

The Scale of Occupational Stress in the Business Process Outsourcing Industry



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Abstract: The work of call center agents is one of the most stressful jobs in the present-day world economy as they are dealing with truckloads of unexpected calls or requests frequently. Thus, the study determined the level of stress of night shift call center agents, determined how stress had affected their personal lives, and recommended job design for call center agents in order for them to cope with stress. A questionnaire on occupational stress measured through Occupational Stress Index (OSI) was administered. Results showed that the respondents, in general, reflected a very high level of stress. To cope with the high level of stress, the respondents with night shifts tends to use more of the avoidance coping scheme - cognitive avoidance; acceptance/resignation; seeking alternative rewards; and emotional discharge rather than approach coping - logical analysis; positive reappraisal; seeking guidance and support; and problem solving.

Key words: Approach coping, Avoidance coping, Business process outsourcing, Occupational stress index.

INTRODUCTION

No human being is exempted from the adverse effects stress can bring – be it physical, mental, emotional and/or psychological. With the fast growing competitiveness and complexities in the standards of life, stress can now be viewed as part of everyday living - very much expected and so impossible to avoid. Stress involving any type of work, be it termed as work stress, job stress, and/or occupational stress, causes certain amount of stress. Occupational stress affects both the individual and its working environment. Studies in the past revealed that it is the individual that suffers the most due to stress even if it is the individual that influences the environment or the other way around. This has been a growing problem in most global workplaces that consequently ended in great losses both for the individual and the work organizations [1].

Among stress occupations include those in the field of service industries such as business process outsourcing, where largest parts of this sector are the call centers. In service industries, knowledge, skills, motivation, working conditions, expectations and behavior of the customers, supervisors, co-workers and the individual creates the service delivery process inherent to distress and emotions [2]. As individual tries to reach his goals through his delivery of services, the pressures in him might gradually increase leading to adverse effect on his mental health along with

undifferentiated combinations of symptoms, functional disabilities and behavioral problems.

Likewise, people at the call centers experienced this same stress. In fact, it is reported that work in a call center is one of the most stressful jobs in the present-day world economy [3]. The work of a call center agent has been described as stressful due to truckloads of routine processes.

Hence, studying the call center agents especially those in night shift schedules provides a better understanding of the key factors in the stress-coping processes to achieve desirable psychological outcomes. The study on call center agents brings a better outlook of the physical, social, mental, emotional, style of living and coping function of the individual.

RESEARCH OBJECTIVES

The study aims to:

1. Determine the level of stress of call center agents; and
2. Determine how stress has affected their personal lives.

DATA AND METHODOLOGY

Research Target Respondents

The target respondents for this study were night shift call center agents from various areas in Metro Manila, selected through non-probability and convenience sampling. A non-probability convenience sampling technique is appropriate, as the aims and objectives of the study were descriptive in nature. These techniques were the only feasible one, as call centers have restricted time available for research activities and respondents were selected on the basis of their accessibility, availability, and willingness to respond.

Research procedure

The research procedure included the administration of the questionnaire, the data gathering process, data capture, instrument validation, and data analysis.

Administration of the Survey Instruments

A questionnaire on occupational stress measured through Occupational Stress Index (OSI) (Srivastava & Singh, 1981) was administered. The items in the questionnaire were rated on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. OSI yielded a total score and

respondents were divided into 3 subgroups based on general score: high level of stress (total score: 156-230); moderate level of stress (total score: 123-155); and low level of stress (total score: 46-122). Higher scores reflect a great or high stress level.

The questionnaire had a covering page that explained the purpose of the research. It indicated clearly that results of the survey remains anonymous and that confidentiality is being maintained. In addition, it was not compulsory to fill in their names when completing the biographical information.

Data processing

The returned questionnaires were hand scored using a scoring template. They were screened for missing data and inappropriate responses. The item scores were summed to obtain the raw scores per factor, which were then converted to T-Scores using the relevant "professional population" norm table in the inventory manual. All the results were captured using statistical software such as Statistical Package for Social Sciences (SPSS) for ease of statistical analysis.

Instrument Validation through Reliability and Validity Analysis

A validity and reliability analysis for measurement scales in the questionnaire was conducted. Cronbach's Alpha, an index of reliability determines if the instrument being used elicit consistent and reliable response even if questions were replaced with other similar questions. Alpha is an important concept in the evaluation of assessments and questionnaires. It is mandatory that assessors and researchers should estimate this quantity to add validity and accuracy to the interpretation of their data. To check validity of instruments, a factor analysis with the varimax rotation will be conducted to detect possible "misfit" variables. In general, this analysis prepares the variables to be used for cleaner structural analysis. This analysis should always be conducted for new datasets. Moreover, validity test determines if the strength of the relationship among variables are large enough to precede a higher analysis for the data.

Data analysis

Data for the subjects were analyzed using available statistical software.

