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Impact Of Work Fatigue On Anxiety Level Of Female Employees Working In Call Centres

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Abstract

Call center contact handlers often experience stressful situations, which could prove harmful for their wellbeing. A cross-sectional survey study was done with 375 call handlers between the ages of 18 and 39. Along with a checked sociodemographic survey responses the Depression Anxiety Stress Scale- 42 (DASS-42) was utilized to assess stress, anxiety, and depression. To determine the relationships among stress, anxiety, and depression and different variables, a univariate examination was conducted. Three different models for stress, anxiety, and depression have been developed using multiple logistic regression and variables with P<0.25 were included. Call handlers were highly likely to experience stress, anxiety, and depression (46.7%, 57.1%, and 62.9%, respectively). Long travel time, lack of leisure options at work, and poor sleep quality might be signs of stress and sadness. Strong indicators of worry among call takers were physical illnesses, a lack of interests, employment that was transitory or part-time, and a lengthy commute to work. Call handlers are dealing with a lot of stress, worry, and sadness. Public health professionals have to take their personal medical worries carefully.

Keywords: Anxiety, call centers, call handlers, depression, stress.

Introduction

Increased operational health concerns are emerging in India as a result of the growth of occupations and the relocation of businesses. A variety of new health problems, especially those relating to mental and social health, are brought on by recently developed occupations, such as workers in call centers. Due to its big population of educated, tech-savvy young adults who are proficient in English, India is a preferred location for services provided offshore. Due to the comfortable employment atmosphere, desired lifestyle, and alluring remuneration packages, global networking centers are one of the most sought-after employers for recent graduates.

Business process outsourcing (BPO) is the practice of a firm outsourcing its non-essential operations, such as handling payments, customer support, and management, in order to focus on its core business. A call center is the voice-based portion of an enterprise process outsourcing organization. While being employed in the BPO industry has made it more easier for young people to achieve their financial and professional objectives than in the past, studies and personal experiences indicate that BPO employees also deal with high

levels of stress and illnesses that are associated to it. Brown describes what she does as "repetitive brain strain" in more detail.

Several studies on Indian call centers have been conducted in the fields of sociology, administration, and psychology, but a short time, occasionally with modest sample sizes, have been conducted in the field of public health. The goal of the current research was to examine the stress, anxiety, and depressive symptoms, as well as the factors that predict them, among call handlers employed in global contact centers.

Objectives of the study

The purpose of the research was to determine the levels of stress, anxiety, and depression experienced by call handlers in international contact centers, in addition to the potential causes of these emotions.

Research Techniques

In the year 2020, a cross-sectional descriptive research was carried out. A call handler is a member of the customer service team who works in a global contact center and whose duties include spending a lot of time on the phone and interacting with technology. The research comprised call handlers who were employed for at least a two-month period and were among the ages of 18 and 39.

The number of participants in the study was calculated to be 354, based on a 33% prevalence of stress, a 95% confidence interval, and a 5% absolute accuracy. Thus, 375 participants were examined in order to achieve the objectives of the research. Two samples were obtained. Three distinct lists of overseas call centers were compiled in the first phase. It became the inspiration for global call centers. Using randomized number tables, five call centers were chosen at random from the entire list. In the second stage, executives provided a list of all call handlers listed in each contact center's attendance record, and each one was given a number. This frame served as our example. 25 call handlers (sample units) from every call center were interviewed. The final digit of a dollar note, chosen at random, was used to choose the first call handler from each list. The investigation was then carried out utilizing systematic random sampling and the necessary sample interval on 25 call handlers. After obtaining informed permission, in-person interviews were conducted at the different call centers using standardized questions.

A pretested, self-prepared, organized questionnaire with queries on the sociodemographic information, way of life, dietary practices, and working conditions of call handlers was used in conjunction with a validated, self-administered version of the Depression, Anxiety, and Stress Scale (DASS 42) to gather data. The DASS is a collection of three self-report measures that was created to assess the negative emotional states of depression, anxiety, and stress. Information concerning these actions may be found on its website, which is in the public domain. The respondents are asked to rank the intensity

of each symptom for each item on a scale of 1 to 4, depending on how often they experienced it the week before. The responses of the relevant questions are added to determine the depression, anxiety, and stress scores. Utilizing an 8-item Athens Insomnia Scale, the quality of the subjects' sleep was evaluated; each one was graded on a 4-point scale, with a higher score indicating more serious sleep issues. The overall score, which varied from 0 to 24, was provided as follows: 4 indicated little trouble falling asleep, 4 or 5 indicated a strong suspicion of insomnia, and 6 indicated there was absolutely no doubt.

