**Supplementary Material**

**Reexamining the relationship between shift work and health behavior: Do fluid intelligence, socio-economic status, and self-control moderate the relation?**

Myriam A. Baum, Frank M. Spinath, and Elisabeth Hahn

Department of Psychology, Saarland University, 66123 Saarbrücken, Germany

**Author Note**

Correspondence concerning this article should be addressed to Myriam A. Baum, Department of Psychology, Saarland University, Campus A2 4, D-66123 Saarbruecken, Germany, phone: +49-681-302-4792, e-mail: myriam.baum@uni-saarland.de

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| **Table S1** | | | | | | | | | | | | | | | | | | | | | | | |
| *Descriptive statistics and correlations for the study variables* | | | | | | | | | | | | | | | | | | | | | | | |
| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | |
| 1. Age | 41.47 | 11.66 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 2. Gender | 1.55 | 0.50 | **-.05\*** | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 3. Shift work | 0.17 | 0.37 | **-.12\*** | -.02 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 4. Smoking | 1.16 | 1.52 | -.02 | **-.08\*\*** | **.10\*\*** | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 5. Alcohol consumption | 1.28 | 1.20 | **-.08\*** | **-.14\*\*** | -.03 | .11 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 6. Preventive health care | 1.74 | 0.79 | **.11\*** | **.18\*\*** | **-.07\*\*** | **-.30\*** | -.04 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 7. Subjective state of health | 3.15 | 0.99 | **-.14\*\*** | **-.06\*** | -.02 | -.12 | -.04 | .07 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 8. Fluid intelligence | 9.31 | 1.69 | **-.13\*\*** | **-.06\*\*** | **-.11\*\*** | **-.18\*\*** | .02 | 00 | **.12\*\*** | - |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 9. Socio-economic status | -0.05 | 0.71 | **.29\*\*** | **.11\*\*** | **-.19\*\*** | **-.21\*\*** | -.01 | **.16\*\*** | **.05\*** | **.23\*\*** | - |  |  |  |  |  |  |  |  |  |  |  |  | |
| 10. Self-control | 2.27 | 0.84 | **.19\*\*** | **.10\*\*** | **-.08\*\*** | **-.11\*\*** | **-.12\*\*** | **.20\*\*** | .07 | -.03 | **.15\*\*** | - |  |  |  |  |  |  |  |  |  |  |  | |
| 11. Occupational status | 2.35 | 0.92 | **-.14\*\*** | -.01 | **-.11\*\*** | **-.06\*** | .04 | .02 | **.08\*\*** | **.13\*\*** | **.05\*\*** | -.01 | - |  |  |  |  |  |  |  |  |  |  | |
| \* *p* < .05 \*\**p* < .01 | | | | | | | | | | | | | | | | | | | | | | | | |

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| **Table S1** (continued) | | | | | | | | | | | | | | | | | | | | | | | |
| *Descriptive statistics and correlations for the study variables* | | | | | | | | | | | | | | | | | | | | | | | |
| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | |
| 12. Shift work x gender | 0.26 | 0.61 | **-.12\*\*** | **.12\*\*** | **.94\*\*** | **.08\*\*** | -.03 | **-.05\*** | -.03 | **-.11\*** | **-.13** | **-.07\*\*** | **-.09\*\*** | - |  |  |  |  |  |  |  |  |  | |
| 13.Shift work x fluid intelligence | 1.48 | 3.40 | **-.13\*\*** | -.02 | **.98\*\*** | **.08\*\*** | -.02 | **-.06\*\*** | -.02 | -.01 | **-.17\*\*** | **-.09\*\*** | **-.10\*\*** | **.92\*\*** | - |  |  |  |  |  |  |  |  | |
| 14. Shift work x socio-economic status | -0.06 | 0.36 | **.13\*\*** | **.13\*\*** | **-.42\*\*** | **-.12\*\*** | .00 | **.09\*\*** | .02 | **.11\*\*** | **.43\*\*** | **.05\*** | **.06\*\*** | **-.29\*\*** | **-.37\*\*** | - |  |  |  |  |  |  |  | |
| 15. Shift work x self-control | 0.35 | 0.86 | **-.08\*\*** | .00 | **-.92\*\*** | **.08\*\*** | -.03 | -.04 | -.01 | **-.12\*\*** | **-.17\*\*** | **.08\*\*** | **-.12\*\*** | **.87\*\*** | **.89\*\*** | **-.37\*\*** | - |  |  |  |  |  |  | |
| 16. Gender x fluid intelligence | 14.36 | 5.24 | **-.11\*\*** | **.85\*\*** | **-.07\*\*** | **-.16\*\*** | **-.12\*\*** | **.17\*\*** | .01 | **.44\*\*** | **.21\*\*** | **.07\*\*** | **.06\*\*** | **.05\*\*** | -.02 | **.16\*\*** | **-.06\*\*** | - |  |  |  |  |  | |
| 17. Gender x socio-economic status | -0.02 | 1.08 | **.27\*\*** | **.09\*\*** | **-.16\*\*** | **-.20\*\*** | -.01 | **.16\*\*** | **.07\*\*** | **.22\*\*** | **.95\*\*** | **.14\*\*** | .04 | **-.13\*\*** | -.14 | **.40\*\*** | **-.14\*\*** | **.19\*\*** | - |  |  |  |  | |
| 18. Gender x self-control | 3.56 | 1.85 | **.09\*\*** | **.68\*\*** | **-.07\*\*** | **-.12\*\*** | **-.16\*\*** | **.26\*\*** | .02 | **-.06\*** | **.17\*\*** | **.77\*\*** | -.01 | .02 | **-.08\*\*** | **.12\*\*** | **.05\*** | **.57\*\*** | **.16\*\*** | - |  |  |  | |
| 19. Shift work x gender x fluid intelligence | 2.27 | 5.49 | **-.14\*\*** | **.12\*\*** | **.92\*\*** | **.06\*\*** | -.03 | **-.04\*** | -.02 | -.02 | **-.12\*\*** | **-.08\*\*** | **-.08\*\*** | **.98\*\*** | **.94\*\*** | **-.26\*\*** | **.85\*\*** | **.10\*\*** | -.11\*\* | .01 | - |  |  | |
| 20. Shift work x gender x socio-economic status | -0.07 | 0.45 | **.14\*\*** | **.07\*\*** | **-.34\*\*** | **-.11\*\*** | .00 | **.08\*\*** | .03 | **.10\*\*** | **.40\*\*** | **.05\*** | .02 | **-.27\*\*** | **-.30\*\*** | **.94\*\*** | **-.29\*\*** | **.10\*\*** | **.42\*\*** | **.08\*\*** | **-.23\*\*** | - |  | |
| 21. Shift work x gender x self- control | 0.54 | 1.41 | **-.09\*\*** | **.12\*\*** | **.87\*\*** | **.06\*\*** | -.04 | -.02 | -.01 | **-.12\*\*** | **-.11\*\*** | **.08\*\*** | **-.09\*\*** | **.93\*\*** | **.84\*\*** | **-.25\*\*** | **.94\*\*** | **.05\*** | **-.11\*\*** | **.13\*\*** | **.90\*\*** | **-.22\*\*** | - | |
