WHAT MAKES EMPLOYEES SATISFIED WITH THEIR JOBS

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Abstract*: Employees job satisfaction directly and indirectly affect the organizations success. Identification of the factors affecting job satisfaction is a challenging task. This paper aims to focus on identification of the factors that affect the employee satisfaction. Office physical environment, psychosocial job characteristics and office furniture were identified as the most influential parameters for overall satisfaction of employees. Data from thirty different organizations were collected through interview and mail survey. The content validity, construct validity, and reliability were tested. For each of the characteristics describing the input parameters like office physical environment, the employees' job, the office furniture mismatch and output parameter like job satisfaction, a 5-point Likert-type scale was used. Five hypotheses were developed. The findings show that both the office physical environment and the psychosocial job characteristics have significant positive effects on job satisfaction. Moreover, the office furniture mismatch causes the decrease of employee satisfaction.*

Keywords: *Job satisfaction; office physical environment; psychosocial job characteristics; office furniture*.
JEL Classification*: L84*

1. Introduction

As stated in (Robbins, 2000), job satisfaction refers to an individual's general attitude towards his/her job. An unsatisfied employees with his or her job has negative attitudes and often creates problems within the

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organization with his colleagues and possibly, with clients (Gregoriou, 2008). According to Luthans (1989), high or low employee turnover rates, absenteeism and grievances lodged are factors that indicate whether job satisfaction or job dissatisfaction exists within organizations. Poor job satisfaction results in employee turnover and increases absenteeism. In consequence, a company loses skilled manpower. Moreover, the cost incurred in training of a newly recruited one in place of leaving one is also a loss. Thus, direct and indirect benefits of the organization are closely associated with employees' job satisfaction (Luddy, 2005 and Gregoriou, 2008). Moreover, loses due to absenteeism, quitting, and poor performance are more likely to increase if the employees suffer from job dissatisfaction. Now the challenges are to identify the factors closely related to job satisfaction and thereby to take necessary measure accordingly.

Office physical environment, psychosocial job characteristics and office furniture are found to have some impact on job satisfaction (Veitch et al., 2007; Hoonakker, 2006 and Amick et al., 2003). Office physical environment consists of amount of artificial and natural lighting, thermal condition, air movement, air quality, ventilation, noise level, visual privacy, privacy of conversation, aesthetic appearance of workplace, size of accommodation etc. (Valencia, 2013; O'Neill and Evans, 2000; Bellingar and Kupritz; Duvall-Early et al., 1992 and Sundstrom et al., 1982). These elements have direct and indirect impact on job satisfaction. In fact, substandard physical environment can relate mental and physical dissatisfaction and thus hamper the overall human productivity (Charles et. al., 2004). In other words, an ideal office physical environment condition can enhance employee satisfaction.

Warr (1987) suggested that improved psychosocial job characteristics condition improve employees' job satisfaction. In this context of psychological job characters, job satisfaction depends on supervision, autonomy, control over work schedule, requirement of intense concentration, time pressure on job accomplishment (Hoonakker, 2006). Requirement of intense concentration and time pressure significance develop job stress. Less control over the work schedule and too much supervision lead an employee to dissatisfaction. Extra workload also creates dissatisfaction with job (Mariani et al., 2003). It is found that two-way communication and less supervision play significant role to satisfy employees in the workplace (Pincus, 1986).

Office furniture mismatch causes various musculoskeletal disorders (MSDs), which also arouse job dissatisfaction (Amick et al., 2003). In practice, musculoskeletal disorder creates physical and mental discomfort. Errors in design parameters of sitting arrangement are responsible for causing various musculoskeletal disorders. Wrong working posture due to the furniture setup and wrong ergonomic design parameters cause back pain, neck pain, wrist trauma etc. Musculoskeletal disorders due to this mismatch hamper the work performance of the employees (Cooper et al., 2004). Musculoskeletal disorders not only cause failure and taking of more breaks but also build up a negative attitude towards the occupation. This causes more absenteeism and reluctance (George and Jones, 2008).

