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LONG HOURS OF WORK AND EMPLOYEE PERFORMANCE IN NIGERIAN UNIVERSITIES

Igbokwe, Innocent C.[1],
Itoya, Joy[2],
Eziuzo, Gloria O.[3i]
[1]Department of Educational Management and Policy,
Nnamdi Azikiwe University,
Nigeria
[2]Department of Business Administration,
Ambrose Ali University, Ekpoma,
Nigeria
[3]Department of Educational Management and Policy,
Nnamdi Azikiwe University,
Nigeria

Abstract:
The study examined the effect of job stress on employee performance in tertiary institutions, using Delta State University, Abraka Campus as the study area. The literature was partitioned into four main sections namely; conceptual review, theoretical framework, extant literature and empirical review. The study adopted descriptive survey design. Statistical tools of analysis were summary statistics of percentages and Chi-square ($\chi 2$) test of independence. All tests were conducted at 0.05 level of significance. Findings indicate that long hours of work as a source of job stress has negative and significant effect on employee performance in tertiary institutions. The study concludes that putting too much pressure and stress on employees often results in negative consequences which are capable of reducing their performance. The study recommends among others that employers should endeavour to always assign tasks that their employees' capabilities can adequately cope with to avoid situations that lead to work stress.

Keywords: job stress, employee performance, long hours

1. Introduction

Stress at work is one of the major psychological risks at work. It is an outcome to certain stimuli present or generated in a working climate and long hours of work is a type of

[i] Correspondence: email innjo2@gmail.com, alizenny@gmail.com, gloriaeziuzo@gmail.com

stress. Job stress in an academic institution is believed to have a profound impact on the performance of employees (Vijayan, 2018). Work related stress is a problem and it is of great concern to employees, employers, psychologists and counselors (Joseph, 2013). In this era of downsizing which has left organizations with relatively small workforce compared to the volume of available work in the organizations, a significant proportion of employees have difficulty performing their primary assignment at work and family/social obligations due to work demands and it leads to stressful situations. In many occasions, especially in the tertiary institutions, work that would normally be for three or more people is left for one person to do because employers do not want to carry heavy wage bill. The consequences are usually work overload and long hours at work by employees. Fonkeng (2018) agree that employees are usually conditioned to work long hours in a very competitive environment like a university setting with little or no rest or sleep which may likely cause high rate of stress and affect the quality of work performance.

Yet, some result of past studies in this area of study indicate that opinion is divided as to the impact of long hours of work on employee performance. The conflicting reports are evident. For instance, whereas Ayodele (2014) found that there is significant negative relationship between job stress as a result of long hours of work and employee performance in the banking sector, Aasia, Hadia and Sabita (2014) found that job stress does not impact employee job performance. In the same vein, in a study carried out by Musyoka, Ogutu and Awino (2012), the result showed that stress had positive effect on corporate performance. Similarly, Qadoos, Ayesha, Tayyab, Togeer and Hafiz (2015) found from their study that positive moderate relationship exists between job stress and employee performance. As could be seen from these results, the relationship between stress and performance is still not resolved. Meanwhile, the findings of some studies are in agreement that long hours of work are one of the main sources of stress and fatigue for employees which correlates with their performance. Pencavel (2015) seems to support that the fact of decreasing returns to hours put at work. Having observed the obligatory overtime for nurses, Lu and Lu (2016) in Collewet and Sauermann (2017), maintain that long hours of time bring about reduction in the quality of work performance by employees.

Actually, there are scarcely sufficient studies on the effect of long hours of work on the performance of non-teaching staff of Nigerian universities, hence this study. The objective of the study is to examine the meaning of job stress and the effect of long hours of work on employee performance in Nigerian universities, using the non-teaching staff of the Delta State University as the study area.

1.1. Long Hours of Work

Time of at work is one of the most basic components of occupational exposure; it structures all other aspects of life and has profound significance for the life of the worker both on and off the job (Johnson & Lipscomb, 2006). Spending more than usual or normal hours of work at job place is seen as long hours of work. The number of hours considered to be long hours vary from work to work and place to place. Long hours of work are very

common among individuals who worked at more than one job or business and more strongly, high job strain, high job insecurity and low supervisor support are not necessarily related to working hours (Shield, 1999). Places of work and type of work also account to long hours of work. A person in shift work may not suffer long hours of work as a person without a shift work. This can be said of white-collar work and clerical, sales and service occupations or in blue-collar occupations. The former is likely to be prone to long hours of work.