| \* *p* < .05 \*\**p* < .01 | | | | | | | | | | | | | | | | | | | | | | | | |

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| **Table S2** | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Smoking | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | -.03 | 0.04 | [-0.10, 0.04] | -.02 | [-0.07, 0.03] | .418 | .08 | [0.04, 0.12] | .08 | [0.04, 0.12] |
| Gender | **-.12** | **0.03** | **[-0.18, -0.06]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Step 2 | Age | -.01 | 0.04 | [-0.08, 0.06] | -.01 | [-0.06, 0.04] | .728 | .12 | [0.08, 0.16] | .04 | [0.01, 0.08] |
| Gender | **-.12** | **0.03** | **[-0.18, -0.06]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Shift work | **.38** | **0.09** | **[0.21, 0.56]** | **.09** | **[0.05, 0.14]** | **<.001** |
| Step 3 | Age | -.05 | 0.03 | [-0.12, 0.01] | -.04 | [-0.08, 0.01] | .115 | .22 | [0.18, 0.26] | .18 | [0.14, 0.22] |
| Gender | **-.14** | **0.03** | **[-0.20, -0.08]** | **-.09** | **[-0.13, -0.05]** | **<.001** |
| Shift work | **.29** | **0.09** | **[0.12, 0.46]** | **.07** | **[0.03, 0.12]** | **.001** |
| Fluid intelligence | **-.17** | **0.02** | **[-0.21, -0.12]** | **-.18** | **[-0.23, -0.14]** | **<.001** |
| Step 4 | Age | -.05 | 0.03 | [-0.12, 0.01] | -.04 | [-0.08, 0.01] | .116 | .22 | [0.18, 0.26] | .00 | [-0.04, 0.04] |
| Gender | **-.14** | **0.03** | **[-0.20, -0.08]** | **-.09** | **[-0.13, -0.05]** | **<.001** |
| Shift work | .12 | 0.41 | [-0.68, 0.93] | .03 | [-0.17, 0.23] | .762 |
| Fluid intelligence | **.29** | **0.02** | **[-0.22, -0.12]** | **-.19** | **[-0.23, -0.14]** | **<.001** |
| Shift work x fluid intelligence | -.17 | 0.05 | [-0.07, 0.11] | .04 | [-0.16, 0.24] | .689 |
| Step 5 | Age | -.05 | 0.03 | [-0.12, 0.13] | -.04 | [-0.08, 0.01] | .112 | .22 | [0.18, 0.26] | .03 | [-0.01, 0.07] |
| Gender | -.11 | 0.23 | [-0.59, 0.36] | -.08 | [-0.40, 0.24] | .629 |
| Shift work | .47 | 1.75 | [-3.21, 4.14] | .11 | [-0.80, 1.02] | .793 |
| Fluid intelligence | **-.16** | **0.08** | **[-0.32, -0.01]** | **-.18** | **[-0.47, 0.00]** | **.043** |
| Shift work x fluid intelligence | -.01 | 0.19 | [-0.42, 0.40] | -.01 | [-0.94, 0.91] | .968 |
| Shift work x gender | -.22 | 1.10 | [-2.54, 2.09] | -.09 | [-1.02, 0.85] | .841 |
| Gender x fluid intelligence | .00 | 0.05 | [-0.11, 0.10] | -.01 | [-0.36, 0.34] | .939 |
| Shift work x gender x fluid intelligence | .02 | 0.12 | [-0.24, 0.27] | .06 | [-0.88, 0.99] | .888 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |
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| **Table S2** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Alcohol consumption | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **-.10** | **0.03** | **[-0.17, -0.04]** | **-.09** | **[-0.15, -0.03]** | **.002** | .16 | [0.12, 0.20] | .16 | [0.12, 0.20] |
| Gender | **-.17** | **0.02** | **[-0.22, -0.12]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Step 2 | Age | **-.11** | **0.03** | **[-0.17, -0.05]** | **-.09** | **[-0.15, -0.03]** | **.002** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.17** | **0.03** | **[-0.22, -0.12]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Shift work | -.12 | 0.07 | [-0.26, 0.01] | -.04 | [-0.08, 0.00] | .070 |
| Step 3 | Age | **-.11** | **0.03** | **[-0.17, -0.05]** | **-.09** | **[-0.15, -0.04]** | **.001** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.17** | **0.02** | **[-0.22, -0.12]** | **-.14** | **[-0.18. -0.10]** | **<.001** |
| Shift work | -.13 | 0.07 | [-0.26, 0.01] | -.04 | [-0.08, 0.00] | .067 |
| Fluid intelligence | -.01 | 0.02 | [-0.05, 0.03] | -.01 | [-0.07, 0.05] | .690 |
| Step 4 | Age | **-.11** | **0.03** | **[-0.17, -0.05]** | **-.09** | **[-0.15, -0.04]** | **.001** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.17** | **0.02** | **[-0.22, -0.12]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Shift work | -.20 | 0.40 | [-1.00, 0.60] | -.06 | [-0.32, 0.19] | .617 |
| Fluid intelligence | -.01 | 0.02 | [-0.05, 0.03] | -.01 | [-0.07, 0.05] | .651 |
| Shift work x fluid intelligence | .01 | 0.04 | [-0.08, 0.10] | .02 | [-0.23, 0.27] | .853 |
| Step 5 | Age | **-.11** | **0.03** | **[-0.17, -0.02]** | **-.09** | **[-0.15, -0.04]** | **.001** | .17 | [0.13, 0.21] | .03 | [-0.01, 0.07] |
| Gender | -.19 | 0.20 | [-0.59, 0.22] | -.16 | [-0.05, 0.19] | .354 |
| Shift work | -.92 | 1.28 | [-3.55, 1.70] | -.29 | [-1.13, 0.54] | .477 |
| Fluid intelligence | -.01 | 0.07 | [-0.14, 0.12] | -.01 | [-0.21, 0.18] | .886 |
| Shift work x fluid intelligence | .06 | 0.01 | [-0.23, 0.35] | .17 | [-0.67, 1.00] | .696 |
| Shift work x gender | .47 | 0.79 | [-1.14, 2.08] | .25 | [-0.59, 1.08] | .554 |
| Gender x fluid intelligence | .00 | 0.04 | [-0.09, 0.09] | .00 | [-0.39, 0.39] | .992 |
| Shift work x gender x fluid intelligence | -.03 | 0.09 | [-0.21, 0.15] | -.15 | [-0.98, 0.68] | .724 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S2** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Preventive health care | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **.10** | **0.02** | **0.06, 0.13** | **.12** | **[0.07, 0.17]** | **<.001** | .22 | [0.18, 0.26] | .22 | [0.18, 0.26] |
| Gender | **.15** | **0.02** | **0.12, 0.18** | **.19** | **[0.14, 0.24]** | **<.001** |
| Step 2 | Age | **.09** | **0.02** | **0.06, 0.13** | **.11** | **[0.06, 0.17]** | **<.001** | .22 | [0.18, 0.26] | .00 | [-0.04, 0.04] |
| Gender | **.15** | **0.02** | **0.12, 0.18** | **.19** | **[0.14, 0.23]** | **<.001** |
| Shift work | **-.11** | **0.04** | **-0.19, -0.02** | **-.05** | **[-0.09, -0.01]** | **.013** |