1.1. Research Hypotheses

Regarding office physical environment, the focus is often given on environmental and physical factors including natural and artificial lighting, thermal condition, air quality, ventilation, noise, visual and conversation privacy, aesthetic appearance of workplace, size of accommodation (Liang et al, 2014; Kamaruzzaman, 2011; Lahtinen et al., 2004; Bengtsson, 2003; Veitch, 2001; Apte et al., 2000; and Clements-Croome and Baizhan, 2000). Vischer et al. (1977) claims that, on average, all aspects of the physical workplace environment together can account for 24% of job satisfaction responses. Veitch et al., (2007) in their study show that satisfactions with lighting, ventilation, acoustics, privacy and overall workplace are significantly associated with job satisfaction. They also pointed out that satisfactory lighting, sufficient ventilation, controlled acoustic and privacy have positive effects on the employees' job satisfaction. However, Bernardi and Kowaltowski (2006) conclude that satisfaction with one or more environmental factor does not necessarily produce equal satisfaction with the total environment. It can, therefore, be said that all factors are not equally important in connection with job satisfaction. A systematic investigation needs to be conducted to assess the most significant office physical environmental factor affecting the job satisfaction. Hence, we test specific environmental factors against the following proposed hypothesis:

- H1: Of the physical environment variables, privacy is the most significant and influential factor affecting employees' job satisfaction.

As shown in (Warr, 1987), improved psychosocial job characteristics condition improves employees' job satisfaction. Various researchers in their

studies (Probst et al., 2010; Hoonakker et al., 2006; Mariani et al., 2003; and Pincus, 1986) have considered time pressure, control over the work schedule, supervising authority, level of supervision and concentration as psychosocial job characteristics and examined their effects on employees' job satisfaction. From their studies, it is found that time pressure, level of supervision and concentration have negative impact on job satisfaction, whereas control over the work schedule and supervising authority positively affect employees' satisfaction with their job. However, the research lacks on identification of the most significant factor of the psychosocial job characteristics on employees' job satisfaction. In this context, this study has proposed the following hypothesis:

- H2: Among the psychosocial job characteristics, control over work schedule is the most significant factor affecting employees' job satisfaction.

From the previous research outcomes (Trivellas et al., 2013; Hoonakker et al., 2006; Newsham et al., 2009; Veitch et al., 2007; Klitzman and Stellman, 1989), it is evident that both the office physical environment and the psychosocial job characteristics have significant association with employees' job satisfaction. However, whether these two factors have the equal impact on the employees' satisfaction with their jobs or not is still lacking. To investigate this issue, the following hypothesis has been proposed:

- H3:Office physical environment and psychosocial job characteristics equally affect the employees' overall job satisfaction.

Okunribido and Wynn (2010) in their research state that musculoskeletal disorders (MSDs) are more likely to increase due to faulty ergonomics. From the article titled 'Ageing and work-related musculoskeletal disorders (MSDs)' published in 'European Agency for Safety and Health at Work' shows that MSDs are expected to increase with age. Cooper et al. (2004) show that furniture and ergonomic mismatch has an impact on employees' satisfaction. Researchers (Jung, 2005; Oshagbemi, 2003; Clark et al., 1996; and Testa and Mueller, 2009) find that the relationship between employees' job satisfaction and age is clearly inconsistent. Addressing these issues, this study has proposed the following hypothesis:

- H4: Employees' job satisfaction decreases with age provided there exists an office furniture (sitting arrangement) mismatch.

