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## Analyzing Smoking Patterns of Day and Shift Software Engineers in Visakhapatnam

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### Abstract

In this technological era, millions of users are communicating each other with the help of Social Network which makes the globe into a small village. Though this advancement is most appreciable, at the same time it found to be more insecure too as most of the online users try to draw attention with other users in many ways, like posting irrelevant messages / pictures etc. Though Online Social Network (OSN) provides support to prevent unwanted messages on user walls, it is not sufficient to control all types of messages. Moreover, it consumes more time which is not effective compared to the present dynamic world. Researchers today are trying to develop many filtering techniques especially for keyword extraction, but not sufficient to handle all kinds of problems that are facing by normal people in OSN environment. Therefore an advanced and secure message filtering technique is very much essential in OSN.

This paper focuses on the existing message filtering techniques used in OSN and analyzes their prospects towards the prevention of unwanted messages in SN. This paper also focuses on the advantages of Expert System in this regard.

**Keywords:** Smoking, Day workers, Shift workers, Software Engineers.

### Introduction

The modern "24-hour Society" is the expression of this condition, where we are both consumers and producers at the same time, requiring, on the one hand, the availability of goods and services and, on the other hand, making consumption and production possible at any time of the day and the night. The most recent statistics indicate that the majority of the working population is engaged in irregular or "non-standard" working hours, including shift and night work, week-end work, split shifts, on-call work, compressed weeks, telework, part-time work, variable/flexible working time, and prolonged duty periods (i.e. 12-h shifts); thus, the classical working day, 7-8 a.m. to 5-6 p.m., Monday to Friday, is nowadays a condition affecting a minority of workers, that is 27% of employed and 8% of self-employed people according to the 3rd European survey on working conditions. Such diversification of working time should contribute to the improvement of human life (more goods, services, employment, and higher salaries) provided that there are no negative interferences with workers' health and well-being. This is not the case in many work situations, and the aim of this paper is to give an overview of the problems to be tackled nowadays by occupational health and some guidelines on how to protect workers' health and well-being. Essential services provided by police departments (military, police and security), fire brigades, ambulance officers and hospital employees have traditionally, always operated throughout a 24 hour period. Increasingly other services such as restaurants, petrol stations, and convenience stores, Business Process Outsourcing (BPOs), customer service (call centres, help desks and receptions), software companies, bars, restaurants, transportations, television and radio broadcasting, repair centres etc. are open 24 hours in order to meet the demand of the population worldwide. Public concerns in recent years over the increasing prevalence of smoking had prompted the researchers to try and determine the relation of shift work and smoking. Yamada et al. (2001) compared the psychosomatic health and unhealthy behavior between 338 workers in clean rooms producing electronic parts in 12 hours shifts and 95

workers in 8 hours shifts and 284 in day time management, clerical and engineering workers, Uchinada, Japan. Results suggested that 12 hours shift workers showed significantly lower fitness level, compared to 8 hours shift workers and day time workers. The tendency to have higher cigarette and alcohol consumption were observed in the 12 hours shift workers. So it can be noted that the 12 hour shift work may have contributed to unhealthy behavior resulting in low physical fitness. Amelsvoort et al. (2005) in The Netherlands conducted a research to assess whether smoking is more frequent among shift workers as compared to day time workers. A total of 7819 employees (out of them 2039 were shift workers) were taken for the study. Results showed shift workers are more often smokers and have significantly higher risk to take up smoking as compared to day workers. Lin et al. (2005) assessed the prevalence of cigarette smoking in female employees of two Taiwanese micro- electronics companies. Total 1950 female employees (day workers and shift workers) were surveyed for their smoking habits. The prevalence of smoking in shift workers was found to be 14per cent.

**Methodology**

The study was carried out at various software industries in Visakhapatnam. The purpose of the present investigation

was to assess the health status of shift workers in comparison to permanent day workers. The information on smoking habits viz., age when smoking was started, number of cigarettes per day or per week, places where they smoke most often, if they have any idea to quit smoking, factor which will motivate to quit smoking were collected by the same structured questionnaire.

