|          |            |         |            |         | VAS-Pos    | (Fear)  |            |         |            |         |
|----------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|
| Feature  | ECG        |         | EDA        |         | EMG        |         | State      |         | Trait      |         |
|          | Chi-square | P-value |
| Anxiety* | 2,529      | 0,099   | 1,224      | 0,311   | 2,570      | 0,096   | 2,399      | 0,111   | 0,253      | 0,778   |
| Fear*    | 3,768      | 0,037   | 6,038      | 0,007   | 3,186      | 0,058   | 7,663      | 0,002   | 0,025      | 0,976   |
| Stress** | 1,740      | 0,195   | 1,036      | 0,369   | 2,242      | 0,126   | 5,074      | 0,014   | 0,078      | 0,927   |
| Happy*** | 1,484      | 0,476   | 0,468      | 0,791   | 4,483      | 0,106   | 0,688      | 0,709   | 4,469      | 0,107   |

<sup>\*</sup> Values obtained using One Way ANOVA | \*\* Values obtained using One Way ANOVA except in the case of the Trait where the values were obtained using Welch's ANOVA | \*\*\* Values obtained using the Kruskal-wallis | Considering 2 degrees of freedom (df = 2)

**Table B.1:** Results of the statistical tests performed on the grouped values of the features anxiety, fear, stress and happy obtained in the VAS-Pos questionnaire made after fear stimulation, in order to verify the existence or not of significant differences between the groups formed based on the ECG, EDA, EMG signals (collected during fear stimulation), the state questionnaire, and the trait questionnaire.

|          |            |         |            |         | VAS-Pos    | (Нарру) |            |         |            |         |
|----------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|
| Feature  | ECG        |         | EDA        |         | EMG        |         | State      |         | Trait      |         |
|          | Chi-square | P-value |
| Anxiety* | 2,157      | 0,340   | 0,338      | 0,844   | 4,198      | 0,123   | 2,090      | 0,352   | 2,335      | 0,311   |
| Fear*    | 2,384      | 0,304   | 1,787      | 0,409   | 0,171      | 0,918   | 0,852      | 0,653   | 1,645      | 0,439   |
| Stress*  | 0,925      | 0,630   | 1,238      | 0,538   | 0,984      | 0,612   | 1,223      | 0,542   | 0,478      | 0,788   |
| Нарру*   | 0,514      | 0,773   | 0,147      | 0,929   | 1,814      | 0,404   | 1,656      | 0,437   | 2,667      | 0,264   |

<sup>\*</sup> Values obtained using the Kruskal-wallis | Considering 2 degrees of freedom (df = 2)

**Table B.2:** Results of the statistical tests performed on the grouped values of the features anxiety, fear, stress and happy obtained in the VAS-Pos questionnaire made after happy stimulation, in order to verify the existence or not of significant differences between the groups formed based on the ECG, EDA, EMG signals (collected during happy stimulation), the state questionnaire, and the trait questionnaire.

|          |            |         | •          |         | VAS-Pos (  | Neutral) | •          |         | •          |         |
|----------|------------|---------|------------|---------|------------|----------|------------|---------|------------|---------|
| Feature  | ECG        |         | EDA        |         | EMG        |          | State      |         | Trait      |         |
|          | Chi-square | P-value | Chi-square | P-value | Chi-square | P-value  | Chi-square | P-value | Chi-square | P-value |
| Anxiety* | 4,064      | 0,131   | 2,720      | 0,257   | 1,998      | 0,368    | 0,741      | 0,600   | 1,173      | 0,556   |
| Fear*    | 1,765      | 0,414   | 0,616      | 0,735   | 0,438      | 0,803    | 1,511      | 0,470   | 0,652      | 0,722   |
| Stress*  | 1,469      | 0,480   | 2,354      | 0,308   | 0,900      | 0,638    | 0,659      | 0,719   | 0,004      | 0,998   |
| Happy**  | 1,205      | 0,316   | 0,975      | 0,391   | 2,930      | 0,231    | 0,238      | 0,790   | 0,584      | 0,565   |

<sup>\*</sup> Values obtained using the Kruskal-wallis | \*\* Values obtained using One Way ANOVA | Considering 2 degrees of freedom (df = 2)

**Table B.3:** Results of the statistical tests performed on the grouped values of the features anxiety, fear, stress and happy obtained in the VAS-Pos questionnaire made after neutral stimulation, in order to verify the existence or not of significant differences between the groups formed based on the ECG, EDA, EMG signals (collected during neutral stimulation), the state questionnaire, and the trait questionnaire.