**Appendix 1. Distribution of propensity score**

In this appendix the distribution of the propensity score (PS) is analyses and compared for SSRIs-users and non-users.

**PS-distribution for SSRIs users and non-users.**

Table 1.a. Statistical descriptors for the SSRIs users and non-users

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| SSRIs | n | Mean | Std. Dev. | Median | Min | Max |
| Non-users | 346,556 | 0.1056 | 0.0828 | 0.0862 | 0 | 0.9899 |
| Users | 45,902 | 0.2029 | 0.1712 | 0.1449 | 0.014 | 0.9897 |

As can been seen from table 1.a the mean, standard deviation and the median of the propensity score are higher for the users, compared to the non-users. The range between the minimum and the maximum is the same for the users and the non-users, and therefore there exist a considerable overlap between the two exposure groups.

**Test for equal means and medians for users and non-users:**

Graphic inspection of histograms, QQ-plots and test for propensity scores goodness-of-fit for normality indicates, that the propensity score is not normal distributed, but the log-propensity score is normal distributed. Therefore a parametric test was used on the log transformation of the propensity score, and a non-parametric test was used on the mean.

Table 2.a. Test for equal distribution of propensity score for users and non-users

|  |  |  |
| --- | --- | --- |
|  | t-test (parametric) | Wilcoxon Rank-Sum test  (Non-parametric) |
| Propensity score | - | Z=159.91  p<0.0001 |
| Log-propensity score (test of equal medians) | Satterthwaite  t(54808)=-163.49  p<0.0001 | - |

Figure 1.a. Histogram for users and non-users

Figure 1.a. about here

The two tests (table 2.a.) and inspection of the histogram (figure 1.a.) for the propensity score indicate that the distribution of the propensity score is not alike, for the two groups. Both groups have a large concentration of individuals with relatively low propensity score, but users are more likely to have higher values of the propensity score.

**PS-distribution for SSRIs users and non-users, for the 50 strata.**

Table 3.a. Statistical descriptors for the SSRIs users and non-users, for all strata