Software called SPSS was used to analyze the data. The chi-square test was used in a multivariate study to determine the relationship between stress, anxiety, and depression and different factors. Three models for stress, anxiety, and depression were created using multiple logistic regression (backward likelihood ratio) and variables with a P-value of less than 0.25. The final regression model did not contain any of the correlated variables. The entry and exit criteria of the backward stepwise model for the independent variables were fixed at $P<0.05$. It used the Hosmer and Lemeshow goodness of fit test.

Analysis of Data

Among the 375 call handlers who underwent testing, males made up the majority (78%) of the group. On average, it was 24.6 + 2.4 years. 83.5 percent of the respondents were single, 15 percent were married, and the last 2.5 percent were either divorced or in live-in relationships. 82% of call handlers had completed their high school education, 8% had finished their tertiary education, and none had less in terms of education. The highest and lowest monthly salaries were 40000 and 7000 rupees, respectively, while the vast majority (96.7%) made more than 10,000 rupees per month. The remaining staff members were either temporary or part-time, making up 49.3% of the call handlers. They worked either the night shift (51.5%) or a changing shift (28.3%), with the remaining people working the day shift. The majority of respondents (87.2%) worked between nine and twelve hours each day, whereas 12.8% (mean 9.2 0.7 hours) worked between seven and nine. The majority (74%) answered less than 100 calls per day, with the remaining respondents answering more over 100.

The prevalence rates of stress, anxiety, and depression among call handlers at international contact centers were 46.7%, 57.1%, and 62.9%, respectively. For the aim of identifying associations, stress, anxiety, and depression were dichotomized into two groups; the categories "mild," "moderate," "severe," and "extremely severe" were combined and given the label "present," whilst the category "normal" was given the word "absent." Table 1 lists the stress, anxiety, and depression factors that univariate analysis indicated were significant (P 0.05). However, there was no statistically significant relationship between call handlers' stress, anxiety, or depression and their marital status ($P > 0.25$).

The factors that predict stress, anxiety, and depressive disorders were found using multiple logistic regression. Using the univariate approach (chi-square), independent

variables with P values of 0.25 were selected as well as independent variables to develop three models for stress, anxiety, and depression. The following additional variables were included in the stress model: Significant predictors include monthly call handler compensation (P = 0.092), alcohol usage (P = 0.214), verbal workplace abuse (P = 0.131), physical ailments (P = 0.083), shift type (P = 0.112), and availability of a cab service to the workplace (P = 0.158). The following factors were also included in the anxiety model: type of employment (P = 0.066), shift type (P = 0.074), shift duration (P = 0.238), alcohol use (P = 0.084), sleep quality (P = 0.083), skipping meals (P = 0.127), verbal abuse at work (P = 0.216), workload (P = 0.233), free time for hobbies/games (P = 0.242), and job tenure (P = 0.061). Other factors in the depression model included the call handlers' age (P = 0.247), monthly salary (P = 0.152), alcohol use (P = 0.221), smoking status (P = 0.160), skipping meals (P = 0.080), physical ailments (P = 0.132), the accessibility of cab service to the office (P = 0.084), the distance traveled to the office (P = 0.126), the time spent on each call (P = 0.222), and handling hostile callers (P = 0. The final predictor variables for stress, anxiety, and depression among call handlers are shown in Table 2.

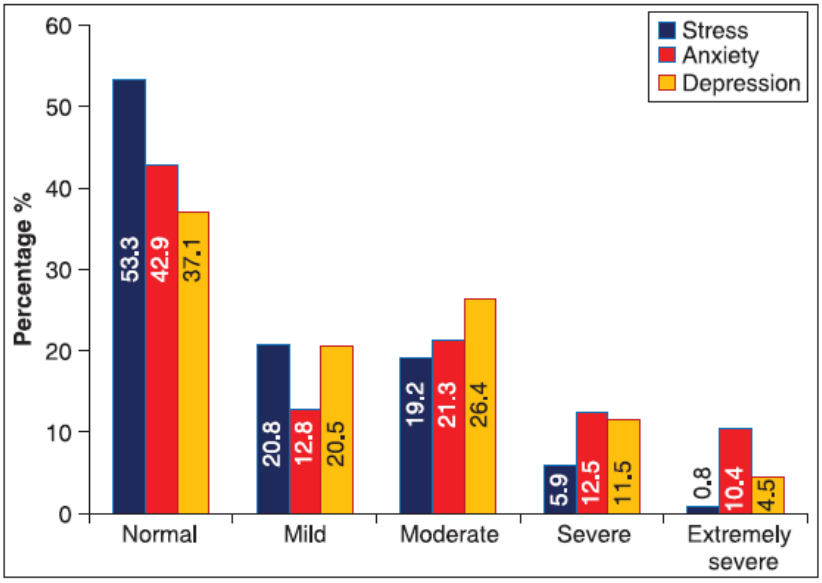

Figure 1: Levels of stress, anxiety, and depression among call handlers (using DASS 42)

