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A STUDY ON STRESS AND MENTAL HEALTH AMONG DAY AND NIGHT SHIFT WORKERS IN CALL CENTRES

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Abstract

The present study examined the stress and mental health among day and night shift call centre employees. The samples were selected from two different call centre's shifts i.e. Day and Night. The sample consisted of both male and female employees. Two scales were used viz. Life event stress scale and mental health inventory, these scale were administered to all the subjects. Results revealed that the night shift employees have significantly higher levels of stress and are at a higher risk of getting an illness than the day shift employees. In mental health the day shift employees had a better mental health in comparison with the night shift employees. Among the genders females had poorer mental health when compared with males.

INTRODUCTION

A call centre is defined as a voice operations centre that interacts with the customer in various ways such as customer support, provisioning, directory assistance; billing and technical support (Jack, Bedics & McCary, 2006). It is now an integral part of the service industry in many countries such as India. The word call centre industry is often used by different names like voice sector, contact centre industry and customer service industry. A call centre is one of the most important ways used by organizations to reach out to their customers and meet their demands. They mainly operate on inbound and outbound calls, by which, they deal with their customers. Inbound call means it is emails or calls originated from the customer to clarify their queries, problems or to make compliant. On the other hand outbound calls originate from the call centres, these calls are made to sell the product and services and to extend their business circle to their contacted companies. Call centre employees need to give concern and handle blended inbound and outbound calls simultaneously. Today's organizations heavily depend on their call centres to attract their customers. It is an opportunity to get to know the customers and to build and maintain an effective relationship with them (Whittaker et.al. 1996).As the result of globalization and liberalization in India, technology has rapidly developed. Information Communication and Technological development growth in various fields motivated many big companies to start their business industries in India, and as the result of this development they have started various call centres in different parts of various states in India, and each company expresses their competency to provide good service to their customers.

Call centres industry is one of the biggest private sector industries in India. Call centre sectors provide job for millions of people with attractive packages. This kind of work

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promises good work environment, financial incentives, free transport and refreshments with a series of business advantages, but also results in unwanted outcomes like voice, hearing problems, body pain, chronic fatigue, insomnia, and stress. This employment also leads to different kinds of physical and psychiatric problems. Call centres exude high-pressure work environments which is marked by routinisation, scripting, computer-based monitoring and intensive performance targets (Houlihan, 2000), but in spite of this hectic work environment people prefer to work in these jobs as it does not require higher educational qualification and these companies provide attractive job perks. In recent times, shift work is viewed as driving society's response to the challenges of the need for constant growth and prosperity (Hossain & Shapiro, 1999).

Shift work can have negative effect on the person's physical, psychological, social functioning and mental health, changing of one shift to another creates disturbances in our normal sleep-wake cycle. They face a exceedingly high risk of change in their circadian rhythms, when this diurnal rhythm is disrupted, the body undergoes dramatic changes and sleep becomes difficult (Schultz & Schultz, 1994). The impact of this might affect their memory performances and negatively affect their physical and mental health, as the body cannot adequately rest and rebuild when the circadian rhythm gets disturbed frequently. The Prevalence of psychiatric disorder such as depression, anxiety, and stress are more common in our society. Shift workers are more prone to develop various physical and psychiatric illnesses affecting our mental health. Bourdouxhe and Queinnec (1999), in their study they found that among former and current shift workers, on an average are 40% more vulnerable to diseases like, high blood pressure, chronic anxiety, asthma, allergies, gastritis, gastric or duodenal ulcers, back disorders, musculoskeletal problems and severe obesity. A common pattern of findings show that, the shift workers when compared to day workers show poorer standards of lifestyle, and have behavioural, and biological risk factors (Lac & Chamoux, 2004; Morikawa et al., 1999 ; Parkes, 2002). Kiviamki et al., (2001) found that shift workers have poorer habits relating to health (e.g. greater use of alcohol and cigarettes, decreased physical activity, and being overweight). Shift workers also underestimate their health problems, and not pay much attention to their severity and seriousness towards their problems. Sushma Suriand & Saba Rizvi (2008) study found that there was significant difference in mental health and stress among male and female employees from domestic call centre. Male employees from both domestic and international call centres had significant difference on the stress scores. The present study aimed to find out the stress and mental health among call centre employees of day and night shift. The study also explored the difference in stress and mental health between the genders.

