**Additional File 1. Main effects model and model with interaction terms, rate ratios with 95% confidence intervals comparing suicide rate of ANZSCO major groups, 2009-2018**

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| --- | --- | --- | --- | --- |
|  | **Main effects model** |  | **Interaction model** |  |
|  | **Rate Ratio (95% CI)** | ***P***  | **Rate Ratio (95% CI)** | ***P***  |
| **Occupation** |  |  |  |  |
|  | Managers | Reference |  | Reference |  |
|  | Professionals | 0.93 (0.85 – 1.03) | 0.148 | 1.10 (0.76 – 1.61) | 0.622 |
|  | Technicians/trades workers | 1.37 (1.25 – 1.51) | <0.001 | 1.49 (0.92 – 2.41) | 0.102 |
|  | Community/personal service workers | 1.42 (1.29 – 1.58) | <0.001 | 1.17 (0.79 – 1.75) | 0.441 |
|  | Clerical/administrative workers | 0.66 (0.59 – 0.73) | <0.001 | 0.63 (0.42 – 0.94) | 0.022 |
|  | Sales workers | 0.75 (0.67 – 0.84) | <0.001 | 0.64 (0.40 – 1.03) | 0.066 |
|  | Machinery operators/drivers | 1.33 (1.20 – 1.48) | <0.001 | 1.06 (0.43 – 2.24) | 0.890 |
|  | Labourers | 1.66 (1.51 – 1.82) | <0.001 | 0.88 (0.53 – 1.43) | 0.601 |
|  | Farmers/farm managers | 1.35 (1.16 – 1.57) | <0.001 | 0.46 (0.07 – 1.50) | 0.284 |
| **Sex** |  |  |  |  |
|  | Females | Reference |  | Reference |  |
|  | Males | 3.81 (3.59 – 4.05) | <0.001 | 3.54 (2.52 – 5.10) | <0.001 |
| **Age group** |  |  |  |  |
|  | 15-24 years | Reference |  | Reference |  |
|  | 25-34 years | 1.35 (1.23 – 1.47) | <0.001 | 1.35 (1.24 – 1.47) | <0.001 |
|  | 35-44 years | 1.59 (1.46 – 1.73) | <0.001 | 1.60 (1.47 – 1.73) | <0.001 |
|  | 45-54 years | 1.54 (1.41 – 1.68) | <0.001 | 1.56 (1.43 – 1.69) | <0.001 |
|  | 55-64 years | 1.26 (1.15 – 1.39) | <0.001 | 1.28 (1.18 – 1.41) | <0.001 |
|  | 65+ years | 1.13 (0.99 – 1.29) | 0.072 | 1.15 (1.01 – 1.31) | 0.033 |
| **Year** |  |  |  |  |
|  | 2007 - 2009 | Reference |  | Reference |  |
|  | 2010 - 2012 | 0.98 (0.91 – 1.05) | 0.583 | 0.96 (0.61 – 1.51) | 0.872 |
|  | 2013 - 2015 | 1.01 (0.95 – 1.09) | 0.691 | 1.24 (0.81 – 1.91) | 0.318 |
|  | 2016 - 2018 | 1.05 (0.98 – 1.13) | 0.136 | 0.96 (0.47 – 1.22) | 0.250 |
| **Occupation\*Year (Interaction)** |  |  |  |  |
|  | Professionals\*2010-2012 |  |  | 1.03 (0.61 – 1.75) | 0.914 |
|  | Technicians/trades workers\*2010-2012 |  |  | 0.91 (0.45 – 1.82) | 0.781 |
|  | Community/personal service workers\*2010-2012 |  |  | 1.21 (0.69 – 2.12) | 0.502 |
|  | Clerical/administrative workers\*2010-2012 |  |  | 0.99 (0.56 – 1.76) | 0.971 |
|  | Sales workers\*2010-2012 |  |  | 1.25 (0.65 – 2.40) | 0.505 |
|  | Machinery operators/drivers\*2010-2012 |  |  | 1.63 (0.57 – 4.90) | 0.364 |
|  | Labourers\*2010-2012 |  |  | 1.43 (0.73 – 2.80) | 0.294 |
|  | Farmers/farm managers\*2010-2012 |  |  | 3.11 (0.66 – 22.22) | 0.183 |
|  | Professionals\*2013-2015 |  |  | 0.96 (0.58 – 1.58) | 0.862 |
|  | Technicians/trades workers\*2013-2015 |  |  | 0.83 (0.43 – 1.62) | 0.586 |
|  | Community/personal service workers\*2013-2015 |  |  | 0.92 (0.54 – 1.58) | 0.770 |
|  | Clerical/administrative workers\*2013-2015 |  |  | 0.80 (0.46 – 1.40) | 0.439 |
|  | Sales workers\*2013-2015 |  |  | 1.16 (0.62 – 2.17) | 0.644 |
|  | Machinery operators/drivers\*2013-2015 |  |  | 0.69 (0.20 – 2.26) | 0.536 |
|  | Labourers\*2013-2015 |  |  | 1.08 (0.56 – 2.08) | 0.817 |
|  | Farmers/farm managers\*2013-2015 |  |  | 1.61 (0.30 – 12.11) | 0.594 |
|  | Professionals\*2016-2018 |  |  | 1.34 (0.77 – 2.34) | 0.301 |
