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Does the Digital Environment Improve Modern Users' Internet Awareness?

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Introduction

Man invented many wonderful gadgets to the society. Now, those items are ruling the world and without which regular routines are unimaginable in the human beings life. Many studies reveal that people routines are heavily tied with those items. The Internet and its resources are playing a vital role in everyone life. Awareness of Information literacy concepts and skills are essential things to the modern users in order to improving their potential in research and other areas of academy. The associations between the users and their dependency of Internet have been traced in many studies. The global development of Internet features in digital libraries has generated changes in the pattern of library routines. Progressive development of Internet technology has affected the way of modern users in utilizing the electronic collections. The reasonable price of those electronic items enables the users to buy and access the electronic resources as and when they are interested. The massive impact of Internet and its electronic resources change the way of information seekers, who are seeking information in electronic environment. This is one kind of an attempt to investigate the modern users' Library visit and their awareness of Internet.

Objectives

The objectives of this research were concerned with to measure the respondents' frequency of Library visit; their awareness levels of Internet, and the level of existing relationship between their Library Visit and Internet awareness.

Methodology

The respondents were selected from the disciplines of Commerce, Economics, English and History belonging to the Faculty of Arts, Annamalai University located in Tamilnadu. In our experimental design the population range for said disciplines was traced as 250. Selecting sample is an important task in any social sciences research. Hence the standard method was applied to measure the required sample size. The samples were selected for evaluation as calculated using the expected error rate, desired

precision range and confidence level. Based on the said attributes the required sample size was traced as 111.95, but study included 120 samples for further investigation. To fulfill the structured problem objectives a well structured questionnaire was structured and distributed to 150 users on the basis of stratified random sampling. Of them 120 filled in questionnaires were taken into the account of analysis. The collected data were carefully sorted and analyzed with the statistical procedure namely Two-Way ANOVA. Also, the Post-Hoc Test (Tukey HSD) has been applied to go in depth to trace the positions of differences.

Scope

Restrictions always exist to explore our presentations in any journals. Keeping this aspect in mind the present investigation comprises the respondents' frequency of Library visit and their Internet awareness levels only.

Hypotheses

To fulfill the said objectives a few null hypotheses have been structured in the present study.

H₁ - There are no statistically significant differences among the respondents' Branch wise Library visit.

H₂ -There are no statistically significant differences among the respondents' Branch wise Internet awareness.

H₃. There are no statistically significant differences between the groups of means among the Branches.

H₄. There are no statistically significant differences between the groups of means among the Library visit; the groups of means among the Awareness.

H₅ -There are no statistically significant differences between the groups of means among the Library visit within each Branch; the groups of means among the awareness within each Branch.

H₆ -There are no statistically significant differences between the groups of means among the Branches within Library visit; the groups of means among the Branches within awareness.

H₇-There is no statistically significant linear relationship between the respondents' Library visits and Internet awareness.

Analysis

Table 1: Frequency of Library Visit:

Branch	Daily	Once in 2 Days	Weekly	Bi-Week	Monthly	Bi-Month	Grand Total
Commerce	17	11	4	2	2	4	40
Economics	10	9	3	1	3	4	30
English	20	8	6	4	1	1	40
History	4	2	1	3	0	0	10
Total	51	30	14	10	6	9	120

Table 1.1:Row Analysis:

Branch	Daily	Once in 2 Days	Weekly	Bi-Week	Monthly	Bi-Month	Grand Total
Commerce	42.50%	27.50%	10.00%	5.00%	5.00%	10.00%	100.00%
Economics	33.33%	30.00%	10.00%	3.33%	10.00%	13.33%	100.00%
English	50.00%	20.00%	15.00%	10.00%	2.50%	2.50%	100.00%
History	40.00%	20.00%	10.00%	30.00%	0.00%	0.00%	100.00%
Total	42.50%	25.00%	11.67%	8.33%	5.00%	7.50%	100.00%

Table 1.2:Col. Analysis:

Branch	Daily	Once in 2 Days	Weekly	Bi-Week	Monthly	Bi-Month	Grand Total
Commerce	33.33%	36.67%	28.57%	20.00%	33.33%	44.44%	33.33%
Economics	19.61%	30.00%	21.43%	10.00%	50.00%	44.44%	25.00%
English	39.22%	26.67%	42.86%	40.00%	16.67%	11.11%	33.33%
History	7.84%	6.67%	7.14%	30.00%	0.00%	0.00%	8.33%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 1.3: Total Analysis:

Branch	Daily	Once in 2 Days	Weekly	Bi-Week	Monthly	Bi-Month	Grand Total
Commerce	14.17%	9.17%	3.33%	1.67%	1.67%	3.33%	33.33%
Economics	8.33%	7.50%	2.50%	0.83%	2.50%	3.33%	25.00%
English	16.67%	6.67%	5.00%	3.33%	0.83%	0.83%	33.33%
History	3.33%	1.67%	0.83%	2.50%	0.00%	0.00%	8.33%
Total	42.50%	25.00%	11.67%	8.33%	5.00%	7.50%	100.00%

The branch wise respondents' Library visit could be observed from the Table 1. 42.50% of the Commerce discipline users visit the library daily, followed by once in 2 days (27.50%) and rest of the levels have secured as 10% & 5% respectively. Economics discipline has secured 33.33% for the option 'Daily' followed by once in 2 days (30.00%), Bi-Month (13.33%), Monthly & Weekly (10.00%) and rest of the level 'Bi-Week' has got 3.33% only. 50.00% of the English branch users visit the library 'Daily', followed by once in 2 days (20.00%), Weekly (15.00%), Bi-Week (10.00%) and the remaining options have secured 2.50% each. 40.00% of History users visit the library 'Daily' while 25.00% of them visit the library 'once in 2 days'. The rest of the options have got their own in between the ranges of 5.00% and 11.67%. The columns and total analyses may explore more information about the dispersions of the observations. The observed points alone would never help any investigators to make the inferences about the population. Hence, a Two-Way ANOVA (Table 1.4) has been performed to trace the significance among the variables. From the ANOVA test results, it is inferred that with the weakened evidences ($F=3.69(F_{crit}=3.287)$, $8.38(F_{crit}=2.901)$) we fail to claim support to the formulated hypothesis one (H_1) in favor of the alternative at the significance level of alpha 0.05%. Other test results also confirm the same. Distributions could be clearly observed from the plot distributions (See Annexure-i), which have been formulated for better capture.

Table 1.4: Two Way Analysis of Variance:

Variable analyzed: Score/Factor A (rows) variable: Branch/Factor B (columns) variable: Visit

Source	D.f.	SS	MS	F	Prob.> F	Omega squared
Among Branch	3	100	33.333	3.69	0.036	0.117
Among Visits	5	378.5	75.7	8.38	0.001	0.535
Residual	15	135.5	9.033			
Non Additivity	1	89.962	89.962	27.658	0	
Balance	14	45.538	3.253			
Total	23	614	26.696			

Omega squared for combined effects = 0.652

Table 1.5: Descriptive Statistics:

GROUP	Row/Col	N	Mean	Variance	Std.Dev.
Commerce	1	6	6.667	36.667	6.055
Economics	2	6	5	13.2	3.633
English	3	6	6.667	50.267	7.09
History	4	6	1.667	2.667	1.633
Daily	1	4	12.75	51.583	7.182
2 Days...	2	4	7.5	15	3.873
Weekly	3	4	3.5	4.333	2.082
Bi-Week	4	4	2.5	1.667	1.291
Monthly	5	4	1.5	1.667	1.291
Bi-Month	6	4	2.25	4.25	2.062
TOTAL		24	5	26.696	5.167

Table 1.6: Comparisons among Branches

Groups	Difference	Statistic	P
1 - 2	1.667	q = 1.358	0.7733
1 - 3	0.000	q = 0.000	1.0000
1 - 4	5.000	q = 4.075	0.0501
2 - 3	-1.667	q = 1.358	0.7733
2 - 4	3.333	q = 2.717	0.2609
3 - 4	5.000	q = 4.075	0.0501

The comparisons among rows (Branch) were analyzed and explored here to test the hypothesis three (H_3). The given analyses have been made based on rows comparisons.

The Tukey HSD Test was adopted to measure the differences between means at alpha level 0.05 (Table 1.6) and observed that there would be no significance statistically identified among rows and based on these enough evidences we can claim support to the formulated hypothesis three (H_3) against the alternative.

Table 1.7: Comparisons among Visits

Groups	Difference	Statistic	P
1 - 2	5.250	q = 3.494	0.1942
1 - 3	9.250	q = 6.155	0.0062
1 - 4	10.250	q = 6.821	0.0026
1 - 5	11.250	q = 7.486	0.0011
1 - 6	10.500	q = 6.987	0.0021
2 - 3	4.000	q = 2.662	0.4482
2 - 4	5.000	q = 3.327	0.2335
2 - 5	6.000	q = 3.993	0.1076
2 - 6	5.250	q = 3.494	0.1942
3 - 4	1.000	q = 0.665	0.9966
3 - 5	2.000	q = 1.331	0.9293
3 - 6	1.250	q = 0.832	0.9904
4 - 5	1.000	q = 0.665	0.9966
4 - 6	0.250	q = 0.166	1.0000
5 - 6	-0.750	q = 0.499	0.9992

The comparisons among Columns (Visit) were analyzed and explored here to test the hypothesis four

(H₄). The given analyses have been made based on Columns comparisons.

Table 1.7 depicts that there would be no significance statistically identified among columns at alpha level 0.05, and based on these enough evidences, we can claim support to the formulated hypothesis four (H₄) against the alternative, except the groups 1-3,4,5,6 as they have secured enough statistical evidences.

Comparisons among Visit within Each Branch

The comparisons among columns (visit) within each were analyzed and explored here to test the hypothesis five (H₅).

Table 1.8: Row 1 Comparisons (Commerce)

Groups	Difference	Statistic	P
1 - 2	6.000	q = 1.996	0.7202
1 - 3	13.000	q = 4.325	0.0709
1 - 4	15.000	q = 4.991	0.0295
1 - 5	15.000	q = 4.991	0.0295
1 - 6	13.000	q = 4.325	0.0709
2 - 3	7.000	q = 2.329	0.5829
2 - 4	9.000	q = 2.994	0.3297
2 - 5	9.000	q = 2.994	0.3297
2 - 6	7.000	q = 2.329	0.5829
3 - 4	2.000	q = 0.665	0.9966
3 - 5	2.000	q = 0.665	0.9966
3 - 6	0.000	q = 0.000	1.0000
4 - 5	0.000	q = 0.000	1.0000
4 - 6	-2.000	q = 0.665	0.9966
5 - 6	-2.000	q = 0.665	0.9966

Table 1.8 shows the test results that there would be no significance statistically identified among columns within row (Commerce) and based on these enough evidences we can claim support to the formulated hypothesis five (H₅) against the alternative, except the groups 1-4,5 as they have secured enough statistical evidences.