| Step 3 | Age | **.09** | **0.02** | **0.06, 0.13** | **.12** | **[0.07, 0.17]** | **<.001** | .23 | [0.19, 0.27] | .00 | [-0.04, 0.04] |
| Gender | **.15** | **0.02** | **0.12, 0.18** | **.19** | **[0.15, 0.24]** | **<.001** |
| Shift work | **-.10** | **0.04** | **-0.19, -0.02** | **-.05** | **[-0.09, -0.01]** | **.018** |
| Fluid intelligence | .01 | 0.01 | -0.02, 0.04 | .02 | [-0.03, 0.08] | .369 |
| Step 4 | Age | **.09** | **0.02** | **0.06, 0.13** | **.12** | **[0.07, 0.17]** | **<.001** | .23 | [0.19, 0.27] | .00 | [-0.04, 0.04] |
| Gender | **.15** | **0.02** | **0.12, 0.18** | **.19** | **[0.15, 0.23]** | **<.001** |
| Shift work | -.36 | 0.22 | -0.79, 0.07 | -.17 | [-0.37, 0.03] | .101 |
| Fluid intelligence | .01 | 0.01 | -0.02, 0.03 | .01 | [-0.05, 0.07] | .665 |
| Shift work x fluid intelligence | .03 | 0.02 | -0.02, 0.08 | .12 | [-0.08, 0.32] | .225 |
| Step 5 | Age | **.09** | **0.02** | **0.06, 0.13** | **.12** | **[0.07, 0.17]** | **<.001** | .23 | [0.19, 0.27] | .00 | [-0.04, 0.04] |
| Gender | \_.05 | 0.12 | -0.30, 0.21 | -.06 | [-0.37, 0.26] | .704 |
| Shift work | -.81 | 0.81 | -2.45, 0.83 | -.37 | [-1.12, 0.37] | .326 |
| Fluid intelligence | -.06 | 0.04 | -0.14, 0.02 | -.13 | [-0.29, .003] | .112 |
| Shift work x fluid intelligence | .09 | 0.09 | -0.09, 0.27 | .38 | [-0.36, 1.13] | .310 |
| Shift work x gender | .29 | 0.53 | -0.79, 1.36 | .21 | [-0.59, 1.02] | .588 |
| Gender x fluid intelligence | .04 | 0.03 | -0.10, 0.10 | .29 | [-0.05, 0.62] | .106 |
| Shift work x gender x fluid intelligence | -.04 | 0.06 | -0.16, 0.08 | -.28 | [-1.08, 0.53] | .490 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S3** | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with socio-economic status as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Smoking | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | -.03 | 0.04 | [-0.10, 0.04] | -.02 | [-0.07, 0.03] | .418 | .08 | [0.04, 0.12] | .10 | [0.03, 0.14] |
| Gender | **-.12** | **0.03** | **[-0.18, -0.06]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Step 2 | Age | -.01 | 0.04 | [-0.08, 0.06] | -.01 | [-0.06, 0.04] | .728 | .13 | [0.09, 0.17] | .10 | [0.06, 0.14] |
| Gender | **-.12** | **0.03** | **[-0.18, -0.06]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Shift work | **.38** | **0.09** | **[0.21, 0.56]** | **.09** | **[0.05, 0.14]** | **<.001** |
| Step 3 | Age | .08 | .04 | [0.00, 0.15] | .05 | [0.00, 0.10] | .058 | .23 | [0.19, 0.27] | .20 | [0.16, 0.24] |
| Gender | **-.08** | **.03** | **[-0.14, -0.02]** | **-.05** | **[-0.09, -0.01]** | **.012** |
| Shift work | **.26** | **.09** | **[0.08, 0.43]** | **.06** | **[0.02, 0.11]** | **.005** |
| Socio-economic status | **-.44** | **.05** | **[-0.55, -0.34]** | **-.21** | **[-0.25, -0.17]** | **<.001** |
| Step 4 | Age | .08 | .04 | [0.00, 0.15] | .05 | [0.00, 0.10] | .058 | .23 | [0.19, 0.27] | .00 | [-0.04, 0.04] |
| Gender | **-.08** | **.03** | **[-0.14, -0.02]** | **-.05** | **[-0.09, -0.01]** | **.013** |
| Shift work | **.26** | **.10** | **[0.06, 0.45]** | **.06** | **[0.01, 0.11]** | **.011** |
| Socio-economic status | **-.44** | **.06** | **[-0.56, -0.33]** | **-.21** | **[-0.26, 0.16]** | **<.001** |
| Shift work x socio-economic status | .00 | .12 | [-0.24, 0.24] | .00 | [-0.05, 0.05] | .987 |
| Step 5 | Age | **.08** | **.04** | **[0.00, 0.16]** | **.05** | **[0.00, 0.10]** | **.049** | .23 | [0.19, 0.27] | .00 | [-0.04, 0.04] |
| Gender | **-.09** | **.03** | **[-0.15, -0.02]** | **-.06** | **[-0.10, -0.01]** | **.011** |
| Shift work | -22 | .35 | [-0.36, 1.01] | .08 | [-0.09, 0.25] | .346 |
| Socio-economic status | -.35 | .15 | [-0.82, 0.24] | -.25 | [-0.39, -0.11] | <.001 |
| Shift work x socio-economic status | .54 | .44 | [-0.34, 1.41] | .11 | [-0.07, 0.29] | .225 |
| Shift work x gender | -.03 | .20 | [-0.41, 0.36] | -.01 | [-0.16, 0.14] | .893 |
| Gender x socio-economic status | .06 | .10 | [-0.14, 0.26] | .04 | [-0.10, 0.19] | .556 |
| Shift work x gender x socio-economic status | -.36 | .27 | [-0.89, 0.17] | -.11 | [-0.27, 0.05] | .177 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S3** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with socio-economic status as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Alcohol consumption | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **-.10** | **0.03** | **[-0.17, -0.04]** | **-.09** | **[-0.15, -0.03]** | **.002** | .16 | [0.12, 0.20] | .17 | [0.13, 0.21] |
| Gender | **-.17** | **0.02** | **[-0.22, -0.12]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Step 2 | Age | **-.11** | **0.03** | **[-0.17, -0.05]** | **-.09** | **[-0.15, -0.03]** | **.002** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.17** | **0.02** | **[-0.22, -0.12]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Shift work | -.12 | 0.07 | [-0.26, 0.01] | -.04 | [-0.08, 0.00] | .070 |
| Step 3 | Age | **-.12** | **.03** | **[-0.19, -0.05]** | **-.10** | **[-0.17, -0.03]** | **.003** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.17** | **.02** | **[-0.22, -0.13]** | **-.15** | **[-0.19, -0.10]** | **<.001** |
| Shift work | -.11 | .07 | [-0.25, 0.03] | -.03 | [-0.08, 0.01] | .115 |
| Socio-economic status | .04 | .04 | [-0.04, 0.13] | .03 | [-0.03, 0.08] | .322 |
| Step 4 | Age | **-.12** | **.03** | **[-0.19, -0.05]** | **-.10** | **[-0.17, -0.03]** | **.003** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.18** | **.02** | **[-0.22, -0.13]** | **-.15** | **[-0.19, -0.11]** | **<.001** |
