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Can you please put it out? Predicting non-smokers’ assertiveness intentions at work

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ABSTRACT
Objective The present study aimed to identify the psychosocial predictors of non-smoker employee intentions to ask smokers not to smoke at work. The predictive effects of past behaviour, anticipated regret, social norms, attitudinal, outcome expectancy and behavioural control beliefs were investigated in relation to the Attitudes—Social influence—Self-Efficacy (ASE) model.

Methods Data were collected from Greek non-smoker employees (n=137, mean age=33.5, SD=10.5, 54.7% female) in 15 companies. The main outcome measure was assertiveness intention. Data on participants’ past smoking, age, gender and on current smoking policy in the company were also collected.

Results The majority of employees (77.4%) reported being annoyed by exposure to passive smoking at work, but only 37% reported having asked a smoker colleague not to smoke in the last 30 days. Regression analysis showed that the strongest predictor of non-smokers’ assertiveness intentions was how often they believed that other non-smokers were assertive. Perceived control over being assertive, annoyance with secondhand smoke (SHS) exposure at work and past assertive behaviour also significantly predicted assertiveness intentions.

Conclusions Assertiveness by non-smoker employees seems to be guided mainly by normative and behavioural control beliefs, annoyance with SHS exposure at work, and past behaviour. Interventions to promote assertiveness in non-smokers might benefit from efficacy training combined with conveying the messages that the majority of other non-smokers are frequently annoyed by exposure to SHS, and that nearly half of all non-smokers are assertive towards smokers.

Tobacco use is causally linked to a range of fatal diseases and adverse health outcomes, including strokes, coronary heart disease and various types of cancer.1 During the last decade, evidence has been accumulating on the health burden of exposure to secondhand smoke (SHS). A recent report by the European Commission2 indicated that SHS has been classified as a workplace carcinogen and that there is no safe level of exposure to SHS. Current estimates suggest that SHS accounts for nearly 80,000 deaths in Europe each year, and almost 10% of these deaths are caused by exposure to SHS at work.3 In its effort to counter the health burden of tobacco use, the Framework Convention on Tobacco Control (FCTC) explicitly states that signatory countries should reduce SHS exposure at work. Workplaces are identified as important settings for health promotion activities, including the reduction of smoking rates and exposure to SHS.1 4 5 Commenting on the benefits of workplace smoking restrictions, West6 noted that “workplace bans can be seen not so much as restricting smokers’ freedoms but providing an environment which is more conducive to their regaining control over their behaviour” (p 174). Indeed, many studies have shown significant links between smoking bans at work and reductions of exposure to SHS, increased quit attempts and successful cessation among smokers.7–13

It has been surmised that worksite smoking restrictions may be jointly influenced by smokers’ compliance with existing restrictions and non-smokers’ reactions to smoking at work, such as asserting the right to smoke-free air when smokers light up a cigarette.14–16 Non-smokers’ assertiveness at work may complement existing smoking regulations by conveying to smokers the message that non-smoking is the norm.17 This may be reinforced by the implication that deviance from a norm or regulation will incur some form of social sanction or disapproval.18 19 While being an important social skill that can be used for the benefit of worksite smoke-free policies, assertiveness has been largely neglected in the tobacco control literature.

Among the few reported studies on non-smokers’ assertiveness, Willemsen and De Vries15 found that almost half of all non-smoker employees in several Dutch companies had asked their smoker colleagues not to smoke. Assertiveness intentions and behaviour were predicted by components of the Attitudes—Social influence—Efficacy (ASE) model,20 21 including attitudes towards being assertive, perceived social norms (eg, the frequency of other colleagues acting assertively) and self-efficacy (eg, how confident one feels to ask smokers not to smoke). More distal variables not included in the standard structure of the ASE, such as annoyance with SHS at work and beliefs about the health effects of SHS were also significant predictors of assertiveness intentions and behaviour. Willemsen and De Vries15 also argued that future studies on non-smoker employee assertiveness would benefit from the inclusion of additional predictors of intentions, such as outcome efficacy (ie, the experience of success following an assertive request).