Table 1.8a: Row 2 Comparisons (Economics)

Groups	Difference	Statistic	P
1 - 2	1.000	q = 0.333	0.9999
1 - 3	7.000	q = 2.329	0.5829
1 - 4	9.000	q = 2.994	0.3297
1 - 5	7.000	q = 2.329	0.5829
1 - 6	6.000	q = 1.996	0.7202
2 - 3	6.000	q = 1.996	0.7202
2 - 4	8.000	q = 2.662	0.4482
2 - 5	6.000	q = 1.996	0.7202
2 - 6	5.000	q = 1.664	0.8412
3 - 4	2.000	q = 0.665	0.9966
3 - 5	0.000	q = 0.000	1.0000
3 - 6	-1.000	q = 0.333	0.9999
4 - 5	-2.000	q = 0.665	0.9966
4 - 6	-3.000	q = 0.998	0.9784
5 - 6	-1.000	q = 0.333	0.9999

Table 1.8a shows the test results that there would be no significance statistically identified among columns within row (Economics) and based on these enough evidences we can claim support to the

formulated hypothesis five (H_5) against the alternative.

Table 1.8b: Row 3 Comparisons (English)

Groups	Difference	Statistic	P
1 - 2	12.000	q = 3.993	0.1076
1 - 3	14.000	q = 4.658	0.0460
1 - 4	16.000	q = 5.323	0.0190
1 - 5	19.000	q = 6.322	0.0050
1 - 6	19.000	q = 6.322	0.0050
2 - 3	2.000	q = 0.665	0.9966
2 - 4	4.000	q = 1.331	0.9293
2 - 5	7.000	q = 2.329	0.5829
2 - 6	7.000	q = 2.329	0.5829
3 - 4	2.000	q = 0.665	0.9966
3 - 5	5.000	q = 1.664	0.8412
3 - 6	5.000	q = 1.664	0.8412
4 - 5	3.000	q = 0.998	0.9784
4 - 6	3.000	q = 0.998	0.9784
5 - 6	0.000	q = 0.000	1.0000

Table 1.8b shows the test results that there would be no significance statistically identified among columns within row (English) and based on these enough evidences we can claim support to the formulated hypothesis five (H_5) against the alternative, except the groups 1-3,4,5,6 as they have secured enough statistical evidences.

Table 1.8c: Row 4 Comparisons (History)

Groups	Difference	Statistic	P
1 - 2	2.000	q = 0.665	0.9966
1 - 3	3.000	q = 0.998	0.9784
1 - 4	1.000	q = 0.333	0.9999
1 - 5	4.000	q = 1.331	0.9293
1 - 6	4.000	q = 1.331	0.9293
2 - 3	1.000	q = 0.333	0.9999
2 - 4	-1.000	q = 0.333	0.9999
2 - 5	2.000	q = 0.665	0.9966
2 - 6	2.000	q = 0.665	0.9966
3 - 4	-2.000	q = 0.665	0.9966
3 - 5	1.000	q = 0.333	0.9999
3 - 6	1.000	q = 0.333	0.9999
4 - 5	3.000	q = 0.998	0.9784
4 - 6	3.000	q = 0.998	0.9784
5 - 6	0.000	q = 0.000	1.0000

Table 1.8c shows the test results that there would be no significance statistically identified among columns within row (History) and based on these enough evidences we can claim support to the formulated hypothesis five (H_5) against the alternative.

Comparisons among Branch within Each Visit

The comparisons among rows within each column (visit) were analyzed and explored here to test the hypothesis six (H_6). The given analyses have been made based on column 1 comparisons.

Table 1.9: Column 1 Comparisons

Groups	Difference	Statistic	P
1 - 2	7.000	q = 2.329	0.3839
1 - 3	-3.000	q = 0.998	0.8933
1 - 4	13.000	q = 4.325	0.0359
2 - 3	-10.000	q = 3.327	0.1301
2 - 4	6.000	q = 1.996	0.5117
3 - 4	16.000	q = 5.323	0.0091

The above Tukey HSD Test among pairs of means at alpha level 0.05 clearly indicates that there would be no significance statistically identified among rows within each column(1) and based on these enough evidences we can claim support to the formulated hypothesis six (H_6) against the alternative except the pairs 1-4 and 3-4 as they have secured enough evidences.

Table 1.9a: Column 2 Comparisons

Groups	Difference	Statistic	P
1 - 2	2.000	q = 0.665	0.9645
1 - 3	3.000	q = 0.998	0.8933
1 - 4	9.000	q = 2.994	0.1923
2 - 3	1.000	q = 0.333	0.9953
2 - 4	7.000	q = 2.329	0.3839
3 - 4	6.000	q = 1.996	0.5117

Table 1.9a explores the Tukey HSD Test results at alpha level 0.05 that there would be no significance statistically identified among rows within each column(2) and based on these enough evidences we can claim support to the formulated hypothesis six (H_6) against the alternative.

Table 1.9b: Column 3 Comparisons

Groups	Difference	Statistic	P
1 - 2	1.000	q = 0.333	0.9953
1 - 3	-2.000	q = 0.665	0.9645
1 - 4	3.000	q = 0.998	0.8933
2 - 3	-3.000	q = 0.998	0.8933
2 - 4	2.000	q = 0.665	0.9645
3 - 4	5.000	q = 1.664	0.6502

Table 1.9c: Column 4 Comparisons

Groups	Difference	Statistic	P
1 - 2	1.000	q = 0.333	0.9953
1 - 3	-2.000	q = 0.665	0.9645
1 - 4	-1.000	q = 0.333	0.9953
2 - 3	-3.000	q = 0.998	0.8933
2 - 4	-2.000	q = 0.665	0.9645
3 - 4	1.000	q = 0.333	0.9953

Table 1.9d: Column 5 Comparisons

Groups	Difference	Statistic	P
1 - 2	-1.000	q = 0.333	0.9953
1 - 3	1.000	q = 0.333	0.9953
1 - 4	2.000	q = 0.665	0.9645
2 - 3	2.000	q = 0.665	0.9645
2 - 4	3.000	q = 0.998	0.8933
3 - 4	1.000	q = 0.333	0.9953

Table 1.9e: Column 6 Comparisons

Groups	Difference	Statistic	P
1 - 2	0.000	q = 0.000	1.0000
1 - 3	3.000	q = 0.998	0.8933
1 - 4	4.000	q = 1.331	0.7837
2 - 3	3.000	q = 0.998	0.8933
2 - 4	4.000	q = 1.331	0.7837
3 - 4	1.000	q = 0.333	0.9953

From the tables 1.9a-1.9e it could be inferred that at alpha level 0.05 there would be no significance statistically identified among branches within each visit, and based on these enough evidences we can claim support to the formulated hypothesis six (H_6) that the groups of means among the branches within Library visit are equal.

Table 2: Awareness of Internet

Discipline	Adequate	I can manage	Insufficient	Grand Total
Commerce	23	7	10	40
Economics	17	2	11	30
English	21	12	7	40
History	4	3	3	10
Grand Total	65	24	31	120

Table 2.1: Row Analysis:

Discipline	Adequate	I can manage	Insufficient	Grand Total
Commerce	57.50%	17.50%	25.00%	100.00%
Economics	56.67%	6.67%	36.67%	100.00%
English	52.50%	30.00%	17.50%	100.00%
History	40.00%	30.00%	30.00%	100.00%
Grand Total	54.17%	20.00%	25.83%	100.00%

Table 2.2: Col. Analysis:

Discipline	Adequate	I can manage	Insufficient	Grand Total
Commerce	35.38%	29.17%	32.26%	33.33%
Economics	26.15%	8.33%	35.48%	25.00%
English	32.31%	50.00%	22.58%	33.33%
History	6.15%	12.50%	9.68%	8.33%
Grand Total	100.00%	100.00%	100.00%	100.00%

Table 2.3: Total Analysis:

Discipline	Adequate	I can manage	Insufficient	Grand Total
Commerce	19.17%	5.83%	8.33%	33.33%
Economics	14.17%	1.67%	9.17%	25.00%
English	17.50%	10.00%	5.83%	33.33%
History	3.33%	2.50%	2.50%	8.33%
Grand Total	54.17%	20.00%	25.83%	100.00%

Respondents' awareness levels of Internet could be observed from the Table 2. In Commerce discipline 57.50% of the users have adequate awareness followed by 'Insufficient' (25.00%) and 'I can manage' (17.50%). In Economics 56.67% of the respondents have adequate awareness followed by 'Insufficient' (36.67%), and rest of the level has secured 6.67%. The respondents from the branch 'English' have received the scores 52.50% (adequate), 30.00% (I can manage) and 17.50% (Insufficient) respectively. History branch has secured 40.0% for the option 'adequate', and rests of the options have received 30.00% each. The columns and total analyses may explore more information about the dispersions of the observations. The observed points alone would never help the investigators to make the inferences about the population. Hence, a Two-Way ANOVA (Table 2.4) has been performed to trace the significance among the variables. From the ANOVA test results it is inferred that there would be no significance exist among the branch wise analysis ($F=3.347(F_{crit}=4.757)$), which led us to claim support to the formulated hypothesis two (H_2) against the alternative at the significance level of alpha 0.05%. The analysis for the awareness levels did show up the significance as it has secured the F value 6.038($F_{crit}=5.143$), which could be the reason for not claiming support to the hypothesis two (H_2) in favor of the alternative. Distributions could be clearly observed from the plot distributions (See Annexure-ii) which have been formulated for better capture.

Table 2.4: Two Way Analysis of Variance

Variable analyzed: Score/ Factor A (rows) variable: Branch/ Factor B (col.) variable: Awareness

SOURCE	D.F.	SS	MS	F	Prob.> F	Omega Squared
Among Branch	3	200	66.667	3.347	0.097	0.242
Among Awareness	2	240.5	120.25	6.038	0.037	0.346
Residual	6	119.5	19.917			
NonAdditivity	1	60.923	60.923	5.2	0.072	
Balance	5	58.577	11.715			
Total	11	560	50.909			

Omega squared for combined effects = 0.588

Table 2.5: Descriptive Statistics:

GROUP	Row/Col	N	MEAN	VARIANCE	STD.DEV.
Commerce	1	3	13.333	72.333	8.505
Economics	2	3	10	57	7.55
English	3	3	13.333	50.333	7.095
History	4	3	3.333	0.333	0.577
Adequate	1	4	16.25	72.917	8.539
I can manage	2	4	6	20.667	4.546
Insufficient	3	4	7.75	12.917	3.594
TOTAL		12	10	50.909	7.135

Table 2.6: Comparisons among awareness

The comparisons among columns (awareness) were analyzed and explored here to test the hypothesis four (H_4). The given analyses have been made based on rows comparisons.