| Shift work | -.10 | .08 | [-0.25, 0.05] | -.03 | [-0.08, 0.02] | .191 |
| Socio-economic status | .04 | .05 | [-0.05, 0.13] | .02 | [-0.03, 0.08] | .410 |
| Shift work x socio-economic status | .04 | .09 | [-0.15, 0.22] | .01 | [-0.04, 0.06] | .696 |
| Step 5 | Age | **-.12** | **.03** | **[-0.19, -0.04]** | **-.10** | **[-0.17, -0.03]** | **.003** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.19** | **.03** | **[-0.24, -0.14]** | **-.16** | **[-0.20, -0.11]** | **<.001** |
| Shift work | -.27 | .29 | [-0.85, 0.31] | -.08 | [-0.26, 0.09] | .360 |
| Socio-economic status | .04 | .23 | [-0.20, 0.28] | .02 | [-0.12, 0.16] | .733 |
| Shift work x socio-economic status | .27 | .34 | [-0.40, 0.94] | .07 | [-0.10, 0.24] | .424 |
| Shift work x gender | .12 | .17 | [-0.22, 0.45] | .06 | [-0.11, 0.22] | .490 |
| Gender x socio-economic status | .00 | .08 | [-0.17, 0.16] | .00 | [-0.15, 0.15] | .978 |
| Shift work x gender x socio-economic status | -.18 | .21 | [-0.59, 0.23] | -.07 | [-0.23, 0.09] | .394 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S3** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with socio-economic status as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Preventive health care | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **.10** | **0.02** | **[0.06, 0.13]** | **.12** | **[0.07, 0.17]** | **<.001** | .22 | [0.18, 0.23] | .22 | [0.18, 0.23] |
| Gender | **.15** | **0.02** | **[0.12, 0.18]** | **.19** | **[0.14, 0.24]** | **<.001** |
| Step 2 | Age | **.09** | **0.02** | **[0.06, 0.13]** | **.11** | **[0.06, 0.17]** | **<.001** | .23 | [0.19, 0.27] | .00 | [-0.04, 0.04] |
| Gender | **.15** | **0.02** | **[0.12, 0.18]** | **.19** | **[0.14, 0.23]** | **<.001** |
| Shift work | **-.11** | **0.04** | **[-0.19, -0.02]** | **-.05** | **[-0.09, -0.01]** | **.013** |
| Step 3 | Age | **.07** | **.02** | **[0.03, 0.11]** | **.08** | **[0.03, 0.14]** | **.002** | .25 | [0.21, 0.29] | .10 | [0.06, 0.14] |
| Gender | **.14** | **.02** | **[0.11, 0.17]** | **.17** | **[0.13, 0.22]** | **<.001** |
| Shift work | -.07 | .04 | [-0.16, 0.01] | -.03 | [-0.07, 0.01] | .094 |
| Socio-economic status | **.13** | **.03** | **[0.07, 0.18]** | **.11** | **[0.07, 0.16]** | **<.001** |
| Step 4 | Age | **.07** | **.02** | **[0.03, 0.11]** | **.08** | **[0.03, 0.14]** | **.002** | .25 | [0.21, 0.29] | .00 | [-0.04, 0.04] |
| Gender | **.14** | **.02** | **[0.11, 0.17]** | **.18** | **[0.13, 0.22]** | **<.001** |
| Shift work | -.08 | .05 | [-0.17, 0.02] | -.04 | [-0.08, 0.01] | .109 |
| Socio-economic status | **.13** | **.03** | **[0.07, 0.19]** | **.11** | **[0.07, 0.16]** | **<.001** |
| Shift work x socio-economic status | -.01 | .07 | [-0.15, 0.13] | -.01 | [-0.06, 0.05] | .855 |
| Step 5 | Age | **.07** | **.02** | **[0.03, 0.10]** | **.08** | **[0.03, 0.14]** | **.002** | .25 | [0.21, 0.29] | .00 | [-0.04, 0.04] |
| Gender | **.15** | **.02** | **[0.12, 0.18]** | **.19** | **[]0.14, 0.24** | **<.001** |
| Shift work | .24 | .18 | [-0.10, 0.59] | .11 | [-0.05, 0.27] | .169 |
| Socio-economic status | .01 | .08 | [-0.16, 0.17] | .01 | [-0.14, 0.16] | .926 |
| Shift work x socio-economic status | .29 | .24 | [-0.19, 0.78] | .11 | [-0.07, 0.29] | .229 |
| Shift work x gender | -.19 | .10 | [-0.39, 0.01] | -.15 | [-0.29, 0.00] | .061 |
| Gender x socio-economic status | .08 | .06 | [-0.04, 0.20] | .11 | [-0.05, 0.27] | .176 |
| Shift work x gender x socio-economic status | -.18 | .14 | [-0.47, 0.10] | -.10 | [-0.26, 0.06] | .205 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S4** | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with self-control as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Smoking | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | -.03 | 0.04 | [-0.10, 0.04] | -.02 | [-0.07, 0.03] | .418 | .08 | [0.04, 0.12] | .08 | [0.04, 0.12] |
| Gender | **-.12** | **0.03** | **[-0.18, -0.06]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Step 2 | Age | -.01 | 0.04 | [-0.08, 0.06] | -.01 | [-0.06, 0.04] | .728 | .12 | [0.08, 0.16] | .04 | [0.01, 0.08] |
| Gender | **-.12** | **0.03** | **[-0.18, -0.06]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Shift work | **.38** | **0.09** | **[0.21, 0.56]** | **.09** | **[0.05, 0.14]** | **<.001** |
| Step 3 | Age | .02 | 0.03 | [-0.05, 0.08] | .01 | [-0.04, 0.05] | .668 | .15 | [0.11, 0.19] | .10 | [0.06, 0.14] |
| Gender | **-.10** | **0.03** | **[-0.16, -0.04]** | **-.07** | **[-0.11, -0.03]** | **.002** |
| Shift work | **.36** | **0.09** | **[0.19, 0.53]** | **.09** | **[0.05, 0.13]** | **<.001** |
| Self-control | **-.18** | **0.06** | **[-0.29, -0.06]** | **-.10** | **[-0.17, -0.03]** | **.008** |
| Step 4 | Age | .02 | 0.03 | [-0.05, 0.08] | .01 | [-0.03, 0.05] | .659 | .16 | [0.12, 0.20] | .00 | [-0.04, 0.04] |
| Gender | **-.10** | **0.03** | **[-0.16, -0.04]** | **-.07** | **[-0.11, -0.03]** | **.002** |
| Shift work | .09 | 0.22 | [-0.34, 0.53] | .02 | [-0.08, 0.13] | .676 |
| Self-control | **-.20** | **0.06** | **[-0.32, -0.07]** | **-.11** | **[-0.18, -0.03]** | **.004** |
| Shift work x self-control | .13 | 0.10 | [-0.07, 0.32] | .07 | [-0.04, 0.18] | .206 |
| Step 5 | Age | .02 | 0.03 | [-0.05, 0.08] | .01 | [-0.03, 0.05] | .657 | .16 | [0.12, 0.20] | .00 | [-0.04, 0.04] |
| Gender | -.17 | 0.10 | [-0.37, 0.04] | -.11 | [-0.25, 0.02] | .104 |
| Shift work | -.19 | 0.75 | [-1.67, 1.28] | -.05 | [-0.41, 0.31] | .795 |
| Self-control | -.30 | 0.16 | [-0.62, 0.01] | -.17 | [-0.35, 0.01] | .061 |
