate, & Gold, 2007). There is evidence that antismoking messages and strategies are more effective than others; for example, graphic advertising about health effects, social normative advertising, and tobacco industry manipulation messages are effective among a number of populations (Wakefield, Flay, Nichter, & Giovino, 2003). In contrast, the messages aimed at providing information about health risks and negative consequences of tobacco are shown to be ineffective (Lantz et al., 2000). Furthermore, antismoking messages have a greater impact on younger than older adolescents, especially the prevention of smoking (Wakefield et al., 2003; White, Durkin, Coomber, & Wakefield, 2015). In general, research regarding the effectiveness of anti-tobacco campaigns that incorporate antismoking messages have mixed findings. A possible explanation for these mixed findings may be found in the way in which

these messages are being executed as well as their intensity, frequency, and duration (Wakefield et al., 2003; White et al., 2015).

The present study focuses on the way antismoking messages are being transmitted, specifically antismoking messages delivered by peers, also referred to as peer discouragement. According to the literature on anti-tobacco campaigns, the way antismoking messages are being executed is relevant (Wakefield et al., 2003; White et al., 2015). Scholars distinguish two ways in which peers may influence young people's behavior and attitudes: overt and covert (Arnett, 2007; Kobus, 2003). Covert peer influence comprises peer behavior and his/her norms, while overt peer influence comprises social pressure of the peer to urge the individual to behave in a specific way. Thus, overt peer influence compared to covert peer influence includes an additional verbal advice urging the individual to change his/her behavior. Scientific data on whether overt and covert peer influence may have a differential impact on individuals' reactions and behaviors are lacking.

The qualitative literature, especially conversation and discourse analysis, suggests that a differential impact may be expected when an individual's reaction is considered. Advice-giving and the reaction to this may be seen as a special type of turn-taking (adjacency pair), the first utterance provoking a specific kind of second utterance (Schegloff, 1968). Advice provokes the receiver's acceptance or rejection. Overt peer influence, which includes verbal advice, is a stronger incitement to accept or reject than covert peer influence. It is expected that receivers, especially young people, confronted with overt peer influence compared to covert peer influence will be more likely to reject/resist the discouragement because they do not want to show in front of their peers a lack of control over their behavior. This is in line with findings from a focus group study showing that young people did not acknowledge in the presence of peers that they experienced and complied to overt peer influence (Arnett, 2007). However, open rejection of an advice is considered to be impolite so it is not preferred (Ting-Toomey, 1988; Ting-Toomey & Kurogi, 1998). Therefore, it is expected that overt peer influence will be met by passive resistance; that is, minimally accepting the advice rather than open resistance because the receiver, while disagreeing, wants to uphold or support the other person's position by being polite (Peräkylä, 1998; Silverman, 1997; Stivers, 2005).

Little is known on whether these two types of peer influence may have a differential impact on individuals' reactions and behaviors. A recent innovative experimental design focusing on peer influence not to smoke and distinguishing covert and overt peer influence indicated that both types did not have a differential impact on late

adolescents and young adults immediate smoking behavior (Harakeh & Vollebergh, 2011). According to the Theory of Planned Behavior (Ajzen, 1991), peer influence affects first the cognitions and subsequently, via intention, the behavior. Thus, antismoking peer context may have affected the cognitive level, the verbalized attitudes and reactions, rather than the behavioral level. So, although no immediate behavioral effects were found we need to determine whether peer discouragement may affect the cognitions towards smoking cessation which may be revealed by verbal expression among daily smokers.

Present study

In the present study, we apply a detailed secondary analysis of verbal data from a previous experimental study (Harakeh & Vollebergh, 2011). We analyze the reasoning and verbalized attitudes of daily smokers who are late adolescents and young adults when they are confronted with overt or covert discouragement (i.e., deliverance of anti-smoking messages) from peers who pretend that they have quit smoking. The design of the experiment has three strengths: (1) the individuals in the study are peers interacting "casually" about not smoking; (2) the smokers do not know they are participating in a study on smoking, which means that their responses might be more "natural"; and (3) the smoker expects that the peer understands his/her experiences of smoking and quitting attempts because s/he has experienced smoking too. This study will examine the following research questions:

1. What accounts did the young people give in reaction to the peer discouragements?
2. Did the daily smoking young people acknowledge the peer discouragement and how was this marked? Did this acknowledgment differ according to whether the peer overtly or covertly discouraged the smoker to smoke?