The following were the statistical techniques used:

- ✚ Descriptive statistics (range, mean and standard deviations) provided useful information on the data of the total sample respondents. The minima, maxima and range information gave an indication of extreme individual scores within the sample, while the standard deviation provided useful information on the variability of scores for each of the scales.
- ✚ A frequency and percentage analysis provided information which made it possible to determine the number of respondents in each of the subgroups.
- ✚ Correlational analysis was used to provide information on the significance of the relationship between stress and respondents demographic profiles.

Research Hypothesis

The purpose of the research hypothesis is to state the relationship between the variables being studied. The research hypothesis is as follows:

Stress affects the personal lives of the respondents.

RESULTS AND DISCUSSION

Respondents' Characteristics

The respondents in the study were all night shift call center agents (99 or 100%) at the time of the study. Their night shift schedule fall within the time range of 6:00pm - 6:00am. Ninety-six Or 97.0% of the respondents have rendered night shift work for a month or more prior to this survey. Moreover, less than half these agents (40 or 40.4%) have been employed on the present company for the past 6 months or more. Likewise, none of the respondents have been officially diagnosed with a medical condition, treatment of which is projected to last 6 months or more.

There were 99 respondents in total, 62.6.0% of them were females (N = 62) and 37.4% of them were males (N = 37). 28.3% of the respondents were single, 44.4% of them were married, and 27.3% of them were separated. None of them have been widowed. Majority of the respondents or 91.9% were bachelor degree holders or have attained college graduate level. All of the respondents (100.0%) worked as full time employees and have permanent positions, and 78.8% of them have been in service for about 3 to 5 years in the company. Moreover, on the nature of work of the respondents, all of the respondents (100.0%) are inbound agents.

More than half of the respondents (61 Or 61.6%) claimed that they do monthly work rotation and the rest of them (38 or 38.4%) are working on a quarterly rotation. Most of the respondents or 99.0% of them rendered overtime work with 94.9% of the respondents having only 2 breaks or rest periods per shift during work. Moreover, 93.9% of the respondents have a 30 minutes of break time and all of them (100.0%) usually reports to office for 5 working days. 99.0% of the respondents received enhancement trainings for call center agents as part of the capability building program of the company and 93.9% of them signified interest in staying in the call center industry for more than 5 years on top of their present tenure in the company.

Validity and Reliability Analysis

The test of reliability analysis of alpha type modeling was also done to verify whether the collected data is reliable or not. Cronbach's Alpha, an index of reliability determines if the instrument being used elicit consistent and reliable response even if questions were replaced with other similar questions. Alpha coefficient ranges in value from 0 to 1 and may be used to describe the reliability of factors extracted from multi-point formatted questionnaires or scales (i.e., rating scale: 1 = poor, 5 = excellent). The higher the score, the more reliable the generated scale is. Nunnally (1978) has indicated 0.70 to be an acceptable reliability coefficient but lower thresholds are sometimes used in the literature.

Alpha is an important concept in the evaluation of assessments and questionnaires. It is mandatory that assessors and researchers should estimate this quantity to add validity and accuracy to the interpretation of their data. Nevertheless alpha has frequently been reported in an uncritical way and without adequate understanding and interpretation.

Results showed that all research variables except for the General Health Questionnaire (Psychological Distress) exceeded the acceptable standard of reliability analysis of 0.70 (see Table 1). This analysis confirms that measurement scales or factors have measured the same constructs and met the acceptable standard of construct reliability analysis. A low value of alpha for the General Health Questionnaire (Psychological Distress) could be due to a low number of questions, poor interrelatedness between items or heterogeneous constructs. In this case, we opt to retain General Health Questionnaire (Psychological Distress) for further analysis.

A Factor Analysis with the Varimax rotation was first done for the 4 main variables in the validity analysis. This type of analysis provides a factor structure (a grouping of variables based on strong correlations). Factor Analysis is good for detecting "misfit" variables. In general, this analysis prepares the variables to be used for cleaner structural equation modeling. Factor Analysis should always be conducted for new datasets.

Results showed that the most of the values of factor analysis for all items that represent each research variable was 0.5 and more, indicating that the items met the acceptable standard of validity analysis. Factor loadings determine the extent to which an item correlates with all other items. Higher loadings are better. If loadings for a particular variable are low (between 0.0-0.4), then that variable will struggle to load significantly on any factor. Thus, low values indicate candidates for removal after you examine the pattern matrix. In this study, none of the factors are nominated for removal from the analysis.

Furthermore, all research variables had eigenvalues larger than 1. All factors whose eigenvalues exceed a specified value are good enough to be retained for further analysis.

A Kaiser-Mayer-Olkin Test (KMO) which is a measure of sampling adequacy was conducted for each variable and the results indicated that it was acceptable. The KMO analysis showed that all research variables exceeded the acceptable standard of KMO's value of 0.5 (less than 0.5 is unacceptable) and all were significant in Bartlett's Test of Sphericity. Bartlett's Test of Sphericity is a test of hypothesis that correlation matrix is an identity matrix. A significant result (Sig. < 0.05) indicates that the variables do relate to one another enough to run a meaningful Factor Analysis.

