CHAPTER III
EMOTIONAL RECOGNITION BETWEEN GENDER

In this research, entries are processed through multiple data presentation and processing tools, such as Excel for direct description and Rstudio statistics for multi-level analysis. Even though the original design of this research aims to target and isolate each different emotional variable and its relation towards gender, the nuance process of this quasi-experimental study has shown multiple dimensions of findings that are worth engaging in consideration towards the actual triangulated result.

The structure of the statistical analysis and how this study accepts entries are done in 3 (three) steps. First, it is gradually examined in a descriptive method of statistical analysis using Excel as the main tool of presentation (M = 51, F = 56). This is followed by a multivariate analysis using MANOVA in R statistics to model the direct impact of gender towards all 6 (six) target emotions.

3.1. Descriptive Intensity as per Emotion

	Happy	**Angry**	**Disgusted**	**Afraid**	**Sad**	**Surprised**
x(AV) Female	-0.563	-0.29	-0.6727	-0.9	1.018	0.4
y(AV) Male	-0.63	0.037	0.22	-0.16	1.24	0.296
n(AV) Gender Sensitivity	0.069	-0.3279	-0.8949	-0.7424	-0.22256	0.1037
Top Sensitivity	Male	Female	Female	Female	Male	Female

Within the first stage of processing our entries, the data were isolated and compiled per emotion. In order to firstly identify perceived differences in a descriptive manner, the data are calculated each emotion based on its sensitivity, for which are modeled through the delta of our post- and pre-test ($\Delta x = x2 - x1$ and $\Delta y = y2 - y1$) for each of our samples. Following so, the dataset is compiled per gender variable through average ($\bar{x} = \Delta x1 - \Delta xn$ and $\bar{y} = \Delta y1 - \Delta yn$)

which will then can be identified the plausible difference based on per isolated gender (Gender $\bar{n}$ = $\bar{x}$ - $\bar{y}$).

With the conducted descriptive data analysis, it is reported that there exists a display of differences between male and female in their sensitivity towards emotions during the extent of the treatment. **This is especially evident in the emotion of "disgusted" as it is rated in average on female ($\bar{x}$) of 0.6727 and male ($\bar{y}$) of 0.22, which entails the largest gap between sensitivity with $\bar{n}$ of. 0.894**. However it is also notable that other gender variables had also shown numerical differences in sensitivity without notable exceptions, thus creating a still-abstract result of numerical differences in emotional sensitivity between male and female. In continuing our findings, we further the analysis to clarify the interaction of each emotion variable compared through its gender data entries in a multivariate analysis.

3.2. Multivariate Effect on Emotional Sensitivity

Test	Df	Value	Approx F	Num Df	Den Df	Pr(>F)
Pillai's Trace						
(Intercept)	1	0.266456	6.1752	6	102	0.0149 *
Treat Factor	1	0.073475	1.3481	6	102	0.2429
Residuals	107					
Wilks' Lambda						
(Intercept)	1	0.73354	6.1752	6	102	0.0149 *
Treat Factor	1	0.92652	1.3481	6	102	0.2429
Residuals	107					
Roy's Largest Root						
(Intercept)	1	0.36324	6.1752	6	102	0.0149 *