Groups	Difference	Statistic	P
1 - 2	10.250	q = 4.594	0.0402
1 - 3	8.500	q = 3.809	0.0798
2 - 3	-1.750	q = 0.784	0.8481

Table 2.6 depicts that there would be no significance statistically identified among columns at alpha level 0.05, and based on these enough evidences, we can claim support to the formulated hypothesis four (H_4) against the alternative, except the groups 1-2 as they have secured enough statistical evidences to reject the same hypothesis.

Comparisons among Awareness within Each Branch

Table 2.7: Row 1 Comparisons

Groups	Difference	Statistic	P
1 - 2	16.000	q = 3.585	0.0977
1 - 3	13.000	q = 2.913	0.1790
2 - 3	-3.000	q = 0.672	0.8852

Table 2.7a: Row 2 Comparisons

Groups	Difference	Statistic	P
1 - 2	16.000	q = 3.585	0.0977
1 - 3	13.000	q = 2.913	0.1790
2 - 3	-3.000	q = 0.672	0.8852

Table 2.7b: Row 3 Comparisons

Groups	Difference	Statistic	P
1 - 2	9	q = 2.017	0.3871
1 - 3	14	q = 3.137	0.1463
2 - 3	5	q = 1.120	0.7211

Table 2.7c: Row 4 Comparisons

Groups	Difference	Statistic	P
1 - 2	1.000	q = 0.224	0.9864
1 - 3	1.000	q = 0.224	0.9864
2 - 3	0.000	q = 0.000	1.0000

Tables 2.7-2.7c depict that there would be no significance statistically identified among the awareness

within each row (Branch) at alpha level 0.05, and based on these enough evidences, we can claim support to the formulated hypothesis five (H_5) that the groups of means among the awareness within each branch are equal, against the alternative.

Comparisons among branch within each awareness levels

The comparisons among rows (Branch) within each column (awareness) were analyzed and explored here to test the hypothesis six (H_6).

Table 2.8: Column 1 Comparisons (Adequate)

Groups	Difference	Statistic	P
1 - 2	6.000	q = 1.344	0.7807
1 - 3	2.000	q = 0.448	0.9880
1 - 4	19.000	q = 4.257	0.0850
2 - 3	-4.000	q = 0.896	0.9175
2 - 4	13.000	q = 2.913	0.2659
3 - 4	17.000	q = 3.809	0.1244

Table 2.8a: Column 2 Comparisons (I can manage)

Groups	Difference	Statistic	P
1 - 2	5.000	q = 1.120	0.8558
1 - 3	-5.000	q = 1.120	0.8558
1 - 4	4.000	q = 0.896	0.9175
2 - 3	-10.000	q = 2.241	0.4514
2 - 4	-1.000	q = 0.224	0.9985
3 - 4	9.000	q = 2.017	0.5292

Table 2.8b: Column 3 Comparisons (Insufficient)

Groups	Difference	Statistic	P
1 - 2	-1.000	q = 0.224	0.9985
1 - 3	3.000	q = 0.672	0.9619
1 - 4	7.000	q = 1.569	0.6978
2 - 3	4.000	q = 0.896	0.9175
2 - 4	8.000	q = 1.793	0.6124
3 - 4	4.000	q = 0.896	0.9175

Tables 2.8-2.8b depict that there would be no significance statistically identified among the branches within each column (awareness) at alpha level 0.05, and based on these enough evidences, we can claim support to the formulated hypothesis six (H_6) that the groups of means among the branches within each awareness are equal.

Pearson Coefficient of Correlation Test:

Table 3: Daily and Adequate

Daily and Adequate		
Pearson Coefficient of Correlation	0.9145	
t Stat		3.1958
df		2
P(T<=t) two tail		0.0856

t Critical two tail	4.3027
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An evaluation was made of the linear relationship between the selected variables using Correlation. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Daily and Adequate as $r(2)=0.9145$, $p = 0.086$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -3 Plots the combinations of two variables against one another for better capture.

Figure-3: Scatter Plot Distribution

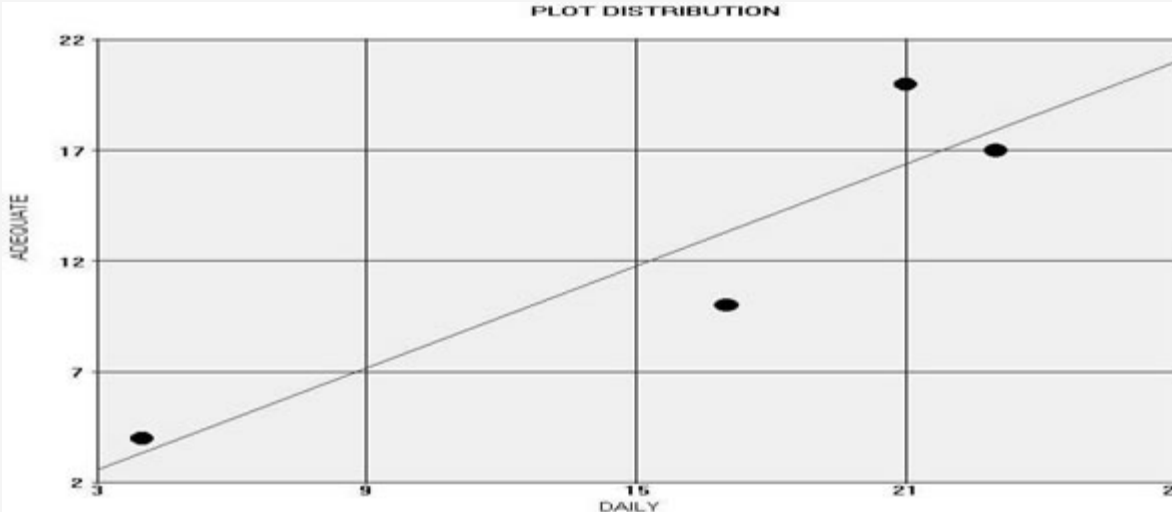


Table 3.1: Daily and I can manage

Daily and I can manage	
Pearson Coefficient of Correlation	0.8678
t Stat	2.4695
df	2
P(T<=t) two tail	0.1322
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Daily and I Can Manage as $r(2)=0.8678$, $p= 0.132$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -3.1 Plots the combinations of two variables against one another for better capture.

Figure-3.1: Scatter Plot Distribution

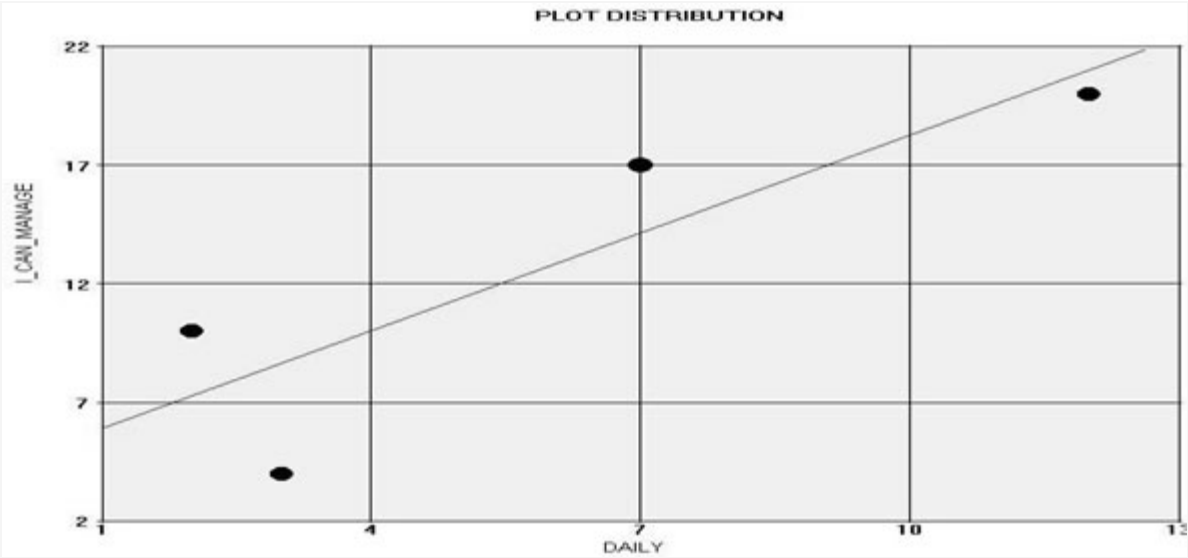


Table 3.2: Daily and Insufficient

Daily and Insufficient	
Pearson Coefficient of Correlation	0.4746
t Stat	0.7625
df	2
P(T<=t) two tail	0.5254
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Daily and Insufficient as $r(2)=0.4746$, $p = 0.525$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -3.2 Plots the combinations of two variables against one another for better capture.

Figure-3.2: Scatter Plot Distribution

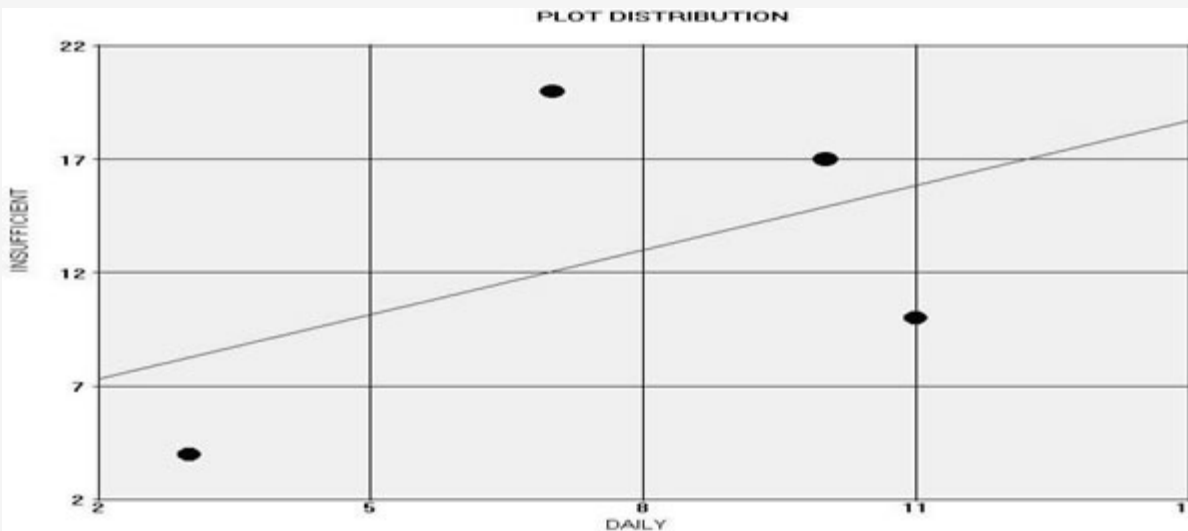


Table 4: Once in 2 Days and Adequate

Once in 2 Days and Adequate	
Pearson Coefficient of Correlation	0.9525
t Stat	4.4217
df	2
P(T<=t) two tail	0.0476
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables and also statistically significant linear relationship between Once in 2 Days and Adequate as $r(2)=0.9525$, $p = 0.0476$. Hence, we do not have enough statistical evidences to claim support to the formulated hypothesis seven (H_7) as there would be a favor for the alternative. Figure-4 Plots the combinations of two variables against one another for better capture.