More recently, Germaine et al22 noted that being concerned about the health hazards of SHS exposure significantly predicted assertiveness behaviour among Australian non-smokers. Furthermore, a different line of research has shown that intentions are strongly influenced by anticipated regret, a psychological construct that refers to anticipated negative emotions from performing or not performing specific behaviours.23–27 Although anticipated regret has been neglected in previous
studies of non-smokers’ assertiveness behaviour, we therefore predicted non-smokers would be more motivated to be assertive if they expected to feel regret if they did not do so.

Studying non-smokers’ assertiveness behaviour and intentions is badly needed in countries with high smoking rates and comparably weak regulations and social norms against tobacco use. For instance, Greece is one of Europe’s heaviest smoking nations, and reports suggest that, over recent years, the country has moved backwards in terms of tobacco control.26 As Vardavas and Kafatos29 noted, introducing smoking restrictions and related policies in Greece is one matter but their enforcement is another. Greek smokers tend to smoke in supposedly smoke-free areas,30 and non-smokers are often exposed to SHS in a number of settings in which smoking is prohibited by law.31 The present study set out to explore Greek non-smoker employee exposure to SHS at work, and intentions to ask smoker colleagues not to smoke. The theoretical model used to predict assertiveness intentions was derived from Willemsen and De Vries’ study15 and research on the effects of anticipated regret on behavioural intentions.20–27

**METHODS**

**Participants**

Questionnaires were distributed to Greek non-smoker employees from a heterogeneous sample of 15 randomly selected companies located in the second largest Greek city (Thessaloniki, approximately one million inhabitants). Being a non-smoker and currently employed by the company for at least 3 months were inclusion criteria for participation. Following an initial screening process to identify employees fitting the inclusion criteria in each participating company, 250 questionnaires were administered and 148 were returned, yielding an acceptable response rate (59.2%). Of these, 11 questionnaires were excluded from subsequent analyses because of missing data or incorrect completion, thus leaving 157 surveys eligible for data analyses (54.8% of the overall sample approached). The distribution of the final sample of employees (n=157) in each company by sector was wine making (24.8%), banking and finance services (19%), media and advertising firms (16.8%), sales and marketing services (16%), educational institutions (14.6%) and day care rehabilitation centres (8.8%). Mean age of participants was 35.5 years (SD=10.5) and 54.7% were female.

**Measures**

For the purposes of the study a questionnaire was developed based on the ASE model applications to non-smokers’ assertiveness.15 Measures included participants’ past smoking (ie, whether or not one used to be a smoker, assessed with a yes/no option), age and gender (male=1, female=2), as well as on key workplace characteristics (ie, current smoking policy in the company, ‘smoking is not allowed anywhere (total ban)=1’; ‘smoking is allowed in certain places (partial ban)=2’; ‘smoking is allowed everywhere (no smoking ban)=5’). Accordingly, measures assessed perceived workplace exposure to, and annoyance with SHS, ASE-related variables (ie, attitudes towards being assertive, social norms, self-efficacy and assertiveness intentions), past assertive behaviour, outcome efficacy, anticipated regret from not acting assertively and SHS health risk beliefs.

**Exposure to SHS at work**

Exposure to SHS at work was assessed with a single item ‘(Do people smoke in your usual working area?)’ measured on a continuous scale from very rarely (1) to very often (5).

**Perceived annoyance with SHS**

Perceived annoyance with SHS was measured as the mean of two items (ie, ‘Are you bothered by SHS in your working area?’ and ‘Do other colleagues of yours get bothered by SHS in their working area?’). Responses were coded on a continuous scale from very rarely (1) to very often (5), and internal consistency reliability (Cronbach’s α) was 0.80.

**Attitudes**

Attitudes towards being assertive were assessed as the mean of four semantic differentials (‘For me, asking smoker colleagues not to smoke in my working area’ is: good/bad; improper/proper; useless/useful; unethical/ethical), scored on a 5-point scale (Cronbach’s α=0.83). Higher scores indicated more positive attitudes towards being assertive.

