Supplementary Material

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**Life with Corona: increased gender differences in depression symptoms and aggressiveness due to the pandemic burden in Germany**

**Liliana Abreu**1\*,†**, Anke Koebach**2,†**, Oscar Díaz**3**, Samuel Carleial**2**, Anke Hoeffler**1**, Wolfgang Stojetz**3**, Hanna Freudenreich**4**, Patricia Justino**5**, Tilman Brück**3,4,6

1Development Research Group, Department of Politics and Public Administration, University of Konstanz, Konstanz, Germany

2Clinical and Neuropsychology, Department of Psychology, University of Konstanz, Konstanz, Germany

3ISDC - International Security and Development Center, Berlin, Germany

4Leibniz Institute of Vegetable and Ornamental Crops, Großbeeren, Germany

5World Institute for Development Economic Research, United Nations University, Finland

6Natural Resources Institute, University of Greenwich, Chatham Maritime, United Kingdom

**\* Correspondence:**

Liliana Abreu

liliana.abreu@uni-konstanz.de

† These authors have contributed equally to this work and share first authorship.

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Abbreviation

GD = Gender difference

# Descriptive statistic of measures and mental health in Germany

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Aggression | | | Anxiety | | | Depression | | | Somatic symptoms burden | | | N | |
|  | (1) | (2) | t-test | (1) | (2) | t-test | (1) | (2) | t-test | (1) | (2) | t-test | (1) | (2) |
| Variable | No | Yes | Difference | No | Yes | Difference | No | Yes | Difference | No | Yes | Difference | No | Yes |
|  | Mean | Mean | (1)-(2) | Mean | Mean | (1)-(2) | Mean | Mean | (1)-(2) | Mean | Mean | (1)-(2) |  |  |
| Lockdown | 1.988 | 2.542 | -0.555\*\*\* | 3.791 | 4.502 | -0.712\*\*\* | 4.977 | 5.803 | -0.825\*\*\* | 4.92 | 4.924 | -0.004 | 3173 | 7806 |
|  | (2.673) | (3.317) |  | (4.211) | (4.991) |  | (4.990) | (5.708) |  | (4.046) | (4.390) |  |  |  |
| Corona test positive | 2.416 | 2.234 | 0.182 | 4.34 | 4.133 | 0.207 | 5.612 | 5.61 | 0.002 | 4.898 | 7.344 | -2.446\*\*\* | 10860 | 119 |
|  | (3.194) | (2.603) |  | (4.836) | (4.385) |  | (5.565) | (5.201) |  | (4.282) | (6.217) |  |  |  |
| Know someone who died | 2.365 | 2.72 | -0.355\*\*\* | 4.252 | 4.869 | -0.617\*\*\* | 5.561 | 5.927 | -0.365\*\* | 4.854 | 5.354 | -0.501\*\*\* | 9431 | 1548 |
|  | (3.133) | (3.499) |  | (4.776) | (5.127) |  | (5.515) | (5.834) |  | (4.244) | (4.694) |  |  |  |
| Income decreased | 2.168 | 3.224 | -1.057\*\*\* | 3.774 | 6.187 | -2.413\*\*\* | 4.983 | 7.677 | -2.694\*\*\* | 4.817 | 5.271 | -0.453\*\*\* | 8512 | 2467 |
|  | (2.918) | (3.839) |  | (4.368) | (5.734) |  | (5.123) | (6.385) |  | (4.226) | (4.570) |  |  |  |
| Main provider: me | 2.372 | 2.452 | -0.08 | 4.229 | 4.433 | -0.205\*\* | 5.261 | 5.918 | -0.657\*\*\* | 4.953 | 4.897 | 0.056 | 5294 | 5685 |
|  | (2.979) | (3.360) |  | (4.731) | (4.916) |  | (5.290) | (5.771) |  | (4.312) | (4.314) |  |  |  |
| Lives with children | 2.25 | 2.968 | -0.718\*\*\* | 4.208 | 4.775 | -0.567\*\*\* | 5.564 | 5.773 | -0.209\* | 4.913 | 4.957 | -0.044 | 8042 | 2937 |
|  | (3.089) | (3.447) |  | (4.840) | (4.777) |  | (5.572) | (5.526) |  | (4.345) | (4.203) |  |  |  |
| Lives alone | 2.416 | 2.41 | 0.006 | 4.2 | 4.757 | -0.557\*\*\* | 5.248 | 6.717 | -1.469\*\*\* | 4.79 | 5.327 | -0.536\*\*\* | 8258 | 2721 |
|  | (3.140) | (3.333) |  | (4.725) | (5.117) |  | (5.355) | (6.013) |  | (4.227) | (4.541) |  |  |  |

The value displayed for t-tests are the differences in the means across the groups. \*\*\*, \*\*, and \* indicate significance at the 1, 5, and 10 percent critical level.

