**Supplementary**

**Correlations**

**Table 1**. Correlations between using devices in physicians’ private and professional life, and digital literacy and e-Health indicators.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Digital literacy – own skills | | Digital literacy – the need for training | | The impact of the Internet / new technologies on healthcare and modern life | | Recommendation of e-Health solutions | | Evaluation of e-Health solutions - the patient | | Evaluation of e-Health solutions - medical facility | |
| Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| **In private life** | | | | | | | | | | | | | | |
| computer | often | -0.20 | 0.90 | 0.21 | 0.92 | -0,14 | 1,02 | -0,20 | 0,99 | -0,24 | 0,78 | -0,01 | 0,98 |
| sometimes | 0.37 | 0.95 | -0.40 | 0,99 | 0,18 | 0,80 | 0,35 | 0,92 | 0,32 | 1,01 | 0,05 | 1,01 |
| never | 0.18 | 1.46 | -0.52 | 1,49 | 0,52 | 1,27 | 0,42 | 0,81 | 1,80 | 2,04 | -0,36 | 1,27 |
| N/A | 1.36 | 2.90 | -0.37 | 0,79 | 2,18 | 1,45 | 1,22 | 0,45 | 1,14 | 1,94 | 0,31 | 1,68 |
| tablet | often | -0.42 | 0.82 | -0.09 | 0,73 | -0,37 | 0,73 | -0,40 | 0,93 | -0,55 | 0,57 | -0,05 | 0,84 |
| sometimes | -0.03 | 0.92 | 0,16 | 1,03 | -0,15 | 0,89 | -0,09 | 0,92 | -0,11 | 0,77 | -0,04 | 0,94 |
| never | 0.27 | 0.88 | -0,05 | 1,15 | 0,31 | 1,03 | 0,34 | 0,95 | 0,42 | 1,17 | 0,17 | 1,17 |
| N/A | 0.16 | 1.66 | -0,20 | 0,77 | 0,32 | 1,42 | 0,03 | 1,25 | 0,20 | 1,19 | -0,40 | 0,72 |
| smartphone | often | -0.07 | 0.91 | 0,20 | 0,86 | -0,13 | 0,93 | -0,11 | 0,97 | -0,19 | 0,79 | 0,01 | 0,90 |
| sometimes | 0.46 | 1.16 | -0,87 | 1,30 | 0,69 | 0,83 | 0,43 | 0,89 | 0,89 | 1,39 | -0,26 | 1,28 |
| never | 0.19 | 1.21 | -1,26 | 0,80 | 0,49 | 1,16 | 0,60 | 1,18 | 0,97 | 1,36 | -0,04 | 1,39 |
| N/A | 0.90 | 2.54 | -0,07 | 0,45 | 1,39 | 1,73 | 0,71 | 0,69 | 1,26 | 1,43 | 0,95 | 2,00 |
| e-mail | often | -0.16 | 0.92 | 0,18 | 0,85 | -0,17 | 0,94 | -0,18 | 0,95 | -0,25 | 0,71 | -0,07 | 0,83 |
| sometimes | 0.36 | 0.82 | -0,24 | 1,23 | 0,20 | 1,02 | 0,23 | 0,97 | 0,07 | 0,92 | 0,30 | 1,15 |
| never | 0.36 | 1.31 | -1,18 | 0,65 | 0,78 | 0,83 | 0,76 | 0,94 | 1,72 | 1,40 | -0,48 | 1,20 |
| N/A | 0.46 | 1.85 | -0,12 | 1,23 | 0,93 | 1,07 | 1,05 | 0,58 | 1,34 | 1,31 | 0,59 | 1,95 |
| mobile apps | often | -0.24 | 0.94 | 0,30 | 0,87 | -0,40 | 0,77 | -0,25 | 1,04 | -0,37 | 0,70 | 0,08 | 0,87 |
| sometimes | 0.24 | 0.79 | -0,11 | 1,04 | 0,46 | 1,10 | 0,16 | 0,66 | 0,19 | 0,81 | -0,10 | 1,08 |
| never | 0.42 | 1.13 | -0,88 | 0,86 | 0,55 | 0,85 | 0,60 | 1,01 | 0,93 | 1,40 | -0,26 | 1,16 |
| N/A | 0.38 | 1.68 | -0,50 | 0,75 | 0,77 | 1,23 | 0,34 | 1,14 | 0,79 | 1,24 | 0,56 | 1,42 |
| **At work** | | | | | | | | | | | | | | |
| computer | often | -0.12 | 0.89 | 0.10 | 0.98 | -0.15 | 0,93 | -0,09 | 0,97 | -0,18 | 0,79 | 0,02 | 0,95 |
| sometimes | 0.80 | 1.19 | -0.69 | 0.99 | 0.93 | 0,95 | 0,62 | 0,99 | 1,12 | 1,18 | -0,28 | 1,09 |
| never | 0.14 | 1.00 | -0.44 | 0.70 | 0.44 | 0,63 | 0,16 | 1,10 | 0,60 | 1,67 | 0,36 | 1,43 |
| N/A | 4.70 | - | 0.51 | - | 3.85 | - | 1,73 | - | 3,39 | - | -1,62 | - |
| tablet | often | -0.66 | 1.08 | -0.58 | 0.77 | -0.36 | 0,45 | -0,81 | 1,09 | -0,64 | 0,74 | -0,04 | 0,66 |
| sometimes | -0.97 | 0.74 | 0.06 | 0.71 | -0.47 | 0,68 | 0,12 | 0,45 | 0,05 | 0,84 | 0,51 | 1,33 |
| never | 0.12 | 0.87 | 0.01 | 1.06 | 0.06 | 0,96 | 0,03 | 0,98 | 0,05 | 1,02 | -0,02 | 1,00 |
| N/A | 0.07 | 1.31 | 0.12 | 0.79 | 0.04 | 1,34 | 0,09 | 1,15 | -0,06 | 1,01 | -0,14 | 0,85 |
| smartphone | often | -0.22 | 1.00 | 0.24 | 1.05 | -0.32 | 0,86 | -0,26 | 1,06 | -0,31 | 0,80 | 0,02 | 0,84 |
| sometimes | 0.06 | 0.62 | 0.06 | 0.81 | 0.19 | 1,00 | 0,09 | 0,50 | -0,06 | 0,62 | 0,03 | 1,08 |
| never | 0.27 | 1.07 | -0.57 | 0.97 | 0.32 | 0,91 | 0,21 | 1,15 | 0,65 | 1,34 | 0,01 | 1,28 |
| N/A | 0.48 | 1.45 | -0.13 | 0.65 | 0.59 | 1,43 | 0,83 | 0,78 | 0,34 | 1,14 | -0,26 | 0,75 |
| e-mail | often | -0.40 | 0.92 | 0.37 | 0.88 | -0.14 | 1,07 | -0,38 | 1,03 | -0,42 | 0,66 | -0,06 | 0,79 |
| sometimes | -0.03 | 0.83 | 0.04 | 0.93 | -0.17 | 0,73 | 0,04 | 0,78 | -0,17 | 0,70 | -0,08 | 0,92 |
| never | 0.25 | 0.96 | -0.49 | 1.04 | 0.24 | 1,04 | 0,18 | 1,07 | 0,50 | 1,24 | 0,21 | 1,26 |
| N/A | 1.45 | 1.30 | -0.02 | 0.99 | 1.00 | 1,43 | 1,13 | 0,84 | 1,38 | 1,12 | -0,19 | 1,12 |
| mobile apps | often | -0.34 | 0.96 | 0.37 | 1.11 | -0.32 | 0,93 | -0,44 | 1,03 | -0,47 | 0,68 | -0,13 | 0,94 |
| sometimes | 0.03 | 0.97 | 0.27 | 0.92 | -0.08 | 0.93 | 0.10 | 0.84 | -0.01 | 0.75 | 0.08 | 0.84 |
| never | 0.09 | 0.89 | -0.47 | 0.85 | 0.19 | 0.91 | 0.09 | 1.02 | 0.25 | 1.24 | -0.03 | 1.18 |
| N/A | 0.56 | 1.31 | -0.30 | 0.69 | 0.54 | 1.44 | 0.55 | 0.97 | 0.43 | 1.14 | 0.15 | 1.00 |