1.2. Long Hours of Work and Performance

It has been observed that working hours, in both their length and their structure, are one of the clearest and most important aspects of an entire class of occupational exposures involving the work process itself – the way in which work is structured and organized at the level of the worksite, the firm, institution, school, and even the labour market (Johnson & Lipscomb, 2006). However, whether long hours of work adversely affect workers performance at work place has been debated for ages and this seems to make adequate policy on working hours in organizations very difficult. On one hand, long hours of work could lead to worker fatigue which goes a long to bring decrease in performance and productivity. On the other hand, long hours of work could lead to higher performance and productivity if the long hours offer better utilization of opportunities and human capital. This is the reason Collewet and Sauermann (2017) identified two reasons why the effect of long hours of work on employee performance is not a straightforward prediction. According to them, unobservable characteristics of industries, firms, institutions, organizations, productivity and performance account for the difficulty in correlating hours of work and performance. Another reason is that external shocks could influence both hours of work and performance which makes the estimation of the effect imprecise. However, Collewet and Sauermann (2017) showed that majority of studies on the link between working hours and performance still find reduction in performance to long hours obvious, an observation discovered to have been caused by worker stress or fatigue which has also not disappeared even in today's service economy with shorter hours. In collaboration with this finding, it is acknowledged that long working hours, especially in combination with other adverse aspects of work organization such as irregular working hours and intense performance demands are strongly associated with fatigue, stress, decrements in performance, adverse health behaviours, and both acute and chronic physical disorders (Caruso et al, 2006). It can be said that a link between long hours of work and performance seems inseparable.

1.4 Significance of the Study

The study has both theoretical and empirical significance. From the theoretical significance perspective, the study will add substantially to the existing stock of literature in the area thereby expanding the frontiers of knowledge. On the other hand, the empirical significance stems from the fact that different categories of people will benefit from the findings of the study. For instance, the authorities of tertiary institutions would be sufficiently enlightened on how to make work less stressful for the employees.

Similarly, the employees would be adequately educated on how to reduce stress in their work situations. The third category area the students/researchers who might be interested in carrying out further studies in the area, they will find the report very useful because it will serve as a good starting point.

2. Theoretical Framework

2.1. Occupational Stress Theory

Karasek (1979) designed a model as presented below on job demands-control-support. He used the model to draw attention to the possibility that work characteristics may not be linearly associated with worker health and that they may combine interactively in relation to health. According to Okeke, Chukwuemeka and Amobi (2017), the initially demonstrated the theory through secondary analyses of data from the United States and Sweden. It was found that employees in job perceived to have both low decision latitude and high job demands were likely to report poor health and low satisfaction.

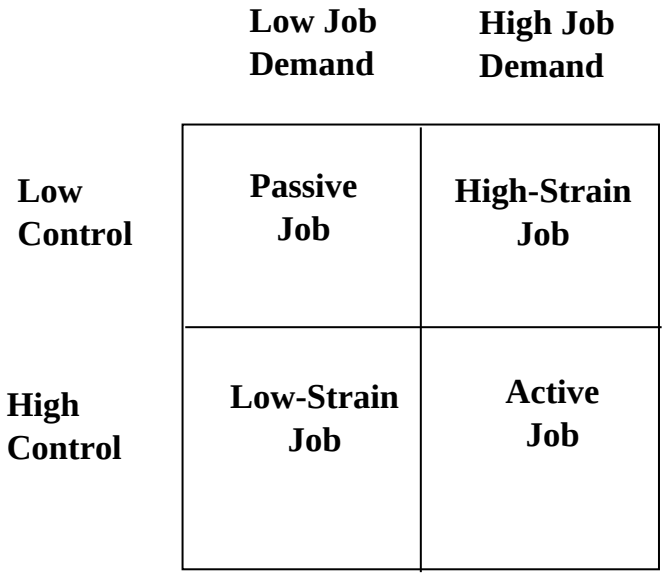

Figure 1: The job demands-control-support Model designed by Karasek (1979)

Later studies appeared to confirm the theory. For example, a representative sample of Swedish working men was examined for depression, excessive fatigue, cardiovascular diseases, etc. Those workers whose jobs were characterized by heavy workloads combined with little latitude for decision-making were represented disproportionately on all the outcome variables. The lowest probabilities for illness and death were found among work groups with moderate workloads combined with high control over work conditions, they reported. Therefore, the issues involved in employee job stress and performance can be effectively analyzed under the framework of job Demands-Control-Support Theory.