Methods

Design

An experimental study tested two conditions: (1) a peer stating three times that s/he had quit smoking and was glad to have done so (covert peer influence) and (2) a peer behaving similarly as in condition one, but urging the other to quit smoking (overt peer influence). In order to prevent the participants from becoming aware of the actual aim of the study, the three discouragements were expressed differently. In the covert peer influence condition, the peers gave the following three discouragements/antismoking messages: 1. "I'm glad I've quit smoking," (2) "I'm so happy that I don't smoke anymore," and

(3) “Smoking is really such a bad habit, I will never start again.” In the overt peer influence condition, the peers gave the same discouragements/antismoking messages, but added a further sentence advising the participant to quit smoking. The three discouragements were: (1) “I’m glad I’ve quit smoking - you should really quit too,” (2) “You need to quit smoking, I’m so happy that I don’t smoke anymore,” and (3) “Smoking is really such a bad habit, you ought to give it up.” The peers were trained beforehand and they learned the script for the three discouragements.

Procedure

This study received approval from our internal faculty board at Utrecht University. Students attending schools for intermediate technical and vocational training were approached in their classes (when approved by the teacher), during their breaks inside the school, or in the schoolyard and asked to participate in a study on music taste and preferences. This coverstory disguised the true nature of the experiment for the student, but the principals of the schools were informed about the actual aim of the study. If students were interested participating, they had to complete an initial screening questionnaire with questions on music and lifestyle (e.g., music taste, smoking, alcohol consumption, eating behavior, and exercise) and were told this enabled us to select participants who are representative of the general Dutch population. The actual reason was to identify and select only the daily smokers (at least one cigarette per day), aged 16–25 years, for participation. The data were collected in May and July 2010. The experimenter drew lots to randomly assign the participants to the two conditions. Parental consent for youth under 18 was not necessary. All participants gave their written informed consent.

The experiment took place in our camper (mobile lab) which we parked during schooldays near the school. A participant and a same-sex peer were invited to participate in a 60-minute session. The peer and participant were always of the same gender because we wanted to avoid confounding effects of attractiveness and sexual intentions as much as possible (see Van Straaten, Engels, Finke-nauer, & Holland, 2008). The experimenter told them that they could help themselves to the available food and drinks and that they were allowed to smoke in the room if they wished. In each session, the peer drew attention to a packet of cigarettes next to him/her on the couch. The experimenter then asked them whether they smoked and both provided an answer (the daily smoker stated that s/he smokes; the peer stated that they had quit smoking, but when the experimenter asked whether s/he would mind if the other smoked in his/her presence the peer stated that

s/he did not mind). The experimenter explained that the cigarette pack must have been left behind by a previous participant and that they were allowed to use it because s/he is probably not coming back to pick them up. This was followed by the first discouragement from the peer. Subsequently, the experimenter left. The peer and participant performed the 30-minute music task of listening and discussing six pop songs, which had no relation to substance use. The peer followed the participant’s music preference and opinion and acted as though he/she has a similar music taste. The peer gave the second and third discouragements at the third and fifth song, respectively. Afterwards, the experimenter returned and the participant and peer both filled in a brief questionnaire containing various questions regarding age, if they were living at home, number of cigarettes smoked per day, etc. All participants were debriefed on the actual aim of the study after the study was completed.

Participants

Our sample size was based on previous experimental studies examining peer influence and smoking behavior, usually including 15–20 participants in each condition (Antonuccio & Lichtenstein, 1980). Only daily smokers were included in the study, two participants were excluded from the analyses because they were no longer daily smokers. In total, 31 cases were included (15 participants in the covert peer influence condition and 16 participants in the overt peer influence condition). We first checked if the deception worked and if participants believed the coverstory and if they thought they were interacting with a peer; this seems to be the case. At the end of the questionnaire, we asked the participants what they thought the study was about, and nobody guessed the actual aim of the study. Furthermore, they perceived the peer as friendly, pleasant, and kind in both conditions (independent sample *t*-test showed no significance between the two conditions). Subsequently, we analyzed the total number of participants’ responses on the three discouragements. However, in three cases the confederate missed or forgot the first discouragement: in the overt condition one discouragement was missing, and in the covert condition two discouragements. We kept these cases in the analyses, but excluded these three specific discouragements. Further, nine discouragements (two in the overt and seven in the covert condition) were not followed by a reaction from the participants. The explanation for this is because the first discouragement was expressed in the presence of the experimenter introducing the study. Therefore, we excluded these discouragements from the analyses. In the other remaining first discouragement situations, participants felt the comments were addressed to