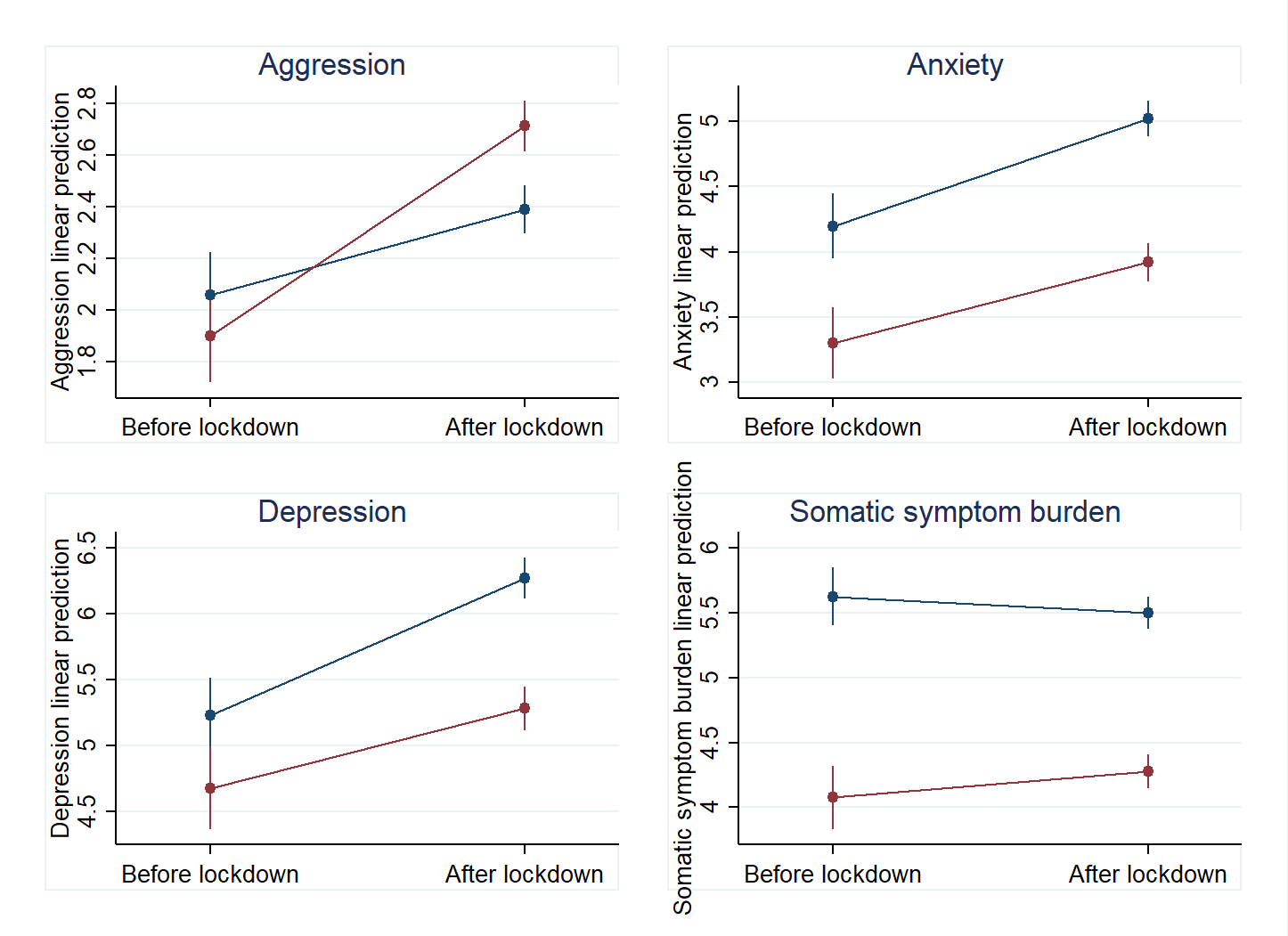
# GLMs regression tables and figures

## GD in mental health before and after the lockdown

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Aggression | Anxiety | Depression | Somatic symptom burden |
|  |  |  |  |  |
| Gender: Male | -0.156 | -0.897\*\*\* | -0.554\*\* | -1.548\*\*\* |
|  | (0.125) | (0.188) | (0.216) | (0.169) |
| Lockdown | 0.486\*\*\* | 1.161\*\*\* | 1.529\*\*\* | 0.083 |
|  | (0.100) | (0.150) | (0.172) | (0.135) |
| Male x Lockdown | 0.478\*\*\* | -0.204 | -0.436\* | 0.328\* |
|  | (0.142) | (0.214) | (0.246) | (0.193) |
|  |  |  |  |  |
| Observations | 10,979 | 10,979 | 10,979 | 10,979 |
| R-squared | 0.036 | 0.053 | 0.054 | 0.032 |
| Model | Linear | Linear | Linear | Linear |
| F(1, 10977) | 59.22 | 87.05 | 89.87 | 52.61 |

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 *Lockdown* is a variable that indicates whether the person responded the survey after the beginning of the lockdown (16 December 2020).

*Controls*: age, household size, years of education, urban vs rural; data was weighted on age, gender and level of education.

