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Sleep Problems, Work-Stress and Health Complaints in Call Centers in Quezon City, Philippines

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Abstract

Call centers in the Philippines provide customer service to various multinational companies. They operate as the basis of work shifts in order to provide continuous service around the clock without interruption. This study investigated common work-related health complaints and assessed problems relating with the complaints of inbound call center agents in Quezon City, Philippines. Copies of self-administered questionnaire were pre-tested and distributed to 96 randomly selected call center agents. Work-related health complaints were verified from the company's clinic. Factors related to workers' health complaints were determined by correlation analysis. Common complaints of respondents included eyestrain (35%), cough (29%), worsening eyesight (26%), and back pain (26%). Respondents identified work stress as the main reason for their health complaints. Stress, irritability, insomnia, sleepiness, and interrupted sleep were significantly related with the occurrence of the work-related health complaints ($P < 0.05$) among the workers. Call centers provide lucrative incomes but they also create occupational health problems. That are associated with sleep problems and stress.

Introduction

Call centers in the Philippines provide customer services to multi-national companies on a worldwide basis. The emergence of call centers in the Philippines provides employment opportunities. However, it has also created stresses due to the "shifting work" system it employs to provide service around the clock. "Shift work" is now becoming a major trend in a broad range of industries in the Philippines. Shift work creates new routines that disrupt the work schedule and normal sleep patterns of workers¹. The concerns among workers on a shift system are increasing as workers experience adverse health consequences² as well as social and family problems³. Filipinos, nowadays, are lured towards working in call centers even if it involves shift work due to the lucrative benefits it provides, disregarding the attendant physical demands and health risks it entails. The prevailing conditions in the health and welfare of workers involved and the occurrence of work-related health problems can

provide valuable information that can be used to safeguard the workers health and well-being. Little information on the actual plight of call center agents is available in the Philippines. Little is also known regarding the factors significantly influence the occurrence of health complaints among call center workers. This study aims to determine the common work-related health complaints of call center workers and identify the factors related to the occurrence of these complaints. The information gathered in this study serves as an initial step towards informing people and decision makers regarding the workers predicament so as to consider policy alternatives and programs aimed at reducing morbidity and improving work efficiency.

Methods

A call center situated in Quezon City, Philippines, was purposively selected. The participants were inbound call center agents. A total

of 96 call center agents were randomly selected from the total list of personnel employed by the company. The selected participants were provided information regarding the purpose of the research, and were requested of their cooperation. A questionnaire was pre-tested, and it included both structured and open-ended questions. It was self-administered by the respondents. The questions determined the subject socio-demographic characteristics (e.g., age, gender, marital status, etc.), the work system that they were engaged in, employment history, and the effects of their work on their health (work-related health complaints) and on quality of life (sleep problems). Data regarding the work schedule of employees were verified by the company's supervisor, whereas data on the work-related health complaints were verified from the company's clinic records. In this study, workers working during the day shift were categorized as "day workers" and those during the night shift were categorized as "night workers."

The factors (age, gender, marital status, work schedule, employment history with the company, experience work stress, and sleep problems, irritability, insomnia, interrupted sleep, and sleepiness during work hours) were used as the dependent variables. Correlation analysis was used to determine the factors signifi-

cantly correlated with the work-related health complaint occurrences among the call center agents. The Spearman's correlation analysis was used for the nonparametric data, and the Pearson correlation analysis for the parametric data. Results yielding a P value of 0.05 were significant. All statistical analysis was performed using the Statistical Package for Social Sciences (SPSS).

Results

Profile of Respondents

A total of 96 randomly selected inbound call center agents completed the questionnaire. About 56% of the call center agents were day workers, and 44% were night workers. There were more female participants (53%) than male participants (47%) in the study. Among the female and male respondents, only 37.3% and 51.1% were working at night, respectively. The mean (\pm SD) age of respondents was 25.7 (\pm 3.9) years. The mean (\pm SD) age of male and female respondents were 26.1 (\pm 4.4) and 25.4 (\pm 3.5) years, respectively. Most (76%) respondents were single, and were working for the company for a mean (\pm SD) of 37.8 (\pm 24.6) weeks. About 32.3% of respondents stated that they earn monthly incomes of less than PHP 20,000 (<\$425.53; \$1 = PHP 47) while 67.7% indicated that they earn monthly in

Table 1. Factors Related To Occurrence Of Health Complaints Of Participants

Factors	R	P
Age	-0.037	0.720
Gender	-0.084	0.418
Marital status	0.082	0.427
Shift schedule	0.101	0.328
Employment history	-0.161	0.117
Work stress	0.283	0.005*
Irritability	0.223	0.029*
Insomnia	0.277	0.006*
Interrupted sleep	0.327	0.001*
Sleepiness during work	0.301	0.003*

* $P < 0.05$.

comes of more than or equal to PHP 20,000 ($\geq \$425.53$).