The higher the mean value, the lower the digital literacy, the lower the evaluation of the Internet impact, the lower the recommendation, and the lower the evaluation of e-health solutions

**Table 2.** Corelations between physicians’ age, digital literacy and e-Health indicators.

|  |  |  |  |
| --- | --- | --- | --- |
| **Indicator** | rho | p | N |
| Digital literacy – own skills | 0.189 | 0.0009 | 307 |
| Digital literacy – the need for training | -0.517 | 0.0000 | 307 |
| The influence of the Internet / new technologies on healthcare and modern life | 0.291 | 0.0000 | 307 |
| Recommendation of e-Health solutions | 0.269 | 0.0000 | 307 |
| Evaluation of e-health solutions - the patient | 0.396 | 0.0000 | 307 |
| Evaluation of e-health solutions - medical facility | -0,150 | 0,0087 | 307 |

**Physicians’ opinion about online health information (Dr Google)**

**Table 3.** % of patients accessing online health information within a month.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| < 1% | 12 | 3,9 | 3,9 |
| 1-2% | 19 | 6,2 | 10,1 |
| 3-5% | 52 | 16,9 | 27,0 |
| 6-10% | 43 | 14,0 | 41,0 |
| > 10% | 102 | 33,2 | 74,3 |
| difficult to calculate | 79 | 25,7 | 100,0 |
| Total | 307 | 100,0 |  |