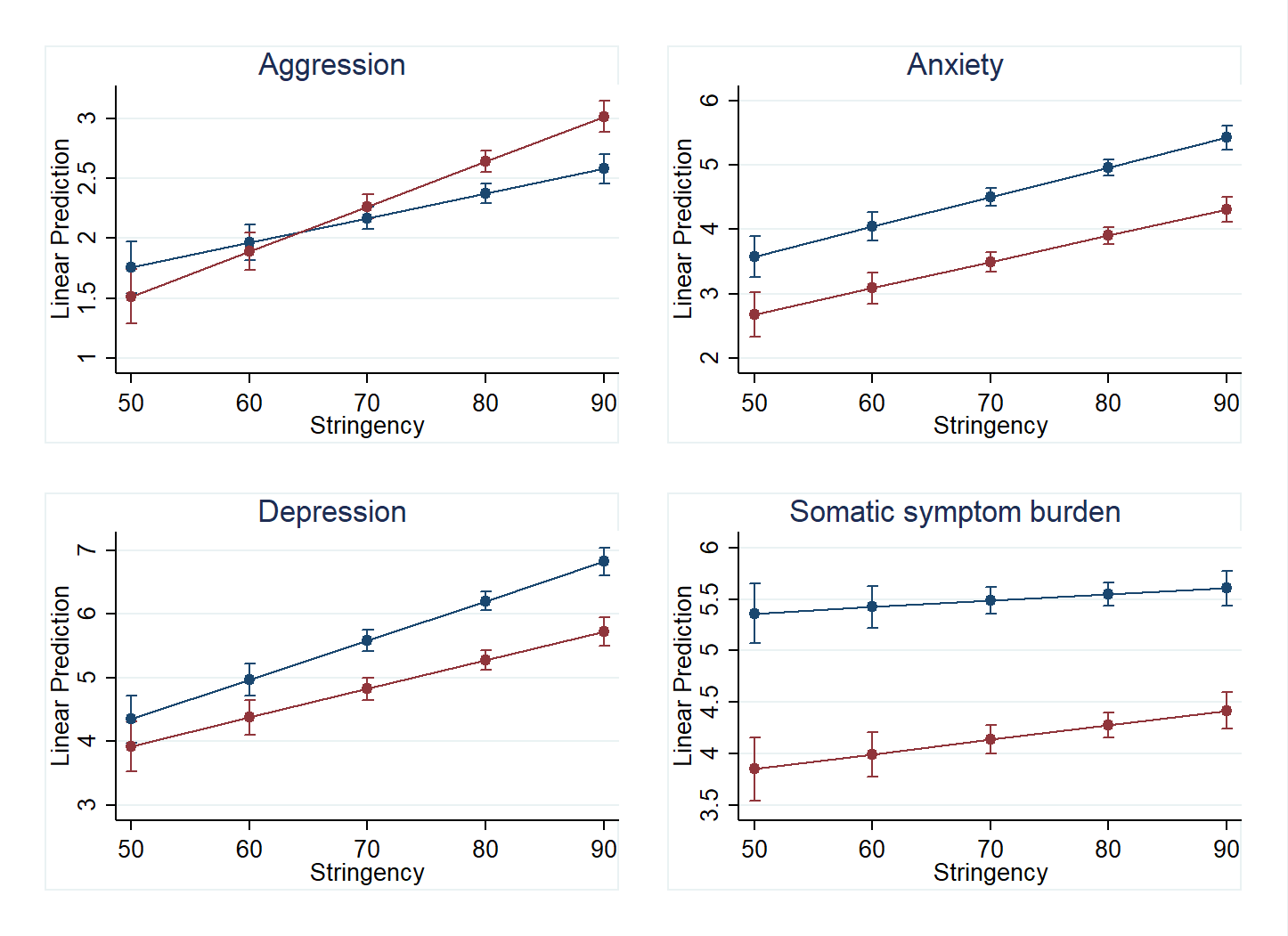


## GD in mental health and stringency of measures to control the spread of the virus

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Aggression | Anxiety | Depression | Somatic symptom burden |
|  |  |  |  |  |
| Gender: Male | -1.087\*\*\* | -0.637 | 0.409 | -1.927\*\*\* |
|  | (0.412) | (0.619) | (0.712) | (0.559) |
| Stringency | 0.020\*\*\* | 0.047\*\*\* | 0.062\*\*\* | 0.006 |
|  | (0.004) | (0.006) | (0.006) | (0.005) |
| Male x Stringency | 0.017\*\*\* | -0.005 | -0.017\* | 0.008 |
|  | (0.005) | (0.008) | (0.009) | (0.007) |
|  |  |  |  |  |
| Observations | 10,979 | 10,979 | 10,979 | 10,979 |
| R-squared | 0.038 | 0.054 | 0.056 | 0.033 |
| Model | Linear | Linear | Linear | Linear |
| F(1, 10977) | 61.35 | 90.33 | 93.46 | 52.66 |

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 *Stringency* is a variable that indicates the stringency of anti-Corona measures that day of the individual filled in the survey.

*Controls*: age, household size, years of education, urban vs rural; data was weighted on age, gender and level of education.