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Strata | Exposed | N | Attempters | Min. | Max. | Mean | Std. Dev. |
| 0 | Non-users (SSRIs) | 7,654 | 15 | 0 | 0.028 | 0.023 | 0.0037 |
|  | Users (SSRIs) | 195 | 2 | 0.014 | 0.028 | 0.023 | 0.0033 |
| 1 | Non-users (SSRIs) | 7,638 | 22 | 0.028 | 0.032 | 0.03 | 0.0013 |
|  | Users (SSRIs) | 211 | 1 | 0.028 | 0.032 | 0.03 | 0.0013 |
| 2 | Non-users (SSRIs) | 7,604 | 24 | 0.032 | 0.036 | 0.034 | 0.0010 |
|  | Users (SSRIs) | 248 | 5 | 0.032 | 0.036 | 0.034 | 0.0010 |
| 3 | Non-users (SSRIs) | 7,580 | 23 | 0.036 | 0.039 | 0.037 | 0.0009 |
|  | Users (SSRIs) | 266 | 4 | 0.036 | 0.039 | 0.037 | 0.0009 |
| 4 | Non-users (SSRIs) | 7,578 | 29 | 0.039 | 0.042 | 0.04 | 0.0008 |
|  | Users (SSRIs) | 272 | 3 | 0.039 | 0.042 | 0.04 | 0.0008 |
| 5 | Non-users (SSRIs) | 7,548 | 21 | 0.042 | 0.044 | 0.043 | 0.0008 |
|  | Users (SSRIs) | 301 | 3 | 0.042 | 0.044 | 0.043 | 0.0007 |
| 6 | Non-users (SSRIs) | 7,527 | 23 | 0.044 | 0.047 | 0.045 | 0.0007 |
|  | Users (SSRIs) | 322 | 5 | 0.044 | 0.047 | 0.046 | 0.0007 |
| 7 | Non-users (SSRIs) | 7,534 | 23 | 0.047 | 0.049 | 0.048 | 0.0007 |
|  | Users (SSRIs) | 315 | 5 | 0.047 | 0.049 | 0.048 | 0.0007 |
| 8 | Non-users (SSRIs) | 7,500 | 32 | 0.049 | 0.051 | 0.05 | 0.0007 |
|  | Users (SSRIs) | 352 | 6 | 0.049 | 0.051 | 0.05 | 0.0007 |
| 9 | Non-users (SSRIs) | 7,498 | 24 | 0.051 | 0.053 | 0.052 | 0.0006 |
|  | Users (SSRIs) | 348 | 6 | 0.051 | 0.053 | 0.052 | 0.0006 |
| 10 | Non-users (SSRIs) | 7,463 | 41 | 0.053 | 0.056 | 0.054 | 0.0006 |
|  | Users (SSRIs) | 387 | 7 | 0.053 | 0.056 | 0.055 | 0.0006 |
| 11 | Non-users (SSRIs) | 7,548 | 35 | 0.056 | 0.058 | 0.057 | 0.0007 |
|  | Users (SSRIs) | 381 | 9 | 0.056 | 0.058 | 0.057 | 0.0007 |
| 12 | Non-users (SSRIs) | 7,361 | 39 | 0.058 | 0.06 | 0.059 | 0.0006 |
|  | Users (SSRIs) | 408 | 10 | 0.058 | 0.06 | 0.059 | 0.0006 |
| 13 | Non-users (SSRIs) | 7,390 | 24 | 0.06 | 0.062 | 0.061 | 0.0006 |
|  | Users (SSRIs) | 460 | 11 | 0.06 | 0.062 | 0.061 | 0.0006 |
| 14 | Non-users (SSRIs) | 7,395 | 41 | 0.062 | 0.065 | 0.064 | 0.0007 |
|  | Users (SSRIs) | 453 | 9 | 0.062 | 0.065 | 0.064 | 0.0007 |
| 15 | Non-users (SSRIs) | 7,381 | 38 | 0.065 | 0.067 | 0.066 | 0.0007 |
|  | Users (SSRIs) | 470 | 9 | 0.065 | 0.067 | 0.066 | 0.0007 |
| 16**§** | Non-users (SSRIs) | 7,374 | 41 | 0.067 | 0.069 | 0.068 | 0.0007 |
|  | Users (SSRIs) | 474 | 11 | 0.067 | 0.069 | 0.068 | 0.0007 |
| 17 | Non-users (SSRIs) | 7,346 | 58 | 0.069 | 0.072 | 0.071 | 0.0007 |
|  | Users (SSRIs) | 503 | 14 | 0.069 | 0.072 | 0.071 | 0.0007 |
| 18 | Non-users (SSRIs) | 7,343 | 49 | 0.072 | 0.075 | 0.073 | 0.0008 |