**Social norms**

Social norms were measured with two items. One item reflected perceived assertiveness (‘how often other colleagues ask smokers not to smoke in their working area?’) and was scored on a 5-point scale from very rarely (1) to very often (5). The second item was open-ended and asked participants to give a percentage indicating the perceived prevalence of smoking in the country (‘In your opinion, how many people in Greece are smokers (ie, smoke at least one cigarette a day?)?’).

**Self-efficacy**

Self-efficacy was assessed as the mean of two semantic differential scales (impossible/possible; difficult/easy) following the stem proposition ‘For me, asking a smoker colleague not to smoke at my working area is…’ Responses were scored on a 5-point scale, and higher scores indicated more perceived control over being assertive (Cronbach’s α=0.69).

**Intention to act assertively**

Intention to act assertively was measured as the mean of three items (ie, ‘I intend to ask smoker colleagues not to smoke in my working area’; ‘I will try to ask smoker colleagues not to smoke in my working area’; ‘I am determined to ask smoker colleagues not to smoke in my working area’), all scored from strongly disagree (1) to strongly agree (5). Cronbach’s α was 0.82.

**Past assertive behaviour**

Past assertive behaviour was measured with two items reflecting recent assertiveness (‘Have you asked a smoker colleague not to smoke in your working area during the last month?’) coded on a nominal (yes/no) scale and frequency (‘If you are bothered by SHS in your working area, do you ask your smoker colleagues not to smoke?’) recorded on a 5-point Likert scale ranging from very rarely (1) to very often (5). A composite measure of past assertive behaviour was developed reflecting the interaction between frequency and assertiveness in the past month (frequency × recent assertiveness), and used in subsequent statistical analyses as an indicator of past assertive behaviour.

**Outcome efficacy**

Outcome efficacy was measured as the mean of two items reflecting whether asking a smoker colleague not to smoke would lead to the desired outcome (‘If you were to ask a male smoker colleague not to smoke in your working area, do you think he would accept it?’ and ‘If you were to ask a female smoker colleague not to smoke in your working area, do you think she would accept it?’). Responses ranged from very unlikely (1) to very likely (5) (Cronbach’s α=0.73).
Anticipated regret
Participants reported how much they anticipated experiencing each of five emotions (regret, shame, worry, happiness and satisfaction) following from not acting assertively. A mean score was generated and responses ranged from strongly disagree (1) to strongly agree (5). Two items (happiness and satisfaction) were reverse scored. Internal consistency reliability was at acceptable levels (Cronbach’s α=0.66).

Perceived health risk from SHS
Perceived health risk from SHS was measured as the mean of seven items. Five items reflected perceived health risk to non-smokers in general (ie, ‘Based on what you know or believe, non-smokers exposed to SHS have increased chances for developing...asthma, lung cancer, heart disease, bronchitis, breathing difficulties’), and two items reflected perceived health risk to vulnerable populations (ie, ‘Exposing a pregnant woman to passive smoke is dangerous for the fetus’ and ‘Exposing people suffering from illness the smoke from other people’s cigarettes may worsen their condition’). Responses were coded on a 5-point scale from strongly disagree (1) to strongly agree (5), with higher values reflecting more perceived risk from SHS exposure (Cronbach’s α=0.77).

Procedure
Following an initial contact with each company’s contact person (executive officers or human resources manager when available), and a screening process to identify employees with the necessary inclusion criteria, one of the investigators approached non-smoker employees and informed them using a standard introduction about the purposes of the study. Employees who consented to participate were given specific verbal instructions on how to complete the questionnaire. Participants completed the questionnaires at a convenient time (eg, work breaks) in order not to disrupt their regular working duties. The completion of the questionnaire took approximately 15 minutes. Completed questionnaires were placed into an envelope, sealed and returned to the investigator.