Neelamegam (2010), Oshagbemi (2003), and Jabnoun and Fook (2001) in their studies show that job experience is related to employees' satisfaction and dissatisfaction with their jobs. Hunt and Saul (1975), Smith (1982) and Clark et al. (1996) find U-shaped association between job satisfaction and experience, whereas some other researchers (Stone, 2000; Syed et al., 2012; and Islam et al., 2012) show it linearly related. In some studies (Stemple, 2004; Amiri et al., 2010), however, researchers find no significant difference in job satisfaction with total years of experience. Like job experience, the relationship between education and job satisfaction is noticeably inconsistent i.e. negative (Santhapparaj et al., 2005), positive (Abdullah et al., 2009; and Neelamegam, 2010), curvilinear (Newby, 1999), and no significant difference (Wan and Leightley, 2006; Abdel-Rahman et al., 2008; and Ghazi and Maringe, 2011). There is, however, dearth in research studying the interaction effects of education and job experience on employees' satisfaction with their jobs. To examine this issue, the following hypothesis has been proposed:

- H5: Employees with higher level of education are always more satisfied with their jobs than the employees with less educational qualification irrespective of their years of job experience.

2. Research Methodology

2.1. Questionnaire Construction and Administration

Based on well-established questionnaires (Charles et al., 2004; Hoonakker et al., 2006) and relevant published literatures, our research questionnaire was constructed and used to collect data in this study. For each of the characteristics describing the office physical environment, the employees' job, the office furniture mismatch and job satisfaction, a 5-point Likert-type scale was used. Depending on the wording of the item, the Likert scale wording ranged from 1 = very unsatisfactory to 5 = very satisfactory, or 1 = never to 5 = always etc. The internal consistency in this study is measured by Cronbach's alpha. The lower limit of 0.6 is considered acceptable for newly developed scales and 0.7 for established scales (Nunnally, 1994). Cronbach's coefficient alphas were calculated for the items of each survey construct.

An introductory letter describing the project included information about the voluntary nature of the questionnaire, and confidentiality of responses was

assured. The questionnaires were distributed randomly to the participants either directly or by email. The completed questionnaires were collected by the authors in ceiled. The respondents filled in the questionnaires at their workplaces. They were instructed to fill in the questionnaire at a quiet place with no other people around and not to consider the answers too long but always stick with the first spontaneous answer that came to their mind.

2.2.Variables

In this study, lighting, ventilation, acoustic and privacy were selected as the predictors of overall office physical environment. Supervising authority, level of being supervised, control over work schedule, time pressure and concentration were considered as the predictors of satisfaction with psychosocial job characteristics. Disparities in sitting arrangement were taken as predictor of office furniture mismatch. In fact, various musculoskeletal disorders such as eye strain, neck pain, shoulder pain, elbow pain, wrist pain, upper back pain, lower back pain and waist pain caused by office furniture mismatch were selected as the predictors of job satisfaction based on office furniture mismatch. Satisfactions with office physical environment and psychosocial job characteristics were also taken as independent variables to measure the overall job satisfaction. Moreover, demographic variables like age, level of education, experience, gender, designation etc. also included in the questionnaire to assess their individual and interaction effects on job satisfaction.

2.3. Data Collection

Data were collected from twenty different organizations. Majority of the respondents were from educational institutions, banks, food industries, glass manufacturing industries and telecommunication industries. To test the non-response bias, the responses of those who returned early were compared with those who returned late to determine whether there are any statistical differences. There were no statistical differences between the early and late responses. A total of 1285 survey questionnaires were distributed. Of the 1162 returned questionnaires, 1010 were usable. The response rate was approximately 87%. The data analysis is based on the 1010 useable questionnaires.

3. *Results and Discussions*

3.1. Reliability Testing

The analysis of the data was initiated with the determination of instrument's internal consistency. It was found through application of reliability test i.e. determination of Cronbach's alpha coefficient. The scale's reliability was determined through sample of 1010 respondents. Each of them answered 57 questions. As shown in Table 3.1, values of Cronbach's alpha for office physical environment, psychosocial job characteristics and office furniture mismatch are found satisfactory and data can be analyzed further to conclude the results (Mehboob et al., 2011).

