



## Smoking and Its Impacts on Absenteeism and Stress: A Preliminary Study

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### ABSTRACT

The article highlights a preliminary study on smoking and its impact on absenteeism and stress in the work place. The article also includes an application of the Theory of Planned Behaviour in explaining the behavior of smoking. The Theory of Planned Behavior which was proposed by Icek Ajzen is used to predict an individual's behavioural control and intention which are influenced by attitude and social norms to perform a behaviour. This article also discusses previous researches done on smoking and its relationship with absenteeism and stress among employees in organizations.

*Keywords:* Smoking; absenteeism; stress; impact; workplace

### INTRODUCTION

Smoking which is the behavior that a smoker brings wherever they go, has been long discussed by researchers from all over the world. This issue is a serious problem that happens in almost every organization. According to About.com (2012), there are 1.1 billion smokers in the world today, and if current trends continue, that number is expected to increase to 1.6 billion by the year 2025.

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Additionally, approximately 10 million cigarettes are purchased a minute, 15 billion are sold each day, and upwards of 5 trillion are produced and used on an annual basis worldwide. In Malaysia, the total number of smokers in the year of 2012 was 4.7 million (Samy, 2012). Additionally, over 5 percent of adult males were smokers and some 50 children under the age of 18 took up smoking every day (Samy, 2012). Nearly 10,000 Malaysians died every year due to smoking and making it as one of the top killers in the country (Idris, 2011). According to Global Adult Tobacco Survey (GATS) (2011), 85.8 per cent of adults in Malaysia believed that second-hand smoke exposed non-smokers to health hazards associated with smoking (Borneo Post, 2013).

The impacts of smoking, especially in the workplace will lead to more issues that need to be tackled by managers. For example, stress and absenteeism which are among the major problems in an organization will decrease the performance and thus reduce the effectiveness of the organization. Not only that, second-hand smoke is believed to cause various types of sickness, such as heart disease and/or lung cancer to non-smokers. Thus, this study is significant to understand the cause of smoking and its impact on stress and absenteeism among employees and also to explore the possible solutions to tackle this issue in an organization's context.

## **THEORETICAL DISCUSSION**

The Theory of Planned Behaviour was the extension of the Theory of Reasoned Action which predicted that an individual's behavioural performance depends on intention and ability. People's intentions are their attitudes towards performing a behavior and the subjective norms related to the behavior. Ability or behavioural control refers to people's belief in their ability to perform a particular behaviour under different situations (Tlou, 2009).

The application of those theories has been found in the study conducted by Ganley and Rosario (2013) who explored on smoking attitudes, knowledge, intent and behaviour among adolescents and young adults. The result showed that subjective norms and attitudes influenced young people to initiate smoking. Smokers were more likely to have friends and family who smoked and con-

sidered smoking to be the norm compared to non-smokers. In this case, the subjective norm became a strong predictor of smoking behavior. 70% of the smokers obtained their first cigarette from a family member or friend. Their positive attitude towards smoking became a significant factor of smoking behaviour.

Based on a research done by Baker et al. (2002), at least 50 percent of their respondents of light smokers cited habit, relaxation, enjoyment, addiction and social reason as the factors to smoke.

Meanwhile, habit, addiction, relaxation, enjoyment and "something to do with my hands" were cited by at least 50 percent of moderate smokers. This finding was supported by a past research carried out by Harakeh, Scholte, Vermulst, Vries and Engels (2004) which predicted parental factors and adolescent's smoking behaviour in the Netherlands. The outcomes of the study showed that adolescents with a high intention to smoke were more likely to engage in smoking. Youngsters with a more positive attitude towards smoking had a lower self-efficacy and perceived a high social norm to smoke. However, those who reported that their parents had knowledge about their whereabouts and activities were less likely to smoke. In other words, parental knowledge was positively related to adolescents' self-efficacy not to smoke. But, if one or both of their parents smoke, there would be possibly a higher possibility for them to start smoking.

Vitoria, Salgueiro, Silva and Vries (2009) also reported that attitudes and self-efficacy had a significant impact on

adolescents' intention to smoke. At the same time, pressure from peers as a social influence factor with a significant impact on intention to smoke caused teenagers to feel greater pressure and this led to a higher intention to smoke. To be concise, a positive attitude towards smoking, a low self-efficacy and a perception of a high pro-smoking social norm were associated with a higher intention to smoke.