ANALYSIS
The statistical software SPSS 15.0 was used for the purposes of statistical analyses. Reliability analysis (Cronbach’s α) was used to assess the internal consistency of the multi-item measures used in the study. One-way ANOVA was used to identify workplace differences in reported SHS exposure at work and annoyance, past assertiveness and assertiveness intentions. Analyses of frequencies with χ² tests were used to examine gender differences in reported assertiveness, as well as differences in the type of smoking policy used between workplaces. Linear regression analysis was employed to identify the predictors of assertiveness intentions in non-smoker employees. Significance level was set to p<0.05 in all analyses.

RESULTS
Differences in SHS exposure and annoyance, assertiveness and smoking policy type between workplaces
One-way ANOVA was used to explore differences in self-reported exposure to SHS at work, annoyance with SHS exposure, assertiveness intentions and past assertive behaviour. The findings indicated there were no significant differences between workplaces (p>0.05). Accordingly, analysis of frequencies with χ² showed that there were no significant differences in reported policy type between companies.

Perceived annoyance with SHS and assertive behaviour
Overall, 37% of the respondents reported that they used to be smokers (past smokers). Over three-quarters of all employees (77.4%) reported that they were (quite/very) frequently bothered by exposure to SHS in their working area. However, when asked to estimate the reactions of their colleagues, only half (51%) believed that their colleagues were frequently bothered by SHS. In a similar fashion, 37% reported being assertive in the last month, and 46% said that they (quite/very) frequently asked others not to smoke in their working area. Analyses of frequencies with χ² tests showed that there were no gender differences in reported assertive behaviour.

Psychosocial predictors of assertiveness intentions
A linear regression analysis was used to identify the predictors of assertiveness intentions. The analysis was completed in a single step using the enter method, and an overall significant model emerged, F (14, 137)=7.317, p<0.001, predicting 59.4% (Adj R²) of the variance in the criterion variable. Tolerance levels were high (>0.579). Predictors included demographic variables (age and gender), company characteristics (type of existing smoking policy), reported SHS exposure at work and annoyance, past smoking behaviour of the respondents, ASE-related variables (attitudes towards assertiveness, social norms, outcome efficacy and perceived behavioural control) and past assertiveness, as well as perceived health risk from SHS exposure, estimated smoking prevalence and anticipated regret. Only four variables significantly predicted assertiveness intentions. Specifically, believing that other non-smoker colleagues are assertive, being annoyed from SHS exposure at work, perceived behavioural control (ie, believing that one can really ask smokers not to smoke) and having been assertive in the past were significant predictors. The findings from the regression analysis with each predictor’s standardised β weights, and 95% CIs for unstandardised coefficients (B) are summarised in table 1.

DISCUSSION
Tobacco use in Greece is widely prevalent and many smokers defy existing restrictions in various settings, thus endangering...
The present study explored Greek non-smoker employees’ readiness to defend their rights for smoke-free air by requesting smoker colleagues not to smoke. The vast majority of the respondents reported being frequently bothered by SHS at work, almost half said they have often asked smoker colleagues not to smoke at work in the past and 57% reported to have done so within the last month. Interestingly, intentions to act assertively in the future was not predicted by variables like attitudes towards being assertive, or concern about the health damaging effects of SHS exposure. Instead, normative beliefs (ie, believing that other non-smoker colleagues are frequently assertive) was the strongest predictor of assertiveness intentions, followed by self-efficacy, annoyance with exposure to SHS at work and having acted assertively in the past. This finding is important for it signifies the role of normative influences on behaviour, and suggests that smokers’ assertiveness could be partly explained in terms of social facilitation: it is more likely for a non-smoker to be assertive when other non-smokers are also (or are perceived to be) assertive. Of course, this statement does not undermine the influence of self-efficacy, annoyance with SHS exposure and past behaviour. Along with normative beliefs, it appears that smokers will be more likely to be assertive when they think they can really ask smokers not to smoke, and being annoyed by smokers’ cigarette smoke also seems a strong motivator of assertiveness.

