

# Belgian population norms for the EQ-5D-5L, 2013 and 2018

## Appendix 1. Fitted models for Belgian EQ-5D population norms, 2013 and 2018

2020-12-29

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## 2013

### Mobility

#### Age-Sex-Region

Fitted model:

```
M0 ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      age.ns6 + sex:region + sex:age.ns1 + region:age.ns3
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.94934	0.26970	-10.9355	< 2.2e-16 ***
sexF	0.49529	0.10388	4.7681	1.860e-06 ***
regionBR	0.10372	0.24833	0.4176	0.67621
regionWA	0.15991	0.14627	1.0932	0.27429
age.ns1	1.37630	0.32698	4.2091	2.564e-05 ***
age.ns2	0.47025	0.33828	1.3901	0.16449
age.ns3	1.36165	0.30795	4.4217	9.792e-06 ***
age.ns4	1.69002	0.26750	6.3179	2.651e-10 ***
age.ns5	3.50173	0.65733	5.3272	9.973e-08 ***
age.ns6	5.92939	0.51429	11.5292	< 2.2e-16 ***
sexF:regionBR	-0.38402	0.27824	-1.3802	0.16753
sexF:regionWA	-0.33043	0.15825	-2.0880	0.03679 *
sexF:age.ns1	-0.78955	0.32016	-2.4661	0.01366 *
regionBR:age.ns3	0.86712	0.49178	1.7632	0.07786 .
regionWA:age.ns3	0.58538	0.28402	2.0611	0.03930 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5034.416

#### Age-Sex

Fitted model:

```
M0 ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      age.ns6 + sex:age.ns1
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.885305	0.264039	-10.9276	< 2.2e-16 ***
sexF	0.360869	0.084964	4.2473	2.164e-05 ***
age.ns1	1.365510	0.326667	4.1801	2.913e-05 ***
age.ns2	0.470059	0.338032	1.3906	0.16435
age.ns3	1.614839	0.287732	5.6123	1.997e-08 ***
age.ns4	1.679986	0.267058	6.2907	3.160e-10 ***
age.ns5	3.493951	0.656528	5.3219	1.027e-07 ***
age.ns6	5.930911	0.512918	11.5631	< 2.2e-16 ***
sexF:age.ns1	-0.786186	0.319644	-2.4596	0.01391 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5035.332

## Age-Region

Fitted model:

```
M0 ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      age.ns6 + region:age.ns3
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.683302	0.262504	-10.2219	< 2.2e-16 ***
regionBR	-0.099814	0.203956	-0.4894	0.6245682
regionWA	-0.023952	0.117718	-0.2035	0.8387656
age.ns1	0.954686	0.285751	3.3410	0.0008348 ***
age.ns2	0.477508	0.337610	1.4144	0.1572519
age.ns3	1.353352	0.307126	4.4065	1.051e-05 ***
age.ns4	1.686069	0.266348	6.3303	2.446e-10 ***
age.ns5	3.582870	0.655692	5.4643	4.649e-08 ***
age.ns6	6.024822	0.511229	11.7850	< 2.2e-16 ***
regionBR:age.ns3	0.860081	0.491947	1.7483	0.0804082 .
regionWA:age.ns3	0.591693	0.283510	2.0870	0.0368855 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5045.941

## Sex-Region

Fitted model:

```
M0 ~ region + sex + region:sex
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.786708	0.067333	-26.5355	< 2.2e-16 ***
regionBR	0.176482	0.190227	0.9277	0.35354
regionWA	0.225549	0.111260	2.0272	0.04264 *
sexF	0.455377	0.087612	5.1977	2.018e-07 ***
regionBR:sexF	-0.400782	0.258926	-1.5479	0.12166
regionWA:sexF	-0.289505	0.148243	-1.9529	0.05083 .

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5690.252

## Age

Fitted model:

```
M0 ~ age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 + age.ns6
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.69480	0.25887	-10.4100	< 2.2e-16 ***
age.ns1	0.95063	0.28560	3.3285	0.0008731 ***
age.ns2	0.47641	0.33730	1.4124	0.1578259
age.ns3	1.60617	0.28695	5.5974	2.176e-08 ***
age.ns4	1.68224	0.26613	6.3211	2.598e-10 ***
age.ns5	3.56853	0.65468	5.4508	5.013e-08 ***

```
age.ns6      6.02832    0.51051  11.8084 < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AIC: 5046.203

### Sex

```
Fitted model:
MO ~ sex
```

```
Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -1.700174   0.051285 -33.1513 < 2.2e-16 ***
sexF         0.332358   0.067770   4.9042  9.38e-07 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AIC: 5686.995

### Region

```
Fitted model:
MO ~ region
```

```
Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -1.534361   0.042921 -35.7481 <2e-16 ***
regionBR     -0.047003   0.128908  -0.3646  0.7154
regionWA     0.062048   0.073348   0.8460  0.3976
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AIC: 5712.105

### Intercept

```
Fitted model:
MO ~ 1
```

```
Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -1.518644   0.033458 -45.389 < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AIC: 5708.002

## Self-care

### Age-Sex-Region

Fitted model:

```
SC ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + region:age.ns2 +  
    region:age.ns4
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-5.68674	0.74859	-7.5966	3.040e-14	***
sexF	0.24968	0.11212	2.2268	0.025960	*
regionBR	-0.99457	0.37877	-2.6258	0.008645	**
regionWA	-0.65332	0.21361	-3.0585	0.002225	**
age.ns1	3.38035	0.71302	4.7409	2.128e-06	***
age.ns2	1.06379	0.55236	1.9259	0.054114	.
age.ns3	7.39647	1.57549	4.6947	2.670e-06	***
age.ns4	8.59676	0.61063	14.0785	< 2.2e-16	***
regionBR:age.ns2	3.09798	1.02228	3.0305	0.002442	**
regionWA:age.ns2	2.00468	0.62129	3.2267	0.001252	**
regionBR:age.ns4	-4.40324	1.55150	-2.8380	0.004539	**
regionWA:age.ns4	-2.50988	0.89392	-2.8077	0.004989	**

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 2526.539

### Age-Sex

Fitted model:

```
SC ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-5.96672	0.75396	-7.9138	2.497e-15	***
sexF	0.24703	0.11164	2.2128	0.026915	*
age.ns1	3.38869	0.72079	4.7014	2.584e-06	***
age.ns2	1.93949	0.50454	3.8441	0.000121	***
age.ns3	7.45365	1.59357	4.6773	2.906e-06	***
age.ns4	7.50228	0.51197	14.6537	< 2.2e-16	***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 2532.886

### Age-Region

Fitted model:

```
SC ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + region:age.ns2 +  
    region:age.ns4
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-5.54361	0.74329	-7.4582	8.772e-14	***
regionBR	-0.99318	0.37844	-2.6244	0.008680	**
regionWA	-0.64781	0.21355	-3.0335	0.002417	**

```

age.ns1      3.37086    0.71104  4.7408 2.129e-06 ***
age.ns2      1.04576    0.55110  1.8976 0.057754 .
age.ns3      7.41598    1.57036  4.7225 2.330e-06 ***
age.ns4      8.67355    0.60916 14.2387 < 2.2e-16 ***
regionBR:age.ns2 3.09900    1.02104  3.0351 0.002404 **
regionWA:age.ns2 2.00087    0.62121  3.2209 0.001278 **
regionBR:age.ns4 -4.39871    1.54917 -2.8394 0.004520 **
regionWA:age.ns4 -2.50043    0.89315 -2.7995 0.005117 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AIC: 2527.699

```

### Sex-Region

Fitted model:  
SC ~ region + sex

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -2.769595    0.089383 -30.9857 < 2.2e-16 ***
regionBR     -0.353926    0.213997  -1.6539  0.09815 .
regionWA     -0.212528    0.115994  -1.8322  0.06692 .
sexF          0.416802    0.104855   3.9750 7.037e-05 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AIC: 2992.017

```

### Age

Fitted model:  
SC ~ age.ns1 + age.ns2 + age.ns3 + age.ns4

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -5.82438    0.74872 -7.7791 7.304e-15 ***
age.ns1      3.38077    0.71893  4.7025 2.569e-06 ***
age.ns2      1.92023    0.50331  3.8152 0.0001361 ***
age.ns3      7.47519    1.58859  4.7055 2.532e-06 ***
age.ns4      7.58325    0.51054 14.8533 < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AIC: 2533.989

```

### Sex

Fitted model:  
SC ~ sex

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -2.85564    0.08172 -34.9443 < 2.2e-16 ***
sexF          0.41519    0.10481   3.9614 7.452e-05 ***

```

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 2992.026

### Region

Fitted model:

SC ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.535517	0.062865	-40.3328	< 2e-16 ***
regionBR	-0.350339	0.213770	-1.6389	0.10124
regionWA	-0.209878	0.115847	-1.8117	0.07003 .

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 3004.335

### Intercept

Fitted model:

SC ~ 1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.621441	0.051103	-51.297	< 2.2e-16 ***

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 3004.259

## Usual activities

### Age-Sex-Region

Fitted model:

```
DA ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
    age.ns6 + region:age.ns1 + region:age.ns3 + region:age.ns6
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.684112	0.241677	-11.1062	< 2.2e-16 ***
sexF	0.297763	0.071362	4.1726	3.012e-05 ***
regionBR	-0.327737	0.314723	-1.0413	0.2977133
regionWA	0.410949	0.159260	2.5804	0.0098696 **
age.ns1	1.337504	0.307034	4.3562	1.323e-05 ***
age.ns2	0.510580	0.303322	1.6833	0.0923183 .
age.ns3	1.123568	0.302021	3.7202	0.0001991 ***
age.ns4	0.404804	0.272034	1.4881	0.1367341
age.ns5	3.344514	0.582839	5.7383	9.562e-09 ***
age.ns6	7.151775	0.602459	11.8710	< 2.2e-16 ***
regionBR:age.ns1	0.113353	0.775192	0.1462	0.8837437
regionWA:age.ns1	-1.323372	0.427079	-3.0987	0.0019440 **
regionBR:age.ns3	1.428164	0.636868	2.2425	0.0249303 *
regionWA:age.ns3	0.142327	0.342155	0.4160	0.6774300
regionBR:age.ns6	-0.935639	1.294480	-0.7228	0.4698079
regionWA:age.ns6	-2.391226	0.732056	-3.2665	0.0010890 **