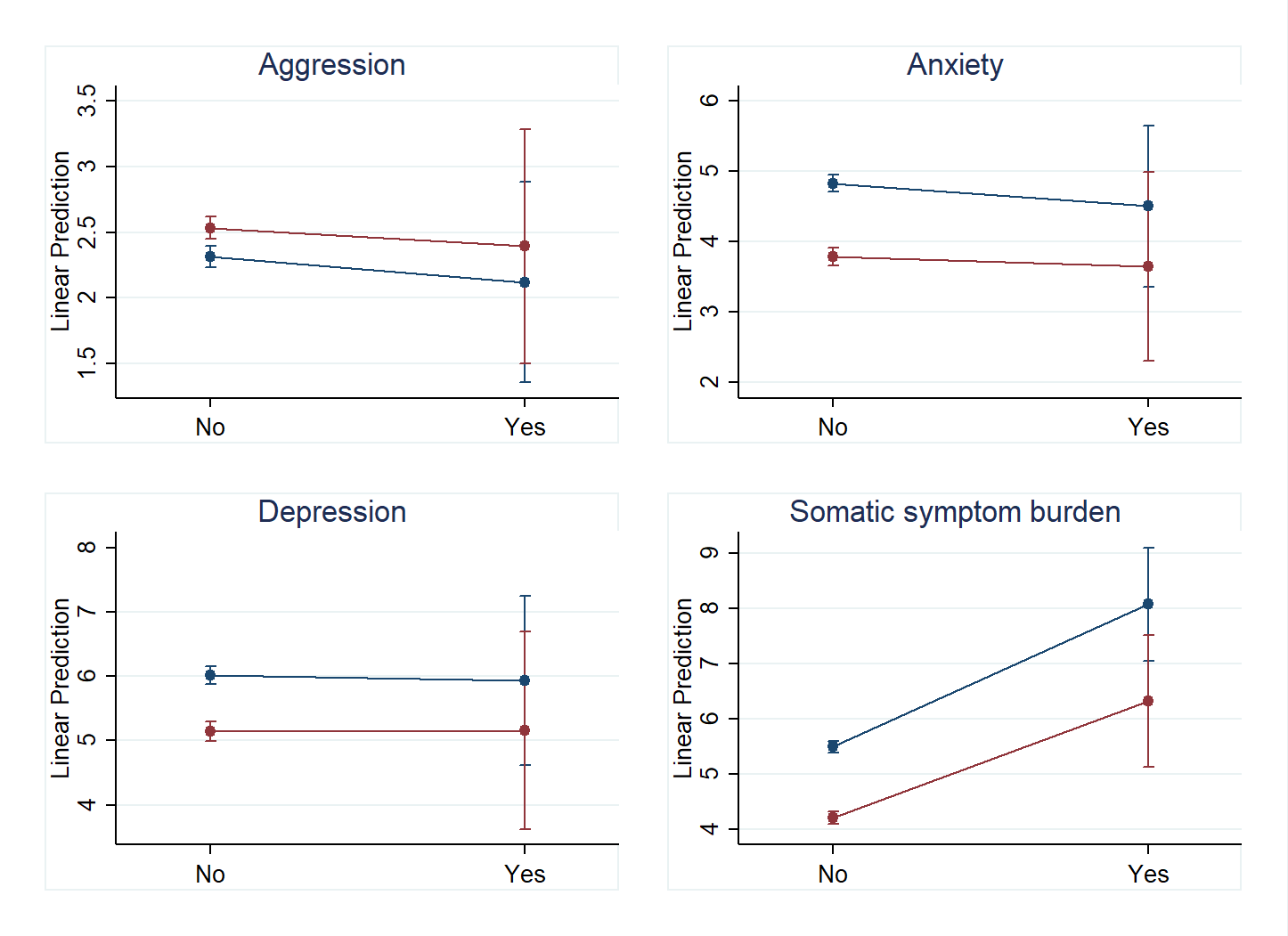


## GD in mental health and corona exposure (someone known died due to the pandemic)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Aggression | Anxiety | Depression | Somatic symptom burden |
|  |  |  |  |  |
| Gender: Male | 0.222\*\*\* | -1.040\*\*\* | -0.871\*\*\* | -1.282\*\*\* |
|  | (0.061) | (0.091) | (0.105) | (0.082) |
| Corona test positive | -0.194 | -0.339 | -0.084 | 2.586\*\*\* |
|  | (0.391) | (0.587) | (0.676) | (0.527) |
| Male x Corona test positive | 0.043 | 0.168 | 0.096 | -0.460 |
|  | (0.601) | (0.902) | (1.039) | (0.810) |
|  |  |  |  |  |
| Observations | 10,979 | 10,979 | 10,979 | 10,979 |
| R-squared | 0.028 | 0.045 | 0.045 | 0.035 |
| Model | Linear | Linear | Linear | Linear |
| F(1, 10977) | 44.82 | 73.98 | 74.09 | 56.79 |

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Controls*: age, household size, years of education, urban vs rural; data was weighted on age, gender and level of education.

