

# Effect of Work Nature and Leave Breaks on Job Satisfaction in Employees: Examining through Mathematical Modelling

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## Abstract

In this study the issue of leaves/ breaks between work days and its effect on mental health and productivity output has been explored from subjective perspective. Loss of productivity is often substantial, especially absenteeism which may be caused by mental health problems due to prolonged workings and ultimately prove towards negative benefits of organizations. Data from this survey analysis proves that when employees are provided with short leaves, it increases job satisfaction and motivation in the employees. Thus based on this study it is proved that successful employment programmes are more effective when provided with small or frequent job breaks to the employees of an organization.

**Keywords:** Job stress, Job Satisfaction, Conflict, Workload, Job Autonomy, Health Care

## Introduction

In many countries organisations are increasing the working days of employees. This ongoing scenario in enterprises testifies to the fact that functioning in a competitive world of unrestricted profitability, by sacrificing the social needs of persons like leaves or break periods in jobs result in serious mental illness. By not breaking the working cycle or eliminating the break or leave barriers of people may lead to discouragement. Evidence from the literature suggests that when regular breaks are provided to employees at workplace, chances of sick leaves and long breaks are reduced. There are also some recent evidence which support that reductions in long work periods might be a factor associated with increases in employment satisfaction and productivity. The majority of HR managers agree (77%) that employees who take most or all of their vacation time are more productive in their jobs than those who do not. Further, HR managers believe that taking using vacation time leads to higher performance (75%) and increased job satisfaction (78%).

## Methodology

The review of the research literature showed that there is less statistical evidence to study the effects of working period and leave breaks on employee motivation. Also there are difficulties in measuring the impact of long hours working on organizational performance. Thus a survey was performed for the same and based on a survey a mathematical model was prepared to study the effect of working period and leave breaks on job satisfaction in employees. There was some recent evidence suggesting that the factors considered in Table 1 are associated with change in employee job satisfaction and his effectiveness or productivity, so based on these variable parameters a questionnaire was used for survey.

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Table 1.Variables Considered During Survey and Analysis

S. No.	Parameter	Levels		
		I	II	III
1	Leave breaks	Weekly	51	42
2	Nature of work	Light	Medium	38
3	Work Time per day	6	9	37

**Data Analysis**

The variable parameters were matrixed in form of I-9 orthogonal array and the data was collected by survey

under these specific set of conditions as shown in Table 2. The results of employee satisfaction level so obtained by the survey are summarized in Table 2. During this survey all Sundays were treated as non working days.

Table 2.The Results of Employee Satisfaction Level so Obtained by the Survey are Summarized

S. No.	Breaks	Work Type	Time in hours	Response for job satisfaction on a scale of 5			
				Response 1	Response 2	Response 3	Average of all responses
1	Weekly	Light	6	10	8	9	9
2	Weekly	Medium	9	9	8	7	8
3	Weekly	Heavy	12	6	5	4	5
4	Monthly	Light	9	6	8	7	7
5	Monthly	Medium	12	5	7	6	6
6	Monthly	Heavy	6	4	5	3	4
7	Quarterly	Light	12	6	6	9	7
8	Quarterly	Medium	6	8	6	7	7
9	Quarterly	Heavy	9	5	4	4	4

Upon completion of the survey the data collected, was transferred into the computer for statistical analysis. Statistical analyses were performed using Minitab version 17. To assess the factors affecting job satisfaction and consequently the performance or productivity, percentage

contribution of these variable was calculated and examined along with linear regression analysis. Figure 1shows theANNOVA analysis obtained using MINITAB software. From the analysis obtained, percentage contribution of considered factors was calculated and tabulated in Table 3.

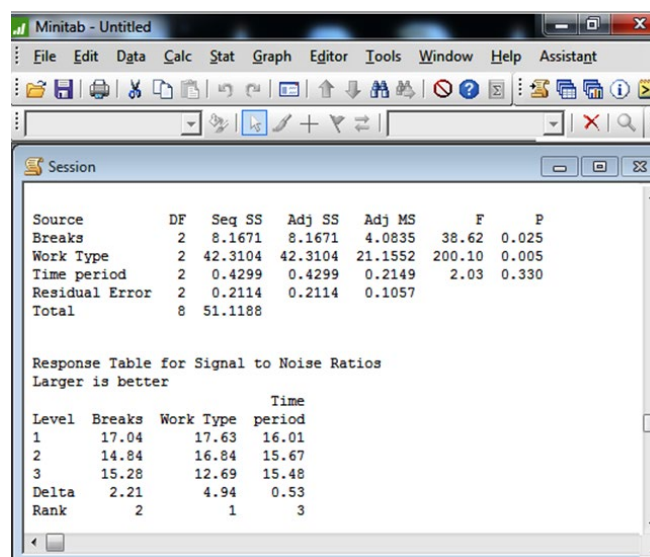


Figure 1.ANNOVA Analysis for Obtained Data

Figure 2.shows regression analysis of the regression equation obtained from ANNOVA analysis

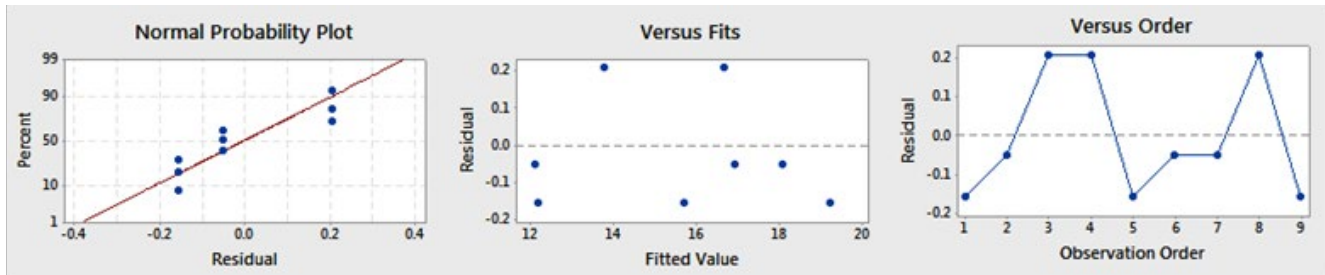


Figure 2.Residual plots for S/ N ratios

**Regression Equation**

$$\text{Satisfaction} = 12.00 + 0.33 \text{ Breaks} - 2.67 \text{ Work Type} - 0.11 \text{ Time period} - 0.00 \text{ Breaks*Work Type} - 0.095 \text{ Breaks*Time period} + 0.095 \text{ Work Type*Time period}$$

**Table 3.Percentage Contribution of Parameters for Satisfaction Level**

S. No	Factors	Level	Contribution
1	Leaves/Breaks	2	19.44 %
2	Work Type	1	77.48 %
3	Time in hours	3	2.78 %
4	Total	-----	100

Table 3.shows graphical representation of obtained results tabulated in Table 3.

**Conclusion and Discussion**

According to the study results, it is evident that the nature of work plays 77.48% role in job satisfaction of employees. Leave breaks during job was also found to be an effective factor which contributes around 20 % for increased job satisfaction. The role of time period of job was found to be less significant, around 2 % in comparison to the other two considered factors. Thus based on the study findings, to achieve lower job stress and higher job satisfaction at any workplace, it is recommended that proper leaves/breaks must be planned in between job days for employees according to the type or nature of job.

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