Fu (2009) defined attitude towards smoking behaviour into three parts, which are personal relative benefit, social relative benefit and personal relative loss. In his/her research on elucidating smoking behavior in developed and developing countries, the hypotheses assumed that greater self-personal relative benefit implied a more positive attitude towards smoking behaviour.

Greater perceived social relative benefit of avoiding smoking behaviour implied a more negative attitude towards smoking behaviour and greater perceived personal loss caused by smoking implied a more negative attitude towards smoking behaviour. The findings showed that the attitudes of the Americans and Japanese over behaviour were positively affected by self-personal relative benefits and negatively influenced by personal relative losses and social relative benefits. (Fu, 2009)

The same result is also found in the studied developing countries, China and Taiwan, in which attitudes over behaviours are positively affected by self-personal relative benefits but they are

negatively affected by social relative benefits and personal relative losses. With regard to norms about smoking, although the ITC Malaysia National Report (2012) did not apply this theory in the survey the report had mentioned that smokers were very aware that their members of close social networks disapproved of their smoking. Nearly all (94%) "agreed" or "strongly agreed" that people who were significant to them considered that they should not smoke. The report also mentioned that the most common reasons that motivated adult smokers to quit were their family disapproval towards smoking (34%), personal health (34%), and the desire to set a good example for their children (33%). The majority of adult smokers (90%) stated that their religion discouraged smoking, and 73% acknowledged that smoking was discouraged (the Islamic term is *makruh*) under the Islamic faith (which is the predominant religion in Malaysia). About half (54%) of adult smokers reported that Ramadan would motivate them to quit smoking "a lot". In addition, 43% of adult smokers reported that they would be motivated to quit smoking "a lot" if they were advised to do so by a religious leader.

## **RESEARCH ON SMOKING AND ITS IMPACTS TO ABSENTEEISM AND STRESS**

### **Smoking and Absenteeism among the Employees in the Workplace**

Rosenblatt and Shirom (2004) studied absenteeism among teachers in the Israeli public education system by looking

into their demographic profiles. They found that there was a higher likelihood that the more educated teachers were, the more they were inclined to attend school. These findings are supported by a research conducted by Bilgin and Mine (2012) who reported that the higher the education level that the blue-collar employees have, the lesser the absenteeism. In addition, Hatletveit (2009) also reported that higher education level reduced the likelihood of being absent.

Halpern et al. (2001) stated that current smokers had the greatest rate of absenteeism, never smokers had the lowest rate, and former smokers were intermediate. Bunn III et al. (2006) also discovered that non-smokers and former smokers missed significantly fewer days compared with current smokers. Over the one year recall period, nonsmokers missed an average of 4.4 days compared with 4.9 days for former smokers and 6.7 days for current smokers. For all occupations, current smokers missed more days of work due to health conditions than former smokers and nonsmokers. Current smokers in all health status groups missed more days of work than non-smokers and former smokers.

Current smokers cost employers more in terms of loss of productivity than both former smokers and non-smokers. Using an average hourly rate of \$34.25/hour, the average annual amount of health-related productivity loss for non-smokers was estimated to be \$2623. For former smokers, the average annual cost of lost productivity was \$3246, and for current smokers, the estimated productivity loss

was \$4430. The results confirmed that being a current smoker was associated with a significant increase in the probability of being absent. It was estimated that the odds of absence for smokers were about 35–43% more than never smokers. (Bunn III et al., 2006).

Sindelar et al. (2005) stated that smoking might affect absences through increased health problems, especially respiratory, circulatory, and cancer. These health problems could result in days lost because of sickness and also more doctor visits and hospitalizations. Secondly, even before onset of these diseases, smokers' lungs and immune system might be compromised and they might be more tired or not feel well enough to go to work. Third, smoking was associated with more accidents and injuries, which could also result in lost days from work. Burns and fire-related accidents were more likely to occur among smokers as compared to non-smokers. Besides, they also reported the same results that current smokers had a significantly 37% greater likelihood of having missed a day, while those who quit in the last three months had 26% greater likelihood as compared to never smokers. Thus, over time, those who quit were more likely to have absences as compared to never smokers, but less likely than current smokers. After one year, quitters were less likely to have an absence as compared to current smokers, but it was not until after five years that the difference became significant.

The National Survey on Drug Use and Health (NSDUH) Report (2007) identified that among adults aged 18 to 64 who

were employed full time in the past week, past month cigarette smokers were more likely to have missed work on 5 or more days in the past month due to illness or injury than those who did not smoke cigarettes in the past month. For both males and females, past month smokers were more likely than past month non-smokers to miss 5 or more days of work in the past month due to illness or injury.