| Shift work x self-control | .34 | 0.33 | [-0.31, 0.98] | .19 | [-0.18, 0.56] | .301 |
| Shift work x gender | .19 | 0.48 | [-0.76, 1.13] | .08 | [-0.30, 0.45] | .698 |
| Gender x self-control | .07 | 0.09 | [-0.11, 0.24] | .08 | [-0.13, 0.30] | .444 |
| Shift work x gender x self-control | -.14 | 0.21 | [-0.55, 0.28] | -.13 | [-0.51, 0.26] | .510 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S4** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with self-control as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Alcohol consumption | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **-.10** | **0.03** | **[-0.17, -0.04]** | **-.09** | **[-0.15, -0.03]** | **.002** | .16 | [0.12, 0.20] | .16 | [0.12, 0.20] |
| Gender | **-.17** | **0.02** | **[-0.22, -0.12]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Step 2 | Age | **-.11** | **0.03** | **[-0.17, -0.05]** | **-.09** | **[-0.15, -0.03]** | **.002** | .17 | [0.13, 0.21 | .00 | [-0.04, 0.04] |
| Gender | **-.17** | **0.02** | **[-0.22, -0.12]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Shift work | -.12 | 0.07 | [-0.26, 0.01] | -.04 | [-0.08, 0.00] | .070 |
| Step 3 | Age | **-.09** | **0.03** | **[-0.15, -0.03]** | **-.08** | **[-0.13, -0.02]** | **.006** | .19 | [0.15, 0.23] | .10 | [0.06, 0.14] |
| Gender | **-.16** | **0.02** | **[-0.21, -0.11]** | **-.13** | **[-0.17, -0.09]** | **<.001** |
| Shift work | **-.14** | **0.07** | **[-0.28, -0.01]** | **-.04** | **[-0.09, 0.00]** | **.042** |
| Self-control | **-.13** | **0.05** | **[-0.24, -0.02]** | **-.09** | **-0.18, -0.01** | **.024** |
| Step 4 | Age | **-.09** | **0.03** | **[-0.15, -0.03]** | **-.07** | **-0.13, -0.02** | **.006** | .19 | [0.15, 0.23] | .00 | [-0.04, 0.04] |
| Gender | **-.16** | **0.02** | **[-0.21, -0.11]** | **-.13** | **-0.17, -0.09** | **<.001** |
| Shift work | **-.41** | **0.20** | **[-0.81, -0.01]** | **-.13** | **[-0.26, 0.00]** | **.044** |
| Self-control | **-.15** | **0.05** | **[-0.26, -0.05]** | **-.11** | **[-0.19, -0.03]** | **.008** |
| Shift work x self-control | .13 | 0.08 | [-0.05, 0.30] | .09 | [-0.04, 0.22] | .163 |
| Step 5 | Age | **-.09** | **0.03** | **[-0.15, -0.03]** | **-.07** | **[-0.13, -0.02]** | **.007** | .20 | [0.16, 0.24] | .00 | [-0.04, 0.04] |
| Gender | **-.30** | **0.08** | **[-0.46. -0.13]** | **-.25** | **[-0.39, -0.10]** | **<.001** |
| Shift work | **-1.29** | **0.57** | **[-2.42, -0.16]** | **-.40** | **[-0.76, -0.04]** | **.026** |
| Self-control | **-.32** | **0.14** | **[-0.61, -0.03]** | **-.23** | **[-0.44, -0.01]** | **.032** |
| Shift work x self-control | .41 | 0.27 | [-0.13, 0.94] | .29 | [-0.10, 0.68] | .136 |
| Shift work x gender | .59 | 0.39 | [-0.19, 1.37] | .30 | [-0.10, 0.70] | .138 |
| Gender x self-control | .11 | 0.07 | [-0.04, 0.25] | .17 | [-0.06, 0.40] | .137 |
| Shift work x gender x self-control | -.19 | 0.18 | [-0.56, 0.19] | -.22 | [-0.66, 0.22] | .313 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S4** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with self-control as a moderator for the unstandardized variables (except for age and gender)* | | | | | | | | | | | |
|  |  | Preventive health care | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **.10** | **0.02** | **[0.06, 0.13]** | **.12** | **[0.07, 0.17]** | **<.001** | .22 | [0.18, 0.26] | .22 | [0.18, 0.26] |
| Gender | **.15** | **0.02** | **[0.12, 0.18]** | **.19** | **[0.14, 0.24]** | **<.001** |
| Step 2 | Age | **.09** | **0.02** | **[0.06, 0.13]** | **.11** | **[0.06, 0.17]** | **<.001** | .22 | [0.18, 0.26] | .00 | [-0.04, 0.04] |
| Gender | **.15** | **0.02** | **[0.12, 0.18]** | **.19** | **[0.14, 0.23]** | **<.001** |
| Shift work | **-.11** | **0.04** | **[-0.19, -0-02]** | **-.05** | **[-0.09, -0.01]** | **.013** |
| Step 3 | Age | **.07** | **0.02** | **[0.03, 0.10]** | **.08** | **[0.04, 0.13]** | **<.001** | .28 | [0.24, 0.32] | .16 | [0.12, 0.20] |
| Gender | **.14** | **0.02** | **[0.11, 0.17]** | **.17** | **[0.13, 0.21]** | **<.001** |
| Shift work | **-.09** | **0.04** | **[-0.17, 0.00]** | **-.04** | **[-0.08, 0.00]** | **.040** |
| Self-control | **.16** | **0.02** | **[0.10, 0.21]** | **.16** | **[0.10, 0.23]** | **<.001** |
| Step 4 | Age | **.07** | **0.02** | **[0.03, 0.10]** | **.08** | **[0.04, 0.13]** | **<.001** | .28 | [0.24, 0.32] | .00 | [-0.04, 0.04] |
| Gender | **.14** | **0.02** | **[0.10. 0.17]** | **.17** | **[0.13, 0.21]** | **<.001** |
| Shift work | .04 | 0.12 | [-0.21, 0.28] | .02 | [-0.10, 0.13] | .763 |
| Self-control | **.16** | **0.03** | **[0.11, 0.22]** | **.17** | **[0.10, 0.25]** | **<.001** |
| Shift work x self-control | -.06 | 0.05 | [-0.17, 0.05] | -.06 | [-0.18, 0.05] | .287 |
| Step 5 | Age | **.07** | **0.02** | **[0.03, 0.10]** | **.08** | **[0.04, 0.13** | **<.001** | .28 | [0.24, 0.32] | .00 | [-0.04, 0.04] |
| Gender | **.11** | **0.05** | **[0.00, 0.21]** | **.19** | **[0.00, 0.26]** | **.047** |
| Shift work | .01 | 0.38 | [-0.74, 0.75] | .00 | [-0.35, 0.35] | .984 |
| Self-control | .11 | 0.07 | [-0.03, 0.25] | .12 | [-0.03, 0.27] | .121 |
| Shift work x self-control | .01 | 0.17 | [-0.32, 0.34] | .01 | [-0.34, 0.37] | .945 |
| Shift work x gender | .02 | 0.26 | [-0.50, 0.53] | .01 | [-0.38, 0.40] | .951 |
| Gender x self-control | .03 | 0.04 | [-0.05, 0.12] | .08 | [-0.12, 0.28] | .448 |
| Shift work x gender x self-control | -.04 | 0.11 | [-0.27, 0.18] | -.08 | [-0.48, 0.32] | .702 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S5** | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence, socio-economic status, and self-control (standardized variables)* | | | | | | | | | | | |