them as they reacted on them, so we included their reactions in these situations. In addition, reactions from two smokers regarding the first and third discouragement in the covert condition and one reaction regarding the first discouragement in the overt condition were unintelligible. Thus, the 31 cases produced a total of 44 responses in the overt condition and 34 responses in the covert condition (i.e. 17 first-, 31 second-, and 30 third- discouragements) and these responses were treated as the main outcome variable. Moreover, the unit of analysis is the conversations and the overt and covert reactions.

Data analyses

We transcribed directly from the videotapes of the sessions. We analyzed the participants' reactions in the two conditions that were considered products of talk-in-interaction between peer confederate and participant. Ordinary conversation is the starting point of discourse analysis (Schegloff, 1995). Although the experimental setting led to prescribed conversational contributions, the conversations may be viewed as real-world to the extent that they are not interviews and that the participants were not aware of the actual aim of the study.

Two researchers rated the data for this analysis, then they resolved disparities in five ratings through discussion. The two researchers were blinded concerning the study group. First, we examined the discourse of the reactions to the peer discouragements. We regarded these as accounts of their smoking behavior, which they presented as excuses or justifications to achieve social approval for their behavior (for more information on this classification see Potter & Wetherell, 1997). We added a third category in which the participants' accounts contained an admission of the negative aspects of their behavior, using arguments that put their smoking habit in a bad light and adding to the peers' arguments. We divided the smokers' accounts into the following three categories: (a) conceding the undesirability of smoking by expressing negative aspects (i.e., admission); (b) agreeing that their smoking behavior is a bad habit, but putting it in the context of external contributory factors (i.e., excuses); and (c) not admitting to the negative aspects of smoking or claiming that the negative aspects are outweighed by other factors (i.e., justification). We used the typology of accounts described in Potter and Wetherell (1997) to further differentiate between excuses (e.g., denial of volition, denial of agency, and appeal to mitigating circumstances) and justification (e.g., claim that effect has been misrepresented, desire for self-fulfillment, and appeal to values). In addition, we divided admissions into financial, health, and general disqualification accounts.

We then considered the reactions to the peer discouragements as an interactional form of advice-giving and advice-receiving. Advice-giving has been analyzed as a delicate interactional phenomenon. In order to examine how the daily smoking late adolescents and young adults received peer discouragement, we used the categorization of advice reception by Heritage and Sefi (1992): (a) *marked acknowledgment* repeating key components of the advice and taking an active role in a dialogue about the peer's or participant's experiences in quitting smoking; (b) *unmarked acknowledgment* "mm", "yeah", "right", which has a primarily continuative function and not showing an intention to follow the advice but avoid causing peer embarrassment or discomfort, also known as passive resistance (Peräkylä, 1998; Silverman, 1997; Stivers, 2005); and (c) demonstration of being well-informed, indicating the redundancy of the advice and included remarks that indicated *open resistance* to the confederate's statements. For the unmarked acknowledgment, we also included remarks about postponing cessation and remarks that mitigated the smoking habit (e.g., "it does not matter because I hardly smoke").

Results

Descriptive statistics

Of the 31 participants, 51.6% were male, aged 16 to 24 ($M = 18.84$; $SD = 1.90$), and the majority lived at their parents' home (77.4%). With respect to smoking behavior, 32.3% of participants smoked one to five cigarettes per day, 32.3% smoked six to 10 cigarettes per day, 25.8% smoked 11 to 20 cigarettes per day, and 9.7% smoked 21 to 30 cigarettes per day. In addition, the descriptive characteristics for the overt and covert condition are depicted in Table 1. Pearson Chi-Square test showed that for gender

Table 1. Descriptive baseline characteristics for the covert and overt condition.