Nevertheless, according to Kelloway, Barling and Weber (2002), the difference between smokers' and nonsmokers' absenteeism did not differ significantly across region. The strength of the effect of tobacco smoking on absence from work was deemed to be stable across countries. Former smokers exhibited less absenteeism ( $M=6.87$ ,  $N=2246$ ) than did current smokers ( $M=7.84$ ,  $N=5326$ ) although this difference was not statistically significant ( $p>.05$ ). Former smokers also exhibited more absenteeism than did non-smokers ( $M=5.43$ ,  $N=6626$ ) although again this difference was not statistically significant.

Levy, Winickoff and Rigotti (2011) looked into different perspectives of school absenteeism among children living with smokers. They found that the likelihood of missing any school was higher for those living in homes in which there was 1 person who smoked in the home (aOR: 1.68 [95% CI: 1.20 –2.34]) than in homes where no one smoked indoors. The number of days a child was absent from school was significantly higher for those living in homes in which smoking took place than for those living

in smoke-free homes, and greater numbers of household smokers led to increased absenteeism. Children living with exactly 1 person smoking in the home missed 1.06 (95% CI 0.54 –1.55) additional school days per year, and those living with 2 smokers missed 1.54 (95% CI: 0.95–2.12) more days of school per year than they would have if they lived in smoke-free homes. Living with a smoker was associated with both measures of respiratory infection, and there was modest evidence of a dose-response or threshold effect. The likelihood that a child had an ear infection in the previous 12 months increased with the number of residents smoking in the household, and was significantly higher among children with at least 2 people who smoked in the home.

McDonald and Hert (2007) who focused on the area of smoking in the United States workforce explained that smoking was associated with reduced productivity. Absenteeism and work limitations (i.e. workers who reported being unable or limited in the kind or amount of work they could do because of a physical, mental, or emotional problem) were higher in current smokers than in former smokers, and higher in former smokers than in never smokers. Smokers lost an average of 6.0 workdays per year, almost twice the absenteeism of those who had never smoked (3.2 workdays per year). Smokers were twice as likely as never-smokers to report being limited in the amount or type of work they could do, 6% vs. 3%. Smoking exacerbated the effect of chronic disease on productivity: workers with ischemic heart disease who

smoked were about twice as likely to be limited in their activities compared with those who formerly smoked or never smoked, 29% vs. 15% and 14%, respectively. Workers aged 20 to 39 had a higher prevalence of smoking than workers aged 40 to 64, 24% vs. 21%. A closer look showed that men aged 20 to 24 and 25 to 29 had the highest prevalence of smoking, 34% and 29%, respectively. College-educated workers were much less likely to smoke than those with less formal education—17% vs 30% (high school diploma) and 33% (less than high school). Current smokers generally had a higher prevalence of respiratory disease than former smokers or those who had never smoked. The prevalence of chronic obstructive pulmonary disease (COPD) among smokers was 7%, compared with 4% for former smokers and 2% for never-smokers. Overall, workers who smoked lost an average of 6.0 workdays per year, slightly more than former smokers (5.5 days) and almost twice the average absenteeism of never-smokers (3.2 days).

Research done by Tsai, Wen, Hu, Cheng and Huang (2005) in Taiwan showed that the time men and women spent for taking smoking breaks amounted to nine days per year and six days per year, respectively, resulting in reduced output productivity losses of US\$733 million. Male smokers took off an average of 4.36 sick days and male non-smokers took off an average of 3.30 sick days. Female smokers took off an average of 4.96 sick days and non-smoking females took off an average of 3.75 sick days. All the reported financial costs caused by

absenteeism and reduced productivity from employees who smoked were significant in Taiwan.

### **Smoking and Stress among Employees in the Workplace**

In China, Cui et al. (2011) had found that 18.1 percent of the college students thought smoking was a stress reliever when they were asked about when they began to smoke. When asked about the reasons why they smoked currently, again 14.7 percent thought it was a stress reliever. Schmidt et al. (2010) found that smoking was unrelated to job stress. Heavy employee workload was associated with lower nicotine dependence. One possible explanation for this is that a heavy workload may drive employees to smoke in their spare time only. Another reason may be the growing number of workplace smoking bans leading participants to reduce their consumption.