|  |  | Smoking | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | -.02 | .02 | [-0.07, 0.03] | -.02 | [-0.07, 0.03] | .416 | .08 | [0.04, 0.12] | .10 | [0.06, 0.14] |
| Gender | **-.08** | **.02** | **[-0.12, -0.04]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Step 2 | Age | -.01 | .02 | [-0.06, 0.04] | -.01 | [-0.06, 0.04] | .722 | .13 | [0.09, 0.17] | .10 | [0.06, 0.14] |
| Gender | **-.08** | **.02** | **[-0.12, -0.04]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Shift work | **.09** | **.02** | **[0.05, 0.14]** | **.09** | **[0.05, 0.14]** | **<.001** |
| Step 3 | Age | .03 | .02 | [-0.02, 0.08] | .03 | [-0.02, 0.08] | .188 | .28 | [0.24, 0.32] | .24 | [0.20, 0.29] |
| Gender | **-.06** | **.02** | **[-0.10, -0.02]** | **-.06** | **[-0.10, -0.02]** | **.004** |
| Shift work | **.05** | **.02** | **[0.00, 0.90]** | **.05** | **[0.00, 0.90]** | **.037** |
| Fluid intelligence | **-.14** | **.02** | **[-0.18, -0.10]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Socio-economic status | **-.16** | **.02** | **[-0.21, -0.12]** | **-.16** | **[-0.21, -0.12]** | **<.001** |
| Self-control | **-.09** | **.03** | **[-0.16, -0.01]** | **-.09** | **[-0.16, -0.01]** | **.025** |
| Step 4 | Age | .03 | .02 | [-0.02, 0.08] | .03 | [-0.02, 0.08] | .187 | .28 | [0.24, 0.32] | .00 | [-0.04, 0.04] |
| Gender | **-.06** | **.02** | **[-0.10, -0.02]** | **-.06** | **[-0.10, -0.02]** | **.005** |
| Shift work | -.02 | .12 | [-0.26, 0.23] | -.02 | [-0.26, 0.23] | .905 |
| Fluid intelligence | **-.14** | **.02** | **[-0.19., -0.10]** | **-.14** | **[-0.19., -0.10]** | **<.001** |
| Socio-economic status | **-.16** | **.03** | **[-0.21, -0.11]** | **-.16** | **[-0.21, -0.11]** | **<.001** |
| Self-control | **-.09** | **.03** | **[-0.17, -0.02]** | **-.09** | **[-0.17, -0.02]** | **.021** |
| Shift work x fluid intelligence | .02 | .11 | [-0.19, 0.23] | .02 | [-0.19, 0.23] | .852 |
| Shift work x socio-economic status | -.01 | .02 | [-0.05, 0.04] | -.01 | [-0.05, 0.04] | .781 |
| Shift work x self-control | .04 | .06 | [-0.07, 0.15] | .04 | [-0.07, 0.15] | .441 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S5** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence, socio-economic status, and self-control (standardized variables)* | | | | | | | | | | | |
|  |  | Alcohol consumption | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **-.09** | **.03** | **[-0.15, -0.03]** | **-.09** | **[-0.15, -0.03]** | **.001** | .16 | [0.12, 0.20] | .17 | [0.13, 0.21] |
| Gender | **-.14** | **.02** | **[-0.18, -0.10]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Step 2 | Age | **-.09** | **.03** | **[-0.15, -0.03]** | **-.09** | **[-0.15, -0.03]** | **.005** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.14** | **.02** | **[-0.18, -0.10]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Shift work | -.04 | .02 | [-0.08, 0.00] | -.04 | [-0.08, 0.00] | .068 |
| Step 3 | Age | **-.09** | **.03** | **[-0.15, -0.03]** | **-.09** | **[-0.15, -0.03]** | **.007** | .20 | [0.16, 0.24] | .10 | [0.06, 0.14] |
| Gender | **-.14** | **.02** | **[-0.18, -0.10]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Shift work | -.04 | .02 | [-0.08, 0.00] | -.04 | [-0.08, 0.00] | .063 |
| Fluid intelligence | -.02 | .03 | [-0.07, 0.03] | -.02 | [-0.07, 0.03] | .410 |
| Socio-economic status | .04 | .03 | [-0.01, 0.09] | .04 | [-0.01, 0.09] | .128 |
| Self-control | **-.10** | **.04** | **[-0.18, -0.01]** | **-.10** | **[-0.18, -0.01]** | **.031** |
| Step 4 | Age | **-.09** | **.03** | **[-0.15, -0.03]** | **-.09** | **[-0.15, -0.03]** | **.007** | .20 | [0.16, 0.24] | .00 | [-0.04, 0.04] |
| Gender | **-.14** | **.02** | **[-0.18, -0.10]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Shift work | -.16 | .15 | [-0.46, 0.14] | -.16 | [-0.46, 0.14] | .289 |
| Fluid intelligence | -.02 | .03 | [-0.08, 0.04] | -.02 | [-0.08, 0.04] | .417 |
| Socio-economic status | .04 | .03 | [-0.01, 0.10] | .04 | [-0.01, 0.10] | .143 |
| Self-control | **-.11** | **.04** | **[-0.20, -0.03]** | **-.11** | **[-0.20, -0.03]** | **.015** |
| Shift work x fluid intelligence | .03 | .13 | [-0.23, 0.29] | .03 | [-0.23, 0.29] | .803 |
| Shift work x socio-economic status | .00 | .02 | [-0.05, 0.05] | .00 | [-0.05, 0.05] | .995 |
| Shift work x self-control | .10 | .07 | [-0.04, 0.23] | .10 | [-0.04, 0.23] | .152 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S5** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence, socio-economic status, and self-control (standardized variables)* | | | | | | | | | | | |
|  |  | Preventive health care | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **.12** | **.03** | **[0.07, 0.17]** | **.12** | **[0.07, 0.17]** | **<.001** | .22 | [0.18, 0.26] | .22 | [0.18, 0.26] |
| Gender | **.19** | **.02** | **[0.14, 0.24]** | **.19** | **[0.14, 0.24]** | **<.001** |
| Step 2 | Age | **.11** | **.03** | **[0.06, 0.17]** | **.11** | **[0.06, 0.17]** | **<.001** | .23 | [0.19, 0.27] | .00 | [-0.04, 0.04] |
| Gender | **.19** | **.02** | **[0.14, 0.23]** | **.19** | **[0.14, 0.23]** | **<.001** |
| Shift work | **-.05** | **.02** | **[-0.09, -0.01]** | **-.05** | **[-0.09, -0.01]** | **.011** |
| Step 3 | Age | **.06** | **.02** | **[0.01, 0.10]** | **.06** | **[0.01, 0.10]** | **.022** | .30 | [0.26, 0.34] | .20 | [0.16, 0.24] |
| Gender | **.16** | **.02** | **[0.12, 0.20]** | **.16** | **[0.12, 0.20]** | **<.001** |