|  | Users (SSRIs) | 506 | 7 | 0.072 | 0.075 | 0.073 | 0.0007 |
| 19 | Non-users (SSRIs) | 7,290 | 45 | 0.075 | 0.077 | 0.076 | 0.0008 |
|  | Users (SSRIs) | 559 | 14 | 0.075 | 0.077 | 0.076 | 0.0008 |
| 20 | Non-users (SSRIs) | 7,298 | 53 | 0.077 | 0.08 | 0.078 | 0.0007 |
|  | Users (SSRIs) | 551 | 7 | 0.077 | 0.08 | 0.078 | 0.0007 |
| 21 | Non-users (SSRIs) | 7,286 | 56 | 0.08 | 0.082 | 0.081 | 0.0008 |
|  | Users (SSRIs) | 564 | 12 | 0.08 | 0.082 | 0.081 | 0.0008 |
| 22 | Non-users (SSRIs) | 7,221 | 55 | 0.082 | 0.085 | 0.084 | 0.0009 |
|  | Users (SSRIs) | 628 | 24 | 0.082 | 0.085 | 0.084 | 0.0009 |
| 23**§** | Non-users (SSRIs) | 7,206 | 60 | 0.085 | 0.088 | 0.087 | 0.0007 |
|  | Users (SSRIs) | 643 | 12 | 0.085 | 0.088 | 0.087 | 0.0008 |
| 24 | Non-users (SSRIs) | 7,167 | 74 | 0.088 | 0.091 | 0.09 | 0.0009 |
|  | Users (SSRIs) | 682 | 21 | 0.088 | 0.091 | 0.09 | 0.0009 |
| 25 | Non-users (SSRIs) | 7,140 | 89 | 0.091 | 0.094 | 0.092 | 0.0009 |
|  | Users (SSRIs) | 709 | 29 | 0.091 | 0.094 | 0.093 | 0.0009 |
| 26 | Non-users (SSRIs) | 7,133 | 71 | 0.094 | 0.097 | 0.096 | 0.0009 |
|  | Users (SSRIs) | 717 | 18 | 0.094 | 0.097 | 0.096 | 0.0009 |
| 27 | Non-users (SSRIs) | 7,038 | 70 | 0.097 | 0.1 | 0.099 | 0.0010 |
|  | Users (SSRIs) | 778 | 23 | 0.097 | 0.1 | 0.099 | 0.0010 |
| 28 | Non-users (SSRIs) | 7,094 | 69 | 0.1 | 0.103 | 0.102 | 0.0009 |
|  | Users (SSRIs) | 788 | 22 | 0.1 | 0.103 | 0.102 | 0.0009 |
| 29 | Non-users (SSRIs) | 7,045 | 86 | 0.103 | 0.107 | 0.105 | 0.0010 |
|  | Users (SSRIs) | 804 | 21 | 0.103 | 0.107 | 0.105 | 0.0010 |
| 30 | Non-users (SSRIs) | 7,024 | 88 | 0.107 | 0.11 | 0.109 | 0.0010 |
|  | Users (SSRIs) | 825 | 27 | 0.107 | 0.11 | 0.109 | 0.0010 |
| 31 | Non-users (SSRIs) | 6,990 | 84 | 0.11 | 0.114 | 0.112 | 0.0009 |
|  | Users (SSRIs) | 859 | 26 | 0.11 | 0.114 | 0.112 | 0.0009 |
| 32 | Non-users (SSRIs) | 6,971 | 88 | 0.114 | 0.118 | 0.116 | 0.0011 |
|  | Users (SSRIs) | 878 | 22 | 0.114 | 0.118 | 0.116 | 0.0011 |
| 33 | Non-users (SSRIs) | 6,944 | 106 | 0.118 | 0.122 | 0.119 | 0.0011 |
|  | Users (SSRIs) | 905 | 33 | 0.118 | 0.122 | 0.12 | 0.0011 |
| 34 | Non-users (SSRIs) | 6,897 | 108 | 0.122 | 0.126 | 0.124 | 0.0012 |
|  | Users (SSRIs) | 954 | 36 | 0.122 | 0.126 | 0.124 | 0.0012 |
| 35 | Non-users (SSRIs) | 6,887 | 90 | 0.126 | 0.13 | 0.128 | 0.0012 |
|  | Users (SSRIs) | 995 | 36 | 0.126 | 0.13 | 0.128 | 0.0012 |
| 36 | Non-users (SSRIs) | 6,754 | 109 | 0.13 | 0.135 | 0.132 | 0.0014 |
|  | Users (SSRIs) | 1,061 | 43 | 0.13 | 0.135 | 0.132 | 0.0014 |
| 37 | Non-users (SSRIs) | 6,764 | 108 | 0.135 | 0.14 | 0.137 | 0.0015 |