In the article of “Smoking and Stress Management” (2013) research studies showed that smoking actually increased the stress level on the body. The only stress that is relieved from smoking is avoiding the withdrawal symptoms from quitting. Smoking causes different types of stress on smoker's body. These stressors affect the amount of oxygen the smoker gets, how their blood vessels work, the blood sugar levels and chemicals that enter the body. Magid, Colder, Stroud, Nichter, Nichter and TERN Members (2009) discovered that college students in objective stressful events (both social and academic) were negatively related to cigarette use. Cigarettes,

alcohol, and marijuana all tend to be consumed during parties and social encounters in college.

A study conducted by Parrott (1994) on individual differences in stress and arousal during cigarette smoking found that stress was significantly lower after smoking than before smoking. Many smokers reported that smoking helped them in various ways – particularly in controlling stress and maintaining alertness. His further investigation on this matter in 1999 reported that most smokers responded positively to statements such as ‘Smoking relaxes me when I am upset or nervous,’ ‘smoking calms me down’, and ‘I am not contented for long unless I am smoking a cigarette’ in questionnaire surveys (Ikard et al., 1969; Russell, Peto & Pavel, 1974; Spielberger, 1986; Tomkins, 1968 as cited in Parrott, 1999). His study also explained that cigarette smoking is a mood modifier for smokers, calming and reducing smokers’ feelings of anxiety and anger’ (Warbutron, 1992, p.57 as cited in Parrott, 1999).

Regular smokers also reported an adverse mood when they had not smoked recently, with feelings of stress and irritability building up during periods of nicotine abstinence (Hughes, Higgins & Hatsukami, 1990; Parrott, Garnham, Wesnes & Pincock, 1996; Office of the U.S. Surgeon General, 1988 as cited in Parrott, 1999). Regular smokers, therefore, experience periods of heightened stress between cigarettes, and smoking briefly restores their stress levels to normal. However, soon they need another

cigarette to forestall abstinence symptoms from developing again. Various surveys have shown that smokers report slightly higher levels of daily stress than do non-smokers. In a survey of male shift workers, the cigarette smokers reported a significantly higher level of self-rated stress than did the non-smokers during both day and night shifts (Jones & Parrott, 1997 as cited in Parrott, 1999).

Kouvonen, Kivimaki, Virtanen, Pentti and Vahtera (2005) reported in their observational study on work stress, smoking status, and smoking intensity of 46,190 employees that, women with passive jobs, high job strains, and active jobs were significantly associated with an increased likelihood of smoking 20 or more cigarettes per day and high effort-reward imbalance with an increased likelihood of smoking 10–19 cigarettes per day. Of the components of the work stress models, low job control, low effort, and low rewards were associated with a higher likelihood of more intensive smoking among women. In men, low rewards were significantly associated with an increased likelihood of smoking 20 or more cigarettes per day. In addition, low control, passive jobs, high job strains, low effort, and high effort-reward imbalance showed similar associations with smoking intensity than those in women.

### **Other Effects of Smoking**

The results from the latest Global Adult Tobacco Survey by Malaysia (2011) showed that 92.2% of adults aged 15

years or older (93.5% of non-smokers and 88.1% of current smokers) believed that smoking could cause serious illness. Most of them believed that smoking causes stroke (80.7%), heart attack (88.8%), lung cancer (93.7%), oral cancer (86.0%), premature birth (79.4%), throat cancer (82.9%), miscarriage (71.9%) and gangrene (66.0%). The research found that there were significant differences between smokers and non-smokers who believed that breathing other people's smoke could cause serious illness (87.7% of non-smokers, 79.8% of smokers). An ordinary smoker has a one in two chances of dying prematurely as a result of smoking.

A study on health status of senior civil servants in Kuala Lumpur showed that health problems like obesity, hypertension, diabetes and hyperlipidaemia that were encountered by the samples had a significant relationship with their unhealthy lifestyle habits such as smoking (Liew et al., 1997).

A report compiled by Smart than Smoking Project Western Australia (2012) explained some harmful consequences of smoking that might happen straight away or in a short-term period to the smoker are: Smelly hair, lesser oxygen to the brain and lung, yucky skin, smelly breath and stained teeth, more coughs and colds and increased heart rate and blood pressure.

The medium and long-term effects are: Stroke, blindness, gum disease, leading to tooth loss, mouth and throat cancer, heart disease, heart attack, emphysema,

lung cancer, stomach ulcers, dry skin and poorer muscle tone.

This report was supported by the outcome discovered by Hansen and Juel (2001) to which twenty year old men who would never begin to smoke, ex-smokers, moderate, and heavy smokers could expect 1.7 years, 3.5 years, 3.0 years, and 2.7 years burdened with diseases of the respiratory system, respectively.