Figure-4: Scatter Plot Distribution

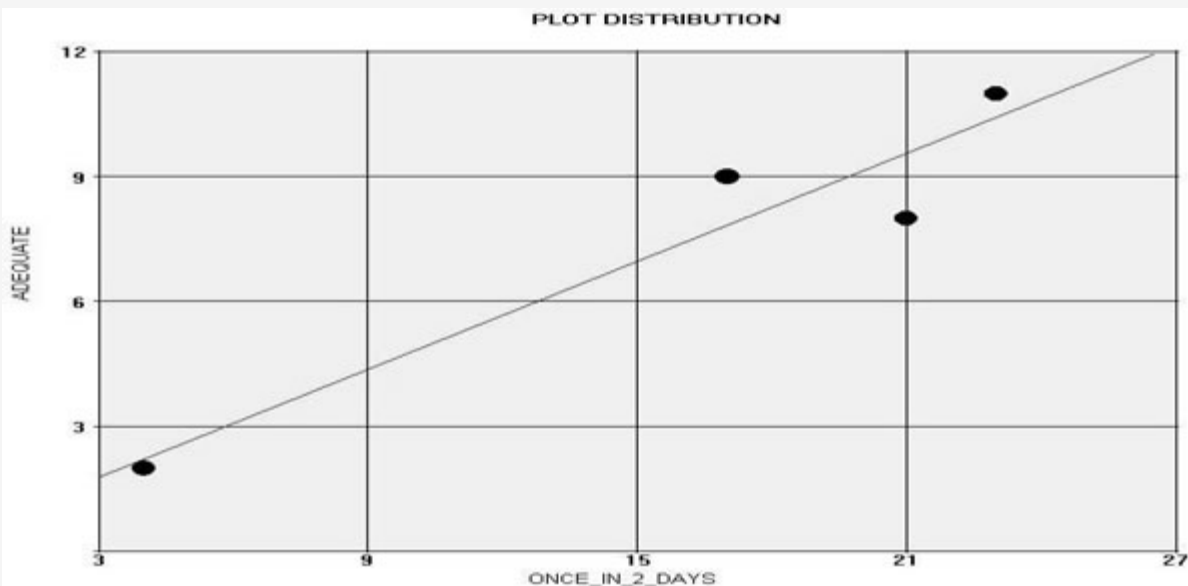


Table 4.1: Once in 2 Days and I can manage

Once in 2 Days and I can manage	
Pearson Coefficient of Correlation	0.3218
t Stat	0.4807
df	2
P(T<=t) two tail	0.6782

t Critical two tail	4.3027
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An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Daily and I can manage as $r(2)=0.3218$, $p = 0.6782$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -4.1 Plots the combinations of two variables against one another for better capture.

Figure-4.1: Scatter Plot Distribution

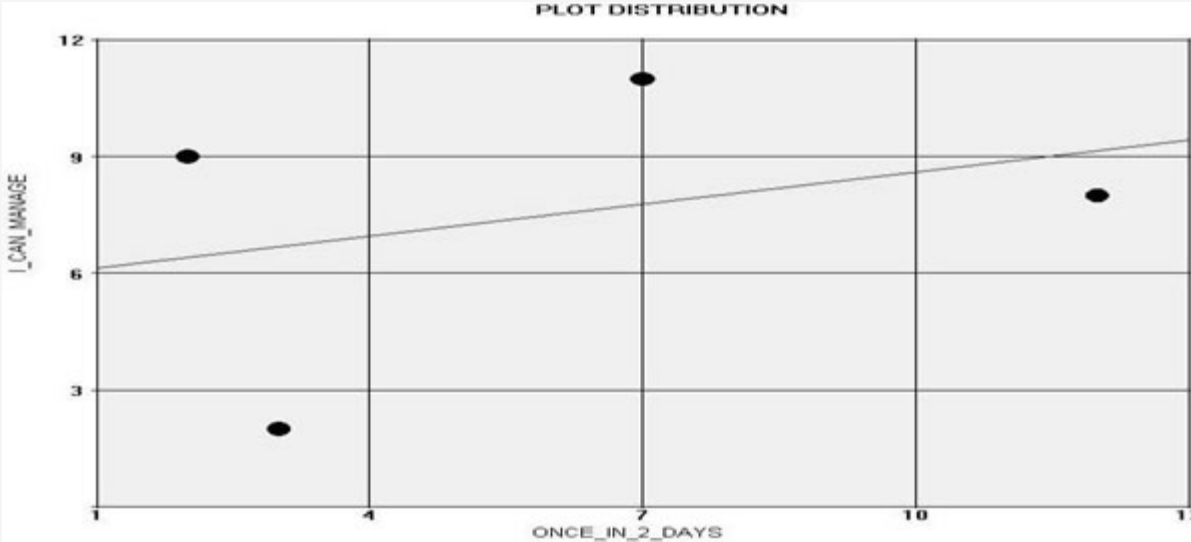


Table 4.2: Once in 2 Days and Insufficient

Once in 2 Days and Insufficient	
Pearson Coefficient of Correlation	0.922
t Stat	3.367
df	2
P(T<=t) two tail	0.078
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Daily and Insufficient as $r(2)=0.922$, $p = 0.078$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -4.2 Plots the combinations of two variables against one another for better capture.

Figure-4.2: Scatter Plot Distribution

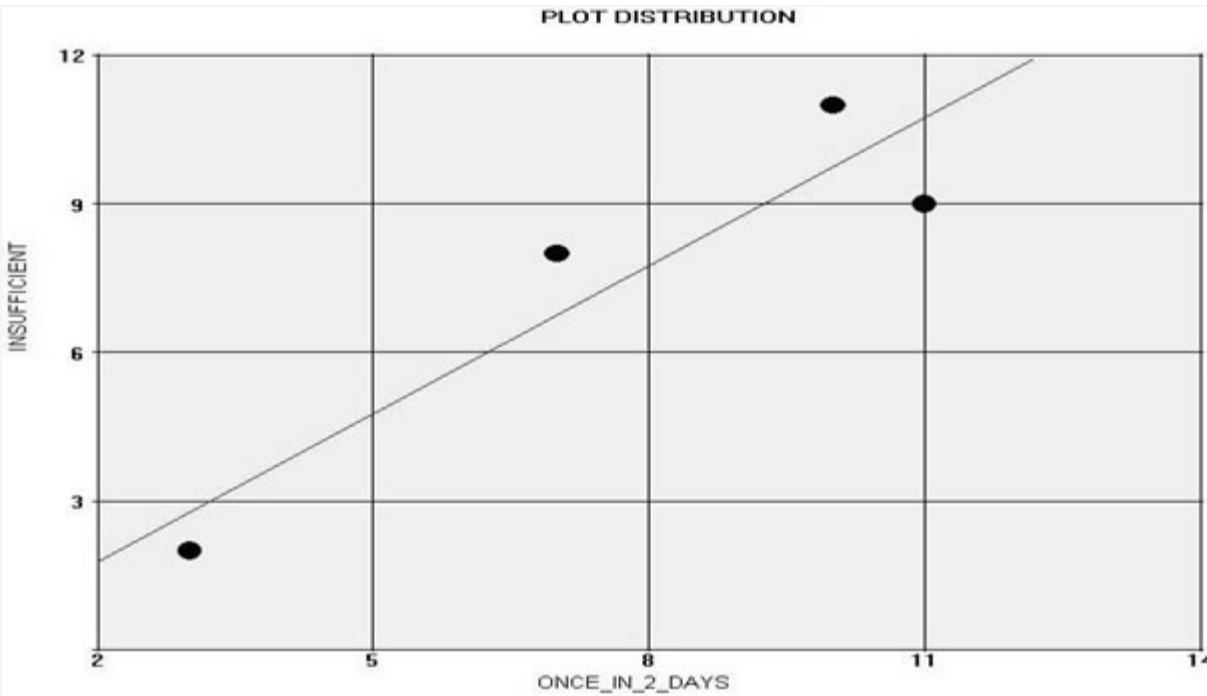


Table 5: Week and Adequate

Weekly and Adequate	
Pearson Coefficient of Correlation	0.8532
t Stat	2.3136
df	2
P(T<=t) two tail	0.1468
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Week and Adequate as $r(2)=0.8532$, $p = 0.1468$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -5 Plots the combinations of two variables against one another for better capture.

Figure-5: Scatter Plot Distribution

Table 5.1: Week and I can manage

Weekly and I can manage	
Pearson Coefficient of Correlation	0.8806
t Stat	2.6279
df	2

P(T<=t) two tail	0.1194
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Week and I can manage as $r(2)=0.8806$, $p = 0.1194$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -5.1 Plots the combinations of two variables against one another for better capture.

Figure-5.1: Scatter Plot Distribution

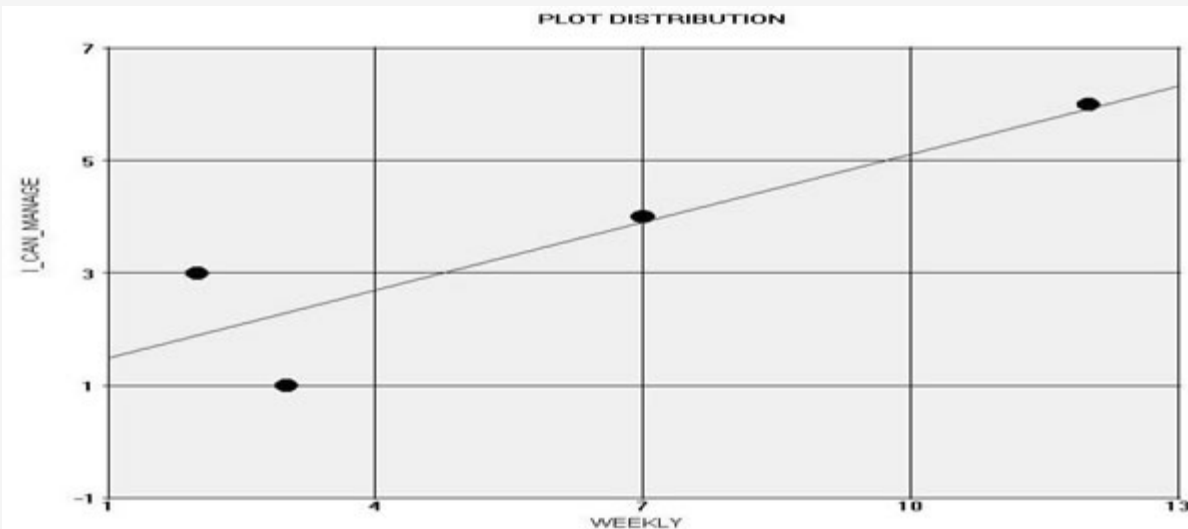


Table 5.2: Week and Insufficient

Weekly and Insufficient	
Pearson Coefficient of Correlation	0.4233
t Stat	0.6607
df	2
P(T<=t) two tail	0.5768
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Week and I can manage as $r(2)=0.8806$, $p = 0.1194$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -5.2 Plots the combinations of two variables against one another for better capture.