MATERIALS AND METHODS

The study was conducted at a call centre located in Hyderabad. The total sample consist of 100 employees working in two different shifts at a call centre i.e. Day shift (N=50) and Night shift (N=50). Descriptive survey method was used in the present study. Random sampling was used by the investigator for the purpose of the data collection. The sample included both male and female employees, the age range was 18-55 years. The research



instruments used in this study were Mental Health Inventory developed by Jagdish and Srivastava (1996) was used by the investigator to study mental health of day and night shift employees in call centres. The inventory consists of 56 items including 32 false-keyed and 24 true-keyed statements. The reliability coefficients of different dimensions of MHI were found to be more than 0.70, that was determined by split-half method using odd-even procedure. The reliability coefficient of overall mental health was 0.73. The construct validity of inventory was found to be 0.54. The Holmes and Rahe (1967) Life event stress scale was used to measure each employees stress. The scale is used by adding together the weighted scores for the each event that a person has experienced in the past year. There was a +0.118 correlation between stress scale scores and illness, which was sufficient to support the hypothesis of a link between life events and illness (e.g. Dinis, Schor, & Blay, 2006; Masuda & Holmes, 1967b; Scully, Tosi, & Banning, 2000) and is used to identify those at risk of stress-related illness.

RESULTS AND DISCUSSION

Table 1. Means, Standard Deviations of Total Mental Health Scores of the Total Sample with respect to Work Shift

Variables	Night shift (N=50) Mean \pm SD	Day shift (N=50) Mean \pm SD	df	T	P
Total mental health scores	159.18 \pm 14.436	184.82 \pm 15.834	98	-8.176	*.000
Total stress scores	217.40 \pm 72.401	197.86 \pm 81.141	98	1.271	.207

* (P<0.01)

Table 1 indicates mean, standard deviations of total mental health scores of the total sample with respect to work shift. The obtained P value is *.000, which is statistically significant. This suggests that the night shift employees have poorer mental health in comparison with the day shift employees. Working night shifts negatively affects the daily sleep cycle and circadian rhythm; this in turn leads to reduced sleep duration and quality of sleep. Rutenfranz et al. (1977), has also reported shift work which includes night shift is associated with disruption of sleep. Åkerstedt (2003) found that shift workers experience more sleep disturbances than day workers. Haines et al. (2008) have reported that various studies have found an association between shift work and “psychological distress, depression, anxiety and burnout.” This disruption in sleep and circadian leads to disturbance in day to day functioning of an individual affecting his mental health. The above table shows that there is no significant difference in stress among day and night shift workers as the day and night shift workers in call centres are accustomed to working in high stress environment. As compared to other professions, call centre employees experience stress, whether be it day



shift or night shift.

Table 2. Mean and Standard Deviation of the Sub-domain of Mental Health with respect to Day and Night Shift

Sub domains of Mental health	Night shift (N=50) Mean±SD	Day shift(N=50) Mean±SD	Df	t	P value
Positive self evaluation	29.34 ± 8.561	29.88±8.327	98	-3.20	.750
Perception of reality	22.74±4.801	24.14±5.311	98	-1.383	.170
Integration of personality	29.78±6.631	34.10±7.217	98	-3.117	.002*
Autonomy	16.58±4.590	16.18±4.797	98	.426	.671
Group oriented attitudes	33.86±6.465	31.32±8.042	98	1.741	.085
Environmental mastery	26.88±6.193	28.40±5.518	98	-1.296	.198

*(P .0.01) level of significance

Table 2 indicates the mean and standard deviation of the sub - domain scores of mental health with respect to day and night shift. Among the Sub domains of mental health comparison of night and day shift employees significant difference was found in the sub domain of ‘integration of personality’. The obtained P value is .002, which is statistically significant. Night shift employees experience problems in integration of personality domain in comparison to the day shift workers. Night shift employees are deprived of adequate amount of sleep, which affect their daily functioning. They are not able to integrate their personality to their day to day work and activities.

Table 3. Means, Standard Deviations of Total Mental Health and Stress of the Total Sample with respect to Gender

Variables	Male (N=54) Mean ± SD	Female (N=46) Mean ± SD	Df	T	P
Total mental health scores	176.00±19.900	167.30±19.813	98	2.182	.031*
Total mental scores	201.67±75.158	214.63±79.645	98	-.836	.405



*(P 0.05) level of significance

Table 3 indicates means, standard deviations of total mental health scores and stress of the total sample with respect to gender, there was a significant difference in mental health between male and female subjects. The obtained P value is .031* which is statistically significant at 0.05 level. Male workers obtained higher scores in mental health compared to female employees.

DELIMITATIONS OF THE STUDY

The duration of working in day or night shift was not taken from the subjects, this would have added an important aspect in the study, as employees who might have spent long period of time in night shift would have adapted well with regards to the change in circadian rhythms and lifestyle in general. However shift workers who have to frequently change their work shift, even before they can adapt to it, would face many problems. This difference may have a significant bearing on the mental health and stress of the individuals.

Another Limitation of this study is that, in the comparison on mental health and stress between genders, we have not measured the difference between the genders on the day and night shift. It would be interesting to know if there would be a difference among males and females in day and night shift.

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