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5245.973

### Age-Sex

Fitted model:

```
DA ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
    age.ns6
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.498974	0.225390	-11.0873	< 2.2e-16 ***
sexF	0.292727	0.071076	4.1185	3.814e-05 ***
age.ns1	0.829338	0.248625	3.3357	0.0008508 ***
age.ns2	0.449971	0.299468	1.5026	0.1329507
age.ns3	1.213235	0.257119	4.7186	2.375e-06 ***
age.ns4	0.346906	0.269213	1.2886	0.1975390
age.ns5	3.249095	0.573116	5.6692	1.435e-08 ***
age.ns6	6.238668	0.520173	11.9935	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5271.096

### Age-Region

Fitted model:

```
DA ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +
```



age.ns6 + region:age.ns1 + region:age.ns3 + region:age.ns6

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.531862	0.238106	-10.6333	< 2.2e-16 ***
regionBR	-0.324602	0.314613	-1.0318	0.3021892
regionWA	0.409371	0.159019	2.5744	0.0100426 *
age.ns1	1.320704	0.306583	4.3078	1.649e-05 ***
age.ns2	0.528419	0.302877	1.7447	0.0810431 .
age.ns3	1.114700	0.301416	3.6982	0.0002171 ***
age.ns4	0.413545	0.271290	1.5244	0.1274167
age.ns5	3.425537	0.581472	5.8911	3.835e-09 ***
age.ns6	7.204718	0.600435	11.9992	< 2.2e-16 ***
regionBR:age.ns1	0.097706	0.775588	0.1260	0.8997507
regionWA:age.ns1	-1.293005	0.426754	-3.0299	0.0024467 **
regionBR:age.ns3	1.428407	0.636540	2.2440	0.0248312 *
regionWA:age.ns3	0.147205	0.341618	0.4309	0.6665361
regionBR:age.ns6	-0.950840	1.294095	-0.7348	0.4624900
regionWA:age.ns6	-2.332018	0.730979	-3.1903	0.0014214 **

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5260.033

## Sex-Region

Fitted model:

DA ~ region + sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.812571	0.059271	-30.5811	< 2.2e-16 ***
regionBR	-0.041191	0.132360	-0.3112	0.755644
regionWA	0.239176	0.072803	3.2852	0.001019 **
sexF	0.361587	0.068429	5.2841	1.263e-07 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5619.359

## Age

Fitted model:

DA ~ age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 + age.ns6

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.35064	0.22177	-10.5994	< 2.2e-16 ***
age.ns1	0.82201	0.24833	3.3101	0.0009325 ***
age.ns2	0.46861	0.29909	1.5668	0.1171637
age.ns3	1.20731	0.25662	4.7047	2.543e-06 ***
age.ns4	0.35434	0.26852	1.3196	0.1869747
age.ns5	3.33210	0.57188	5.8266	5.658e-09 ***
age.ns6	6.31067	0.51856	12.1697	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5284.753

### Sex

Fitted model:

DA ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.738256	0.051970	-33.4476	< 2.2e-16 ***
sexF	0.361749	0.068364	5.2915	1.213e-07 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5625.87

### Region

Fitted model:

DA ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.614550	0.044067	-36.6383	< 2.2e-16 ***
regionBR	-0.038633	0.132075	-0.2925	0.7699000
regionWA	0.239868	0.072625	3.3028	0.0009572 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5644.175

### Intercept

Fitted model:

DA ~ 1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.539727	0.033686	-45.708	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 5650.792

## Pain/Discomfort

### Age-Sex-Region

Fitted model:

PD ~ sex + region + age.ns1 + age.ns2 + sex:age.ns2 + region:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.023428	0.111880	-9.1476	< 2.2e-16 ***
sexF	0.350807	0.069062	5.0796	3.783e-07 ***
regionBR	-0.280611	0.297356	-0.9437	0.3453290
regionWA	-0.324998	0.174142	-1.8663	0.0620024 .
age.ns1	1.948138	0.218490	8.9164	< 2.2e-16 ***
age.ns2	0.935529	0.277902	3.3664	0.0007616 ***
sexF:age.ns2	0.768437	0.366849	2.0947	0.0361979 *
regionBR:age.ns1	1.306045	0.669251	1.9515	0.0509972 .
regionWA:age.ns1	1.700300	0.376811	4.5123	6.412e-06 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8032.205

### Age-Sex

Fitted model:

PD ~ sex + age.ns1 + age.ns2 + sex:age.ns2

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.146401	0.090839	-12.6202	< 2.2e-16 ***
sexF	0.352745	0.068633	5.1396	2.754e-07 ***
age.ns1	2.538674	0.170482	14.8912	< 2.2e-16 ***
age.ns2	0.875635	0.275933	3.1734	0.001507 **
sexF:age.ns2	0.763051	0.364608	2.0928	0.036367 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8095.647

### Age-Region

Fitted model:

PD ~ region + age.ns1 + age.ns2 + region:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.82238	0.10397	-7.9094	2.586e-15 ***
regionBR	-0.26651	0.29637	-0.8992	0.36852
regionWA	-0.33425	0.17351	-1.9265	0.05405 .
age.ns1	1.93742	0.21763	8.9024	< 2.2e-16 ***
age.ns2	1.43394	0.17984	7.9733	1.545e-15 ***
regionBR:age.ns1	1.27669	0.66710	1.9138	0.05565 .
regionWA:age.ns1	1.72184	0.37558	4.5845	4.551e-06 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8053.632

### Sex-Region

Fitted model:

PD ~ region + sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.268916	0.042584	-6.3150	2.701e-10 ***
regionBR	0.178883	0.097429	1.8360	0.06635 .
regionWA	0.359328	0.057199	6.2821	3.341e-10 ***
sexF	0.274416	0.051713	5.3065	1.117e-07 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8342.736

### Age

Fitted model:

PD ~ age.ns1 + age.ns2

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.946020	0.081329	-11.6320	< 2.2e-16 ***
age.ns1	2.532005	0.169794	14.9122	< 2.2e-16 ***
age.ns2	1.371039	0.178430	7.6839	1.543e-14 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8118.001

### Sex

Fitted model:

PD ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.144485	0.037163	-3.8879	0.0001011 ***
sexF	0.274192	0.051541	5.3199	1.038e-07 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8377.356

### Region

Fitted model:

PD ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
--	----------	------------	---------	----------