	Covert condition ($N = 15$)	Overt condition ($N = 16$)
<i>Frequencies in%, N</i>		
Gender		
Female	46.7, 7	50, 8
Male	53.3, 8	50, 8
Living		
At their parents' home	86.7, 13	68.8, 11
On their own	13.3, 2	31.3, 5
Current Smoking Behavior		
1–5 Cigarettes/day	26.7, 4	37.5, 6
6–10 Cigarettes/day	53.3, 8	12.5, 2
11–20 Cigarettes/day	13.3, 2	37.5, 6
21–30 Cigarettes/day	6.7, 1	12.5, 2
<i>Range minimum to maximum (M, SD)</i>		
Age	17–24 years (19.13, 1.85)	16–24 years (18.56, 1.97)

Table 2. Young smokers' accounts in reaction to peer discouragement.

Accounts	Number of cases	Number of reactions
<i>Admission</i>	10	15
Financial	6	6
Health	3	3
General disqualification	4	6
<i>Excuses</i>	16	46
Denial of volition	13	23
Denial of agency	2	2
Appeal to mitigating circumstances	9	21
<i>Justification</i>	7	10
Claim that effect has been misrepresented	2	3
Desire for self-fulfillment	7	7
Appeal to values	0	0

and living there were no significant differences between the two conditions ($\chi^2(1) = .034, p = .853$ and $\chi^2(1) = 1.42, p = .233$ respectively). Independent sample *t*-test showed that for age and current smoking behavior there were no significant differences between the two conditions ($t = .832, p = .412$ and $t = -.702, p = .488$, respectively).

Accounts given by the participants in reaction to peer discouragement

As shown in Table 2, 15 accounts given by the participants represented an expression of some negative aspects of smoking; they included financial accounts (e.g., "quitting saves you money, too of course—you can only gain"), health accounts (e.g., "... it's not good for your health either"), and general disqualification accounts (e.g., "it's awful—really a filthy habit, people who smoke just look stupid"). Furthermore, 46 reactions of the participants represented one or more excuses; that is, denied volition (e.g., "I had stopped for a long time, and then on New Year's Eve, I smoked three packs ... That was it, I was back on them again."), appeal to mitigating circumstances (e.g., other people who smoked in their presence, parties), and denied agency (e.g., "One day I just woke up with a pack of tobacco"). Finally, 10 reactions presented a justification: used self-fulfillment accounts by emphasizing the positive experience of smoking for them (e.g., "Yes I should stop, but I enjoy it," "I smoke if I'm a bit stressed ..."), and claimed that the negative effects of smoking a small number of cigarettes are misrepresented (e.g., "but I don't smoke much, so that's different").

Participants' acknowledgement of the peer discouragement

In the overt condition, we counted 44 reactions in which the peer expressed advice to stop smoking (see Table 3).

Table 3. Three types of acknowledgement (i.e. marked, unmarked and open resistance) present in the overt and covert peer influence condition.

	Number of acknowledgments			Total
	Marked	Unmarked	Open resistance	
Overt condition	10	26	8	44
Covert condition	23	4	7	34
Total	33	30	15	78

In 10 cases, the participants gave a marked acknowledgment (e.g., "OK, so how did you quit smoking then?"). In this way, they demonstrated their acceptance of the advice and presented themselves in an active role in relation to their smoking habit. The participants in this category often asked how the peer managed to stop or told him/her about their own efforts. In 26 reactions, the participants gave an unmarked acknowledgment by just saying "yeah" or "oh okay." They continued the conversation without showing an intention to follow the advice, indicating passive resistance. Finally, in eight reactions, the participants showed open resistance by responding that the advice was unnecessary because they already understood the importance of quitting, or by pointing out the advantages of smoking for them ("... cigarettes are really my thing"), or questioning the peer's authority ("The ones who used to smoke are always the worst").

Of the 34 reactions in the covert condition, 23 were marked acknowledgments (e.g., "Yeah. I'd like to stop too"), whereas only four reactions were unmarked acknowledgments (e.g. the participant laughs, looks away, says nothing, continues with the music task). Seven reactions were demonstrations of open resistance (e.g. "Fascinating. We all have to die anyway").