2.2 Extant Literature

Stress at workplace has become an important topic of study in organizational behaviour. As a crucial aspect of human resource management, it has psychological and physiological effects on both the employee and the manager by affecting their health and performance at work (Aniedi, Offiong and Effiom, 2014 in Okeke, Chukwuebuka and Amobi, 2017). They note that stress is a major cause of negative work attitudes and high labour turnover in the organization. They contend that employee under stress can be a problem to other employees, especially if he/she is handling dangerous equipment/machines as well as cause other unpleasant health conditions to the employees. To Steyn and Kamper (2014), a moderate level of stress may have positive effect and the person involved may work harder and for long hours but a low level of stress may have negative effect and adversely affect the performance of the employee. However, they observe equally that overstress is always dangerous, and no employee can escape its consequences.

Furthermore, long hours of work have been found to be a factor of job stress in the organization. Dividing time sufficiently between work, family, friends and other socials could be quite challenging (Duxbury and Higgins, 2012). They opine that long hours of work create stress for the employee because under such circumstance, he/she would certainly have less time left for other obligations. It is a situation that confronts the employee while trying to balance work demands and other roles as a social being. Therefore, shuttling among work role, family roles and social obligations could have some negative health consequences on the employee. Such strain could manifest in headache, fatigue, tiredness, tension, anxiety, depression, lack of concern, bad temper, etc. and they affect employees' performance negatively in the organization (Greehaus and Bentell, 2005).

2.3 Empirical Review

Past studies that relate to the present study were reviewed in this section of the literature to put the study in the proper perspective. Odor (2019) investigated work related stress and employee commitment at Delta State Polytechnic, Ogwashi Ukwu, Delta State, Nigeria. The study which adopted descriptive survey design found that work stress is negatively related to the three types of commitment namely; affective, normative and continuance commitment. It was concluded that teaching staff with low job stress will be more committed to duty than those with high level stress. In a related study, Okeke, Chukwuemeka and Amobi (2017) conducted a study on occupational stress and the performance of non-teaching staff of selected universities in the South-Eastern Nigeria. The study used descriptive survey design and the findings indicate that occupational stress does have positive effect on the performance of non-teaching staff. Also, the reductions of occupational stress have positive effect on the effectiveness of the employees under study. It was concluded that reduction in the occupational stress will enhance employees' performance in the organizations.

Okeke, Ojan and Oboreh (2016) carried out a study on effects of stress on employee productivity in the banking industry in Awka Metropolis of Anambra State, Nigeria. The

study was designed as a descriptive survey. The results showed that work load pressure has significant negative effect on employee productivity. It was equally found that stress hinders effective performance of the employees. The study concludes that remedial measures aimed at minimizing job stress should be taken by the management on permanent basis. Finally, Dina (2016) examined the effect of stress on professional librarians' job performance in Nigerian university libraries. The study adopted descriptive survey design. The result showed that professional librarians' quality in terms of job performance in relation to their job demand and expectations can be affected as a result of enormous stress. The study concludes that professional librarians who engage in other activities aside their primary assignment for which they were employed are more prone to stress than those who do not.

3. Methodology

Descriptive survey design was used to facilitate the generalization of research results for the entire population of interest. Apart from that Obasi (2000) observes that survey method is always useful in the collection of primary data for studies of this nature, especially when the necessary data cannot be found in any statistical record in form of secondary data. The study used senior non-teaching staff of the Delta State University, Abraka Campus as the units of investigation. Through a pilot study commissioned by the researcher, 511 members of specified category of staff were identified from the campus. Thus, the population of the study is 511 senior admin staff across the faculties and central administration block.

Taro Yameni's Statistical formula for determining sample size from a finite population was used. The procedure is as outlined below:

$$n = \frac{N}{1+N(e)^2}$$

Where:
n = Sample size to be determined
N = Entire population of interest
e = Error margin (0.05)
1 = Constant (unity)

Substituting the values in the formula, we have:

$$n = \frac{511}{1+511(0.05)^2}$$

$$= 224.368825466$$

$$\text{n} = 224 \text{ (Nearest whole number)}.$$

Thus, the sample size for the study is 224 senior non-teaching members of staff in the university.

Concerning the sampling technique used in selecting the units of observation, we employed systematic sampling method. This method was chosen in preference to other methods because of its unique attributes of random start and sampling interval which enables the method to evenly-spread the sample across the population of interest.