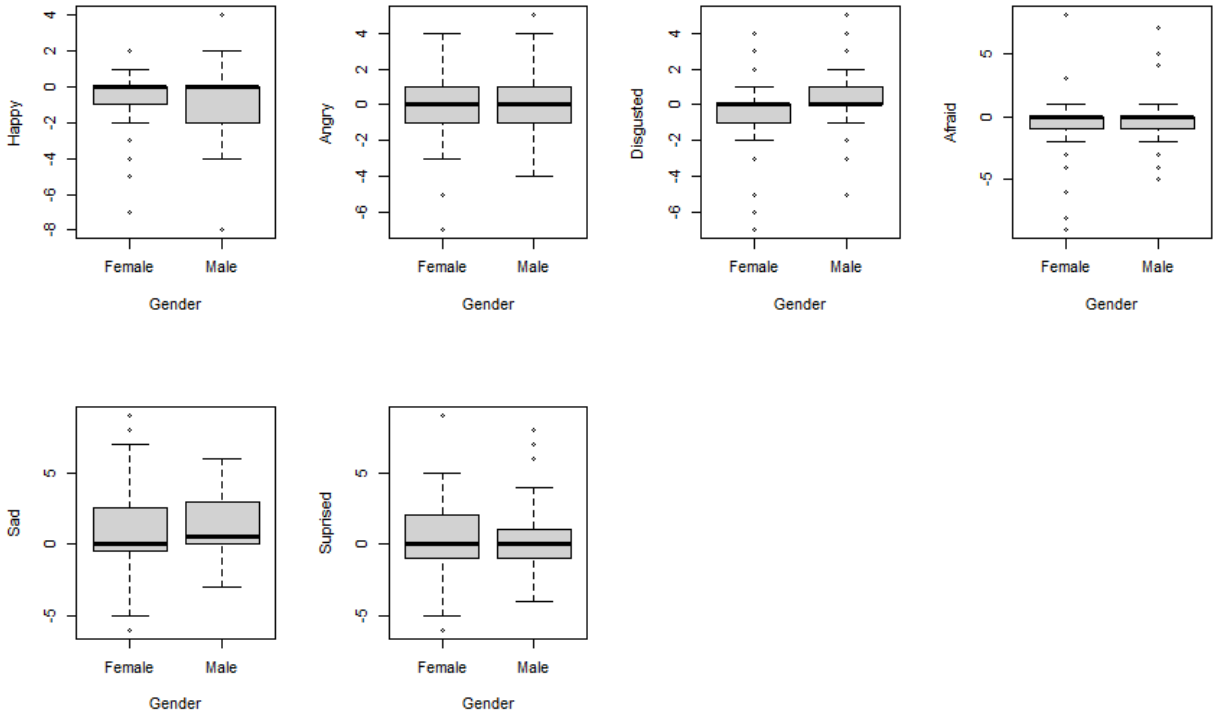
Treat Factor	1	0.0793	1.3481	6	102	0.2429
Residuals	107					
Hotelling-Lawley						
(Intercept)	1	0.36324	6.1752	6	102	0.0149 *
Treat Factor	1	0.0793	1.3481	6	102	0.2429
Residuals	107					

The next stage within the calculation, is the multivariate modeling on the effects of gender towards emotional sensitivity. A MANOVA of gender and range of emotions had resulted in significant results, with a significant impact of gender as a variate (*Pr>f = 0.0149*) in overall inputs indiscriminate of univocal nature in each emotion type. Elaboratively, our data set were put into test through 4 (four) different levels of statistical analysis; Pillai's trace (Approx value of 0.267), Wilk's Lambda (Approx value of 0.734), Roy's Largest Root (Approx value of 0.363), and Hotelling-Lawley's trace (Approx value of 0.363), all of which follows the same numerator and denominator of 6 and 102 degrees of freedom, producing F-statistic of 6.175. **Provided in the figure's intercept, with a variate of 0.0149 < 0.05, it can be defined that statistically, gender does have an impact on emotional sensitivity**.

Emotion	**Treatment Factor**	**Df**	**Sum Sq**	**Mean Sq**	**F value**	**Pr(>F)**
Happy	Yes	1	0.18	0.1839	0.0551	0.8148
	Residuals	107	357.01	3.3365		
Angry	Yes	1	2.93	2.9305	0.8014	0.3727

	Residuals	107	391.27	3.6567		
Disgusted	Yes	1	21.82	21.824	5.9351	0.01649*
	Residuals	107	393.44	3.677		
Afraid	Yes	1	15.02	15.0188	2.4646	0.1194
	Residuals	107	652.05	6.0939		
Sad	Yes	1	1.35	1.3496	0.2304	0.6322
	Residuals	107	626.85	5.8584		
Surprised	Yes	1	0.29	0.293	0.0509	0.822
	Residuals	107	616.46	5.7613		

Structurally, this is continued, through analysis on each individual range of emotions within the result of our MANOVA. Regarding each isolated emotion, it reveals that the interactivity of gender with the assumption of differences, through a univariate ANOVA, are concisely variative in terms of its significance. The figure above, had shown that the range of emotions as a dependent variable scores its significance only in the aspect of Disgusted (*P = 0.016*), whilst others such as Happy (*P = 0.8*), Angry (*P = 0.37*), Afraid (*P = 0.11*), Sad (*P = 0.63*), and Surprised (*P = 0.82*) had shown insignificant value in its interaction with gender. This particular result, had shown that **in univariative sense, female and male scores significantly differed on the aspect of Disgusted** (*P = 0.016*) **in their association towards gender differences**.



Regarding the spread of the summarized findings, we can infer the result of the above figure to reflect the orientation of the sums in each gender in contrast to each range of emotions. The figures are referred from the result of extracted univariate/ANOVA from the same conducted MANOVA analysis. Descriptively, it can be displayed that throughout all the range of emotions, only the aspect of Disgusted that had shown significant differences, as relatively, the male gender scored positive increase in intensity, whilst its female counterpart are relatively negative or atleast a decrease in sensitivity. As follows, the rest of the emotional spectrum expresses a seemingly similar manner as defined through gender, showing that male and female are reported differently in their arousal towards Disgust aspect of expression.