In addition, in both the overt and covert conditions, almost all the remarks in which the participants openly resisted the discouragement were expressed in response to the third and final discouragement. In the overt condition, six of the eight and in the covert condition five of the seven openly stated that the advice of the peer was redundant, or otherwise indicated that they would not follow the advice (see Table 4). For the first and second discouragement this was four "in total".

Discussion

This study examined how daily-smoking late adolescents and young adults (i.e., aged 16 to 25 years) verbally react to antismoking peers. Our results showed that the majority of smokers criticized smoking ($N = 16$) and/or expressed the negative aspects of smoking ($N = 10$), whereas a smaller number justified their smoking behavior ($N = 7$). Peer discouragement elicited acknowledgments (i.e.,

Table 4. Three types of acknowledgement (i.e. marked, unmarked and open resistance) present in the first, second, and third peer discouragement.

	Number of acknowledgments			Total
	Marked	Unmarked	Open resistance	
First discouragement	5 (1 O + 4 C)	10 (10 O + 0 C)	2 (1 O + 1 C)	17
Second discouragement	16 (4 O + 12 C)	13 (11 O + 2 C)	2 (1 O + 1 C)	31
Third discouragement	12 (5 O + 7 C)	7 (5 O + 2 C)	11 (6 O + 5 C)	30
Total	33	30	15	78

Note: "O" stands for the overt peer influence condition and "C" for the covert peer influence condition.

33 marked, 30 unmarked, and 15 open resistance) by the daily-smokers. More importantly, these acknowledgments differed for the two types of peer influence contexts of overt and covert. Thus, it is necessary to take into account the interactional processes in an antismoking peer context. Whereas the previous study did not find differences between the two types of peer influence on immediate smoking, this detailed study does. The way peers transmit/deliver antismoking messages appears to be crucial for how young people receive them. This is in line with existing literature on anti-tobacco campaigns where it is emphasized that the effectiveness of anti-tobacco messaging depends on how it is being executed (see also Wakefield et al., 2003; White et al., 2015).

Participants in the covert peer influence condition more often received peer discouragement with marked acknowledgements. They were more elaborative about smoking and took an active role in the dialogue; for example they asked the peer to tell them about their attempts to stop smoking, told the peer about their own attempts, and their plans to stop. In contrast, the participants in the overt peer influence condition more often showed unmarked acknowledgements, indicating passive resistance to the peer's remarks. This is in line with the reactance theory (Brehm, 1966) which assumes that people who are told what they ought to do feel threatened and become argumentative and resistant (Wolburg, 2006). However, open resistance did not significantly differ between these two conditions. But, we did find passive resistance which in the overt condition was the result of the discomfort the smokers felt and their reluctance—for reasons of politeness—to show this openly.

A possible explanation for the differences in type of acknowledgement between the overt and covert peer discouragement condition is in line with Festinger's cognitive dissonance theory (1957). The participants may

have experienced a discrepancy between his/her behavior or attitudes and that of his/her peer because on the one hand the individual smokes and on the other hand the peer is advising not to do so. Our present findings show that this discrepancy elicited verbalized attitudes and reactions among daily smokers and differed for the overt and covert peer influence condition. The participants who reacted with unmarked acknowledgements may be the ones who solved this discrepancy in a covert way, indirectly showing that the relationship with the peer is less of their concern. In contrast, the participants who reacted with marked acknowledgements solved this discrepancy by discussing their own and peer's smoking experiences and attempts to quit smoking, showing their tendency to take a more congruent position towards smoking.

Although our findings show that peer influence not to smoke affected participant's cognitive level, the findings of a previous experiment indicated that it did not change their immediate smoking behavior. Thus, even if the smokers agreed with the peer that smoking is not a "good thing to do" and that they ought to quit, they did not smoke less cigarettes during the interaction. However, because only immediate smoking was measured in the previous study, peer influence not to smoke may have changed young people's intention to quit smoking or the smoking behavior in the long-term (e.g., quit attempt, decrease in number of cigarettes, etc.). Future research should examine whether peer influence not to smoke enables the daily smoker to progress through the stages of change (Prochaska & DiClemente, 1983) and move beyond precontemplation to contemplation, preparation, and action.