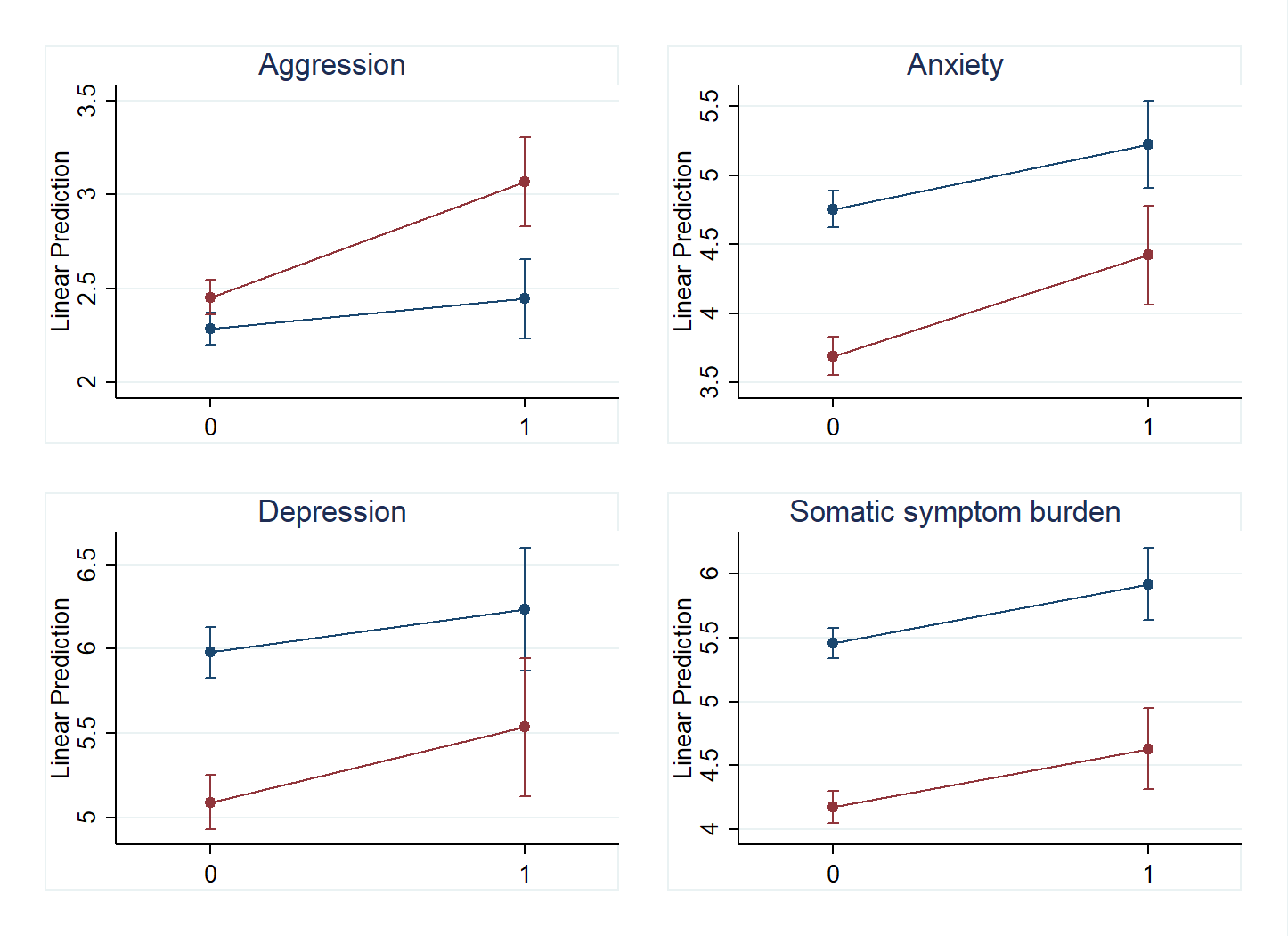


## GD in mental health and corona exposure (someone known died due to the pandemic)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Aggression | Anxiety | Depression | Somatic symptom burden |
|  |  |  |  |  |
| Gender: Male | 0.166\*\* | -1.063\*\*\* | -0.888\*\*\* | -1.282\*\*\* |
|  | (0.065) | (0.097) | (0.112) | (0.087) |
| Know someone who died | 0.204\* | 0.548\*\*\* | 0.389\* | 0.528\*\*\* |
|  | (0.117) | (0.175) | (0.202) | (0.157) |
| Male x Know someone who died | 0.455\*\*\* | 0.257 | 0.182 | -0.007 |
|  | (0.174) | (0.262) | (0.302) | (0.235) |
|  |  |  |  |  |
| Observations | 10,979 | 10,979 | 10,979 | 10,979 |
| R-squared | 0.030 | 0.047 | 0.046 | 0.034 |
| Model | Linear | Linear | Linear | Linear |
| F(1, 10977) | 48.98 | 77.92 | 75.60 | 54.43 |

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Controls*: age, household size, years of education, urban vs rural; data was weighted on age, gender and level of education.