```

(Intercept) -0.126285    0.032856 -3.8436 0.0001212 ***
regionBR     0.179870    0.097201  1.8505 0.0642422 .
regionWA     0.359056    0.057065  6.2921 3.133e-10 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

AIC: 8367.511

### Intercept

Fitted model:  
 PD ~ 1

### Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.0019757	0.0256896	-0.0769	0.9387

AIC: 8402.324

## Anxiety/Depression

### Age-Sex-Region

Fitted model:

AD ~ sex + region + age.ns1 + age.ns2 + sex:age.ns1 + region:age.ns2

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.436978	0.156027	-15.6189	< 2.2e-16 ***
sexF	1.050844	0.189481	5.5459	2.924e-08 ***
regionBR	0.857829	0.141593	6.0584	1.375e-09 ***
regionWA	0.929297	0.080408	11.5572	< 2.2e-16 ***
age.ns1	1.731967	0.311598	5.5583	2.723e-08 ***
age.ns2	0.493653	0.257715	1.9155	0.0554286 .
sexF:age.ns1	-1.432007	0.402059	-3.5617	0.0003685 ***
regionBR:age.ns2	-1.233365	0.754273	-1.6352	0.1020131
regionWA:age.ns2	-1.409131	0.426003	-3.3078	0.0009403 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6625.151

### Age-Sex

Fitted model:

AD ~ sex + age.ns1 + age.ns2 + sex:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.92908	0.14698	-13.1243	< 2.2e-16 ***
sexF	0.98154	0.18476	5.3124	1.082e-07 ***
age.ns1	1.50405	0.30383	4.9503	7.409e-07 ***
age.ns2	-0.20602	0.19391	-1.0625	0.2880290
sexF:age.ns1	-1.30642	0.39176	-3.3348	0.0008537 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6947.732

### Age-Region

Fitted model:

AD ~ region + age.ns1 + age.ns2 + region:age.ns2

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.823498	0.101146	-18.0285	< 2.2e-16 ***
regionBR	0.857196	0.140927	6.0825	1.183e-09 ***
regionWA	0.917745	0.080083	11.4599	< 2.2e-16 ***
age.ns1	0.897068	0.194811	4.6048	4.128e-06 ***
age.ns2	0.578486	0.257079	2.2502	0.0244342 *
regionBR:age.ns2	-1.207319	0.751684	-1.6062	0.1082401
regionWA:age.ns2	-1.419123	0.425466	-3.3355	0.0008516 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6677.911

### Sex-Region

Fitted model:

AD ~ region + sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.711325	0.055145	-31.0333	< 2.2e-16 ***
regionBR	0.977058	0.103986	9.3961	< 2.2e-16 ***
regionWA	1.072365	0.063778	16.8140	< 2.2e-16 ***
sexF	0.411700	0.060598	6.7939	1.091e-11 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6656.28

### Age

Fitted model:

AD ~ age.ns1 + age.ns2

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.357507	0.091041	-14.911	< 2.2e-16 ***
age.ns1	0.736499	0.189186	3.893	9.902e-05 ***
age.ns2	-0.125030	0.193255	-0.647	0.5177

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6998.644

### Sex

Fitted model:

AD ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.235863	0.044371	-27.8531	< 2.2e-16 ***
sexF	0.395483	0.058962	6.7074	1.981e-11 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6964.538

### Region

Fitted model:

AD ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
--	----------	------------	---------	----------

```

(Intercept) -1.484926    0.042250 -35.1463 < 2.2e-16 ***
regionBR      0.971852    0.103489   9.3908 < 2.2e-16 ***
regionWA      1.065592    0.063471  16.7887 < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

AIC: 6699.607

### Intercept

Fitted model:  
AD ~ 1

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -1.021142    0.029111 -35.077 < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

AIC: 7006.794



## Any problem

### Age-Sex-Region

Fitted model:

ANY1 ~ sex + region + age.ns1 + region:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.754835	0.076197	-9.9064	< 2.2e-16 ***
sexF	0.319479	0.053942	5.9226	3.169e-09 ***
regionBR	0.289591	0.204040	1.4193	0.155815
regionWA	0.358999	0.122872	2.9217	0.003481 **
age.ns1	2.419187	0.203101	11.9113	< 2.2e-16 ***
regionBR:age.ns1	0.612643	0.669514	0.9151	0.360162
regionWA:age.ns1	0.797016	0.377474	2.1114	0.034734 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7832.174

### Age-Sex

Fitted model:

ANY1 ~ sex + age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.588868	0.061252	-9.6138	< 2.2e-16 ***
sexF	0.317919	0.053471	5.9456	2.754e-09 ***
age.ns1	2.563404	0.163070	15.7196	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7928.965

### Age-Region

Fitted model:

ANY1 ~ region + age.ns1 + region:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.595433	0.070816	-8.4082	< 2.2e-16 ***
regionBR	0.299321	0.203211	1.4730	0.140762
regionWA	0.355423	0.122414	2.9034	0.003691 **
age.ns1	2.433470	0.202225	12.0335	< 2.2e-16 ***
regionBR:age.ns1	0.578279	0.665846	0.8685	0.385127
regionWA:age.ns1	0.804337	0.375849	2.1401	0.032350 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7863.935

## Sex-Region

Fitted model:

ANY1 ~ region + sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.010081	0.042602	-0.2366	0.8129469
regionBR	0.354328	0.100416	3.5286	0.0004177 ***
regionWA	0.525765	0.059304	8.8656	< 2.2e-16 ***
sexF	0.336343	0.052699	6.3823	1.744e-10 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8107.501

## Age

Fitted model:

ANY1 ~ age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.430576	0.054758	-7.8633	3.742e-15 ***
age.ns1	2.577506	0.162327	15.8785	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7961.066

## Sex

Fitted model:

ANY1 ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.174943	0.037208	4.7018	2.579e-06 ***
sexF	0.334144	0.052331	6.3852	1.712e-10 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8185.785

## Region

Fitted model:

ANY1 ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.162869	0.032899	4.9505	7.401e-07 ***
regionBR	0.354146	0.100081	3.5386	0.0004023 ***
regionWA	0.523966	0.059105	8.8650	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8145.016

### Intercept

Fitted model:

ANY1 ~ 1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.346215	0.026076	13.277	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8223.391

## Index value

### Age-Sex-Region

Fitted model:

```
index ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 +  
      age.ns5 + age.ns6 + sex:age.ns2 + sex:age.ns6 + region:age.ns2 +  
      region:age.ns4 + region:age.ns6
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.9377371	0.0165340	56.7158	< 2.2e-16 ***
sexF	-0.0519386	0.0093671	-5.5448	3.142e-08 ***
regionBR	-0.0151181	0.0262924	-0.5750	0.5653260
regionWA	-0.0026092	0.0156266	-0.1670	0.8674013
age.ns1	-0.0692044	0.0179621	-3.8528	0.0001187 ***
age.ns2	-0.0645209	0.0298130	-2.1642	0.0305119 *
age.ns3	-0.1475873	0.0194340	-7.5943	3.867e-14 ***
age.ns4	0.0221357	0.0296477	0.7466	0.4553361
age.ns5	-0.3972743	0.0423467	-9.3815	< 2.2e-16 ***
age.ns6	-0.6532625	0.0728543	-8.9667	< 2.2e-16 ***
sexF:age.ns2	0.0556679	0.0279183	1.9940	0.0462273 *
sexF:age.ns6	-0.1179972	0.0581987	-2.0275	0.0426816 *
regionBR:age.ns2	-0.0748249	0.0662537	-1.1294	0.2588128
regionWA:age.ns2	-0.1410082	0.0378831	-3.7222	0.0002003 ***
regionBR:age.ns4	-0.0988844	0.0831782	-1.1888	0.2345819
regionWA:age.ns4	-0.1618388	0.0494081	-3.2755	0.0010640 **
regionBR:age.ns6	0.2030033	0.1611174	1.2600	0.2077567
regionWA:age.ns6	0.3957670	0.1013314	3.9057	9.559e-05 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 217.8918