**Table 4.**  Physicians’ opinion on the overall quality of online health information.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| reliable | 10 | 3.3 | 3.3 |
| usually reliable | 55 | 17.9 | 21.2 |
| sometimes reliable | 164 | 53.4 | 74.6 |
| unreliable | 57 | 18.6 | 93.2 |
| no opinion | 21 | 6.8 | 100.0 |
| Total | 307 | 100.0 |  |

**Table 5.**  Physicians’ opinion on patients' health benefits related to online health knowledge.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| often | 16 | 5,2 | 5,2 |
| sometimes | 106 | 34,5 | 39,7 |
| seldom | 73 | 23,8 | 63,5 |
| never | 13 | 4,2 | 67,8 |
| I do not have such knowledge | 99 | 32,2 | 100,0 |
| Total | 307 | 100,0 |  |

**Table 6**. Physicians’ assessment of patients' use of online health knowledge.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| very positive | 9 | 2,9 | 2,9 |
| positive | 55 | 17,9 | 20,8 |
| meaningless | 68 | 22,1 | 43,0 |
| negative | 128 | 41,7 | 84,7 |
| very negative | 47 | 15,3 | 100,0 |
| Total | 307 | 100,0 |  |

**Table 7.** Physicians’ opinion that the Internet will revolutionize healthcare.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| rather yes | 116 | 37,8 | 37,8 |
| yes | 123 | 40,1 | 77,9 |
| I do not know | 52 | 16,9 | 94,8 |
| no | 4 | 1,3 | 96,1 |
| rather not | 12 | 3,9 | 100,0 |
| Total | 307 | 100,0 |  |

**Table 8**. Physicians’ feelings about new technologies in the modern life.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| Fascinates me | 25 | 8,1 | 8,1 |
| I'm interested in this | 72 | 23,5 | 31,6 |
| It's helpful | 176 | 57,3 | 88,9 |
| I have no opinion | 6 | 2,0 | 90,9 |
| I am concerned about this phenomenon | 19 | 6,2 | 97,1 |
| I am terrified of this phenomenon | 9 | 2,9 | 100,0 |
| Total | 307 | 100,0 |  |

**Table 9.** Opinion about the general quality of online health information.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| reliable | 10 | 3,3 | 3,3 |
| usually reliable | 55 | 17,9 | 21,2 |
| sometimes reliable | 164 | 53,4 | 74,6 |
| un reliable | 57 | 18,6 | 93,2 |
| no opinion | 21 | 6,8 | 100,0 |
| Total | 307 | 100,0 |  |

**Table 10.** Opinion on patients' experience of health benefits as a result of access to online health information.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| often | 16 | 5,2 | 5,2 |
| sometimes | 106 | 34,5 | 39,7 |
| seldom | 73 | 23,8 | 63,5 |
| never | 13 | 4,2 | 67,8 |
| I do not have such a knowledge | 99 | 32,2 | 100,0 |
| Total | 307 | 100,0 |  |

**Table 11.** An assessment of patients' use of online health knowledge

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **%** | **% cumulative** |
| very positive | 9 | 2,9 | 2,9 |
| positive | 55 | 17,9 | 20,8 |
| meaningless | 68 | 22,1 | 43,0 |
| negative | 128 | 41,7 | 84,7 |
| very negative | 47 | 15,3 | 100,0 |
| Total | 307 | 100,0 |  |

**Dr. Google and indicators**

The conducted analyses also showed that respondents working in the diagnostic laboratory had higher digital skills (-0.23) than those not working there (0.01). Physicians employed in the hospital presented a higher need for training (0.16) but hospital personnel (-0.26), not working in a primary healthcare (-0.23), conducting a private practice (-0.44), providing 24/7 medical assistance (-0.54), and working in the diagnostic laboratory (-0.89), rated higher the impact of the Internet and new technologies on healthcare and the modern life. The recommendation of e-Health solutions was also higher among respondents employed in hospitals (-0.30) and physicians not working in primary healthcare (-0.36). The assessment of e-Health solutions in relation to the patient was higher in hospital personnel (-0.32), not working in a primary healthcare (-0.33), and working in a diagnostic laboratory (-0.35). The evaluation of e-health solutions in relation to a medical facility was higher in respondents not working in emergency services (-0.02) and people working in 24-hour medical assistance (-0.37).

