

Study to evaluate nature and extent of psychiatric morbidity in business process outsourcing employees in Delhi and National capital region

Debalina Biswas¹, Anjali Sehgal², Brijesh Saran^{3*}, A. K. Seth⁴

PG's¹⁻², Assistant Professor³, HOD & Professor⁴, Department of Psychiatry, Santosh Deemed to be University, Ghaziabad, U.P.

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Abstract

Background: Call center employees repeatedly undergo stress in their daily lives and can result in detrimental effects on their health. Objectives: To evaluate the extent and nature of psychiatric morbidity in Business Process Outsourcing Employees in Delhi and National Capital region. Materials and Methods: A cross sectional questionnaire based survey was done among 300 call center employees of both sexes. Tools used are: General Health Questionnaire 12 (GHQ 12) for screening non-psychotic psychiatric disorders, Pittsburg's Sleep Quality Index (PSQI) for assessing quality, quantity, latency of sleep. Beck Anxiety Inventory (BAI) and Beck's Depression Inventory (BDI) are also used. Results: the study was conducted at Business Process Outsourcing (BPO) unit of Delhi-NCR region in association with Department of Psychiatry, Santosh Medical College and Hospital, Ghaziabad. The study was carried out in 2 phases: in phase 1 all the employees were handed GHQ and PSQI to know if they had any subjective distress or psychiatric illness. Phase 2 was conducted in those employees whose GHQ >12. BDI and BAI were given to them. Prevalence of psychiatric morbidities in females was 55.6% and 16.4% in males. Academic pressure and financial pressure was observed as a major stressor in the age group of 18-30 years. Physical stressor was found to be a major stressor in older age group. Depression was more common in female employees than males. Anxiety features are more common in employees staying in nuclear families than those in joint family. Conclusion: The call center employees face a high burden of psychiatric morbidities and females are more commonly involved than males. Public health specialists should pay more attention to them regarding health issues.

Key Words: Business Process Outsourcing, Psychiatric morbidities, call centers, stressor.

Introduction:

Call Centers are a recent phenomenon which is relatively made possible by the dissemination of telecommunication and information technologies. The broadest definition is given by Norling, stating "a call center is any communications platform from which firms deliver services to customers via remote, real time contact". Characteristics of Call centers are:

- Employees who are involved in specialized operation which includes telecommunication and information system technologies.
- Automatic systems control their work which virtually distribute work, control the work pace and their performance is being monitored.
- Dealing with inbound calls, out bound calls or assembling both- they are in direct contact with the customer.

Emergence of BPO in India occurred in the mid-1990s. By the end of 1990s when Multinational companies started establishing completely their own subsidiaries which caused off shoring to the requirement of the mother companies. Today the Indian BPO has grown up enough to off shore services including customer care, medical transcription, medical billing services ,database management, web sales or marketing, accounting, processing of tax, telesales, telemarketing, human resource hiring and biotechnology research. In this study 1161 employees were given Public health questionnaire 9 (web based) depression scale with maintenance of confidentiality and anonymity. There was a negative linear relationship between rates of depressive features and the overall performance of working group ($p < 0.001$). The conclusion therefore drawn was that the working group who showed depressive symptoms performed poorly. A study was conducted at Delhi-NCR in 2005 regarding

aspects of women employees in call centers (N=100). It was found that night shift employment are producing deleterious effect of women's health, their family life and also their ability of decision making. A study on 100 employees of call centre at Kolkata to look for stress and psychiatric morbidities. Scales used are Life Stress Scale and Mental Health Inventory to all subjects. T-test and Anova test were used to analyze statistically the scores obtained. This showed that in both sexes there is significant difference in stress and mental health. Male employees differed significantly on stress scores.

Aims and Objectives:

1. To evaluate the extent of Psychiatric Morbidity in Business Process Outsourcing Employees in Delhi National Capital Region.
2. To find the nature of Psychiatric Morbidity in Business Process Outsourcing Employees in Delhi National Capital Region.
3. To study, if any, changes over socio-demographic pattern of these subjects.
4. Study quality of sleep in Business Process Outsourcing Employees in Delhi National Capital Region.

Materials and Methods:

The study was carried out in a call centre in Delhi-NCR in 2 phases. In phase 1, GHQ 12 and PSQI questionnaire was given to the call center employees of BPO. Written informed consent was taken from them. In phase 2, workers with GHQ > 12 were further evaluated. They were given Beck's Anxiety Inventory and Beck's Depression Inventory scales.

Tools:

- General Health Questionnaire 12: It was given by Goldberg in 1970s. It screens for non-psychotic psychiatric disorders. It is a sensitive, accurate, fast and reliable scale. It has got items each given on a four point scale.
- Pittsburg's Sleep Quality Index: Self-rated questionnaire assessing sleep disturbances over 1 month of time. It has got nineteen individual items building seven component scores which includes: subjective quality of sleep, latency of sleep, duration of sleep, habitual efficiency of sleep, disturbances of sleep, use of sleep medications and daytime dysfunctioning.
- Beck Anxiety Inventory: It was developed by Aaron Beck consisting of a multiple choice questionnaire. The BAI consists of twenty-one questions which is designed for the age group ranging between 17-80 years old. Maximum score of BAI is 63.
 - 0-7 : minimal level of anxiety
 - 8-15: mild anxiety
 - 16-25 : moderate anxiety
 - 26-63 : severe anxiety
- Beck Depression Inventory: It is one of the most commonly used scale to check the severity of depression. Age group is ≥ 13 years of age. The standard cut-offs are:
 - a. 0-9 : minimal depression
 - b. 10-18: mild depression
 - c. 19-29: moderate depression
 - d. 30-63: severe depression