### Age-Sex

Fitted model:

```
index ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      age.ns6 + sex:age.ns2 + sex:age.ns6
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.9366032	0.0156688	59.7750	< 2.2e-16 ***
sexF	-0.0528700	0.0094853	-5.5739	2.663e-08 ***
age.ns1	-0.0681333	0.0181587	-3.7521	0.000178 ***
age.ns2	-0.1124674	0.0270277	-4.1612	3.235e-05 ***
age.ns3	-0.1493959	0.0196346	-7.6088	3.462e-14 ***
age.ns4	-0.0287538	0.0247094	-1.1637	0.244627
age.ns5	-0.4039981	0.0426154	-9.4801	< 2.2e-16 ***
age.ns6	-0.5149636	0.0657386	-7.8335	6.099e-15 ***
sexF:age.ns2	0.0546458	0.0282689	1.9331	0.053301 .
sexF:age.ns6	-0.1289006	0.0589114	-2.1880	0.028727 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 223.1824

### Age-Region

Fitted model:

```
index ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      age.ns6 + region:age.ns2 + region:age.ns4 + region:age.ns6
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.9125528	0.0159521	57.2059	< 2.2e-16 ***
regionBR	-0.0148227	0.0264120	-0.5612	0.5746861
regionWA	-0.0025582	0.0156976	-0.1630	0.8705530
age.ns1	-0.0693964	0.0180379	-3.8473	0.0001214 ***
age.ns2	-0.0372400	0.0262500	-1.4187	0.1560773
age.ns3	-0.1488904	0.0195107	-7.6312	2.918e-14 ***
age.ns4	0.0269675	0.0296878	0.9084	0.3637405
age.ns5	-0.4212787	0.0421685	-9.9904	< 2.2e-16 ***
age.ns6	-0.7525723	0.0596532	-12.6158	< 2.2e-16 ***
regionBR:age.ns2	-0.0758606	0.0665546	-1.1398	0.2544303
regionWA:age.ns2	-0.1419108	0.0380523	-3.7294	0.0001947 ***
regionBR:age.ns4	-0.1001634	0.0835577	-1.1987	0.2307056
regionWA:age.ns4	-0.1652488	0.0496266	-3.3298	0.0008772 ***
regionBR:age.ns6	0.2058807	0.1618476	1.2721	0.2034274
regionWA:age.ns6	0.3969146	0.1017667	3.9002	9.775e-05 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 219.7383

### Sex-Region

Fitted model:

```
index ~ region + sex
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.8554308	0.0052796	162.0267	< 2.2e-16 ***
regionBR	-0.0357283	0.0121453	-2.9417	0.003283 **
regionWA	-0.0567269	0.0070974	-7.9926	1.733e-15 ***
sexF	-0.0415529	0.0064284	-6.4640	1.148e-10 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 240.0971

### Age

Fitted model:

```
index ~ age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 + age.ns6
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.910989	0.015031	60.6072	< 2.2e-16 ***
age.ns1	-0.068396	0.018236	-3.7506	0.000179 ***

```

age.ns2      -0.085991    0.022830   -3.7666   0.000168 ***
age.ns3      -0.150816    0.019713   -7.6507  2.513e-14 ***
age.ns4      -0.024672    0.024727   -0.9978   0.318459
age.ns5      -0.428883    0.042433  -10.1073 < 2.2e-16 ***
age.ns6      -0.621313    0.050655  -12.2656 < 2.2e-16 ***

```

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 225.0852

## Sex

Fitted model:

index ~ sex

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.8353163	0.0046723	178.7787	< 2.2e-16 ***
sexF	-0.0418159	0.0064816	-6.4515	1.245e-10 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 244.0001

## Region

Fitted model:

index ~ region

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.8339253	0.0041211	202.3538	< 2.2e-16 ***
regionBR	-0.0360048	0.0122096	-2.9489	0.003208 **
regionWA	-0.0569400	0.0071350	-7.9804	1.91e-15 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 242.5848

## Intercept

Fitted model:

index ~ 1

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.8135868	0.0032554	249.92	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 246.5199

## Visual Analogue Scale

### Age-Sex-Region

Fitted model:

```
VAS ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 +  
      sex:region + region:age.ns1 + region:age.ns2 + region:age.ns4
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	82.65816	1.13361	72.9162	< 2.2e-16 ***
sexF	-1.92690	0.60699	-3.1745	0.001513 **
regionBR	4.06179	2.31738	1.7528	0.079725 .
regionWA	2.53395	1.29714	1.9535	0.050835 .
age.ns1	-5.20085	1.35709	-3.8324	0.000129 ***
age.ns2	-2.83583	1.75503	-1.6158	0.106213
age.ns3	-21.45309	2.59667	-8.2618	< 2.2e-16 ***
age.ns4	-33.18574	3.44967	-9.6200	< 2.2e-16 ***
sexF:regionBR	1.97638	1.79913	1.0985	0.272046
sexF:regionWA	1.57442	1.05025	1.4991	0.133931
regionBR:age.ns1	-6.63868	3.61045	-1.8387	0.066031 .
regionWA:age.ns1	-3.63719	2.04279	-1.7805	0.075073 .
regionBR:age.ns2	-9.31758	5.34055	-1.7447	0.081120 .
regionWA:age.ns2	-7.43097	3.06027	-2.4282	0.015219 *
regionBR:age.ns4	16.71395	10.27282	1.6270	0.103818
regionWA:age.ns4	12.36216	6.10691	2.0243	0.043009 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 1311341

### Age-Sex

Fitted model:

```
VAS ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	83.78001	1.02421	81.7993	< 2.2e-16 ***
sexF	-1.29385	0.47626	-2.7167	0.006624 **
age.ns1	-6.90702	1.12902	-6.1177	1.044e-09 ***
age.ns2	-5.71576	1.40555	-4.0666	4.867e-05 ***
age.ns3	-21.76709	2.59053	-8.4026	< 2.2e-16 ***
age.ns4	-28.91233	2.84947	-10.1465	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 1312289

### Age-Region

Fitted model:

```
VAS ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + region:age.ns1 +  
      region:age.ns2 + region:age.ns4
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	81.6299	1.0860	75.1638	< 2.2e-16 ***
regionBR	5.2099	2.0549	2.5354	0.0112719 *
regionWA	3.4414	1.1511	2.9897	0.0028105 **
age.ns1	-5.1297	1.3580	-3.7774	0.0001609 ***
age.ns2	-2.7171	1.7562	-1.5471	0.1219119
age.ns3	-21.7103	2.5970	-8.3599	< 2.2e-16 ***
age.ns4	-33.8142	3.4473	-9.8088	< 2.2e-16 ***
regionBR:age.ns1	-6.7829	3.6087	-1.8796	0.0602398 .
regionWA:age.ns1	-3.7621	2.0442	-1.8404	0.0657926 .
regionBR:age.ns2	-9.4818	5.3441	-1.7743	0.0760989 .
regionWA:age.ns2	-7.5476	3.0622	-2.4648	0.0137543 *
regionBR:age.ns4	17.2675	10.2711	1.6812	0.0928102 .
regionWA:age.ns4	12.7669	6.1045	2.0914	0.0365598 *

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 1313050

### Sex-Region

Fitted model:

VAS ~ region + sex + region:sex

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	78.18845	0.45270	172.7143	< 2.2e-16 ***
regionBR	-0.37007	1.34951	-0.2742	0.7839
regionWA	-0.50232	0.78657	-0.6386	0.5231
sexF	-2.45460	0.62927	-3.9007	9.757e-05 ***
regionBR:sexF	2.53908	1.86526	1.3612	0.1735
regionWA:sexF	1.64809	1.08977	1.5123	0.1305

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 1413232

### Age

Fitted model:

VAS ~ age.ns1 + age.ns2 + age.ns3 + age.ns4

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	83.12334	0.99611	83.4479	< 2.2e-16 ***
age.ns1	-6.90014	1.12995	-6.1066	1.119e-09 ***
age.ns2	-5.65131	1.40652	-4.0179	5.983e-05 ***
age.ns3	-22.03728	2.59078	-8.5061	< 2.2e-16 ***
age.ns4	-29.38050	2.84662	-10.3212	< 2.2e-16 ***

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 1314022



## Sex

Fitted model:

VAS ~ sex

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	78.00613	0.35548	219.4391	< 2.2e-16 ***
sexF	-1.74548	0.49313	-3.5396	0.0004055 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 1412503

## Region

Fitted model:

VAS ~ region

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	76.91808	0.31498	244.2021	<2e-16 ***
regionBR	0.94458	0.93318	1.0122	0.3115
regionWA	0.34650	0.54532	0.6354	0.5252

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 1417195

## Intercept

Fitted model:

VAS ~ 1

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	77.09910	0.24674	312.47	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 1416254

## 2018

### Mobility

#### Age-Sex-Region

Fitted model:

M0 ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + region:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.515455	0.175168	-14.3602	< 2.2e-16 ***
sexF	0.273360	0.063625	4.2964	1.736e-05 ***
regionBR	0.207058	0.195117	1.0612	0.2885993
regionWA	0.082043	0.118780	0.6907	0.4897491
age.ns1	0.689369	0.210736	3.2712	0.0010707 **
age.ns2	0.958731	0.173068	5.5396	3.031e-08 ***
age.ns3	2.805715	0.402402	6.9724	3.115e-12 ***
age.ns4	5.233257	0.304105	17.2087	< 2.2e-16 ***
regionBR:age.ns1	0.270557	0.435999	0.6205	0.5348983
regionWA:age.ns1	0.920578	0.258278	3.5643	0.0003648 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6454.851

#### Age-Sex

Fitted model:

M0 ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.466861	0.167770	-14.7038	< 2.2e-16 ***
sexF	0.277642	0.063361	4.3819	1.177e-05 ***
age.ns1	1.059995	0.173768	6.1000	1.060e-09 ***
age.ns2	0.936488	0.172304	5.4351	5.477e-08 ***
age.ns3	2.786833	0.401378	6.9432	3.834e-12 ***
age.ns4	5.232484	0.302255	17.3115	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6498.197

#### Age-Region

Fitted model:

M0 ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + region:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.372524	0.171706	-13.8174	< 2.2e-16 ***
regionBR	0.215389	0.194570	1.1070	0.2682925
regionWA	0.084984	0.118612	0.7165	0.4736878
age.ns1	0.692781	0.210540	3.2905	0.0010001 **
age.ns2	0.954285	0.172743	5.5243	3.308e-08 ***