**Table 12.** Correlations between type of workplace, and digital literacy and other e-Health indicators (means)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Workplace | | Digital competence - skills | | Digital competences - the need for training | | Assessment of the impact of the Internet and new technologies on healthcare and the life of modern man | | Recommendation of e-health solutions | | Evaluation of e-health solutions - patient | | Evaluation of e-health solutions - medical facility | |
| Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| hospital | no | 0,04 | 1,09 | -0,09 | 1,00 | 0,14 | 1,05 | 0,16 | 1,01 | 0,17 | 1,13 | 0,06 | 1,08 |
| yes | -0,08 | 0,80 | 0,16 | 0,99 | -0,26 | 0,84 | -0,30 | 0,91 | -0,32 | 0,59 | -0,10 | 0,83 |
| primary healthcare | no | -0,03 | 0,86 | 0,18 | 1,26 | -0,23 | 0,96 | -0,36 | 0,90 | -0,33 | 0,60 | -0,13 | 0,87 |
| yes | 0,01 | 1,03 | -0,04 | 0,93 | 0,05 | 1,00 | 0,08 | 1,01 | 0,07 | 1,06 | 0,03 | 1,03 |
| private practice | no | 0,01 | 1,04 | -0,03 | 0,96 | 0,09 | 1,05 | 0,04 | 1,01 | 0,05 | 1,06 | 0,00 | 1,04 |
| yes | -0,06 | 0,81 | 0,14 | 1,16 | -0,44 | 0,56 | -0,19 | 0,91 | -0,23 | 0,60 | 0,00 | 0,82 |
| family practice | no | 0,00 | 1,00 | 0,01 | 0,99 | -0,01 | 1,00 | 0,00 | 1,01 | 0,01 | 1,00 | 0,00 | 1,00 |
| yes | -0,10 | 0,87 | -0,72 | 1,31 | 0,59 | 1,04 | 0,13 | 0,40 | -0,62 | 0,64 | 0,25 | 1,02 |
| ambulance | no | -0,01 | 1,00 | 0,00 | 1,00 | 0,01 | 1,00 | 0,01 | 1,00 | 0,00 | 1,00 | -0,02 | 0,99 |
| yes | 0,89 | 0,00 | -0,64 | 0,00 | -1,10 | 0,00 | -1,33 | 0,00 | -0,36 | 0,00 | 2,34 | 0,00 |
| 24/7 medical assistance | no | 0,03 | 1,01 | 0,00 | 1,01 | 0,03 | 1,00 | 0,01 | 1,02 | 0,00 | 0,98 | 0,02 | 1,03 |
| yes | -0,44 | 0,80 | 0,03 | 0,79 | -0,54 | 0,76 | -0,11 | 0,63 | 0,01 | 1,34 | -0,37 | 0,21 |
| diagnostic laboratory | no | 0,01 | 1,01 | -0,01 | 1,01 | 0,03 | 1,00 | 0,00 | 1,01 | 0,01 | 1,01 | 0,01 | 1,01 |
| yes | -0,23 | 0,21 | 0,40 | 0,57 | -0,89 | 0,31 | 0,13 | 0,37 | -0,35 | 0,35 | -0,19 | 0,72 |

**Table 13.** Correlations between type of workplace, and digital literacy and other e-Health indicators (t-test)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Workplace | | Digital competence - skills | Digital competences - the need for training | Assessment of the impact of the Internet and new technologies on healthcare and the life of modern man | Recommendation of e-health solutions | Evaluation of e-health solutions - patient | Evaluation of e-health solutions - medical facility |
| hospital | t | 1,129 | -2,080 | 3,663 | 3,970 | 5,100 | 1,443 |
| *p* | 0,2599 | 0,0383 | 0,0003 | 0,0001 | 0,0000 | 0,1501 |
| primary healthcare | t | -0,230 | 1,231 | -1,970 | -3,020 | -3,863 | -1,175 |
| *p* | 0,8183 | 0,2223 | 0,0498 | 0,0027 | 0,0002 | 0,2430 |
| private practice | t | 0,545 | -1,105 | 5,279 | 1,532 | 1,900 | -0,033 |
| *p* | 0,5869 | 0,2699 | 0,0000 | 0,1265 | 0,0584 | 0,9741 |
| family practice | t | 0,211 | 1,442 | -1,191 | -0,257 | 1,252 | -0,506 |
| *p* | 0,8334 | 0,1503 | 0,2345 | 0,7976 | 0,2114 | 0,6133 |
| ambulance | t | -1,258 | 0,914 | 1,557 | 1,891 | 0,509 | -3,369 |
| *p* | 0,2095 | 0,3612 | 0,1204 | 0,0595 | 0,6110 | 0,0009 |
| 24/7 medical assistance | t | 1,911 | -0,110 | 2,387 | 0,751 | -0,036 | 5,014 |
| *p* | 0,0569 | 0,9126 | 0,0176 | 0,4605 | 0,9716 | 0,0000 |
| diagnostic laboratory | t | 2,600 | -1,224 | 7,818 | -1,010 | 2,730 | 0,566 |
| *p* | 0,0160 | 0,2219 | 0,0000 | 0,3324 | 0,0176 | 0,5717 |

t—Student’s t-test