Table 3.1. Reliability statistics for office physical environment, psychosocial job characteristics and office furniture mismatch

Categories	Cronbach's Alpha
Office physical environment	.874
Psychosocial job characteristics	.640
Office furniture mismatch	.727

3.2. Demographic Characteristics

The demographic data of the respondents are given in Table 3.2. It shows that our sample consists of more male (89.86%) than female (10.14%). All the respondents are educationally well qualified: 95.65% of them have post-graduate and bachelor degrees and remaining 4.35% have other degrees. Of 1010 respondents, 43.48% are identified as young adult (24-30 years), 43.48% as early middle age (31-40 years) and 13.04% as late middle age (41-51 years). Job categories of the respondents are distributed as teachers (40.58%), managers (18.84%) officers (14.49%), engineers (11.59%) and other professionals (14.49%).

Table 3.2. Frequency distribution of different demographic variables

Demographic variables	Category	Frequency	Percentage
Age group	Young adult (24-30 yrs.)	439	43.48
	Early middle age(31-40 yrs.)	439	43.48
	Late middle age (41-51 yrs.)	132	13.04
Education level	Postgraduate degree	439	43.48
	Bachelor degree	527	52.17
	Others	44	4.35
Sex	Male	908	89.86
	Female	102	10.14
Job designation	Teacher	410	40.58
	Manager	190	18.84
	Officer	146	14.49
	Engineer	117	11.59
	Others	146	14.49

3.3. Hypotheses Testing

In this context, the relevant data have been collected using a self-made questionnaire and analyzed statistically using SPSS. Backward elimination method is used to develop various regression models to find the most significant predictors affecting the response variables. Results obtained from the analyses performed are then used to test the previously developed hypotheses.

H1: Of the office physical environment variables, privacy is the most significant factor affecting the employees' job satisfaction.

To test this hypothesis, a linear regression model for job satisfaction based on office physical environment was developed relating the job satisfaction and its associated predictors. Backward elimination method is applied as it eliminates the insignificant model terms automatically. Analysis of variance (ANOVA) of the model and its significant model terms are summarized in Table 3.3. From the model summary statistics, it is apparent that the model is statistically significant ($F = 18.461$ and $p \leq 0.000$). Satisfactions with acoustic and privacy have significant and positive relationships (for acoustic, $\beta = 0.214$ and $p = 0.025$; for privacy, $\beta = 0.421$

and $p \leq 0.000$) with job satisfaction and no collinearity exist between them (for the both factors, VIF values are found to be less than 3). Satisfactions with ventilation and lighting, on the other hand, have no significant relationship with job satisfaction. The value of beta coefficient for the privacy is greater than that of the acoustic. These results indicate the fact that the privacy is the most significant variable affecting the employee's job satisfaction based on office physical environment. H1 is, therefore, not rejected.

Table 3.3. ANOVA table for job satisfaction model based on office physical environment

Model Summary Statistics		**R^2 =0.359**		**Adj. R^2 = 0.339**	**Darbin-Watson: 2.056**		
		F-value: 18.461			**P-value: .000[a]**		
a. Predictors: (Constant), Privacy, Acoustic							
Coefficients[c]							
Model		Unstandardized Coefficients		Standardized Coefficients	tt	PP-value	VIF
		B	Std. Error	Beta			
Final	(Constant)	1.850	.331		5.583	..000	
	Acoustic	.214	.093	.262	2.300	..025	1.334
	Privacy	.421	.113	.423	3.719	..000	1.334
c. Dependent Variable: Job satisfaction based on office physical environment							

▪ H2: Among the psychosocial job characteristics, control over work schedule is the most significant factor affecting employees' job satisfaction.