Results and Observation:

The study was done at BPO unit of Delhi NCR region in association with Department of Psychiatry, Santosh medical college and hospital, Ghaziabad. A random selection of 300 samples was done. The study was carried out in 2 phases. Phase 1: all the employees were given GHQ 12 and PSQI to assess psychiatric disorders and quality of sleep. Phase 2: those who have GHQ score >12 were given Beck anxiety Inventory and Beck depression inventory.

The table below shows comparison of perceived stressor with age.

Stressor	<30 years	>30 years	Total
Academic	37 (100%)	0 (0.0%)	37 (100%)
Emotional	69 (71.9%)	27 (28.1%)	96 (100%)
Financial	60 (62.5%)	36 (37.5%)	96 (100%)
Physical	14 (34.1%)	27 (65.9%)	41 (100.0%)
Social	21 (70%)	9 (30.0%)	30 (100%)

Majority of financial and emotional stressor were between 18-29 year age group.

The Table below shows comparison of gender with BDI score

BDI	BDI<=9	BDI>9	TOTAL
Sex			
Male	15 41.7%	21 58.3%	36 100%
Female	9 20%	36 80.0%	45 100%
Total	24 29.6%	57 70.4%	81 100%

The table below shows comparison of Marital status with BAI score

BAI	BAI<=7	BAI>7	TOTAL
Marital status			
Married	15 41.7%	21 58.3%	36 100%
Unmarried	27	18	45

	60%	40.0%	100.0%
Total	42	39	81
	51.9%	48.1%	100.0%

Discussion:

The study was done at BPO unit of Delhi NCR region in association with Department of Psychiatry, Santosh medical college and hospital, Ghaziabad. A random selection of 300 samples was done. The study was carried out in 2 phases. Phase 1: all the employees were given GHQ 12 and PSQI to assess psychiatric disorders and quality of sleep. Phase 2: those who have GHQ score >12 were given Beck anxiety Inventory and Beck depression inventory.

Perceived stressor:

Academic stressor was found to be a major stressor for employees aged less than 30 years. Physical stressor contributed majorly in 65.9% employees of older age group. Financial stressor was found to be a main stressor in 62.5% employees in the younger age group.

Psychiatric morbidity and social demographic variables:

In phase 1, out of 300 employees, 81 were having GHQ scores >12 which shows they might have some possible psychiatric morbidity. They were further evaluated by BAI and BDI.

Variation on gender basis:

According to GHQ 12, significant variation was seen according to gender. In 55.6% of female employees psychiatric morbidity was observed as compared to male employees which was 16.4%.

Variation according to marital status:

It was observed that 32.6% of unmarried employees showed symptoms of psychiatric disorder in comparison to 22.2% of married ones.

Variation on the basis of residential status:

Psychiatric morbidity was seen more commonly in non-hostel setup than those staying at hostel.

Variation on basis of family structure:

Psychiatric morbidity was seen more significantly seen in employees belonging to nuclear families (35.4%) than those in joint family (22.7%).

Sleep and social demographic variables:

Variation on basis of gender and age:

Female gender is more likely to have disturbed sleep quality.

Variation on basis of commute time:

Employees spending more than 2 hours in commuting had more problems with sleep quality compared to those travelling for less than an hour.

Depression and social demographic variables

Variations on basis of gender:

In this study, it was seen that depression was seen in 80% of female employees and 58.3% of male employees.

Variation on basis of marital status:

Unmarried employees tend to have depression more than married ones.

Anxiety and Social Demographic Variables:

Variation on basis of Family structure:

Employees of nuclear family (58.8%) showed more anxiety symptoms than those in joint family (30%).

Variation on basis of Commute Time:

Employees having more than 2 hours (60%) of commute time showed more symptoms of anxiety than those who travel for 1-2 hours (53.8%) or less than 1 hour (44.4%).

Conclusions:

In this study, we conclude that:

- Academic pressure was seen as an important stressor in employees less than 30 years of age.
- Physical stressor was perceived as a main stressor in 65.9% of employees of older age group (>30 years)

- Financial stressor was seen as a major stressor in 62.5% of employees less than 30 years of age.
- 55.6% of female employees in comparison to 16.4% of male employees are seen to have psychiatric disorders.
- Psychiatric disorders are more common in unmarried employees of 32.6% than in married ones of 22.2%.
- 29.4% of employees staying in non hospital setup shows more psychiatric disorders than those staying in hostel.
- Psychiatric morbidities was seen to be more common in nuclear families (35.4%) in comparison to those (22.7%) staying in joint family.
- Female employees showed depression much more than male employees.
- Depression was found to be more common in unmarried employees than in married ones.
- Anxiety symptoms are less common in employees staying in joint family than in nuclear family.
- Anxiety symptoms are more common in employees (60%) who are travelling for more than 2 hours than in those who travel for 1-2 hours or less than 1 hour.

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