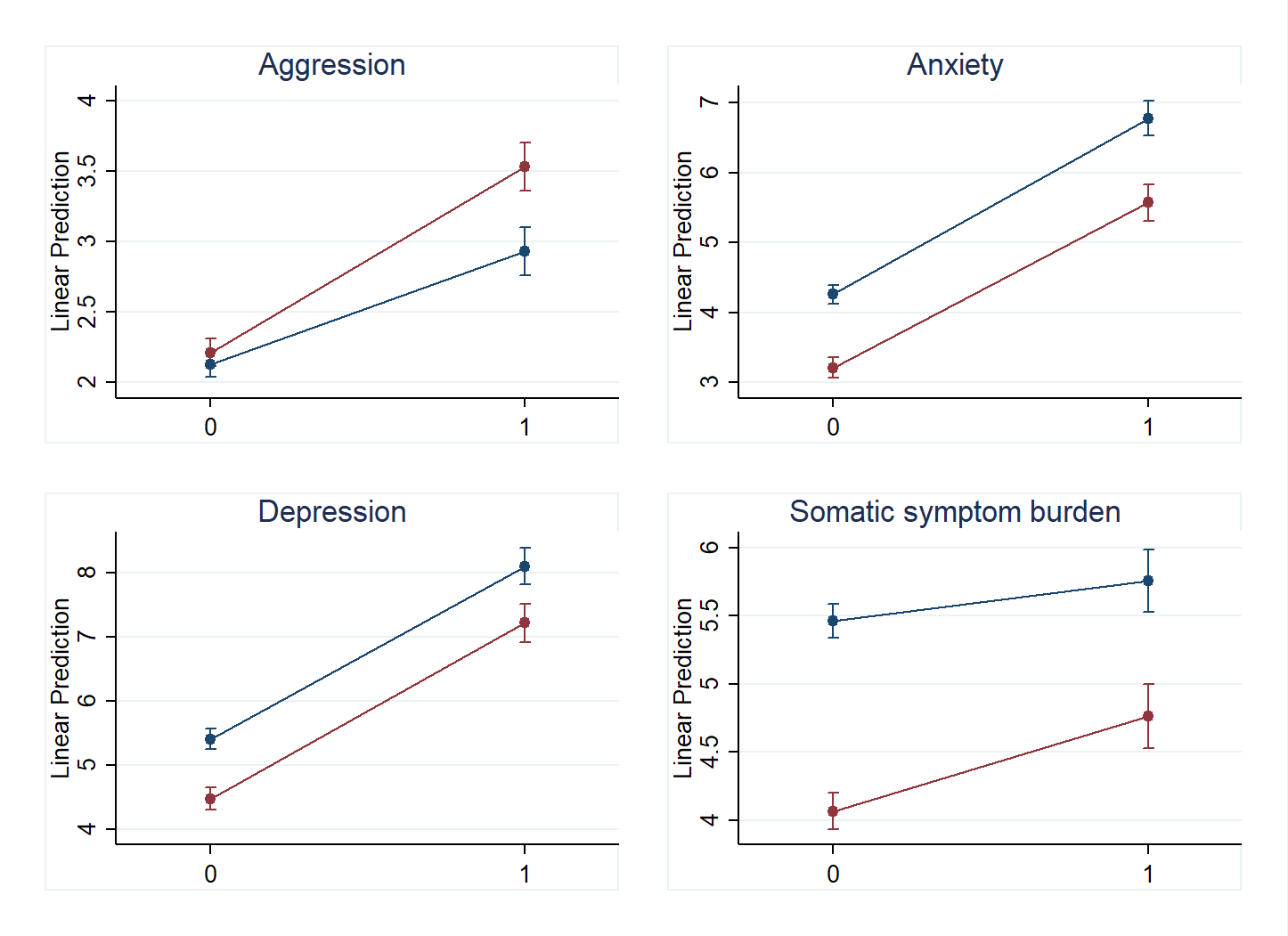
## GD in mental health and corona exposure (income decrease)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Aggression | Anxiety | Depression | Somatic symptom burden |
|  |  |  |  |  |
| Gender: Male | 0.081 | -1.048\*\*\* | -0.932\*\*\* | -1.394\*\*\* |
|  | (0.068) | (0.101) | (0.117) | (0.093) |
| Income decreased | 0.719\*\*\* | 2.390\*\*\* | 2.548\*\*\* | 0.246\* |
|  | (0.098) | (0.145) | (0.167) | (0.133) |
| Male x Income decreased | 0.518\*\*\* | -0.162 | 0.041 | 0.400\*\* |
|  | (0.141) | (0.209) | (0.241) | (0.191) |
|  |  |  |  |  |
| Observations | 10,979 | 10,979 | 10,979 | 10,979 |
| R-squared | 0.045 | 0.086 | 0.083 | 0.034 |
| Model | Linear | Linear | Linear | Linear |
| F(1, 10977) | 74.42 | 147.1 | 141.9 | 55.20 |

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Controls*: age, household size, years of education, urban vs rural; data was weighted on age, gender and level of education.



