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1) Determine the average ratings for PE, EE, SI, FC, Habit and BI.

Descriptive:

	PE	EE	SI	FC	H1	BI1
N	118	118	118	118	118	118
Missing	0	0	0	0	0	0
Mean	3.65	3.63	3.68	3.70	3.52	3.34
Std. error mean	0.0819	0.0811	0.0744	0.0767	0.0797	0.0879
Standard deviation	0.889	0.881	0.809	0.833	0.866	0.955

2) Are there any differences in the ratings of PE, EE, SI, FC, Habit and BI due to Gender?

T-Test is chosen as the number of variables is two in which one is categorical and the other is continuous.

H_0: There is no significant difference in the ratings towards PE, EE, SI, FC, Habit and BI due to the gender

H_1: Gender difference affected the ratings of PE, EE, SI, FC, Habit and BI

Independent Samples T-Test

		Statistic	df	p
PE	Student's t	1.147	116	0.254
EE	Student's t	1.594	116	0.114
SI	Student's t	0.161	116	0.873
FC	Student's t	0.381	116	0.704
H1	Student's t	0.737	116	0.463
BI1	Student's t	1.200	116	0.233

Levene's test is significant (p < .05), suggesting a violation of the assumption of equal variances

Descriptive

	Gender(B/G)	PE	EE	SI	FC	H1	BI1
N	1	53	53	53	53	53	53
	2	65	65	65	65	65	65
Mean	1	3.75	3.77	3.69	3.74	3.58	3.45
	2	3.56	3.52	3.67	3.68	3.47	3.24
Std. error mean	1	0.120	0.117	0.101	0.104	0.107	0.133
	2	0.112	0.111	0.108	0.111	0.116	0.117
Standard deviation	1	0.873	0.848	0.738	0.760	0.776	0.965
	2	0.900	0.897	0.867	0.893	0.935	0.944

Inference

From table 2.1:

For 10% Significance level,

The Alternate Hypothesis (H_1) is rejected as p value is greater than 0.01 for all variables.

From table 2.2:

As mean values are almost same for both categories.

Therefore, the ratings of PE, EE, SI, FC, Habit and BI are not affected by the gender difference.

3) If we had three age categories, are there any differences in the ratings of PE, EE, SI, FC, Habit and BI?

Descriptive

	Age
N	118
Missing	0
Mean	19.6
Median	20.0
Minimum	17
Maximum	22

Minimum age is 17 and Maximum age is 22 with mean and median values are very close. So, the 3-age group is taken as less than 19 as group 1, 19-20 as group 2 and more than 22 as group 3.

As three grouping variables are present within one categorical variable and it being compared with a continuous variable, ANNOVA is chosen.

H_0:   There is no significant difference in the rating towards PE, EE, SI, FC, Habit and BI due to Age.

H_1:   There is significant differences in rating due to age category

One-Way ANOVA (Welch's)

	F	df1	df2	p
PE	1.1413	2	43.2	0.329
EE	0.8635	2	45.2	0.429
SI	2.3432	2	45.2	0.108
FC	0.2004	2	45.4	0.819
H1	1.2938	2	45.2	0.284
BI1	0.0797	2	42.6	0.924

Descriptive

	Age G	PE	EE	SI	FC	H1	BI1
N	1	21	21	21	21	21	21
	2	69	69	69	69	69	69
	3	28	28	28	28	28	28
Mean	1	3.52	3.40	3.43	3.77	3.25	3.41
	2	3.75	3.65	3.82	3.71	3.61	3.32
	3	3.47	3.75	3.54	3.63	3.49	3.32
Std. error mean	1	0.203	0.210	0.192	0.198	0.200	0.212
	2	0.0998	0.105	0.0953	0.101	0.103	0.105
	3	0.188	0.159	0.142	0.150	0.159	0.218
Standard deviation	1	0.928	0.960	0.881	0.908	0.918	0.971
	2	0.829	0.873	0.791	0.835	0.853	0.873
	3	0.994	0.842	0.751	0.795	0.844	1.15

Inference

From Table 3.2,

The value of p is greater than 0.1.

So, the Null hypothesis is accepted.

Therefore, there is no significant differences in rating towards PE, EE, SI, FC, Habit and BI with respect to the age categories.

4) Are there any differences in the ratings of PE, EE, SI, FC, Habit and BI due location of the institution?

ANOVA

H_0:   There is no significant difference in the ratings of PE, EE, SI, FC, Habit and BI due to the location of the Institution

H_1:   There is significant difference in the ratings of PE, EE, SI, FC, Habit and BI due to location of the Institution

One-Way ANOVA (Welch's)

	F	df1	df2	p
PE	3.37	2	16.2	0.060
EE	2.57	2	16.1	0.108
SI	1.87	2	15.1	0.188
FC	2.05	2	15.6	0.163
H1	3.46	2	16.0	0.056
BI	4.21	2	16.2	0.034

Descriptive

	U, SU, R	PE	EE	SI	FC	H1	BI1
N	1	83	83	83	83	83	83
	2	28	28	28	28	28	28
	3	7	7	7	7	7	7
Mean	1	3.64	3.58	3.67	3.73	3.50	3.21
	2	3.85	3.89	3.87	3.81	3.75	3.70
	3	2.96	3.21	3.11	3.00	2.86	3.33
Std. error mean	1	0.0987	0.0999	0.0846	0.0940	0.0975	0.112
Standard deviation	1	0.899	0.910	0.770	0.857	0.889	1.02
	2	0.820	0.759	0.840	0.648	0.724	0.650
	3	0.783	0.822	0.956	0.990	0.836	0.923

Inference

From table 4.1,

For 5% significance level,

Only BI has p value < 0.05

Therefore, Null Hypothesis is rejected in case of BI and accepted for rest of the factors.