|  | Technicians/trades workers\*2016-2018 |  |  | 1.87 (0.95 – 3.69) | 0.070 |
|  | Community/personal service workers\*2016-2018 |  |  | 1.95 (1.10 – 3.47) | 0.023 |
|  | Clerical/administrative workers\*2016-2018 |  |  | 1.52 (0.84 – 2.74) | 0.165 |
|  | Sales workers\*2016-2018 |  |  | 1.55 (0.79 – 3.06) | 0.201 |
|  | Machinery operators/drivers\*2016-2018 |  |  | 1.89 (0.64 – 5.80) | 0.252 |
|  | Labourers\*2016-2018 |  |  | 1.96 (0.99 – 3.90) | 0.053 |
|  | Farmers/farm managers\*2016-2018 |  |  | 2.65 (0.48 – 20.12) | 0.280 |
| **Occupation\*Sex (Interaction)** |  |  |  |  |
|  | Professionals\*Males |  |  | 0.83 (0.54 – 1.26) | 0.380 |
|  | Technicians/trades workers\*Males |  |  | 1.02 (0.61 – 1.72) | 0.941 |
|  | Community/personal service workers \*Males |  |  | 1.31 (0.82 – 2.07 | 0.250 |
|  | Clerical/administrative workers\*Males |  |  | 1.12 (0.69 – 1.82) | 0.636 |
|  | Sales workers\*Males |  |  | 1.17 (0.68 – 2.02) | 0.578 |
|  | Machinery operators/drivers\*Males |  |  | 1.38 (0.63 – 3.46) | 0.453 |
|  | Labourers\*Males |  |  | 2.53 (1.50 – 4.33) | <0.001 |
|  | Farmers/farm managers\*Males |  |  | 3.52 (1.03 – 22.09) | 0.090 |
| **Sex\*Year (Interaction)** |  |  |  |  |
|  | Males\*2010-2012 |  |  | 1.03 (0.63 – 1.70) | 0.904 |
|  | Males\*2013-2015 |  |  | 0.98 (0.61 – 1.57) | 0.926 |
|  | Males\*2016-2018 |  |  | 1.50 (0.89 – 2.54) | 0.131 |
| **Occupation\*Sex\*Year (Interaction)** |  |  |  |  |
|  | Professionals\*Males\*2010-2012 |  |  | 0.88 (0.48 – 1.62) | 0.679 |
|  | Technicians/trades workers\* Males\*2010-2012 |  |  | 1.10 (0.52 – 2.33) | 0.803 |
|  | Community/personal service workers\*Males\*2010-2012 |  |  | 0.85 (0.44 – 1.62) | 0.612 |
|  | Clerical/administrative workers\*Males\*2010-2012 |  |  | 1.26 (0.63 – 2.50) | 0.515 |
|  | Sales workers\*Males\*2010-2012 |  |  | 0.90 (0.42 – 1.91) | 0.776 |
|  | Machinery operators/drivers\* Males\*2010-2012 |  |  | 0.59 (0.19 – 1.76) | 0.353 |
|  | Labourers\*Males\*2010-2012 |  |  | 0.59 (0.28 – 1.22) | 0.153 |
|  | Farmers/farm managers\* Males\*2010-2012 |  |  | 0.23 (0.03 – 1.13) | 0.091 |
|  | Professionals\*Males\*2013-2015 |  |  | 0.86 (0.48 – 1.54) | 0.606 |
|  | Technicians/trades workers\* Males\*2013-2015 |  |  | 0.88 (0.43 – 1.81) | 0.732 |
|  | Community/personal service workers\*Males\*2013-2015 |  |  | 1.02 (0.54 – 1.91) | 0.957 |
|  | Clerical/administrative workers\* Males\*2013-2015 |  |  | 1.03 (0.53 – 2.03) | 0.925 |
|  | Sales workers\*Males\*2013-2015 |  |  | 0.66 (0.32 – 1.38) | 0.274 |
|  | Machinery operators/drivers\* Males\*2013-2015 |  |  | 1.21 (0.36 – 4.21) | 0.757 |
|  | Labourers\*Males\*2013-2015 |  |  | 0.60 (0.29 – 1.22) | 0.159 |
|  | Farmers/farm managers\* Males\*2013-2015 |  |  | 0.48 (0.06 – 2.75) | 0.425 |
|  | Professionals\*Males\*2016-2018 |  |  | 0.72 (0.39 – 1.35) | 0.308 |
|  | Technicians/trades workers\* Males\*2016-2018 |  |  | 0.46 (0.22 – 0.94) | 0.034 |
|  | Community/personal service workers\*Males\*2016-2018 |  |  | 0.45 (0.23 – 0.87) | 0.017 |
|  | Clerical/administrative workers\* Males\*2016-2018 |  |  | 0.55 (0.27 – 1.12)  | 0.101 |
|  | Sales workers Males\*2016-2018 |  |  | 0.72 (0.33 – 1.56) | 0.411 |
|  | Machinery operators/drivers\* Males\*2016-2018 |  |  | 0.47 (0.15 – 1.43) | 0.186 |
|  | Labourers\*Males\*2016-2018 |  |  | 0.40 (0.19 – 0.84) | 0.015 |
|  | Farmers/farm managers\* Males\*2016-2018 |  |  | 0.38 (0.05 – 2.19) | 0.294 |