Table 1: Distribution of students according to sex and different grades of temporomandibular disorders

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sex | TMD Group | Total 345 (100%) | Chi-Square | p |
| No Dysfunction 185 (53.6%) | Mild142 (41.2%) | Moderate18 (5.2%) |
| Male | 78 (58.6%) | 48 (36.1%) | 7 (5.3%) | 133 (100%) | 2.371 | 0.306 |
| Female | 107 (50.5%) | 94 (44.3%) | 11 (5.2%) | 212 (100%) |   |   |

Table 2: Frequency and percentage of parafunctional habits

|  |  |  |
| --- | --- | --- |
| Parafunctional habits | Yes | No |
| Frequency (Percent) | Frequency (Percent) |
| Nail Biting | 69 (20%) | 276 (80%) |
| Clenching | 44 (12.8%) | 301 (87.2) |
| Grinding | 24 (7 %) | 321 (93%) |
| Biting of Lips | 114 (33%) | 231 (67%) |
| Biting of Objects | 91 (26.4%) | 254 (73.6%) |
| Chewing Gums | 166 (48.1%) | 179 (51.9%) |
| Finger sucking | 9 (2.6%) | 336 897.4%) |
| Mouth Breathing | 69 (20%) | 276 (80%) |

Table 3: Association between parafunctional habits and temporomandibular disorders among students

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parafunctional Habits** |  | TMDgroup | Total |   |   |
| no dysfunction | mild | moderate | Chi-Square | p |
| Nail Biting | Yes | 34 (18.4%) | 29 (20.4%) | 6 (33.3%) | 69 | 2.32 | 0.314 |
| No | 151 (81.6%) | 113 (79.6%) | 12 (66.7%) | 276 |   |   |
| Clenching | Yes | 12 (6.5%) | 23 (16.2%) | 9 (50.0%) | 44 | 30.485 | <0.001 |
| No | 173 (93.5%) | 119 (83.8%) | 9 (50.0%) | 301 |   |   |
| Grinding | Yes | 4 (2.2%) | 15 (10.6%) | 5 (27.8%) | 24 | 21.48 | <0.001 |
| No | 181 (97.8%) | 127 (89.4%) | 13 (72.2%) | 321 |   |   |
| Biting of Lips | Yes | 38 (20.5%) | 64 (45.1%) | 12 (66.7%) | 114 | 31.552 | <0.001 |
| No | 147 (79.5%) | 78 (54.9%) | 6 (33.3%) | 231 |   |   |
| Biting of Objects | Yes | 37 (20.0%) | 44 (31.0%) | 10 (55.6%) | 91 | 13.319 | <0.001 |
| No | 148 (80.0%) | 98 (69.0%) | 8 (44.4%) | 254 |   |   |
| Chewing Gums | Yes | 81 (43.8%) | 74 (52.1%) | 11 (61.1%) | 166 | 3.517 | 0.172 |
| No | 104 (56.2%) | 68 (47.9%) | 7 (38.9%) | 179 |   |   |
| Finger sucking | Yes | 2 (1.1%) | 5 (3.5%) | 2 (11.1%) | 9 | 6.43\* | 0.039 |
| No | 183 (98.9%) | 137 (96.5%) | 16 (88.9%) | 336 |   |   |
| Mouth Breathing | Yes | 25 (13.5%) | 34 (23.9%) | 10 (55.6%) | 69 | 20.467 | <0.001 |
| No | 160 (86.5%) | 108 (76.1%) | 8 (44.4%) | 276 |   |   |
| \* Fisher's Exact Test |  |  |  |  |  |  |  |

Table 4: Frequency and percentage of sign and symptoms of temporomandibular joint disorders

|  |  |  |  |
| --- | --- | --- | --- |
| Fonseca Anamnestic Questionnaire | No | Sometimes | Yes |
| **Is it hard for you to open your mouth?** | 323 (93.6%) | 18 (5.2%) | 4 (1.2%) |
| **Is it hard for you to move your mandible from side to side?** | 335 (97.1%) | 7 (2%) | 3 (0.9%) |
| **Do you get tired /muscular pain while chewing?** | 236 (68.4%) | 73 (21.2%) | 36 (10.4%) |
| **Do you have frequent headaches?** | 177 (51.3%) | 81 (23.5%) | 87 (25.2%) |
| **Do you have pain on the nape or stiff neck?** | 259 (75.1%) | 54 (15.7%) | 32 (9.3%) |
| **Do you have earaches or pain in craniomandibular joints?** | 309 (89.6%) | 27 (7.8%) | 9 (2.6%) |
| **Have you noticed any TMJ clicking while chewing or when you open your mouth?** | 253 (73,3%) | 48 (13.9%) | 44 (12.8%) |
| **Do you clench or grind your teeth?** | 283 (82%) | 36 (10.4%) | 26 (7.5%) |
| **Do you feel your teeth do not articulate well?** | 280 (81.2%) | 17 (4.9%) | 48 (13.9%) |
| **Do you consider yourself a tense (nervous) person?** | 152 (44.1%) | 100 (29%) | 93 (27%) |