An item structured instrument designed to reflect the modified five (5) point Likert scale was used to elicit information from the respondents in the campus. The instrument was both face and content validated by experts to ensure that it can measure what it was meant to measure. Similarly, the reliability of the instrument was established through the method of test re-test and the estimated coefficients are 0.90, 0.80 and 0.73 for the three research questions respectively with an average coefficient of 0.81 (see Appendix II for details of estimation). Thus, the instrument is 81 percent reliable and it was considered very adequate for the study.

The researcher made use of direct questionnaire distribution method. The approach enables the researcher to assess whether the respondents actually understood the questionnaire items so that clarifications/explanations may be made. The volume of non-response rate which often associate with surveys of this nature was also reduced. Out of the 224 copies of the questionnaire issued out, 197 were completed and returned thus showing a response rate of 87.9 percent. With regard to method of analysis, the data were analyzed quantitatively through application of summary statistics of percentages and chi-square (χ^2) inferential statistics. All tests were carried out at 0.05 level of significance that being the probability at which we were willing to risk Type I error. The hypotheses formulated to guide the objectives of the study and strengthen the analysis was tested with chi-square (χ^2) test of independence at 0.05 level of significance and 16 degrees of freedom.

The demographic features of the respondents such as gender, age, educational qualification, length of time in service (in years), etc., were discussed in this section of the analysis to assess the capacity and suitability of the respondents in discussing all issues relating to employee job stress and performance in the organization.

The analysis of demographic features of the respondents showed that 101 representing 51.3 percent of the sample are female thus showing that there are more female respondents in the sample than male respondents. The table shows that 183 representing 92.7 percent of the sample are within the age bracket of 28 years and above. In terms of education, 182 representing about 92.4 percent of the sample have qualifications ranging from Ordinary National Diploma (OND) or National Certificate of Education (NCE) and above. The analysis of organizational tenure shows that 89.8 percent of them have worked for upward of 5 years and above in the institution. The implication of the results is that the respondents are in a position to effectively discuss all issues relating to job stress and performance.

Table 1: Demographic Features of the Respondents

S/N	Demographic Features	Frequency	Percentage of Total
1.	Gender:		
	Male	96	48.7
	Female	101	51.3
	Total	**197**	**100.0**
2.	Age Interval:		
	18 – 27	14	7.3
	28 – 37	48	24.1
	38 – 47	73	37.0
	48 – 57	41	20.7
	58 and above	21	10.9
	Total	**197**	**100.0**
3.	Educational Qualification:		
	WAEC	15	7.6
	OND/NCE	33	16.8
	HND/First Degree	89	45.2
	Masters	27	13.7
	Professional Cert	29	14.7
	PhD	4	2.0
	Total	**197**	**100.0**
4.	Length of Time in Service:		
	Below 5 yrs	20	10.2
	5 – 10 yrs	50	25.4
	11 – 15 yrs	87	44.1
	16 and above yrs	40	20.3
	Total	**197**	**100.0**

Source: Field Survey, 2020.

Table 2: Long Hours of Work and Employee Performance

S/N	Items of the Questionnaire	Alternative Responses					Total
		SA	A	D	SD	UND	
1.	Excessive workload and prolonged hours of work are prominent sources of stress which hampers performance.	75 (38.1)	83 (42.1)	17 (8.6)	12 (6.1)	10 (5.1)	197 (100)
2.	Long hours of work can put pressure on employee's family, especially women because of their dual responsibility.	89 (45.2)	71 (36.0)	20 (10.2)	10 (5.1)	7 (3.6)	197 (100)
3.	Pressure from organization leads to stress and frustration among employees.	66 (33.5)	95 (48.2)	18 (9.1)	10 (5.1)	8 (4.1)	197 (100)
4.	Long hours of work do not permit clear demarcation between work and life outside work and it is a direct source of work stress.	79 (40.1)	88 (44.7)	20 (10.2)	7 (3.6)	3 (1.5)	197 (100)
5.	Long hours of work are capable of causing the employee an ill-health because he/she hardly have time for rest thereby causing stress.	58 (29.4)	121 (61.4)	10 (5.1)	5 (2.5)	3 (1.5)	197 (100)
	Total	367	458	85	44	31	985
	Percentage of Total	(37.3)	(46.5)	(8.6)	(4.5)	(3.1)	(100)

Note: (SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree and UND = Undecided). Figures in parenthesis are percentages

As could be seen from Table 2, 37.3 percent of the respondents on the average strongly agreed with all the statements of the items, 46.5 percent of the respondents also agreed but not strongly, 8.6 percent disagreed, 4.5 percent strongly disagreed and 3.1 percent were undecided on all the issues raised in the section. But apart from the averages as presented above, variation across the items showed that whereas 38.1 percent and 42.1 percent strongly agreed and merely agreed with item 1 respectively, 29.4 percent and 61.4 percent did so for item 5 respectively.