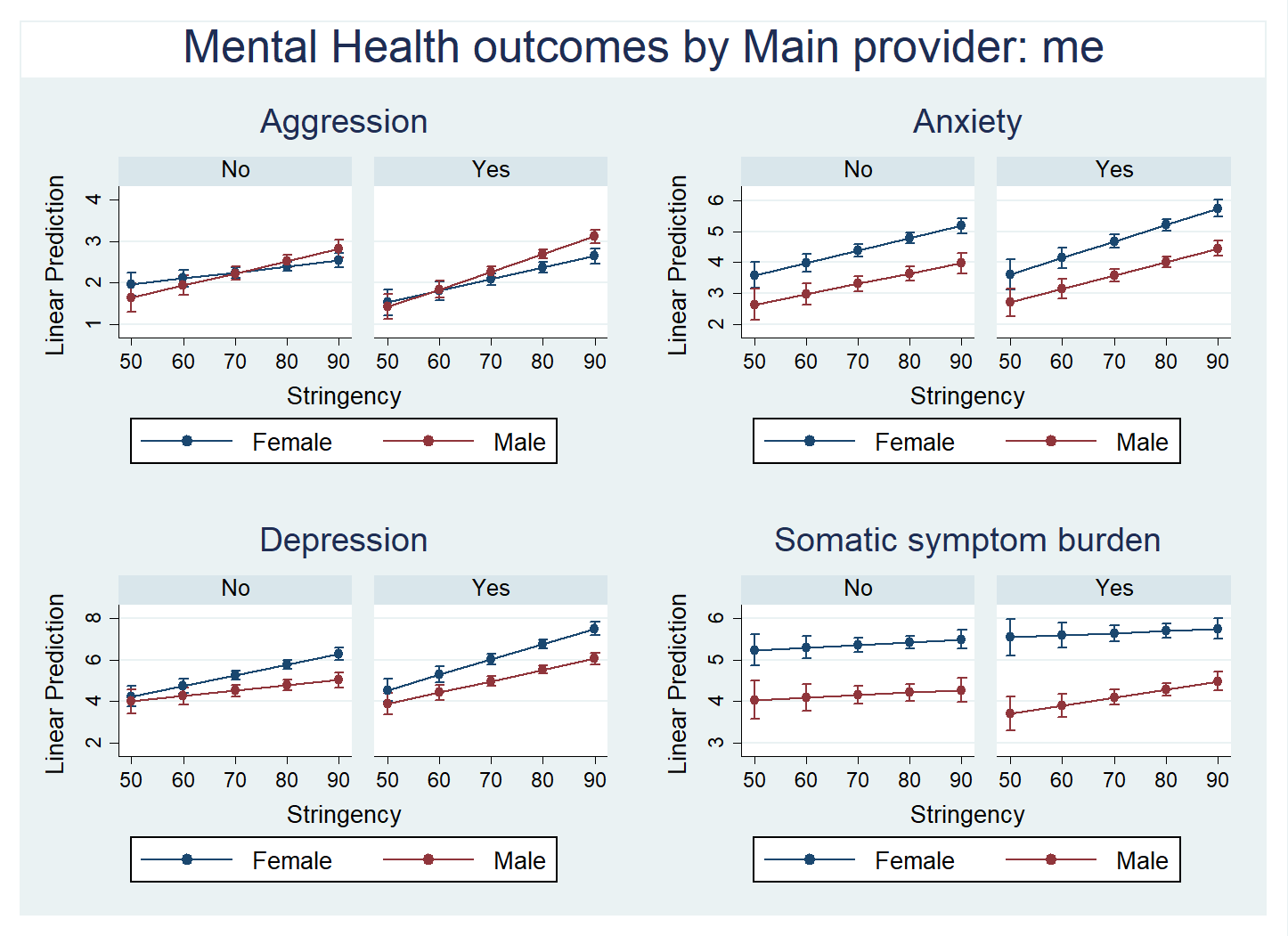
## GD in mental health and household characteristics (main provider)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Aggression | Anxiety | Depression | Somatic symptom burden |
|  |  |  |  |  |
| Gender: Male | -1.056\* | -0.653 | 0.979 | -1.255 |
|  | (0.593) | (0.890) | (1.020) | (0.805) |
| Main provider: me | -0.981\* | -0.437 | -0.614 | 0.459 |
|  | (0.571) | (0.856) | (0.981) | (0.774) |
| Stringency | 0.015\*\*\* | 0.040\*\*\* | 0.051\*\*\* | 0.006 |
|  | (0.005) | (0.007) | (0.008) | (0.007) |
| Male x Main provider: me | 0.257 | 0.254 | -0.657 | -1.270 |
|  | (0.834) | (1.250) | (1.434) | (1.131) |
| Male x Stringency | 0.015\* | -0.006 | -0.025\* | 0.001 |
|  | (0.008) | (0.012) | (0.013) | (0.010) |
| Main provider: me x Stringency | 0.013\* | 0.013 | 0.023\* | -0.001 |
|  | (0.007) | (0.011) | (0.013) | (0.010) |
| Male x Main provider: me x Stringency | -0.001 | -0.004 | 0.005 | 0.013 |
|  | (0.011) | (0.016) | (0.018) | (0.015) |
|  |  |  |  |  |
| Observations | 10,979 | 10,979 | 10,979 | 10,979 |
| R-squared | 0.039 | 0.058 | 0.065 | 0.034 |
| Model | Linear | Linear | Linear | Linear |
| F(1, 10977) | 40.32 | 61.50 | 69.77 | 34.61 |

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Controls*: age, household size, years of education, urban vs rural; data was weighted on age, gender and level of education.