Figure-5.2: Scatter Plot Distribution

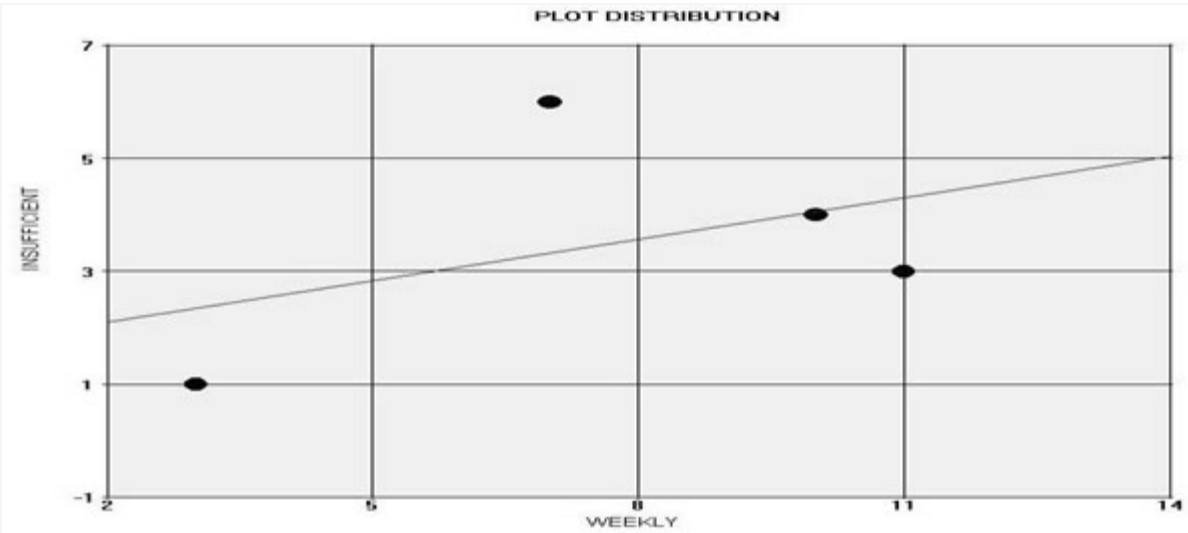


Table 6: Bi-Week and Adequate

Bi-Week and Adequate	
Pearson Coefficient of Correlation	-0.1058
t Stat	-0.1505
df	2
P(T<=t) two tail	0.8942
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation analysis. Test result indicates the negative and weak relationship between the variables Bi-Week and Adequate as $r(2)=-0.1058$, $p = 0.8942$. With the help of enough statistical evidences it is inferred that there would not be a possible significance statistically identified to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -6 Plots the combinations of two variables against one another for better capture.

Figure-6: Scatter Plot Distribution

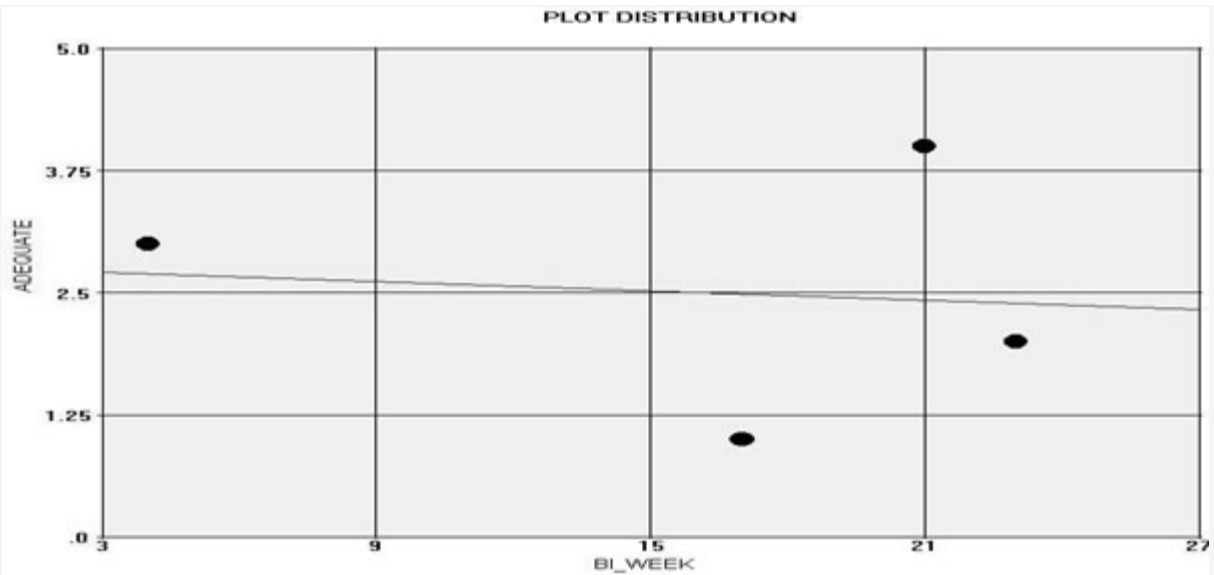


Table 6.1: Bi- Week and I can manage

Bi-Week and I can manage	
Pearson Coefficient of Correlation	0.7384
t Stat	1.5483
df	2
P(T<=t) two tail	0.2616
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Bi-Week and I can manage as $r(2)=0.7384$, $p = 0.2616$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -6.1 Plots the combinations of two variables against one another for better capture.

Figure-6.1: Scatter Plot Distribution

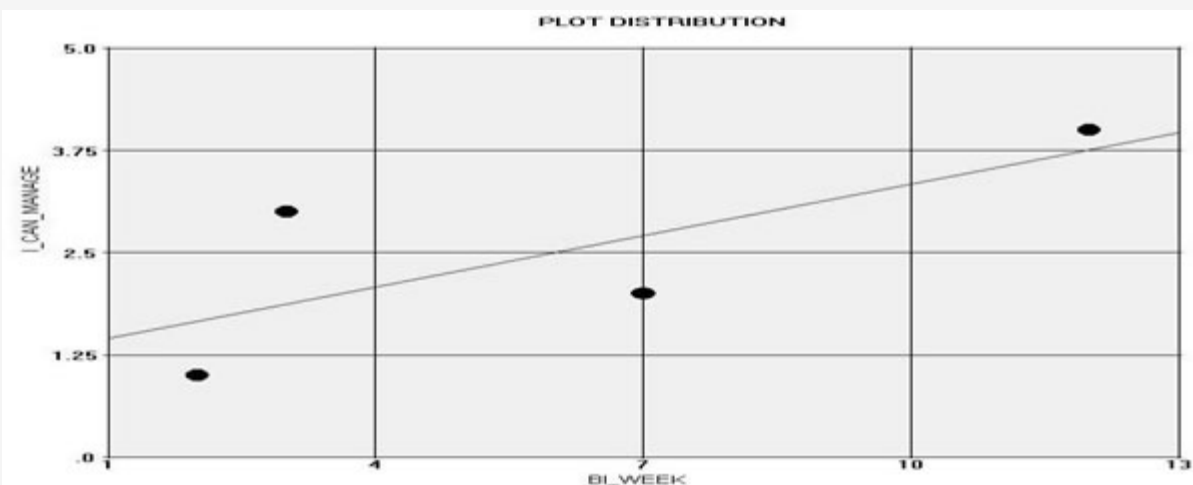


Table 6.2: Bi-Week and Insufficient

Bi-Week and Insufficient	
Pearson Coefficient of Correlation	-0.6825
t Stat	-1.3206
df	2
P(T<=t) two tail	0.3174
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation analysis. Test result indicates the negative and weak relationship between the variables Bi-Week and Insufficient as $r(2)=-0.6825$, $p = 0.3174$. With the help of enough statistical evidences it is inferred that there would not be a possible significance statistically identified to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -6.2 Plots the combinations of two variables against one another for better capture.

Figure-6.2: Scatter Plot Distribution

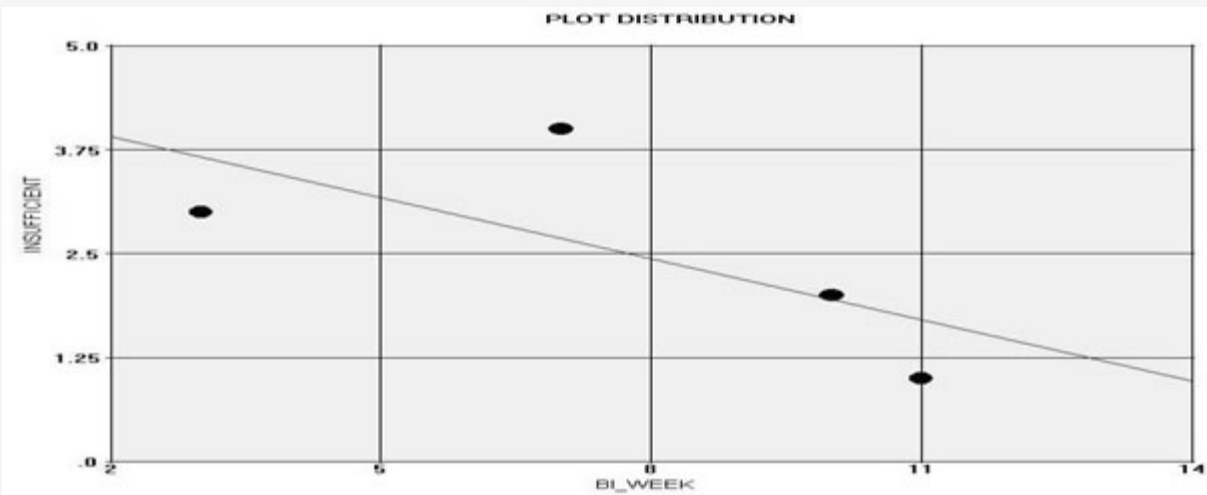


Table 7: Monthly and Adequate

Monthly and Adequate	
Pearson Coefficient of Correlation	0.6199
t Stat	1.1171
df	2
P(T<=t) two tail	0.3802
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Monthly and Adequate as $r(2)=0.6199$, $p = 0.3802$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -7 Plots the combinations of two variables against one another for better capture.