3.1 Hypothesis

H_0: Long hours of work as a source of job stress does not have negative and significant effect on employee performance in tertiary institution.

H_1: Long hours of work as a source of job stress have negative and significant effect on employee performance in tertiary institution.

Table 3: Summary of Chi-Square (χ^2) Test for Hypothesis

Hypothesis	Sample Size (n)	Degree of Freedom (df)	Chi-Square (χ^2) Values		Significance level (α)	Decision Rule
			$\chi^2_{cal.}$	$\chi^2_{crit.}$		
	224	16	40.805	26.296	0.05	Rejected

Note: $\chi^2_{cal.}$ means calculated value of χ^2 and $\chi^2_{crit.}$ means the critical value of χ^2.

3.2 Decision Rule

At 0.05 level of significance and 16 degrees of freedom, the calculated value of χ^2 (40.805) is greater than the critical value of χ^2 (26.296). Hence the null hypothesis was rejected, and we concluded that long hours of work as a source of job stress have significant but negative effect on employee performance in tertiary institution.

4. Discussion of Research Results

Finally, the study found that long hours of work as a source of work stress negatively affects employee performance. On the contrary, the finding of this study disagrees with a study carried out by Musyoka, Ogutu and Awino (2012), which showed that stress, no matter the type, had positive effect on corporate performance and the study of Qadoos, Ayesha, Tayyab, Togeer and Hafiz (2015) which held that positive moderate relationship exists between job stress and employee performance.

The finding of this study agrees with the finding of Ayodele (2014) that there is significant negative relationship between job stress as a result of long hours of work and employee performance. This is similar to the finding that acknowledged that long working hours, especially in combination with other adverse aspects of work organization such as irregular working hours and intense performance demands are strongly associated with fatigue, stress, decrements in performance, adverse health behaviours, and both acute and chronic physical disorders (Caruso et al, 2006). This is supported by the study of Pencavel (2015). Long hours of work lead to burnout and the strain that goes with it causes ill-health to the worker. It hardly permits the worker time

for the family and other social engagements. The university environment is prone to long hours of work which sometimes make the employee to work into late evenings. Long hours of work make it possible for work to spill over into family domain and other socials and that potentially is a source of stress. When such unhealthy situation persists, employees' performance tends to diminish. Therefore, employee need stress-free condition for optimum performance at duty posts.

5. Conclusion

The success of every academic institution depends largely on the employees. This work has shown that long hours inherent in job stress do not allow employees in Nigerian universities to perform at their optimal level of productivity and efficiency. Long hours of work when it is not moderated causes severe stress that breaks workers down and lower their performance. If it is allowed to persist in an organizational climate may become hazardous to employees, affect their health and performance. Long hours of work affect employee performance negatively. The government and policy makers should strive to create a working environment where there is stress-free climate by reducing the long hours of work and other stress causing agents.

5.1 Recommendations

Based on the findings and the conclusion drawn from the study, the following recommendations were made to manage the effect of job stress on employee performance:

1. There is need to ensure that employees do not engage on unnecessary long hours at work so that the stress that comes with it may be avoided to permit the desired level of performance.
2. Modest increase of working hours should be adopted and modified overtime to reduce unnecessary health and other hazardous exposures.
3. Proper strategies should be put in place with respect to working hours in order to reduce stress and improve the performance of employees.

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Appendix I: Survey Instrument

Personal Data

Instructions: Please tick [\/] as appropriate in the boxes provided below.