Contrary to our expectations, anticipated regret was not a significant predictor of assertiveness intentions. This is in contrast to several studies showing that anticipated regret significantly predicted intentions. Nonetheless, these studies were concerned with health behaviours and choices largely relevant to self-regulation (eg, exercise, smoking initiation), whereas the present study focused on behaviour of a more social nature, involving interaction—and maybe conflict—with others. Perhaps anticipated regret of a quarrel with a colleague, and the potential damage to a relationship, weighs more than the regret of not acting assertively towards a person with whom one has to interact daily, now and in the future.

The practical aspect of the present findings is that workplace-based interventions to increase employee assertiveness against exposure to SHS might benefit by targeting normative and behavioural control beliefs. In particular, conveying the messages that more than three-quarters of other non-smokers are frequently annoyed by exposure to SHS, and that nearly half of all non-smokers are assertive with smokers, combined with efficacy training may jointly increase intentions to be assertive. The present findings also suggest that those employees who reported assertiveness in the past were determined to be assertive again in the future. Thus, interventions to promote non-smoker assertiveness at work might also target employees who already are assertive, and perhaps use them as role models for other employees—this would further assist in efforts to convey the message that assertiveness is the norm. Still, these suggestions should be further validated as intentions are not always translated into actions. To the extent, however, that other potential barriers to behaviour are obvious; intentions to act should provide good predictions of future behaviour.

While the present study yielded important findings, there are some limitations that need to be mentioned. First, a relatively small sample of employees was used and this limits the potential for generalisation. Although this can be compensated by the heterogeneity of the sample, a larger number of participants would probably allow for further and more insightful statistical analyses (eg, multilevel analysis). This point relates also to the second limitation of the study, which regards the focus on employee-level variables at the expense of measures regarding the characteristics of the workplace or the company. Given that we used different companies from various business sectors, multilevel analyses would allow us to examine the effects of company-level variables (eg, size, managerial attitudes and company commitment to health promotion). Third, the model used in this study predicted 59.4% of the variance in assertiveness intentions, leaving more than half of the variance unexplained. Nevertheless, previous studies have reported similar effect sizes. Future studies should employ time series designs to ascertain the causality between intentions and behaviour. While the model used in the present study assumed that normative beliefs, perceived control and intentions might lead to future behaviour, it might also be the case these variables are influenced by past assertive behaviour. A longitudinal design would help in identifying the directionality of causal associations.

Notwithstanding these limitations, the present study had several strengths. To begin with, this report addressed the issue of SHS exposure at work and non-smokers’ assertiveness for smoke-free air in a European country, and member of the FCTC, where tobacco control policies are largely disrespected and smoking is still socially acceptable—or at least not followed by any punishment, especially when it occurs in public settings and non-designated areas. Therefore, the present findings may set the basis for evidence-based and theory-driven tobacco control policies to increase non-smokers’ assertiveness against SHS exposure in the future. Second, the study contributed to the existing literature by investigating theory-driven assumptions not addressed in past research on non-smokers’ assertiveness intentions at work. For instance, results showed that for socially oriented behaviours, variables assumed to be central in decision-making and health psychology research, such as attitudes and anticipated regret, did not exert significant effects in predicting assertiveness intentions.

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Contributors All authors have contributed to the development of the manuscript.

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What this paper adds

- Non-smokers’ assertiveness is an important aspect in the promotion and establishment of smoke-free environments, but has been largely neglected in the tobacco control literature. The present study assessed non-smokers’ exposure to and annoyance with SHS at work, and intentions to ask smokers not to smoke in Greece—a country with comparably high smoking rates, weak anti-smoking norms and ineffective means to prevent exposure to SHS. The findings suggested that past behaviour, normative and efficacy beliefs, are more important than attitudinal and health risk beliefs in predicting assertiveness intentions. This is important for future interventions aiming to promote non-smokers’ assertiveness, especially in countries where smoking is still highly prevalent and seen as socially accepted.
REFERENCES