Figure-7: Scatter Plot Distribution

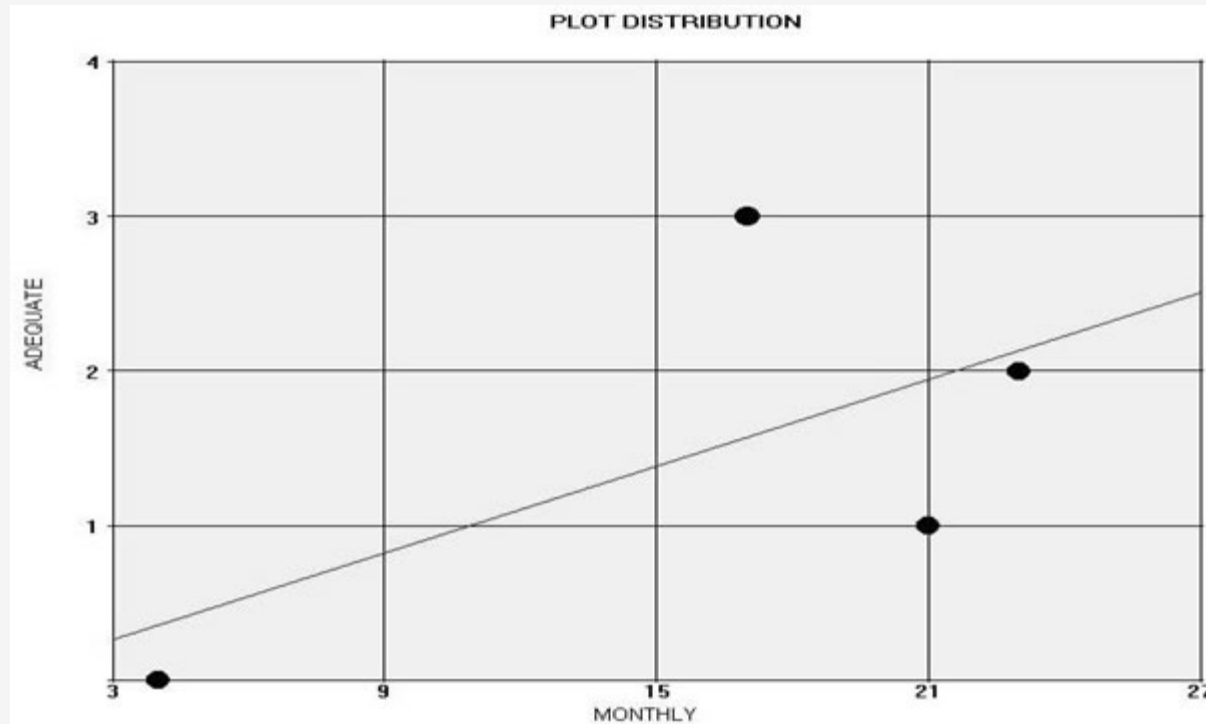


Table 7.1: Monthly and I can manage

Monthly and I can manage	
Pearson Coefficient of Correlation	-0.2272
t Stat	-0.3299
df	2
P(T<=t) two tail	0.7728
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation analysis. Test result indicates the negative and weak relationship between the variables Monthly and I can manage as $r(2)=-0.2272$, $p = 0.7728$. With the help of enough statistical evidences it is inferred that there would not be a possible significance statistically identified to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -7.1 Plots the combinations of two variables against one another for better capture.

Figure-7.1: Scatter Plot Distribution

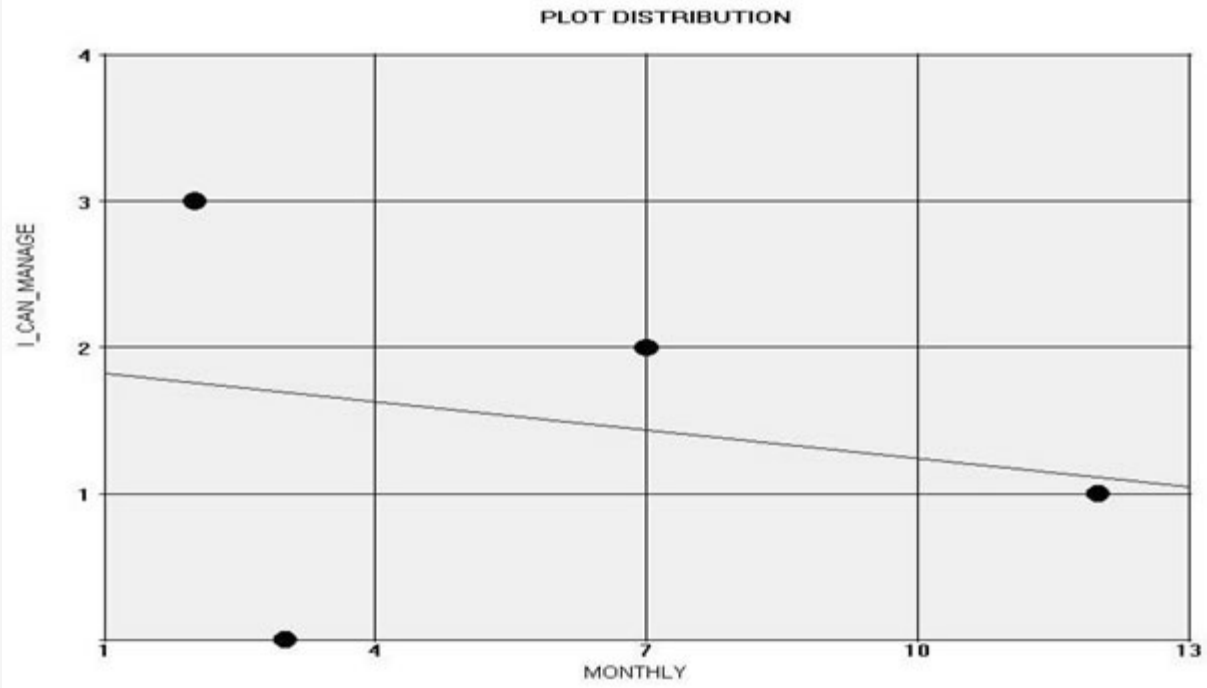


Table 7.2: Monthly and Insufficient

Monthly and insufficient	
Pearson Coefficient of Correlation	0.969
t Stat	5.629
df	2
P(T<=t) two tail	0.03
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. Also, there would be a statistically significant linear relationship between Monthly and Insufficient as $r(2)=0.969$, $p = 0.03$. Hence, we do not have enough statistical evidences to claim support to the formulated hypothesis seven (H_7) against the alternative. Figure -7.2 Plots the combinations of two variables against one another for better capture.

Figure-7.2: Scatter Plot Distribution

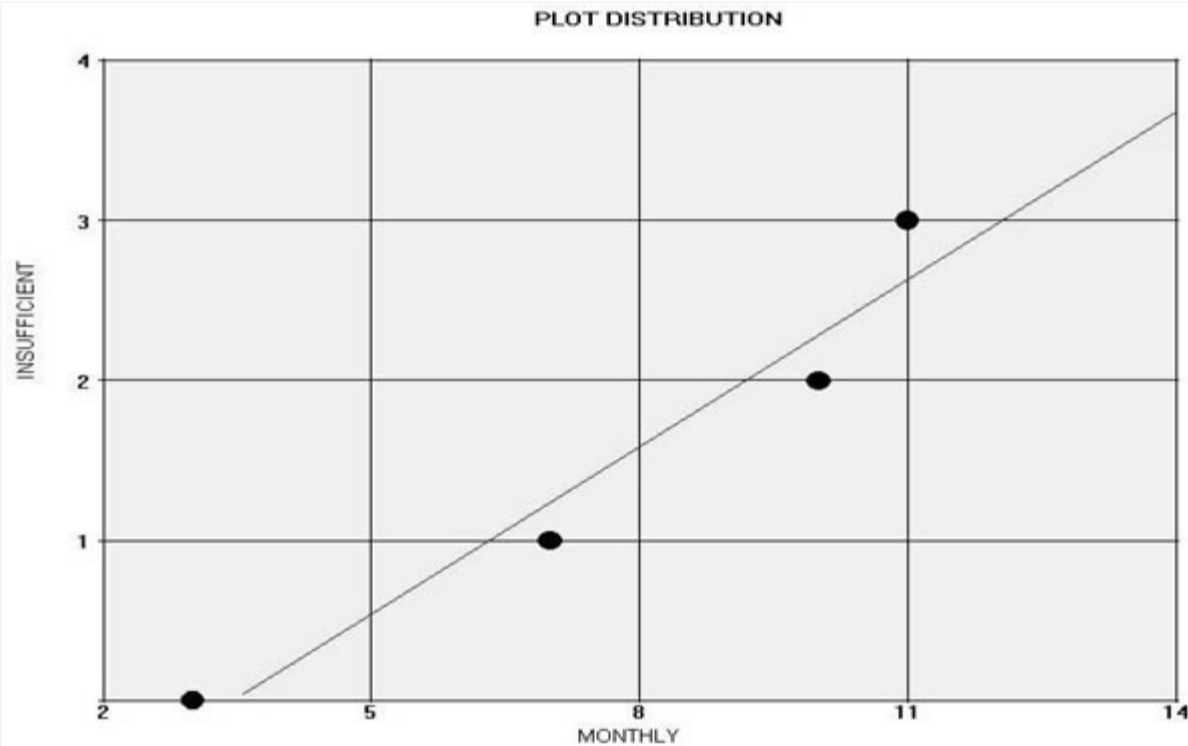


Table 8: Bi-Month and Adequate

Bi-Month and Adequate	
Pearson Coefficient of Correlation	0.658
t Stat	1.2358
df	2
P(T<=t) two tail	0.342
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation Analysis. Test result indicates positive relationship between the variables. However, no statistically significant linear relationship between Bi-Month and Adequate as $r(2)=0.658$, $p = 0.342$. Hence, we do not have enough statistical evidences to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -8 Plots the combinations of two variables against one another for better capture.