|  | Users (SSRIs) | 1,082 | 40 | 0.135 | 0.14 | 0.137 | 0.0015 |
| 38**§** | Non-users (SSRIs) | 6,716 | 143 | 0.14 | 0.145 | 0.142 | 0.0016 |
|  | Users (SSRIs) | 1,137 | 34 | 0.14 | 0.145 | 0.142 | 0.0016 |
| 39 | Non-users (SSRIs) | 6,660 | 141 | 0.145 | 0.151 | 0.148 | 0.0018 |
|  | Users (SSRIs) | 1,189 | 48 | 0.145 | 0.151 | 0.148 | 0.0019 |
| 40 | Non-users (SSRIs) | 6,642 | 130 | 0.152 | 0.158 | 0.155 | 0.0020 |
|  | Users (SSRIs) | 1,232 | 50 | 0.152 | 0.158 | 0.155 | 0.0020 |
| 41 | Non-users (SSRIs) | 6,498 | 126 | 0.158 | 0.166 | 0.162 | 0.0023 |
|  | Users (SSRIs) | 1,326 | 40 | 0.158 | 0.166 | 0.162 | 0.0023 |
| 42**¶§** | Non-users (SSRIs) | 6,418 | 157 | 0.166 | 0.176 | 0.171 | 0.0029 |
|  | Users (SSRIs) | 1,431 | 64 | 0.166 | 0.176 | 0.171 | 0.0029 |
| 43**§** | Non-users (SSRIs) | 6,310 | 174 | 0.176 | 0.188 | 0.182 | 0.0034 |
|  | Users (SSRIs) | 1,539 | 65 | 0.176 | 0.188 | 0.182 | 0.0034 |
| 44 | Non-users (SSRIs) | 6,137 | 163 | 0.188 | 0.204 | 0.196 | 0.0044 |
|  | Users (SSRIs) | 1,713 | 79 | 0.188 | 0.204 | 0.196 | 0.0045 |
| 45 | Non-users (SSRIs) | 5,858 | 219 | 0.204 | 0.225 | 0.214 | 0.0062 |
|  | Users (SSRIs) | 1,991 | 109 | 0.204 | 0.225 | 0.214 | 0.0062 |
| 46 | Non-users (SSRIs) | 5,614 | 215 | 0.225 | 0.258 | 0.24 | 0.0095 |
|  | Users (SSRIs) | 2,235 | 94 | 0.225 | 0.258 | 0.24 | 0.0093 |
| 47**¶§** | Non-users (SSRIs) | 5,227 | 245 | 0.258 | 0.318 | 0.284 | 0.0171 |
|  | Users (SSRIs) | 2,622 | 126 | 0.258 | 0.318 | 0.285 | 0.0174 |
| 48**¶§** | Non-users (SSRIs) | 4,470 | 258 | 0.318 | 0.452 | 0.373 | 0.0380 |
|  | Users (SSRIs) | 3,379 | 206 | 0.318 | 0.452 | 0.378 | 0.0386 |
| 49**¶§** | Non-users (SSRIs) | 3,595 | 373 | 0.452 | 0.99 | 0.626 | 0.1393 |
|  | Users (SSRIs) | 4,254 | 401 | 0.452 | 0.99 | 0.642 | 0.1406 |

¶ Significant difference in means (p<0.05, t-test)

**§** Significant difference in distributions (p<0.05, Wilcoxon)

As can been seen from table 3.a. the distribution of the propensity score within each strata is much alike. We tested for significant difference in distributions for each strata and found significant difference for strata 16, 23, 38, 42, 43, 47, 48 and 49. As the PS is getting higher, the more unequal are the distributions of the PS, for users and non-users.

**Conclusion**

This appendix is analysing the distribution of the PS for SSRIs users and non-users. Overall the distribution is not alike for the two groups, but within each stratum the users and non-users are having considerable overlap. Suicide attempts are also represented within each stratum and users/non-users.