Table 1: Variables found significant for stress, anxiety and depression on univariate analysis (*N* = 375)

Variables	Stress			Anxiety			Depression		
	Stress *n* (%)		Unadj. Or (95% CI)	Anxiety *n* (%)		Unadj. Or (95% CI)	Depression *n* (%)		Unadj. Or (95% CI)
	No	Yes	*P* value	No	Yes	*P* value	No	Yes	*P* value
Sleep quality			2.51 (1.49-4.23) *P*<0.001	–	–	–	46 (54.8)	38 (45.2)	2.58 (1.57-4.23) *P*<0.001
Normal	59 (70.2)	25 (29.8)							
Abnormal	141 (48.5)	150 (51.5)					93 (32)	198 (68)	
Skipping food			2.21 (1.45-3.38) *P*<0.001	–	–	–	–	–	–
No	98 (65)	53 (35)							
Yes	102 (45.5)	122 (54.5)							
Workload			1.83 (1.20-2.79) *P*=0.005	–	–	––	102 (43.6)	132 (56.4)	2.17 (1.38-3.43) *P*=0.001
OK	138 (59)	96 (41)							
Heavy	62 (44)	79 (56)					37 (26.2)	104 (73.8)	
Availability of relaxation time at office			1.91 (1.23-2.96) *P*=0.004	–	–	–	34 (28.8)	84 (71.2)	1.71 (1.07-2.73) *P*=0.025
No	50 (42.4)	68 (57.6)							
Yes	150 (58.4)	107 (41.6)					105 (41)	152 (59)	
Availability of relaxation facility at office			1.69 (1.12-2.55) *P*=0.013	–	–	–	65 (31.2)	143 (68.8)	1.75 (1.15-2.67) *P*=0.009
No	99 (47.6)	109 (52.4)							
Yes	101 (60.5)	66 (39.5)					74 (44.3)	93 (55.7)	
Shift duration			2.24 (1.41-3.55) *P*=0.001	–	–	–	–	–	–
7-9 hours	159 (59)	111 (41)							
>9 hours	41 (39)	64 (61)							
Distance travelled to office			1.90 (1.08-3.33) *P*=0.024	143 (45.4)	172 (54.6)	1.94 (1.07-3.52) *P*=0.027	–	–	–
Upto 30 Km	176 (56)	139 (44)		18 (30)	42 (70)				
>30 Km	24 (40)	36 (60)							
Time spent in travel to reach office			2.46 (1.49-4.08) *P*<0.001	134 (46)	158 (54)	1.76 (1.05-2.94) *P*=0.030	119 (40.8)	173 (59.2)	2.17 (1.24-3.77) *P*=0.006
<2 hours	170 (58.2)	122 (41.8)		27 (32.5)	56 (67.5)				
≥2 hours	30 (36)	53 (64)					20 (24)	63 (76)	
Number of calls attended/day			1.68 (1.05-2.68) *P*=0.031	–	–	–	–	–	–
Up to 100	138 (50)	138 (50)							
>100	62 (62.6)	37 (37.4)							

Table 2: Predictors of stress, anxiety and depression among call handlers (regression analysis)

Predictor variables of stress	B	SE	Adjusted or (95% CI)	
Sleep quality				
Normal	0.783		2.19 (1.26-3.81)	0.006
Abnormal		0.282		
Skipping of food				
No	0.880		2.41 (1.52-3.83)	0.000
Yes		0.236		
Total number of calls attended/day				
>100	0.572		1.77 (1.06-2.97)	0.030
Up to 100		0.264		
Travel time to reach office				
<2 h	0.808		2.24 (1.28-3.93)	0.005
≥2 h		0.286		
Shift duration				
7-9 h	0.757		2.13 (1.30-3.50)	0.003
>9 h		0.254		
Availability of relaxation time				
Yes	0.506		1.66 (1.01-2.72)	0.044
No		0.252		
Availability of relaxation facilities				
Yes	0.525		1.69 (1.06-2.70)	0.028
No		0.239		
Predictor variables of anxiety				
Salary/month (Rs.)				
≤15000	0.630		1.88 (1.20-2.95)	0.006
>15000		0.230		
Physical ailments				
No	0.856		2.36 (1.47-3.78)	0.000
Yes		0.241		
Time for hobbies/games				
Yes	0.474		1.61 (1.03-2.51)	0.037
No		0.228		
Distance travelled to reach office				
≤30 Km	0.723		2.06 (1.10-3.87)	0.025
>30 Km		0.322		
Nature of employment				
Permanent	0.652		1.92 (1.23-3.00)	0.004
Others		0.228		
Predictor variables of depression				
Sleep quality				
Normal	0.837		2.31 (1.39-3.85)	0.001
Abnormal		0.261		
Workload				
OK	0.605		1.83 (1.14-2.94)	0.012
Heavy		0.242		
Travel time to reach office/day				
<2 h	0.767		2.15 (1.20-3.88)	0.010
≥2 h		0.299		
Availability of relaxation facilities				
Yes	0.517		1.68 (1.08-2.61)	0.022
No		0.226		