Figure-8: Scatter Plot Distribution

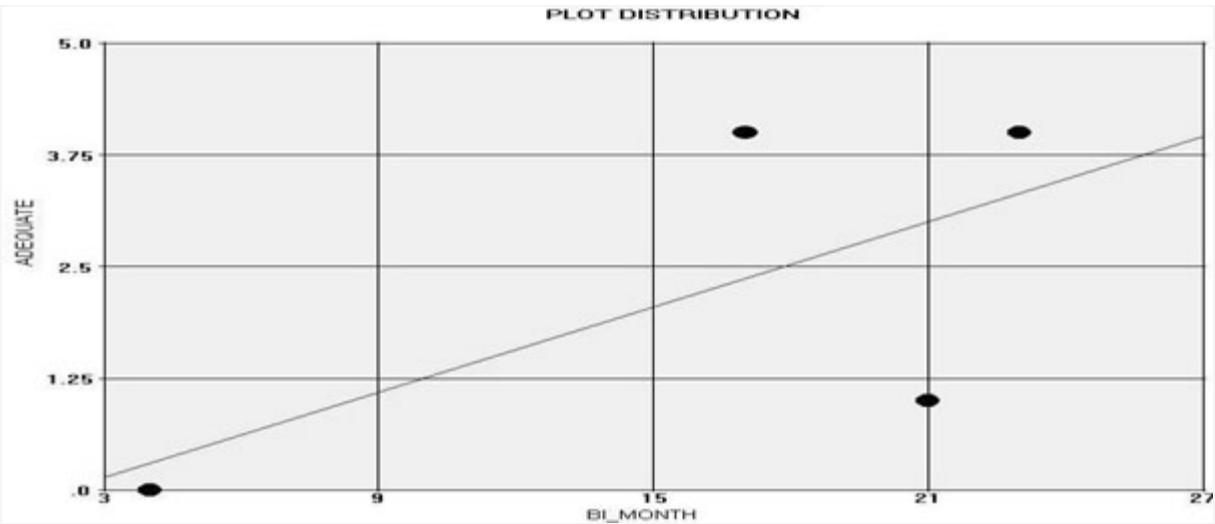


Table 8.1: Bi-Month and I can manage

Bi-Month and I can manage	
Pearson Coefficient of Correlation	-0.2134
t Stat	-0.3089
df	2
P(T<=t) two tail	0.7866
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation analysis. Test result indicates the negative and weak relationship between the variables Bi-Month and I can manage as $r(2)=-0.2134$, $p = 0.7866$. With the help of enough statistical evidences it is inferred that there would not be a possible significance statistically identified to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -8.1 Plots the combinations of two variables against one another for better capture.

Figure-8.1: Scatter Plot Distribution

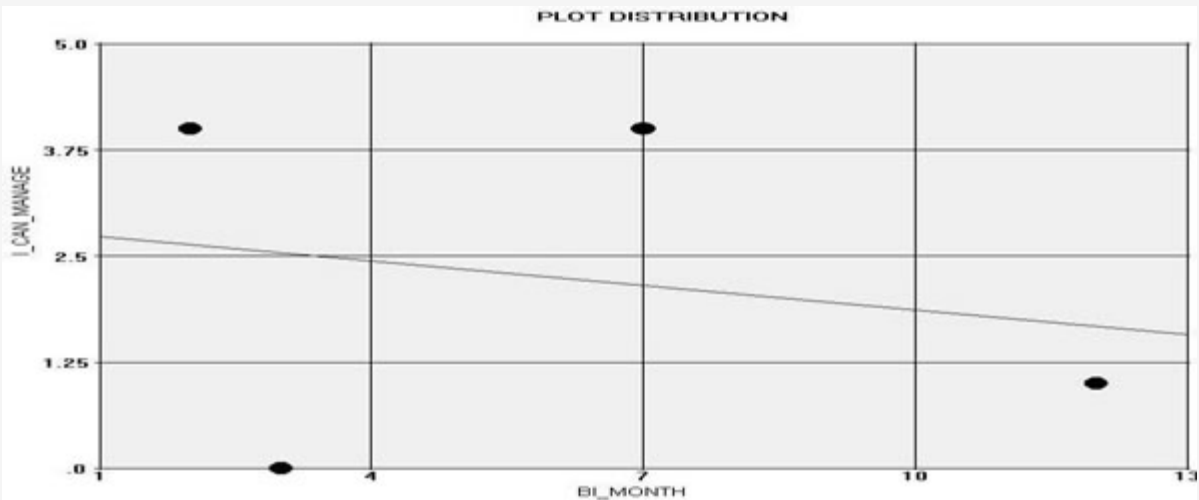
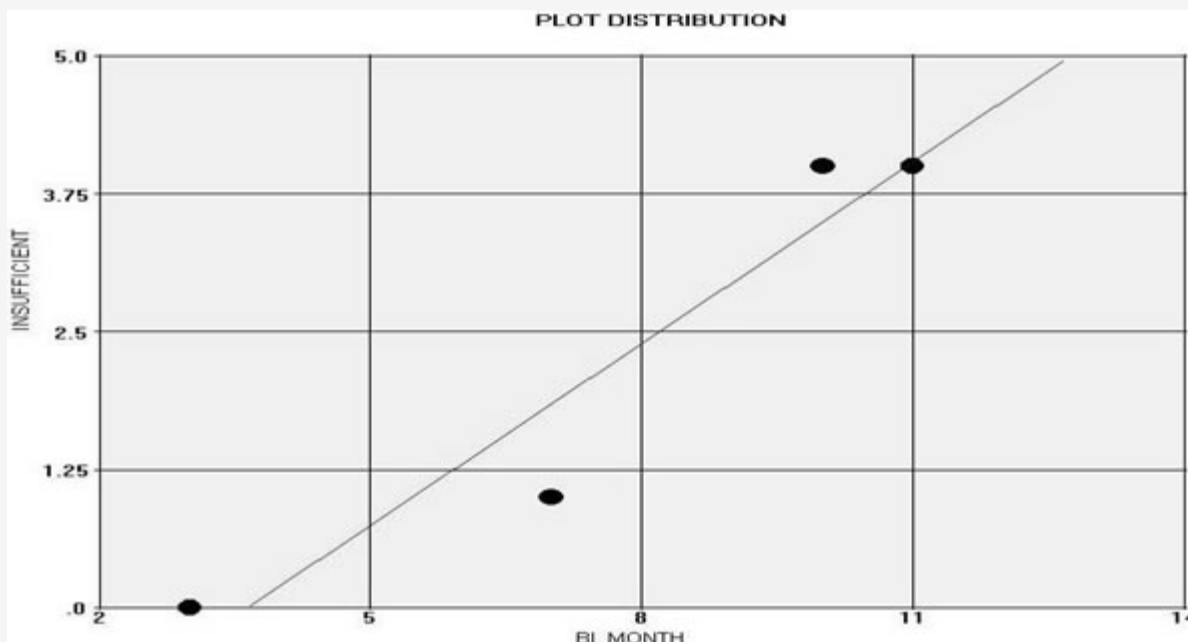


Table 8.2: Bi-Month and Insufficient

Bi-Month and Insufficient	
Pearson Coefficient of Correlation	0.956
t Stat	4.6098
df	2
P(T<=t) two tail	0.044
t Critical two tail	4.3027

An evaluation was made of the linear relationship between the selected variables using Correlation analysis. Test result indicates the strong relationship between the variables Bi-Month and Insufficient as $r(2)=-0.956$, $p = 0.044$. With the help of enough statistical evidences it is inferred that there would not be a possible significance statistically identified to claim support to the alternative against the formulated hypothesis seven (H_7). Figure -8.2 Plots the combinations of two variables against one another for better capture.

Figure-8.2: Scatter Plot Distribution



Determinations:

The present study encompasses the sample size up to 120 comprising the disciplines of Commerce, Economics, English and History. The study reveals that the respondents' daily visit to the library to utilize the IT infrastructures has secured the first slot as the mean value is traced as 12.75 with Std.Dev. 7.182. Respondents' 2 days once visit received the mean 7.5, and Std.Dev. 3.873. The Week wise visit to the library has secured the mean and Std.Dev. 3.5, 2.082 followed by Bi-Week (2.5, 1.291), Bi-Month (2.25, 2.062) and rest of the attribute month have the least values (1.5, 1.291). It could be inferred from the analysis that the majority of respondents would like to visit the library daily in order to access the electronic features that are offered in the library. Two-Way Anova was applied to fulfill the research question; do the modern users' Library visits differ? , and the results ($F=3.69$, 8.38) made us to conclude that there would be a possible significance exist between the users visit to the library. The calculated w^2 shows approximately 11 per cent of variance for the variable Branch while

53 per cent of variance exists in Library visits. The w^2 for combined effects is traced as 0.652. Further, we were interested to trace the specific groups in which the significance exist, and hence the Post-Hoc Test namely Tukey HSD was adopted to analyze the pairs. The visit wise comparison test results revealed that the groups 1-3, 4, 5, 6 (Table 1.7) did show the significance rather than other pairs. The Comparisons among visit within each branch test results revealed that the groups 1- 4, 5 (Table 1.8a); the groups 1-3, 4, 5, 6 (Table 1.8c) have come up with the significance while other pairs didn't show the significance. The Comparisons among branch within each visit test results showed that the groups 1- 4 & 3-4 (Table 1.9) are having significance when compared to the remaining pairs.

The analysis for the attributes 'Internet awareness' reveal that majority of respondents have got adequate awareness (mean=16.25, Std.Dev.=8.539) of Internet whereas the rest of the users felt that they have insufficient knowledge of the Internet (mean=7.75, Std.Dev.=3.594) followed by the level 'I can manage', which has received the mean 6 with the Std.Dev.4.546. Two-Way Anova was again applied to test the research question, do the users' Internet awareness levels differ? , and the results for rows ($F=3.347$, 6.038) made us to conclude that there would not be a possible significance exist between the users' awareness levels. In contrary the results for columns ($F=6.038$) would not led us to conclude the same. To trace the significance for the pairs, we once again used the Post-Hoc Test (Tukey HSD). The awareness wise comparison test results indicates possible significance for the groups 1-2 (Table 2.6) rather than other pairs. The statistical tool namely Pearson's correlation coefficient has been adopted to test the research question, do the users' Library visits influence them to upgrade their awareness of Internet? , and the outcomes were explored towards the Tables 3-8.2. Correlation Test result indicates positive as well as statistically significant linear relationship between the variables (Table 4) Once in 2 Days and Adequate as $r(2)=0.9525$, $p = 0.0476$; (Table 7.2) Monthly and Insufficient as $r(2)=0.969$, $p = 0.03$, and (Table 8.2) Bi-Month and Insufficient as $r(2)=-0.956$, $p = 0.044$. Though some of the strong/weak and positive/negative relationships were identified between the variables thorough out the study the possible significance was not captured in between the levels of the variables except a few levels. It would be interesting to observe the above results that the frequent visits to the library enable one to be aware of the Internet, when compared to the Bi-Month and Month wise visits. Hence, it could be concluded that there would be linear relationship exist between the users' library visits and their awareness of Internet. Of course, the electronic environment setups inside the library upgrade the modern users' Internet awareness.