Table 5: Association between Fonseca Anamnestic Questionnaire and temporomandibular disorders

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Fonseca Anamnestic Questionnaire** |  | TMD group | Total | Chi-Square | p |
| no dysfunction | mild | moderate |
| **Is it hard for you to open your mouth?** | No | 184 (99.5%) | 126 (88.7%) | 13 (72.2%) | 323 | 35.566\* | <0.001 |
| Sometimes | 1 (0.5%) | 15 (10.6%) | 2 (11.1%) | 18 |   |   |
| Yes | 0 | 1 (0.7%) | 3 (16.7%) | 4 |   |   |
| **Is it hard for you to move your mandible from side to side?** | No | 185 (100%) | 135 (95.1%) | 15 (83.3%) | 335 | 19.991\* | <0.001 |
| Sometimes | 0 | 6 (4.2%) | 1 (5.6%) | 7 |   |   |
| Yes | 0 | 1 (0.7%) | 2 (11.1%) | 3 |   |   |
| **Do you get tired /muscular pain while chewing?** | No | 161 (87.0%) | 71 (50.0%) | 4 (22.2%) | 236 | 104.761 | <0.001 |
| Sometimes | 22 (11.9%) | 48 (33.8%) | 3 (16.7%) | 73 |   |   |
| Yes | 2 (1.1%) | 23 (16.2%) | 11 (61.1%) | 36 |   |   |
| **Do you have frequent headaches?** | No | 130 (70.3%) | 46 (32.4%) | 1 (5.6%) | 177 | 90.741 | <0.001 |
| Sometimes | 40 (21.6%) | 39 (27.5%) | 2 (11.1%) | 81 |   |   |
| Yes | 15 (8.1%) | 57 (40.1%) | 15 (83.3%) | 87 |   |   |
| **Do you have pain on the nape or stiff neck?** | No | 166 (89.7%) | 85 (59.9%) | 8 (44.4%) | 259 | 58.96 | <0.001 |
| Sometimes | 15 (8.1%) | 36 (25.4%) | 3 (16.7%) | 54 |   |   |
| Yes | 4 (2.2%) | 21 (14.8%) | 7 (38.9%) | 32 |   |   |
| **Do you have earaches or pain in craniomandibular joints?** | No | 181 (97.8%) | 116 (81.7%) | 12 (66.7%) | 309 | 37.058\* | <0.001 |
| Sometimes | 4 (2.2%) | 20 (14.1%) | 3 (16.7%) | 27 |   |   |
| Yes | 0 | 6 (4.2%) | 3 (16.7%) | 9 |   |   |
| **Have you noticed any TMJ clicking while chewing or when you open your mouth?** | No | 167 (90.3%) | 81 (57.0%) | 5 (27.8%) | 253 | 78.519 | <0.001 |
| Sometimes | 13 (7.0%) | 32 (22.5%) | 3 (16.7%) | 48 |   |   |
| Yes | 5 (2.7%) | 29 (20.4%) | 10 (55.6%) | 44 |   |   |
| **Do you clench or grind your teeth?** | No | 173 (93.5%) | 103 (72.5%) | 7 (38.9%) | 283 | 87.125 | <0.001 |
| Sometimes | 9 (4.9%) | 26 (18.3%) | 1 (5.6%) | 36 |   |   |
| Yes | 3 (1.6%) | 13 (9.2%) | 10 (55.6%) | 26 |   |   |
| **Do you feel your teeth do not articulate well?** | No | 169 (91.4%) | 107 (75.4%) | 4 (22.2%) | 280 | 66.174 | <0.001 |
| Sometimes | 9 (4.9%) | 6 (4.2%) | 2 (11.1%) | 17 |   |   |
| Yes | 7 (3.8%) | 29 (20.4%) | 12 (66.7%) | 48 |   |   |
| **Do you consider yourself a tense (nervous) person?** | No | 116 (62.7%) | 34 (23.9%) | 2 (11.1%) | 152 | 82.302 | <0.001 |
| Sometimes | 49 (26.5%) | 49 (34.5%) | 2 (11.1%) | 100 |   |   |
| Yes | 20 (10.8%) | 59 (41.5%) | 14 (77.8%) | 93 |   |   |
| \* Fisher's Exact Test |  |  |  |  |  |  |  |

Table 6: Logistic regression analysis for presence of temporomandibular disorders with parafunctional habits

|  |  |  |  |
| --- | --- | --- | --- |
| Parafunctional habits | p | OR | 95% C.I.forOR |
| Lower | Upper |
| Nail Biting | 0.573 | 0.841 | 0.46 | 1.537 |
| Clenching | 0.13 | 1.834 | 0.837 | 4.02 |
| Grinding | 0.034 | 3.637 | 1.105 | 11.972 |
| Biting of Lips | <0.001 | 2.769 | 1.672 | 4.585 |
| Biting of Objects | 0.111 | 1.549 | 0.905 | 2.651 |
| Chewing Gums | 0.18 | 1.373 | 0.864 | 2.183 |
| Finger sucking | 0.716 | 1.414 | 0.219 | 9.146 |
| Mouth Breathing | 0.031 | 1.904 | 1.062 | 3.413 |