1. Gender:
   Male [ ]
   Female [ ]
2. Age bracket:
   18 – 27 years [ ]
   28 – 37 years [ ]
   38 – 47 years [ ]
   48 – 57 years [ ]
   58 and above years [ ]
1. Educational Qualification:
   WAEC [ ]
   OND/NCE [ ]
   HND/First degree [ ]
   Professional Cert. [ ]
   Masters degree [ ]
   PhD [ ]
4. Length of Service (in years):
   Below 5 years [ ]
   5 – 10 years [ ]
   11 – 15 years [ ]
   16 and above years [ ]

Questionnaire: Long Hours of Work and Employee Performance

S/N	Items of the Questionnaire	Alternative Responses					Total
		SA	A	D	SD	UND	
1.	Excessive workload and prolonged hours of work are prominent sources of stress which hampers performance.						
2.	Long hours of work can put pressure on employee's family, especially women because of their dual responsibility.						
3.	Pressure from organization leads to stress and frustration among employees.						
4.	Long hours of work do not permit clear demarcation between work and life outside work and it is a direct source of work stress.						
5.	Long hours of work are capable of causing the employee an ill-health because he/she hardly have time for rest thereby causing stress.						
	Total						
	Percentage of Total						

Note: (SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree and UND = Undecided).

Appendix II: Reliability Test

The reliability test was carried out through the application of Spearman rank order correlation coefficient. The estimation procedure is as shown below:

$$r = 1 - \frac{6\sum d^2}{n(n^2-1)}$$

Where:
r = the coefficients to be determined
n = number of response options
d = difference in rank order
1 and 6 = constants
The value of the coefficient ranges from -1 to +1

Estimation of Reliability for Research Question

Response Options	**Result of 1st Responses (x)**	**Result of 2nd Responses (y)**	**Rx**	**Ry**	**Rx – Ry (d)**	**d^2**
Strongly agree	7	5	1	2	-1	1
Agree	5	6	2	1	1	1
Disagree	4	3	3	4	1	1
Strongly disagree	2	4	4.5	3	1.5	2.25
Undecided	2	2	4.5	5	-0.5	0.25
Total	20	20				5.5

$$r = 1 - \frac{6(5.5)}{5(5^2-1)}$$

$$r = 1 - \frac{33}{120}$$

$$r = 0.73$$

Appendix III

The relationship between variables were examined using chi-square (χ^2) test of independence. The test procedure and actual calculations are shown below. We calculate an overall measure of discrepancy between the observed and expected values. We therefore compare this measure with some theoretical values of the same Chi-square (χ^2) (Oyeka, 1996).

Test Statistic of Chi-Square (χ^2):

$$\chi^2 = \sum \frac{(O-E)^2}{E} \sim \chi^2_{(\mathrm{r}-1)(\mathrm{c}-1)}$$

Where:
O = Observed frequency and

E = Expected frequency

$$\text{and } E = \frac{N_i \times N_j}{N_{..}}$$

Where:
N_i = Row total
N_j = Column total
$N_{..}$ = Overall total
Where:
r denote row
c denote column
∴ (r-1)(c-1) = degrees of freedom (df) and
(α) = level of significance

Decision Rule
Whenever $\chi_c^2 > \chi_{(r-1)(c-1)}^2$
Where: χ^2_c = Chi-square (χ^2) Calculated and
$\chi_{(r-1)(c-1)}^2$ = Chi-square (χ^2) tabulated,
reject H_o and accept H_1.

1. Chi-Square (χ^2) Estimation for Hypothesis I:

$$\chi^2 = \frac{(O-E)^2}{E}$$

$$= \frac{(69-71.6)^2}{71.6} + \frac{(83-81.4)^2}{81.4} + \cdots + \frac{(10-10.4)^2}{10.4}$$

$$= 0.09 + 0.03 + \cdots + 0.02$$

$$\chi^2_{Cal} = 31.612$$

$$\chi^2_{Crit} = 26.296$$

Hence the null hypothesis was rejected and the alternative accepted.

2. Chi-Square Estimation for Hypothesis II

$$\chi^2 = \frac{(O-E)^2}{E}$$

$$= \frac{(68-73.6)^2}{73.6} + \frac{(79-77.4)^2}{77.4} + \cdots + \frac{(5-8.8)^2}{8.8}$$

$$= 0.43 + 0.03 + \cdots + 1.64$$

$\chi^2_{Cal} = 29.207$

$\chi^2_{Crit} = 26.296$

Hence the null hypothesis was rejected and the alternative accepted.

3. Chi-Square (χ^2) Estimation for Hypothesis III:

$$\chi^2 = \frac{(O-E)^2}{E}$$

$$= \frac{(75-73.4)^2}{73.4} + \frac{(83-91.6)^2}{91.6} + \cdots + \frac{(3-6.2)^2}{6.2}$$

$$= 0.03 + 0.81 + \cdots + 1.65$$

$\chi^2_{Cal} = 40.805$

$\chi^2_{Crit} = 26.296$

Hence the null hypothesis was rejected and the alternative accepted.