| Shift work | -.03 | .02 | [-0.07, 0.01] | -.03 | [-0.07, 0.01] | .184 |
| Fluid intelligence | .00 | .03 | [-0.06, 0.05] | .00 | [-0.06, 0.05] | .933 |
| Socio-economic status | **.10** | **.02** | **[0.06, 0.15]** | **.10** | **[0.06, 0.15]** | **<.001** |
| Self-control | **.16** | **.03** | **[0.09, 0.23]** | **.16** | **[0.09, 0.23]** | **<.001** |
| Step 4 | Age | **.06** | **.02** | **[0.01, 0.10]** | **.06** | **[0.01, 0.10]** | **.021** | .30 | [0.26, 0.34] | .00 | [-0.04, 0.04] |
| Gender | **.16** | **.02** | **[0.12, 0.20]** | **.16** | **[0.12, 0.20]** | **<.001** |
| Shift work | -.13 | .12 | [-0.36, 0.10] | -.13 | [-0.36, 0.10] | .258 |
| Fluid intelligence | -.02 | .03 | [-0.08, 0.04] | -.02 | [-0.08, 0.04] | .542 |
| Socio-economic status | **.10** | **.03** | **[0.05, 0.15]** | **.10** | **[0.05, 0.15]** | **<.001** |
| Self-control | **.17** | **.03** | **[0.09, 0.24]** | **.17** | **[0.09, 0.24]** | **.001** |
| Shift work x fluid intelligence | .15 | .10 | [-0.05, 0.35] | .15 | [-0.05, 0.35] | .144 |
| Shift work x socio-economic status | .00 | .03 | [-0.06, 0.05] | .00 | [-0.06, 0.05] | .967 |
| Shift work x self-control | -.05 | .06 | [-0.16, 0.07] | -.05 | [-0.16, 0.07] | .425 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S6** | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence, socio-economic status, and self-control (unstandardized variables except for age and gender)* | | | | | | | | | | | |
|  |  | Smoking | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | -.03 | .04 | [-0.10, 0.04] | -.02 | [-0.07, 0.03] | .418 | .08 | [0.04, 0.11] | .10 | [0.06, 0.14] |
| Gender | **-.12** | **.03** | **[-0.18, -0.06]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Step 2 | Age | -.01 | .04 | [-0.08, 0.06] | -.01 | [-0.06, 0.04] | .728 | .13 | [0.09, 0.17] | .10 | [0.06, 0.14] |
| Gender | **-.12** | **.03** | **[-0.18, -0.06]** | **-.08** | **[-0.12, -0.04]** | **<.001** |
| Shift work | **.38** | **.09** | **[0.21, 0.56]** | **.09** | **[0.05, 0.14]** | **<.001** |
| Step 3 | Age | .05 | .04 | [-0.02, 0.12] | .03 | [-0.02, 0.08] | .193 | .28 | [0.24, 0.32] | .26 | [0.22, 0.30] |
| Gender | **-.09** | **.03** | **[-0.15, -0.03]** | **-.06** | **[-0.10, -0.02]** | **.004** |
| Shift work | **.19** | **.07** | **[0.02, 0.36]** | **.05** | **[0.00, 0.90]** | **.032** |
| Fluid intelligence | **-.13** | **.02** | **[-0.17, -0.09]** | **-.14** | **[-0.18, -0.10]** | **<.001** |
| Socio-economic status | **-.34** | **.06** | **[-0.45, -0.23]** | **-.16** | **[-0.21, -0.12]** | **<.001** |
| Self-control | **-.16** | **.06** | **[-0.28, -0.03]** | **-.09** | **[-0.16, -0.01]** | **.017** |
| Step 4 | Age | .05 | .04 | [-0.02, 0.12] | .03 | [-0.02, 0.08] | .192 | .28 | [0.24, 0.32] | .00 | [-0.04, 0.04] |
| Gender | **-.09** | **.03** | **[-0.15, -0.03]** | **-.06** | **[-0.10, -0.02]** | **.005** |
| Shift work | -.06 | .50 | [-1.04, 0.92] | -.02 | [-0.26, 0.23] | .908 |
| Fluid intelligence | **-.13** | **.02** | **[-0.17, -0.09]** | **-.14** | **[-0.19., -0.10]** | **<.001** |
| Socio-economic status | **-.34** | **.06** | **[-0.46, -0.22]** | **-.16** | **[-0.21, -0.11]** | **<.001** |
| Self-control | **-.17** | **.06** | **[-0.29, -0.04]** | **-.09** | **[-0.17, -0.02]** | **.013** |
| Shift work x fluid intelligence | .01 | .05 | [-0.08, 0.10] | .02 | [-0.19, 0.23] | .856 |
| Shift work x socio-economic status | -.03 | .12 | [-0.27, 0.20] | -.01 | [-0.05, 0.04] | .779 |
| Shift work x self-control | .08 | .10 | [-0.12, 0.27] | .04 | [-0.07, 0.15] | .441 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S6** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence, socio-economic status, and self-control (unstandardized variables except for age and gender)* | | | | | | | | | | | |
|  |  | Alcohol consumption | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **-.10** | **.03** | **[-0.17, -0.04]** | -.09 | [-0.15, -0.03] | **.002** | .16 | [0.12, 0.20] | .17 | [0.13, 0.21] |
| Gender | **-.17** | **.02** | **[-0.22, -0.12]** | -.14 | [-0.18, -0.10] | **<.001** |
| Step 2 | Age | **-.11** | **.03** | **[-0.17, -0.05]** | -.09 | [-0.15, -0.03] | **.002** | .17 | [0.13, 0.21] | .00 | [-0.04, 0.04] |
| Gender | **-.17** | **.02** | **[-0.22, -0.12]** | -.14 | [-0.18, -0.10] | **<.001** |
| Shift work | -.12 | .07 | [-0.26, 0.01] | -.04 | [-0.08, 0.00] | .070 |
| Step 3 | Age | **-.11** | **.03** | **[-0.17, -0.04]** | -.09 | [-0.15, -0.03] | **.003** | .20 | [0.16, 0.24] | .10 | [0.06, 0.14] |
| Gender | **-.17** | **.03** | **[-0.21, -0.12]** | -.14 | [-0.18, -0.10] | **<.001** |
| Shift work | -.13 | .07 | [-0.27, 0.01] | -.04 | [-0.08, 0.00] | .067 |
| Fluid intelligence | -.02 | .02 | [-0.05, 0.02] | -.02 | [-0.07, 0.03] | .415 |
| Socio-economic status | .07 | .04 | [-0.02, 0.15] | .04 | [-0.01, 0.09] | .122 |
| Self-control | **-.14** | **.05** | **[-0.25, -0.02]** | -.10 | [-0.18, -0.01] | **.023** |
| Step 4 | Age | **-.11** | **.03** | **[-0.17, -0.04]** | -.09 | [-0.15, -0.03] | **.003** | .20 | [0.16, 0.24] | .00 | [-0.04, 0.04] |
| Gender | **-.17** | **.03** | **[-0.21, -0.12]** | -.14 | [-0.18, -0.10] | **<.001** |
| Shift work | -.51 | .47 | [-1.46, 0.44] | -.16 | [-0.46, 0.14] | .283 |
| Fluid intelligence | -.02 | .02 | [-0.06, 0.03] | -.02 | [-0.08, 0.04] | .418 |
| Socio-economic status | .07 | .05 | [-0.02, 0.16] | .04 | [-0.01, 0.10] | .136 |
| Self-control | **-.16** | **.05** | **[-0.27, -0.05]** | -.11 | [-0.20, -0.03] | **.009** |
| Shift work x fluid intelligence | .01 | .04 | [-0.08, 0.10] | .03 | [-0.23, 0.29] | .807 |