Work-Related Health Complaints

The majority (81%) of the respondents had work-related health complaints. Most of these respondents who had work-related health complaints were female (84%) compared with male (78%). The majority of call center agents employed during the night (69%) and day (64.8%) admitted that they are stressed from their work. More night workers (85.7%) reported experiencing work-related complaints compared with day workers (79.8%). Common complaints presented by respondents and verified from the company's clinic were eyestrain (35%), cough (29%), worsening of eyesight (26%), and back pain (26%). Most respondents identified that stress in the workplace (67%) is the main reason for the occurrence of these work-related health complaints. Work stress was significantly related to workers' sleep problems, such as sleepiness during work hours ($R = 0.234$), irritability ($R = 0.328$), and insomnia ($R = 0.204$; $P < 0.05$). Other reasons recognized by respondents in relation to the occurrence of their work-related health complaints were sleep problems (51%), insufficient exercise (41%), and poor diet and eating habits (24%).

Factors Related to Work-Related Health Complaints

The factors (age, gender, marital status, work schedule, employment history with the company, experience work stress, and sleep problems, irritability, insomnia, interrupted sleep, and sleepiness during work) were correlated with the respondents' perceived occurrence of work-related health complaints. Stress ($R = 0.283$), irritability ($R = 0.223$), insomnia ($R = 0.277$), sleepiness ($R = 0.301$), and interrupted sleep ($R = 0.327$). They were significantly related with the occurrence of work-related health complaints of respondents ($P < 0.05$; **Table 1**). Results of the study did not negate the possibility that age, gender, marital status, shift schedule, and employment history with the company may have significant correlations with the occurrence of these work-related health complaints ($P > 0.05$).

Discussion

This was a cross-sectional study, and its scope is limited to the inbound call center agents working in the Philippines. The study only

identified significant factors related to the occurrence of work-related health complaints. The information used in the study was obtained directly from the respondents, and their health complaints were verified by the company's clinic. The detailed analysis of the transitions of work schedule over time and on the occurrence of work-related health complaints were not carried out.

The findings of the study suggest that workers recognize that stress and sleep problems are the results of working in a call center and these factors were significantly related to the occurrence of the workers' health complaints, such as eyestrain, cough, worsening eyesight, and back pain. According to Gordon et al.¹ Thus, working in shifts could lead to problems such as getting less sleep and stress. Jansen et al.⁴ support this finding, as they indicated that working in shifts oftentimes creates sleep problems, irritability, and reduced productivity at work. It could also lead to morbidities brought about by human error and accidents at work. As well, the findings by Chen et al.⁵ support these conclusions, as they indicated that working in shifts creates stress or pressure that may affect sleep and the biological rhythm of workers. Similarly, Reinberg⁶ reported significant relationships between sleep and health. Poor sleep is believed to be associated with poor health, since sleep deprivation directly or indirectly affect the physiological system, thereby resulting in unhealthy conditions, disorders, and diseases. Results of this study showed that "night workers" reported more work-related health complaints as compared with "day workers". Knutsson⁷ supports this finding that night work is linked to poor health condition. Chen et al.⁵ reinforce this result as they pointed out that night workers tend to experience more health problems because working on night schedules commonly disrupts one's biological rhythm, and this may in turn have an implication to the workers' physiologic, psychological, and social welfare.

Conclusion

This study revealed common work-related health complaints of inbound call center workers employed in a call center in the Philippines, and also identified the factors related to the occurrence of health complaints. The results of the study suggests that sleep problems and stress are relatively common among inbound

call center agents working in shifts. Stress, irritability, insomnia, sleepiness, and interrupted sleep were significantly related with the occurrence of the work-related health complaints among the workers. The common work-related health complaints identified in the study were eyestrain, cough, worsening eyesight, and back pain. Stress and sleep problems encountered from working in call centers, especially during the night hours, had an adverse effect on workers' health. Other epidemiological studies corroborate the findings of this study, namely that sleep problems and stress were the common factors that can affect the workers quality of life, performance, and occurrence of morbidities. More in-depth studies, with larger sample sizes could investigate of the different factors, apart from the ones covered in this study. Further studies may examine the effects of working in shifts on workers health complaints. More detailed studies on the transition of shift work over time and on the occurrence of health impacts are recommended to guide future decisions and programs that will help improve workers' performance productivity and welfare.

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