There is no significant difference in the rating towards PE, EE, SI, FC and Habit due to Location of the Institution. But the Location of Institute affects the rating of BI significantly.

From Table 4.2,

The mean of BI of Sub-Urban location is highest followed by Rural Location and then Urban Location of the institution.

For 10% Significance,

PE, HI and BI ratings are affected due to Location of the institution.

5) Are there any differences in the ratings of PE, EE, SI, FC, Habit and BI due location of the home?

ANOVA

H_0: There is no significant difference in the rating towards PE, EE, SI, FC, Habit and BI due to Location of the Home

H_1: There is significant difference in the rating towards PE, EE, SI, FC, Habit and BI due to Location of the Home

One-Way ANOVA (Welch's)

	F	df1	df2	p
PE	0.7566	2	36.8	0.476
EE	0.0857	2	40.7	0.918
SI	0.6659	2	37.3	0.520
FC	1.8136	2	41.5	0.176
H1	0.5773	2	37.8	0.566
BI1	0.0597	2	38.2	0.942

Descriptive

	U, SU, R2	PE	EE	SI	FC	H1	BI1
N	1	74	74	74	74	74	74
	2	26	26	26	26	26	26
	3	18	18	18	18	18	18
Mean	1	3.71	3.61	3.73	3.75	3.58	3.36
	2	3.64	3.65	3.70	3.80	3.47	3.29
	3	3.38	3.69	3.46	3.38	3.33	3.30
Std. error mean	1	0.0991	0.106	0.0912	0.102	0.0988	0.109
	2	0.166	0.171	0.161	0.136	0.173	0.204
	3	0.255	0.190	0.212	0.190	0.219	0.224
Standard deviation	1	0.853	0.911	0.784	0.875	0.849	0.939
	2	0.846	0.872	0.819	0.693	0.880	1.04
	3	1.08	0.807	0.900	0.806	0.929	0.949

Inference:

From Table 5.1,

We reject the alternate hypothesis since p value is > 0.05 and the Null hypothesis is accepted.

Thus, PE, EE, SI, FC, Habit and BI doesn't change with location of home.

6) Out of PE, EE, SI and FC determine the influencers of Habit?

Model Fit Measures

				Overall Model Test			
Model	R	R²	Adjusted R²	F	df1	df2	p
1	0.726	0.528	0.511	31.6	4	113	< .001

From table 6.1,

R value is 0.726, which means the linear model is good to use.

Model Coefficients - H

Predictor	Estimate	SE	t	p
Intercept	0.4997	0.2921	1.711	0.090
PE	0.3682	0.0926	3.977	< .001
EE	0.2609	0.1036	2.519	0.013
SI	0.0241	0.1056	0.228	0.820
FC	0.1732	0.0943	1.836	0.069

Durbin–Watson Test for Autocorrelation

Autocorrelation	DW Statistic	p
-0.0143	1.97	0.828

DW value 1.97 is acceptable.

Collinearity Statistics

	VIF	Tolerance
PE	2.16	0.462
EE	2.66	0.376
SI	2.33	0.430
FC	1.97	0.507

From Table 6.2,

The P value of SI and FC are > 0.05, so not significant.

$H = 0.4997 + 0.3682\ PE + 0.2609\ EE$

Therefore, PE and EE determine the influencers of Habit.

7) Out of PE, EE, SI and FC determine the influencers of BI?

Linear Regression

Model Fit Measures

Model	R	R²	Adjusted R²	Overall Model Test			
				F	df1	df2	p
1	0.649	0.421	0.401	20.5	4	113	< .001

Model Coefficients - BI1

Predictor	Estimate	SE	t	p
Intercept	0.379	0.357	1.063	0.290
PE	0.221	0.113	1.954	0.053
EE	0.324	0.127	2.560	0.012
SI	-0.110	0.129	-0.852	0.396
FC	0.372	0.115	3.231	0.002

Assumption Checks

Durbin–Watson Test for Autocorrelation

Autocorrelation	DW Statistic	p
0.162	1.66	0.058

Collinearity Statistics

	VIF	Tolerance
PE	2.16	0.462
EE	2.66	0.376
SI	2.33	0.430
FC	1.97	0.507

From Table,

EE and FC have p value < 0.05

$BI = 0.379 + .0324\ EE + 0.372\ FC$

Therefore, EE and FC determine influence of BI.