| Shift work x socio-economic status | .00 | .10 | [-0.19, 0.19] | .00 | [-0.05, 0.05] | .999 |
| Shift work x self-control | .13 | .09 | [-0.05, 0.31] | .10 | [-0.04, 0.23] | .143 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S6** (continued) | | | | | | | | | | | |
| *Results of the hierarchical regression analyses with fluid intelligence, socio-economic status, and self-control (unstandardized variables except for age and gender)* | | | | | | | | | | | |
|  |  | Preventive health care | | | | | | | | | |
|  |  | b | SE b | b[95%-CI] | Beta | Beta[95%-CI] | *p* | R | R[95%-CI] | √(ΔR²) | √(ΔR²)[95%-CI] |
| Step 1 | Age | **.10** | **.02** | **[0.06, 0.13]** | **.12** | **[0.07, 0.17]** | **<.001** | .22 | [0.18, 0.26] | .22 | [0.18, 0.26] |
| Gender | **.15** | **.02** | **[0.12, 0.18]** | **.19** | **[0.14, 0.24]** | **<.001** |
| Step 2 | Age | **.09** | **.02** | **[0.06, 0.13]** | **.11** | **[0.06, 0.17]** | **<.001** | .23 | [0.19, 0.27] | .00 | [-0.04, 0.04] |
| Gender | **.15** | **.02** | **[0.12, 0.18]** | **.19** | **[0.14, 0.23]** | **<.001** |
| Shift work | **-.11** | **.04** | **[-0.19, -0.02]** | **-.05** | **[-0.09, -0.01]** | **.013** |
| Step 3 | Age | **.05** | **.02** | **[0.01, 0.08]** | **.06** | **[0.01, 0.10]** | **.018** | .30 | [0.26, 0.34] | .20 | [0.16, 0.24] |
| Gender | **.13** | **.02** | **[0.10, 0.16]** | **.16** | **[0.12, 0.20]** | **<.001** |
| Shift work | -.06 | .04 | [-0.14, 0.03] | -.03 | [-0.07, 0.01] | .184 |
| Fluid intelligence | .00 | .01 | [-0.03, 0.02] | .00 | [-0.06, 0.05] | .952 |
| Socio-economic status | **.12** | **.03** | **[0.06, 0.17]** | **.10** | **[0.06, 0.15]** | **<.001** |
| Self-control | **.15** | **.03** | **[0.10, 0.20]** | **.16** | **[0.09, 0.23]** | **<.001** |
| Step 4 | Age | **.05** | **.02** | **[0.01, 0.08]** | **.06** | **[0.01, 0.10]** | **.017** | .30 | [0.26, 0.34] | .00 | [-0.04, 0.04] |
| Gender | **.13** | **.02** | **[0.09, 0.16]** | **.16** | **[0.12, 0.20]** | **<.001** |
| Shift work | -.28 | .25 | [-0.77, 0.21] | -.13 | [-0.36, 0.10] | .259 |
| Fluid intelligence | -.01 | .01 | [-0.04, 0.02] | -.02 | [-0.08, 0.04] | .551 |
| Socio-economic status | **.11** | **.03** | **[0.05, 0.17]** | **.10** | **[0.05, 0.15]** | **<.001** |
| Self-control | **.16** | **.03** | **[0.10, 0.21]** | **.17** | **[0.09, 0.24]** | **<.001** |
| Shift work x fluid intelligence | .04 | .02 | [-0.01, 0.08] | .15 | [-0.05, 0.35] | .144 |
| Shift work x socio-economic status | .00 | .07 | [-0.15, 0.14] | .00 | [-0.06, 0.05] | .972 |
| Shift work x self-control | -.04 | .05 | [-0.15, 0.06] | -.05 | [-0.16, 0.07] | .428 |
| *Note.* SE = standard error; b[95%-CI] = confidence interval for b; Beta[95%-CI] = confidence interval for Beta; *p* = *p*-value; R[95%-CI] = confidence interval for R; √(ΔR²)[95%-CI] = confidence interval for √(ΔR²). | | | | | | | | | | | |

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| **Table S7** *Standardized mean values of health behavior in the compared groups* | | | | | | | | | | | |
|  |  | *N* | Smoking | | | Alcohol consumption | | | Health examinations | | |
|  |  | *M* | *SD* | *d* | *M* | *SD* | *d* | *M* | *SD* | *d* |
| Self-employed | shift workers | 14 | 0.10 | 0.95 | 0.21 | 0.26 | 1.33 | 0.11 | -0.30 | 1.22 | 0.36 |
| day workers | 237 | -0.10 | 0.93 | 0.12 | 1.10 | 0.12 | 1.01 |
| Civil servants | shift workers | 17 | -0.34 | 0.73 | 0.09 | 0.01 | 0.77 | 0.20 | 0.11 | 1.11 | 0.09 |
| day workers | 211 | -0.27 | 0.80 | -0.16 | 0.94 | 0.20 | 0.97 |
| White-collar workers | shift workers | 308 | 0.19 | 1.13 | 0.22 | -0.07 | 0.92 | 0.08 | -0.10 | 0.98 | 0.14 |
| day workers | 1,492 | -0.04 | 0.96 | 0.01 | 1.01 | 0.04 | 1.00 |
| Blue-collar workers | shift workers | 66 | 0.42 | 1.13 | 0.05 | -0.14 | 0.96 | 0.18 | -0.33 | 0.93 | 0.01 |
| day workers | 118 | 0.36 | 1.13 | 0.04 | 1.06 | -0.32 | 0.88 |
| Apprentices and trainees | shift workers | 25 | 0.43 | 1.17 | 0.35 | 0.11 | 0.93 | 0.06 | -0.38 | 0.90 | 0.08 |
| day workers | 93 | 0.03 | 1.09 | 0.16 | 0.87 | -0.30 | 1.12 |
| *Note.* Standardized mean values of the compared groups with regard to health behavior; *M* = mean; *SD* = standard deviation. | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table S8** *Unstandardized mean values of health behavior in the compared groups* | | | | | | | | | | | |
|  |  | *N* | Smoking | | | Alcohol consumption | | | Health examinations | | |
|  |  | *M* | *SD* | *d* | *M* | *SD* | *d* | *M* | *SD* | *d* |
| Self-employed | shift workers | 14 | 1.31 | 1.45 | 0.20 | 1.59 | 1.65 | 0.11 | 1.50 | 0.97 | 0.37 |
| day workers | 237 | 1.02 | 1.41 | 1.43 | 1.31 | 1.83 | 0.80 |
| Civil servants | shift workers | 17 | 0.65 | 1.06 | 0.12 | 1.29 | 0.92 | 0.19 | 1.82 | 0.88 | 0.08 |
| day workers | 211 | 0.79 | 1.27 | 1.09 | 1.13 | 1.89 | 0.77 |
| White-collar workers | shift workers | 308 | 1.45 | 1.71 | 0.23 | 1.19 | 1.10 | 0.09 | 1.66 | 0.78 | 0.14 |
| day workers | 1,492 | 1.09 | 1.46 | 1.29 | 1.21 | 1.77 | 0.79 |
| Blue-collar workers | shift workers | 66 | 1.80 | 1.72 | 0.05 | 1.12 | 1.16 | 0.17 | 1.48 | 0.74 | 0.00 |
| day workers | 118 | 1.72 | 1.72 | 1.33 | 1.27 | 1.48 | 0.71 |
| Apprentices and trainees | shift workers | 25 | 1.82 | 1.78 | 0.36 | 1.42 | 1.11 | 0.04 | 1.43 | 0.72 | 0.41 |
| day workers | 93 | 1.21 | 1.65 | 1.46 | 1.04 | 1.76 | 0.89 |
| *Note.* Unstandardized mean values of the compared groups with regard to health behavior; *M* = mean; *SD* = standard deviation. | | | | | | | | | | | |