Comparison of Means

Between Approach Coping and Avoidance Coping

The t-test analysis reveals that avoidance coping of respondents is significantly higher than approach coping ($p < 0.00$) as shown in Table 2. This indicates that coping response of respondents with night shifts tends to use more of the avoidance coping scheme (cognitive avoidance; acceptance/resignation; seeking alternative rewards; and emotional discharge) rather than approach coping (logical analysis; positive reappraisal; seeking guidance and support; and problem solving). This indicates that avoidance type of coping response is relatively predominant among the night shift call center agents.

Between Cognitive Approach Coping and Behavioral Approach Coping

Tests showed that behavioral approach as coping response is significantly higher than cognitive coping approach ($p < 0.00$) as indicated in Table 3. This means that behavioral approach types of coping response is relatively predominant among the night shift call center agents. Respondents seek more guidance/support and problem solving techniques as their approach coping rather than logical analysis and positive reappraisal.

Table 1: The Results of Validity and Reliability Analyses for Measurement Scales

Variable	No of Items	Factor Loading	Eigen-value	Variance Explained	KMO	Bartlett's Test of Sphericity	Cronbach Alpha
Occupational Stress Index	46	0.637 – 0.846	7.058	58.814	0.711	230.023*	0.839
General Health Questionnaire	28	0.544 – 0.821	2.640	65.996	0.586	26.731*	0.497
Coping Response Inventory	48	0.675-0.921	5.135	64.189	0.500	45.509*	0.797
Psychological Distress		0.741					

Variables	Mean	s.d.	P <
Approach Coping	2.99	0.31	0.000**
Avoidance Coping	3.16	0.36	

**Test is significant at the 1% level (2-tailed)

Table 2: T-Test between Approach Coping and Avoidance Coping

Table 3: T-Test between Cognitive and Behavioral Approach Coping

Variables	Mean	s.d.	P <
Cognitive Approach Coping	2.87	0.37	0.000*
Behavioral Approach Coping	3.11	0.42	

*Test is significant at the 5% level (2-tailed)

Table 4: T-Test between Cognitive Avoidance Coping and Behavioral Avoidance Coping

Variables	Mean	s.d.	P <
Cognitive Avoidance Coping	3.09	0.41	0.011**
Behavioral Avoidance Coping	3.22	0.49	

**Test is significant at the 1% level (2-tailed)

Between Cognitive Avoidance Coping and Behavioral Avoidance Coping

Table 4 showed that behavioral avoidance as coping response is significantly higher than cognitive avoidance approach ($p < 0.000$). This indicates that behavioral avoidance types of coping response are relatively predominant among the night shift call center agents. Respondents tends to seek alternative reward and/or and emotional discharge as their avoidance coping response rather than the use of the cognitive avoidance schemes such as acceptance/resignation.

Descriptive Statistics

The means for the occupational stress subscales are from 4.15 to 4.37 signifying that the level of stress due to work are ranging from very high levels. The instrument gained an average occupational stress of 4.33 (on the five-point scale) with a standard deviation of 0.20. This indicates that the respondents, in general, reflected a very high level of stress. According to respondents, role overload increases to their stress level.

For psychological distress, respondents gained a mean of 1.42 which indicates a low level of distress. A low score indicates a healthy well-being and reflect less impact of the symptoms. The means for the occupational stress subscales ranges from 1.14 to 1.88 signifying that the level of distress are ranging from low to moderate levels.

On the coping response inventory, among the subscales with the high mean scores are all on behavioral approach (3.11) and behavioral avoidance (3.23) coping methods. These strategies are amongst the most predominant coping responses that respondents would most often use to deal with any difficulties.

On the psychological well-being, results shows that the subscales or dimensions of autonomy, personal relations with others, and self-acceptance have high mean scores with 5.04, 5.18, and 5.08 respectively, which indicates that respondents have a mastery of those areas mentioned. Low mean scores means that respondents struggles to feel comfortable with the dimensions used in this instrument.

Pearson Correlation Analysis

The occupational stress is significantly correlated with the psychological distress in the opposite direction ($r = -0.220$, $p < 0.028$). However, occupational stress is positively correlated with the psychological well-being ($r = -0.382$, $p < 0.000$). All the correlations are weak and in the predicted direction (see Table 5).

Table 5: Pearson Correlation Analysis for Instrument Variables

Variables	Mean	SD	Min	Max	Person Correlation Coefficients			
					1	2	3	4
1 Occupational Stress Index	4.33	0.20	3.44	4.67				
2 General Health Questionnaire	1.42	0.10	1.18	1.64	-.220*			
3 Coping Response Inventory	3.08	0.25	2.44	3.67	-.070	-.017		
4 Psychological Well-Being	5.03	0.43	2.79	5.85	.382**	-.110	.188	

**Correlation is significant at the 1% level (2-tailed)

*Correlation is significant at the 5% level (2-tailed)

CONCLUSION

According to various studies, call center agents are expose to stress. Call centers in the Philippines will need to put a lot of effort into stress-preventing activities in the workplace, especially as many organizations are not aware of the magnitude of the problem and its negative consequences. Moreover, to be able to manage stress, call centers will have to apply specific measures and allocate available funds to covering the costs of preventing occupational stress consequences.

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