The European Agency for Safety and Health at Work (2012) clarified that some individuals died early due to the consequences of smoking. But for those who survived, they would still suffer from long-term poor health conditions. The risk of dying from heart disease was around twice higher for cigarette smokers compared to those who had never smoked. They also mentioned that smoking altered taste and smell which were associated with bad breath and increased the risk of tooth loss by up to threefold in heavy smokers.

Moreover, smokers had an 18 times more risk of having impaired pulmonary functions as compared to non-smokers (Nighute & Awari, 2011). The effects of smoking could become more serious when it impacted the psychological well-being of the smoker. This is what was reported by Parmak (2011) that soldiers who experienced problems with their general health and whose smoking behaviour became more frequent were more vulnerable to mental distress. Herbert, Foulds and Schaw (2001) found that smoking when paired with a distract-



tor did not induce a greater reduction in anxiety than smoking with no distractor. They found that participants who smoked a cigarette did not show a greater reduction in anxiety than participants who did not smoke. Neither cigarette smoking nor distraction had any effect on anxiety. They also examined whether cigarette smoking could produce an improvement in attentional performance in non-abstinent smokers. The results suggested that smoking a cigarette did not improve performance on this task under these conditions.

The smokers seem to threaten the health of their surrounding colleagues, stakeholders, friends and family members. 40% of children, 33% of male non-smokers, and 35% of female non-smokers throughout the world were exposed to secondhand smoke (Ober, Jaakkola, Woodward & Ustin, 2010). The report from Surgeon General (2006) as cited by Dresbach and Sanderow (2008) also showed that children and adults in the United States of America were still exposed to secondhand smoke in their homes and workplaces despite substantial progress in tobacco control.

Second-hand smoke can produce acute irritation of the nose, throat and lower airways, odor annoyance, shortness of breath, coughing and wheezing. Surgeon General (2006) also mentioned that although ventilation could help to remove some of the contaminants and erase odor, researches show that many pollutants still remained. As a result, even non-smoking sections and other areas deemed

“non-smoking” did not offer complete protection.

Exposure to second-hand tobacco smoke would therefore increase the risks of coronary heart disease and cardiac death among both men and women (European Agency for Safety and Health at Work, 2012).

Oberg et al. (2010) revealed that there were clear inequalities in the burden of disease from second-hand smoke according to sex and age. Women had the greatest burden of deaths of the total attributable to second-hand smoke, whereas children were most affected in terms of death and disability-adjusted life-years (DALYs).

Raja and Sultana (2013) explained that many studies have found that there are relationships between exposure to environment tobacco smoke and sudden death syndrome (SIDS) independent of the effects of maternal smoking during pregnancy. This association has been discovered for maternal smoking, paternal smoking, and smoking by other relatives or guests in the household. Not only that, Hegaard, Kjægaard, Møller, Wachmann and Ottesen (2006) pointed out that pregnant non-smokers who were exposed to environment tobacco smoke (ETS) both at home and outside the home gave birth to children with an average birth weight of 78.9g lower than the children of mothers who were unexposed to ETS.

Cigarette smoking can also cause fire as reported by a number of researches in

western country. O'Connor, Bauer, Giovino, Hammond, Hyland, Fong and Cummings (2007) found that 10 out of 596 Ontario resident smokers experienced a fire in their home that was caused by a cigarette. They emphasized that although the rate was low, it was consistent with larger national surveys assessing fire risks. Another research done by Markowitz (2010) in the United States of America stated a ten percent increase in price associated with a decrease in fires of 6.3 to 7.5 percent, while a ten percent increase in tax was associated with a decrease in fires of 13.5 to 14.3 percent. This study also reported that workplace smoking restrictions were positively associated with residential fires that were caused by cigarettes.

## CONCLUSION

This preliminary study summarized the application of the Theory of Planned Behaviour in explaining the behaviour of smoking. Previous research findings on smoking and its relationship with absenteeism and stress among the employees in organizations were discussed. Earlier findings also showed that there is a positive significant relationship between smoking and absenteeism in the organization. In addition to that, it is also suggested that serious illness and health problems including obesity, hypertension, diabetes and hyperlipidemia have significant relationships with unhealthy lifestyle habits such as smoking. However, studies also showed that smoking was explained as a stress reliever where stress was reported significantly lower after smoking than before smoking. Fur-

ther studies should be conducted to objectively evaluate the impact of smoking towards stress and absenteeism in organizations.

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