In this case, a linear regression model for job satisfaction based on psychosocial job characteristics was developed. Table 3.4 summarizes the analysis of variance (ANOVA) of the model and its significant model terms. From the model summary statistics, it is found that control over work schedule, time pressure and supervised' variables have significant relations

(for control over work schedule, β = 0.220 and p = 0.025; for time pressure, β = -0.340 and p = 0.001; for supervised, β = -0.319 and p = 0.015) with job satisfaction. 'Control over work schedule' affects positively while the other two variables affect negatively or adversely with job satisfaction. However, the values of beta coefficients reveal that 'time pressure' is the most significant variable affecting the job satisfaction. Besides, 'concentration' and 'supervising authority' are not found to have significant relationship with the response variable. H2 is, therefore, rejected.

Table 3.4. ANOVA table for job satisfaction model based on psychosocial job characteristics

Model Summary Statistics		**R^2 =0.330**		**Adj. R^2= 0.299**		**Darbin-Watson: 2.047**	
		F-value: 10.690				**P-value: .000[a]**	
a. Predictors: (Constant), Time pressure, Supervised, Control over work schedule							
Coefficients[c]							
Model		Unstandardized Coefficients		Standardized Coefficients	t	P-value	VIF
		B	Std. Error	Beta			
FFinal	(Constant)	5.281	.640		8.256	.000	1.334
	Supervised	-.319	.127	-.276	-2.505	.015	1.334
	Control over work schedule	.220	.096	.254	2.297	.025	1.334
	Time pressure	-.340	.099	-.351	-3.444	.001	
c. Dependent Variable: Job satisfaction based on psychosocial job characteristics							

▪ H3: Office physical environment and psychosocial job characteristics equally affect the employees' overall job satisfaction.

For testing the above-stated hypothesis, office physical environment and psychosocial job characteristics are taken as predictors for the overall job satisfaction. A linear regression model relating the overall job satisfaction with its aforesaid predictors is developed. From the model summary statistics shown in Table 3.5, it is evident that the model developed for overall job satisfaction is statistically significant ($F = 17.182$ and $p \leq 0.000$). Both the office physical environment and the psychosocial job characteristics have significant positive effects. However, psychosocial job characteristics is found to have greater influence on job satisfaction over the office physical environment since the beta coefficient (β) of psychosocial job characteristics is found comparatively larger (for office physical environment, $\beta = 0.126$ and $p=0.031$; for psychosocial job characteristics, $\beta = 0.342$ and $p < 0.001$). H3 is, therefore, rejected.

Table 3.5. ANOVA table for overall job satisfaction model

Model Summary Statistics		**R^2 =0.342**		**Adj. R^2 = 0.322**	**Darbin-Watson: 2.190**		
		F-value: 17.182			**P-value: .000[a]**		
a. Predictors: (Constant), Psychosocial job characteristics, Office physical environment							
Coefficients[c]							
Model		Unstandardized Coefficients		Standardized Coefficients	t	P-value	VIF
		B	Std. Error	Beta			
Final	(Constant)	2.108	.300		7.036	.000	
	Office Physical Environment	.126	.057	.220	2.201	.031	1.000
	Psychological Job Characteristics	.342	.063	.544	5.447	.000	1.000
c. Dependent Variable: Overall job satisfaction							

- H4: Employees' job satisfaction decreases with age provided there exists an office furniture (sitting arrangement) mismatch.

Table 3.6. Descriptive statistics for age group vs. job satisfaction

		Job satisfaction based on office physical environment		**Job satisfaction based on psychosocial job characteristics**	
Age groups	N	Mean	(±)SD	Mean	(±)SD
Young adult	439	3.80	.502	3.60	.675
Early middle age	439	3.90	.563	3.50	.731
Late middle age	132	3.72	.833	3.89	.782
ANOVA test statistics:		F = 0.416	P = 0.662	F = 1.03	P = 0.363