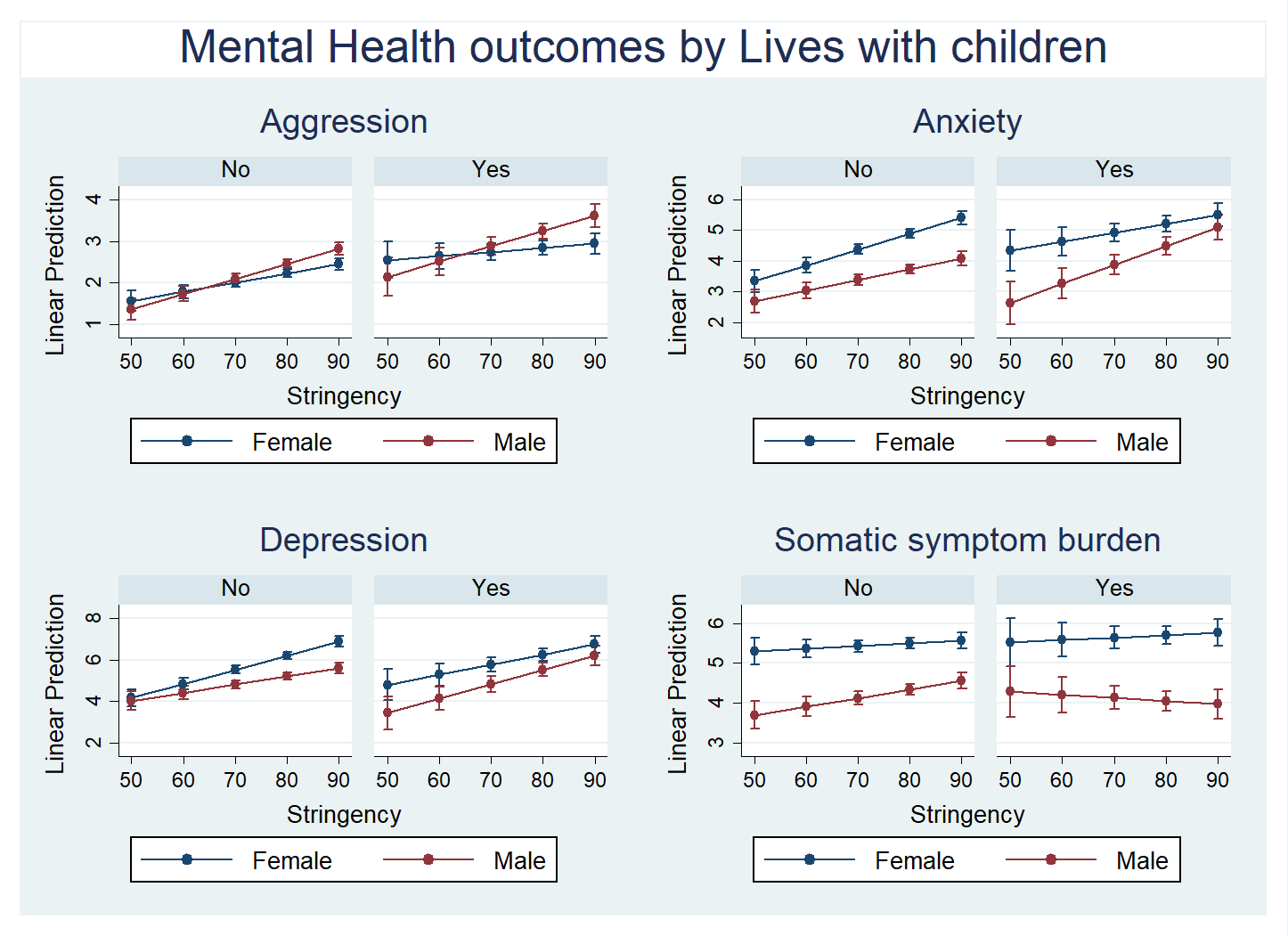
## GD in mental health and household characteristics (lives with children)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Aggression | Anxiety | Depression | Somatic symptom burden |
|  |  |  |  |  |
| Gender: Male | -0.894\* | 0.185 | 1.262 | -2.371\*\*\* |
|  | (0.469) | (0.705) | (0.810) | (0.636) |
| Lives with children | 1.311\* | 1.570 | 0.948 | 0.002 |
|  | (0.674) | (1.013) | (1.164) | (0.914) |
| Stringency | 0.022\*\*\* | 0.052\*\*\* | 0.068\*\*\* | 0.007 |
|  | (0.004) | (0.006) | (0.007) | (0.006) |
| Male x Lives with children | -0.852 | -3.516\*\* | -3.635\*\* | 1.876 |
|  | (0.982) | (1.477) | (1.698) | (1.334) |
| Male x Stringency | 0.014\*\* | -0.017\* | -0.028\*\*\* | 0.015\* |
|  | (0.006) | (0.009) | (0.010) | (0.008) |
| Lives with children x Stringency | -0.012 | -0.023\* | -0.020 | -0.001 |
|  | (0.009) | (0.013) | (0.015) | (0.012) |
| Male x Lives with children x Stringency | 0.013 | 0.049\*\*\* | 0.049\*\* | -0.030\* |
|  | (0.013) | (0.019) | (0.022) | (0.017) |
|  |  |  |  |  |
| Observations | 10,979 | 10,979 | 10,979 | 10,979 |
| R-squared | 0.041 | 0.055 | 0.058 | 0.034 |
| Model | Linear | Linear | Linear | Linear |
| F(1, 10977) | 42.66 | 58.32 | 61.54 | 34.97 |

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Controls*: age, household size, years of education, urban vs rural; data was weighted on age, gender and level of education.



## GD in mental health and household characteristics (living alone)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | Aggression | Anxiety | Depression | Somatic symptom burden |
|  |  |  |  |  |
| Gender: Male | -1.285\*\*\* | -1.340\* | -0.415 | -1.756\*\*\* |
|  | (0.477) | (0.714) | (0.816) | (0.646) |
| Lives alone | -1.374\*\* | -0.951 | -0.607 | 0.075 |
|  | (0.642) | (0.963) | (1.100) | (0.870) |
| Stringency | 0.016\*\*\* | 0.041\*\*\* | 0.055\*\*\* | 0.005 |
|  | (0.004) | (0.006) | (0.007) | (0.006) |
| Male x Lives alone | 0.641 | 2.742\* | 3.203\*\* | -0.781 |
|  | (0.950) | (1.425) | (1.627) | (1.287) |
| Male x Stringency | 0.018\*\*\* | 0.002 | -0.008 | 0.005 |
|  | (0.006) | (0.009) | (0.010) | (0.008) |
| Lives alone x Stringency | 0.017\*\* | 0.019 | 0.024\* | 0.004 |
|  | (0.008) | (0.012) | (0.014) | (0.011) |
| Male x Lives alone x Stringency | -0.003 | -0.029 | -0.030 | 0.016 |
|  | (0.012) | (0.018) | (0.021) | (0.017) |
|  |  |  |  |  |
| Observations | 10,979 | 10,979 | 10,979 | 10,979 |
| R-squared | 0.039 | 0.059 | 0.074 | 0.036 |
| Model | Linear | Linear | Linear | Linear |
| F(1, 10977) | 40.61 | 62.94 | 79.39 | 37.48 |

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Controls*: age, household size, years of education, urban vs rural; data was weighted on age, gender and level of education.