Our findings seem in line with findings of studies of patients receiving medical advice by being told to change their lifestyle/behavior. Such an advising strategy is not effective (Britt, Hudson, & Blampied, 2004) and may elicit resistance and denial (Rollnick, Butler, & Stott, 1997). Motivational interviewing is more successful when health practitioners motivate the patient to change by evoking evaluations rather than imposing lifestyle modification (Britt et al., 2004). Smoking cessation studies showed support for this motivational interviewing (Britt et al., 2004). These motivational learning principles also may be applied in the peer context; covert rather than overt peer influence seems more effective in evoking evaluations of smoking and motivate the smoker to change his/her attitudes and behavior. Moreover, this means that smoking cessation programs may need to incorporate peers as "support groups" to provide opportunity to talk and share experiences with similar others. Future research is needed to examine whether the impact of antismoking messages from peers may well differ from

the effect of antismoking and smoking cessation campaigns. Young people may reflect more on smoking and smoking cessation if antismoking messages are communicated by peers as they may find it easier to relate to peers, which might result in an exchange of views and experiences on quitting smoking. In contrast, antismoking and smoking cessation campaigns informing smokers about smoking-related health risks or focusing on changing smoking-related attitudes among smokers are shown not to be effective in discouraging or reducing smoking (Lantz et al., 2000). These antismoking messages may be seen in this specific group as patronizing and therefore may be counterproductive.

Furthermore, in both the overt and covert peer influence condition, the smokers were more likely to give responses indicating redundancy or open resistance when the peer uttered the third discouragement. In these cases, the discouragement may have been one too many, especially in a short period of 30 minutes. It may have made the smoker feel uncomfortable, irritated, or ill at ease leading him/her to show more open resistance, which is in line with the reactance theory. Thus, a repeated antismoking message in a short period might not be effective in discouraging smokers from smoking and could even have a boomerang effect. Little is known about the impact of the number of discouragements and the time in which they occur or follow each other, thus these components such as intensity and frequency of antismoking messaging should be considered and examined further in future experimental and intervention research designs looking at peer messaging.

Limitations

There are some limitations of our study. First, our findings are not generalizable to other samples or other countries for several reasons. Young adults from Western countries might react differently to peer discouragements than those from Eastern countries. Cultural differences in openness or straight forwardness need to be considered. Furthermore, the participants were recruited from intermediate technical and vocational training schools, with this particular sample being more likely to smoke (Van Dorsselaer & Goossens, 2015). In addition, while the findings of this qualitative study provide a strong indication, replication in other samples and countries is needed. Second, the peers in this study were strangers; well-known peers such as popular classmates or (best) friends who quit smoking may have a different impact on the reaction of the participant. Third, this experiment only examined short-term influences; long-term influences were not taken into account. Finally, this study

included participants ranging from 16 to 25 years. It may be the case that late adolescents may react and respond differently to antismoking messages transmitted by peers than young adults. In this present study we were not able to examine these factors. However, there were no age differences between the two experimental conditions suggesting that our findings and conclusion are not biased by age. Nevertheless, future research is needed to examine whether young adults may react differently and perceive the antismoking messages more as patronizing compared to adolescents. Previous studies regarding antismoking messages show that it is more effective among adolescents compared to older adolescents (Wakefield et al., 2003; White et al., 2015).

Conclusion

The findings show that in the covert peer influence condition, the great majority of young people agreed with the peer discouragement, whereas in the overt peer influence condition the majority showed passive resistance. Also, the findings show that the young people in the covert peer influence condition more often expressed an interest in the peer's smoking cessation experiences. Thus, these findings together indicate that mild discouragement seems more effective in stimulating young people to take an active role in the dialogue with their peers about smoking. This might have implications for the development of smoking cessation programs and antismoking campaigns, as they may be more effective if they would incorporate peers as a "support group" to provide an opportunity to talk and share experiences regarding smoking cessation with similar others. Providing smokers with this opportunity, where nobody is judging them or telling them to quit smoking, might be effective in changing their cognitions (i.e., attitudes) and may affect their motivation to change their behavior. This needs to be examined further.

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Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

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