**Participants**

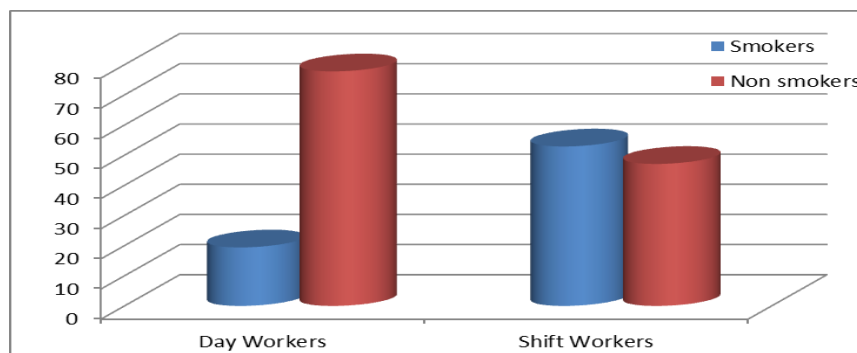
A total of 70 software engineers, in the age group of 22-33 years were selected for the study, with 36 members in control group (permanent day workers) and 34 members in study group (shift workers). All the shift workers followed an 8 hour irregular rotating work schedule namely morning, evening and night shift. Permanent day workers were the workers of typical day schedule who work for 8 hours. The first step included sample selection and then, rapport was formed with the subjects.

**Result and Discussion**

Once the data was obtained, it was coded, tabulated and analyzed, keeping in mind the objectives of the study. Appropriate statistical tools were used to draw meaningful inferences.

**Table1:** Smoking patterns of the subjects

Particulars		Day Workers (N=36)		Shift Workers (N=34)	
		Frequency	Percentage	Frequency	Percentage
Category	Smokers	7	19.4	18	52.9
	Non smokers	29	77.8	16	47.1
Age of starting (Years)	< 21	1	2.7	2	5.8
	21-24	6	16.6	8	23.5
	> 24	0	0	8	23.5
Number of cigarettes/week		Before joining Job			
	<18	4	11.1	3	8.8
	18-34	1	2.7	2	5.8
	>34	2	5.5	2	5.8
	Total	7	19.4	7	20.5
		After joining Job			
	<32	3	8.3	2	5.8
	32-47	2	5.5	9	26.4
	>47	2	5.5	7	20.5
	Total	7	19.4	18	52.9
Places smoke mostly	Office	5	13.8	4	11.8
	Home	2	5.5	0	0
	Outside	3	8.3	14	41.2
Company of smoking	Alone	4	11.1	6	17.6
	With friends	5	13.8	12	35.4
Motivation to quit smoking	Health issue	6	16.7	10	29.4
	Cost of cigarette	1	2.8	8	23.5