B = Regression coefficient, SE = Standard error, OR = Odds ratio, CI = Confidence interval

Interpretation

According to certain perspectives, stress is a universal issue, but it is also a result of "a framework that emphasizes the interrelationships between structural relations of power and the subjective interpretations and actions of employees." The biochemistry of the brain may be affected for a very long time by chronic stress. The functional states of

numerous neurotransmitter and intraneuronal system of communication may be impacted by these long-lasting alterations, that may even entail the death of neurons and an excessive decrease in synaptic connections. As a consequence, even in the absence of an external stressor, a person has a significant risk of experiencing more bouts of depression.

Amongst call handlers, worry, stress, and despair became all too frequent. These high percentages were also seen in earlier studies among contact center workers. Although the amount of depression stated by Suri et al. was similar with our results, we did not have any controls. Those three adverse feelings aren't summarized by any of them, either. Most of these studies used lower sample numbers and a range of research techniques to analyze stress, anxiety, and depression in various study contexts (local and international call centers).

The bulk of international contact centers are open at night to accommodate their customers, which consists mostly of Americans, Britons, Australians, and Germans. The term "graveyard shifts" or "UK-USA shift" is commonly used to describe these unpredictable work schedules. When your internal clock's settings conflict with the sleep-wake cycle of the shift schedule, this might interfere with a person's circadian rhythm. Lack of sleep may have an impact on one's health since it increases stress, fatigue, depressive symptoms, irritability, and a person's susceptibility to illnesses. Some call handlers adopt terrible eating habits, such as eating junk food, eating too much, skipping meals, smoking, abusing alcohol and drugs, and consuming a lot of stimulants like tea, coffee, and soda in order to work through the night and manage the physical and psychological stress. The negative effects of such odd eating patterns include obesity and persistent headaches.

Long work hours and night shift responsibilities may cause stress and worry in contact center workers, which is hazardous for their mental health. Travel time is one of the main variables Vaid et al. highlighted as one of the many factors that impact workplace stress. According to accepted psychiatric textbooks, there is a strong link between anxiety and physical disorders including musculoskeletal problems. According to a research by Honda et al., taking breaks from computer usage may prevent mental health problems. It is recommended that their places of work provide appropriate relaxation and amenities. It has now been shown that the research by Kuruvilla et al., which found that contact center workers were more likely to seek out psychiatric and counseling services because of their high levels of work-related stress, is accurate.

The research we conducted has certain drawbacks. It is difficult to comprehend how a number of variables, including insufficient sleep and physical health, are associated to stress, anxiety, and depression since the research was cross-sectional. Whether stress, anxiety, and depression began to exist before or after these conditions is difficult to determine. The levels of stress, anxiety, and depression among call handlers were

measured as part of our quantitative and descriptive study. We believed qualitative elements like focus groups and in-depth interviews may have revealed other aspects of the condition in addition to the quantitative approach.

Only 22% of the phone operators in our survey were female. The author of the research was unaware of this; had they been, certain modifications to the technique may have been made to provide a more accurate picture of female call handlers. Anxiety, sadness, and moderate to severe stress were all present in 6.7%, 22.9%, and 16% of call handlers, respectively. We believed these were the ones who could soon need medical attention or drugs. Counseling and stress-relieving treatments are required in contact centers due to the high incidence of stress, anxiety, and depression among call handlers. To assist these phone operators in the meantime, part-time counselors working in conjunction with a mental health institution may be assigned.

Conclusion

By consist of psychologists, psychiatrists, and public health specialists in routine health checks, call handlers may be exposed to early detection and therapy of mental problems and other lifestyle diseases. Creating a preventative and advertising strategy for such a distinctive industry as phone handling, however, presents a significant challenge. Whenever call takers are being taught and oriented, clear and useful IEC (Information, Education, and Communication) messaging may assist establish a positive atmosphere. It's important to emphasize the value of living a stress-free life, eating healthfully, exercising, and engaging in hobbies. To improve the body of knowledge and effectively push for a better understanding of stress, anxiety, and depression among call handlers, additional studies of this sort are necessary.

Public health practitioners often focused largely on the traditional workforce, including industrial and agricultural employees. When new jobs like call handlers emerge, it is important that we take into account the value of this labor including the public health issues it poses.

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