From the table 3.6, it is clear that late middle age group is more satisfied with their jobs for office physical environment whereas the same group is less satisfied for psychosocial job characteristics over the other two age groups i.e. level of job satisfaction based on both office physical environment and psychosocial job characteristics does not show any regular shaped patterns for different age groups. Moreover, ANOVA test statistic illustrate that these relationships are insignificant (for office physical environment: $F = 0.416$ and $p = 0.662$; for psychosocial job characteristics: $F = 1.03$ and $p = 0.363$) and biased by variability of means. However, the mean values given in the table 3.7 are found to be 3.20, 2.73 and 2.22 for young adult, early middle age and late middle age respectively. This result points out the fact that the level of job satisfaction based on office furniture mismatch decreases with the increase in age. Besides, both the ANOVA test ($F = 5.204$ and $p = 0.008$) and the Welch test ($F = 6.05$ and $p = 0.008$) statistics show that the aforestated relationships are significant, and the results are affected neither by variability of means nor by the variability of sample sizes. H4 is, therefore, not rejected.

Table 3.7. Descriptive statistics for age-group vs. job satisfaction based on office furniture mismatch

Age groups	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Young adult	439	3.20	.664	.121	2.95	3.45
Early middle age	439	2.73	1.015	.185	2.35	3.11
Late middle age	132	2.22	.833	.278	1.58	2.86
Summary Statistics	ANOVA test				Robust (Welch) test of equality of means	
	F = 5.204		p = 0.008		F = 6.05	p = 0.008

- H5: Employees with higher level of education are always more satisfied with their jobs than the employees with less educational qualification irrespective of their years of job experience.

Table 3.8. Descriptive statistics for interaction effect of education and job experience on overall job satisfaction

Level of education	Job experience	Mean	Std. Deviation	N
Bachelor	0 to 5 years	3.64	.434	
	6 to 10 years	3.05	.274	
	11 and above	3.78	.315	
Postgraduate	0 to 5 years	3.96	.214	
	6 to 10 years	3.88	.384	
	11 and above	4.06	.509	
Levene's Test of Equality of Error Variances[a]	F	df1	df2	p-value
	2.339	5	60	.05
a. Design: Intercept + Education + Experience + Education * Experience				

To test the above-stated hypothesis, interaction effects of level of education and length of job experience on the overall job satisfaction are analyzed. In this context, factorial ANOVA analysis is performed. From table 4.60, it is apparent that interaction effects on overall job satisfaction show a U-shaped pattern i.e. irrespective of education level, employees having 6-10 years of job experience are less satisfied over the other two experience groups. However, for the similar job experience, respondents with higher education have more overall satisfaction with their jobs than other education group. Besides, the highest mean value of overall job satisfaction for the employees with a bachelor degree (for bachelor degree and 11 years and above: the highest mean value = 3.78) is found be smaller than the lowest mean value of the job satisfaction for those with post-graduate degree (for postgraduate degree and 6 – 10 years: the lowest mean value = 3.88). Moreover, Levene's test for variance/standard deviation illustrates that the test result is significant i.e. variability of means does not affect the results shown in the aforesaid table. H5 is, therefore, not rejected.

4. Conclusions

The study was focused to identify the most influencial factors affecting the job staisfaction. Five hypotheses were developed based on three parameters of employee satisfaction like- office physical environment, psychosocial job characteristics and office furniture mismatch. Based on the results obtained following conclusions can be drawn-

(i) Of the office physical environment variables, privacy is the most significant factor affecting the employees' job satisfaction.
(ii) Among the psychosocial job characteristics, time pressure is the most significant factor affecting employees' job satisfaction.
(iii) Both the office physical environment and the psychosocial job characteristics have significant positive effects. However, psychosocial job characteristics are found to have greater influence on job satisfaction over the office physical environment.
(iv) Employees' job satisfaction decreases with age provided there exists an office furniture (sitting arrangement) mismatch.
(v) Employees with higher level of education are always more satisfied with their jobs than the employees with less educational qualification irrespective of their years of job experience.

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