**Fig.1:** Smokers and Non-Smokers

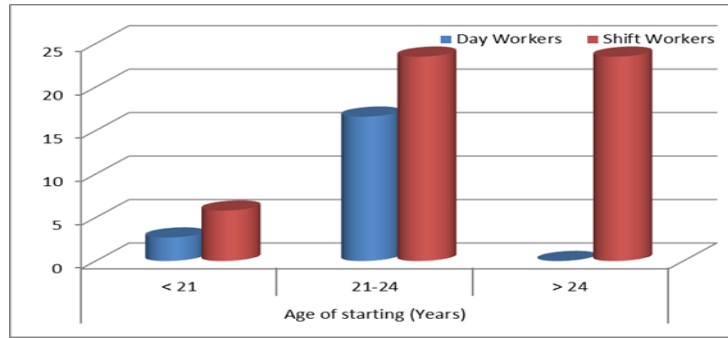


Fig.2: Smokers by Age

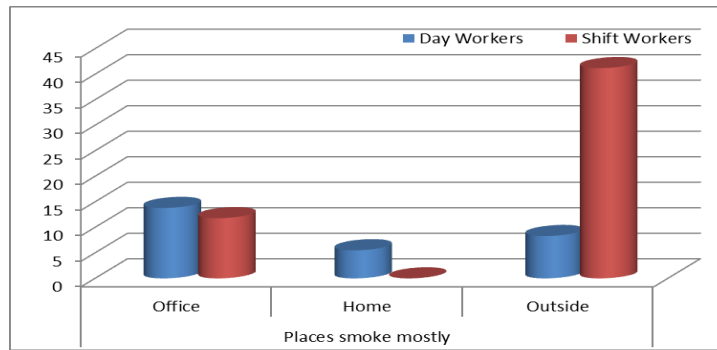


Fig.3: Place of smoking

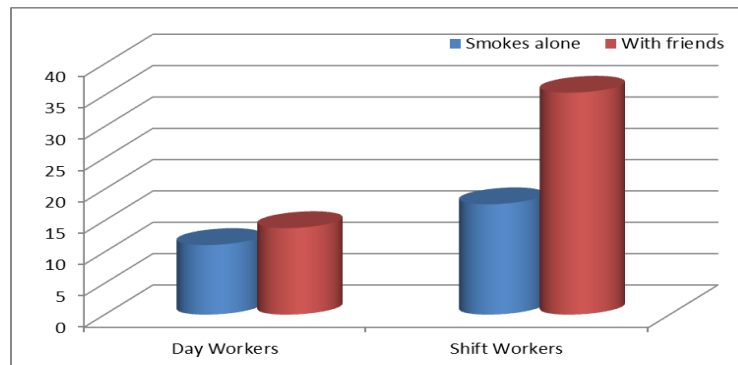


Fig.4: Smoking Company

**Conclusion**

Among the day workers only 19.4 per cent of subjects were smokers, whereas in case of shift workers more than half the subjects (52.9%) were smokers. Seventy eight per cent of day workers and 47.1 per cent of shift workers were nonsmokers. Regarding the age of starting 16.6 per cent day workers started smoking between 21 to 29 years, 2.7 per cent of the subjects before 21 years of age. Among the shift workers, equal percentage of subjects (23.5%) started smoking between the ages 21years to 24years and after 24 years. Only 5.8 per cent were found to smoke before the age of 21years. Before joining the job approximately 20 per cent subjects from both the group were having smoking habits, 11.1 per cent day workers and 8.8 per cent shift workers were smoking less than 18 cigarettes per week. Three per cent day workers and 5.8 per cent shift workers were smoking 18 to 34 cigarettes per week, followed by 5.5 per cent day workers and 5.8 per cent shift workers smoking more than 34 cigarettes. After joining the job the percentage of subjects smoking remained same (19.4 %) in day workers, but in shift workers this percentage increased to 52.9 per cent. Eight per cent day workers and 2.9 per cent shift worker smoked less than 32 cigarettes/week; followed by 5.5 per cent day workers and 26.9 per cent

shift workers consuming 32 to 47 cigarettes. More than 47 cigarettes were consumed by 5.5 per cent day workers and 20.5 per cent shift workers. With regard to place of smoking 8.3 per cent day workers and 41.2 per cent shift workers reported to smoke outside, 11.1 per cent day workers and 17.6 per cent shift workers were smoking alone, but 13.8 per cent day workers and 35.4 per cent shift workers smoked along with friends. Seventeen per cent day workers and 29.4 per cent shift workers reported to quit smoking if any health problem arises. Approximately three per cent day worker and 23.5 per cent shift workers reported that they will quit smoking if the cost of cigarette is increased. With reference to the findings of the smoking pattern the numbers of smokers (18 subjects) in shift workers were more than the day workers (19.4%). Out of 52.9 per cent smokers in shift workers 23.5 per cent of subjects had started smoking after the age of 24 years that was after joining the job. There was difference observed in the number of cigarettes consumed before joining the job and at present. The findings were in conformity with the results of Amelvoort et al. (2004), who concluded that shift workers are more often smokers and have significantly higher risk to take up smoking as compared to day workers. Lin et al. (2005) also explored that shift work was an

important factor in determining cigarette smoking habits in participants. The possible mechanism might be the use of nicotine as a way to cope with feelings of sleepiness or to maintain vigilance, which was required in night workers and to reduce job stress.

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