Acknowledgements

I sincerely express my thanks to Professor Emeritus William G. Miller, Iowa State University.

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Appendix 1

Figure 1: Branch wise 3D Distribution

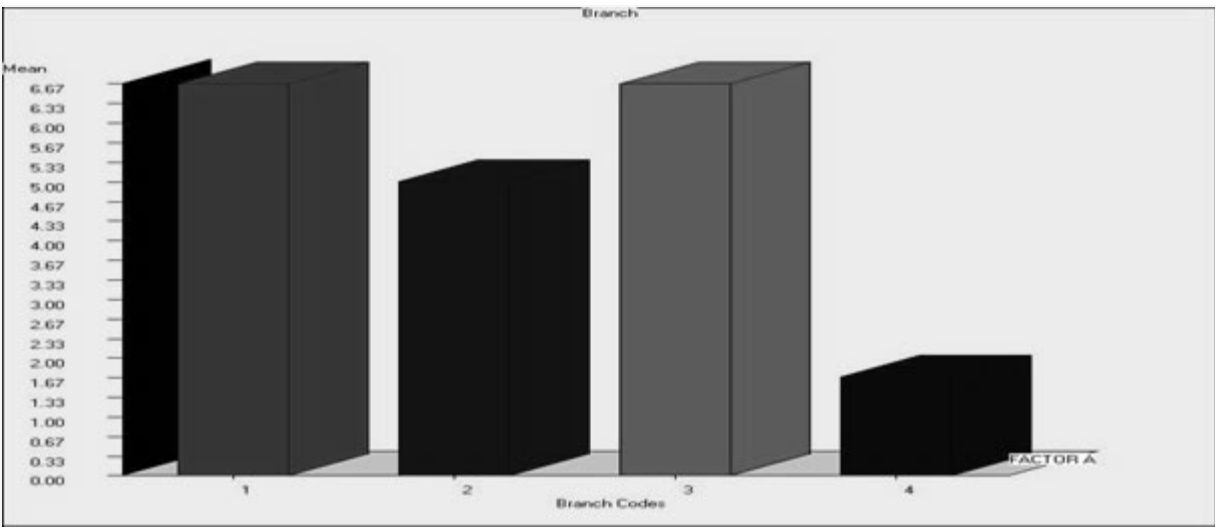


Figure 2: Library Visit-3D Distribution

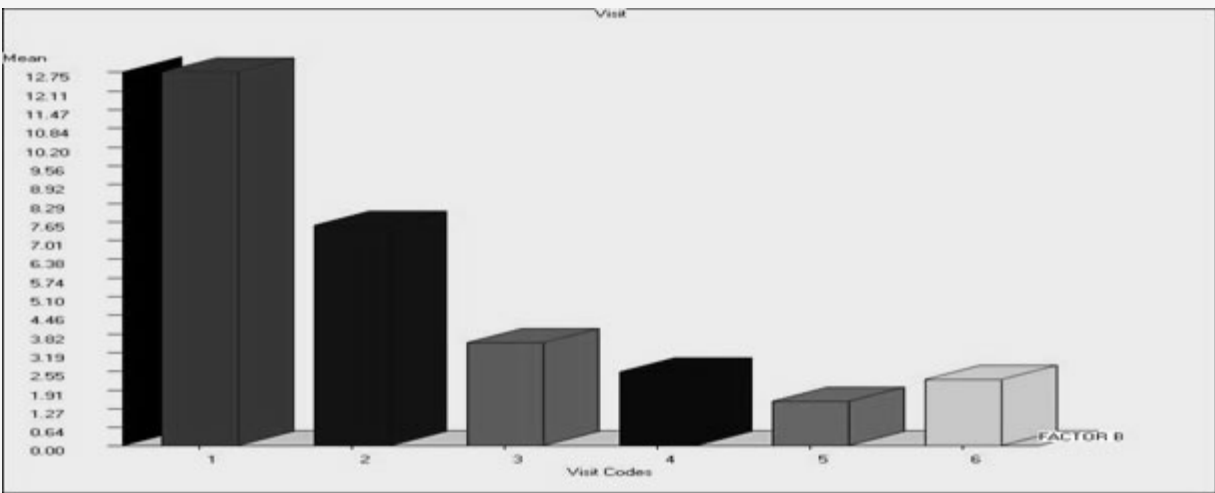
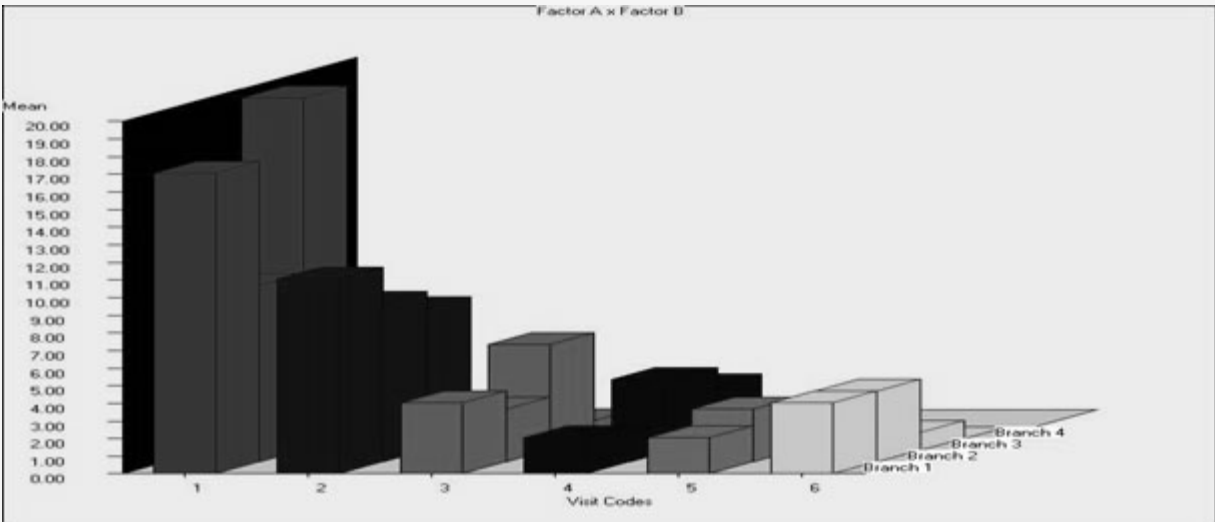


Figure 3: Branch Vs Visit 3D Distribution



Appendix 2

Figure 4: Branch Mean Distribution

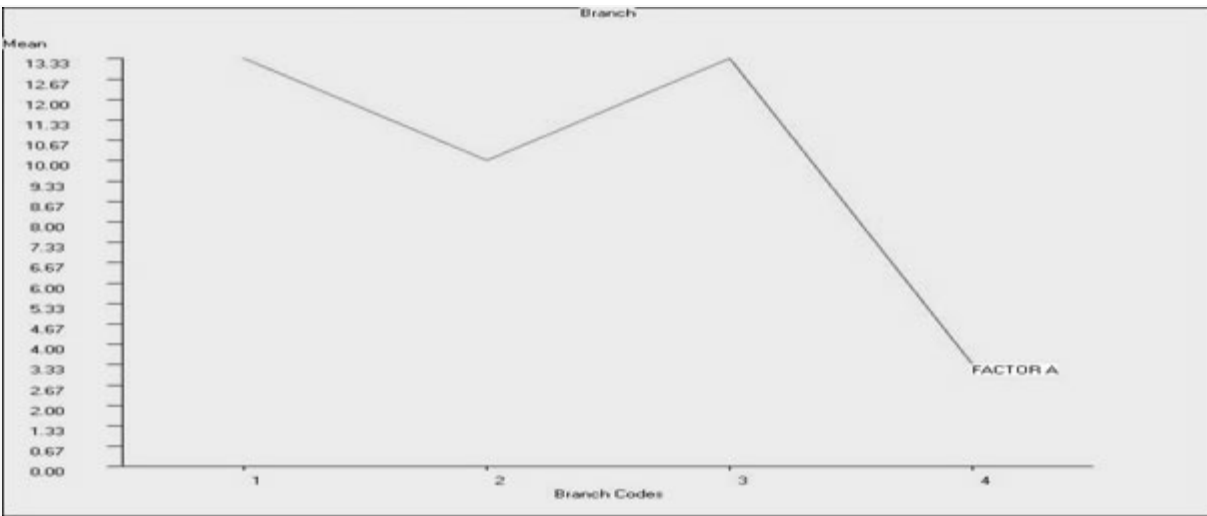


Figure 5: Awareness Mean Distribution

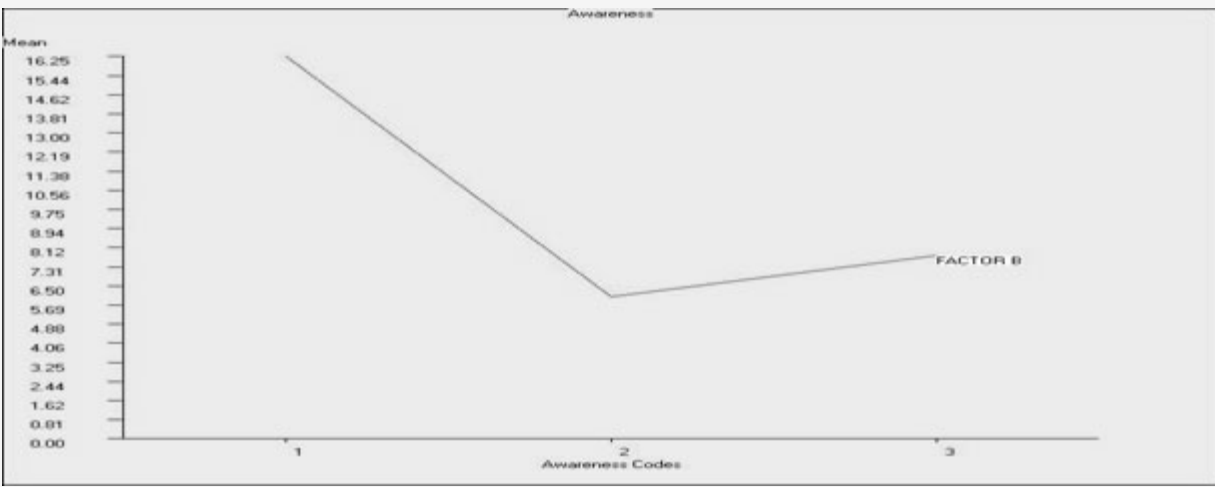


Figure 6: Branch Vs Awareness Mean Distribution