```

age.ns3          2.827575    0.402674    7.0220 2.187e-12 ***
age.ns4          5.276486    0.302894   17.4202 < 2.2e-16 ***
regionBR:age.ns1 0.257109    0.434878    0.5912 0.5543733
regionWA:age.ns1 0.920131    0.257872    3.5682 0.0003595 ***

```

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6469.844

### Sex-Region

Fitted model:

M0 ~ region + sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.759234	0.052461	-33.5344	< 2.2e-16 ***
regionBR	0.118925	0.106162	1.1202	0.2626
regionWA	0.339683	0.063081	5.3849	7.250e-08 ***
sexF	0.335434	0.059612	5.6270	1.834e-08 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7252.937

### Age

Fitted model:

M0 ~ age.ns1 + age.ns2 + age.ns3 + age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.32016	0.16410	-14.1383	< 2.2e-16 ***
age.ns1	1.06182	0.17362	6.1158	9.607e-10 ***
age.ns2	0.93196	0.17198	5.4192	5.987e-08 ***
age.ns3	2.81043	0.40166	6.9970	2.615e-12 ***
age.ns4	5.27473	0.30101	17.5233	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6513.971

### Sex

Fitted model:

M0 ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.631944	0.044845	-36.3907	< 2.2e-16 ***
sexF	0.337243	0.059498	5.6681	1.444e-08 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7275.907

## Region

Fitted model:

MO ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.578262	0.040042	-39.4149	< 2.2e-16 ***
regionBR	0.120391	0.105939	1.1364	0.2558
regionWA	0.341759	0.062940	5.4299	5.639e-08 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7281.558

## Intercept

Fitted model:

MO ~ 1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.449140	0.029408	-49.276	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7305.011

## Self-care

### Age-Sex-Region

Fitted model:

SC ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + region:age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-3.60430	0.29386	-12.2655	< 2e-16 ***
sexF	0.12024	0.10453	1.1503	0.25003
regionBR	0.13111	0.19369	0.6769	0.49845
regionWA	0.26589	0.11093	2.3970	0.01653 *
age.ns1	0.72851	0.30415	2.3953	0.01661 *
age.ns2	0.63339	0.26708	2.3715	0.01771 *
age.ns3	1.99149	0.70121	2.8401	0.00451 **
age.ns4	6.11585	0.43045	14.2081	< 2e-16 ***
regionBR:age.ns4	-0.79034	0.91718	-0.8617	0.38885
regionWA:age.ns4	-1.48587	0.59186	-2.5105	0.01206 *

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 2951.605

### Age-Sex

Fitted model:

SC ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-3.48541	0.28822	-12.0929	< 2.2e-16 ***
sexF	0.12258	0.10441	1.1740	0.240380
age.ns1	0.71575	0.30343	2.3589	0.018329 *
age.ns2	0.60164	0.26564	2.2649	0.023522 *
age.ns3	2.01034	0.69683	2.8850	0.003914 **
age.ns4	5.52861	0.35580	15.5386	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 2952.546

### Age-Region

Fitted model:

SC ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + region:age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-3.54204	0.28867	-12.2704	< 2e-16 ***
regionBR	0.13415	0.19365	0.6928	0.48846
regionWA	0.26791	0.11090	2.4158	0.01570 *
age.ns1	0.73113	0.30409	2.4043	0.01620 *
age.ns2	0.62813	0.26705	2.3522	0.01866 *
age.ns3	2.00292	0.70167	2.8545	0.00431 **
age.ns4	6.14679	0.42957	14.3091	< 2e-16 ***

```

regionBR:age.ns4 -0.77784    0.91762  -0.8477  0.39662
regionWA:age.ns4 -1.48324    0.59154  -2.5074  0.01216 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

AIC: 2949.207

### Sex-Region

Fitted model:  
SC ~ region + sex

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -2.968926   0.086657 -34.2606 < 2.2e-16 ***
regionBR     -0.033410   0.181810  -0.1838  0.854197
regionWA      0.166544   0.105065   1.5852  0.112931
sexF          0.262361   0.099220   2.6442  0.008187 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

AIC: 3360.001

### Age

Fitted model:  
SC ~ age.ns1 + age.ns2 + age.ns3 + age.ns4

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -3.42103    0.28280 -12.0968 < 2.2e-16 ***
age.ns1      0.71850    0.30338   2.3683  0.017870 *
age.ns2      0.59606    0.26562   2.2440  0.024829 *
age.ns3      2.02226    0.69735   2.8999  0.003733 **
age.ns4      5.56194    0.35472  15.6798 < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

AIC: 2950.17

### Sex

Fitted model:  
SC ~ sex

```

Coefficients:
              Estimate Std. Error z value Pr(>|z|)
(Intercept) -2.915819   0.075135 -38.8079 < 2.2e-16 ***
sexF         0.263728   0.099199   2.6586  0.007847 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

AIC: 3357.568

## Region

Fitted model:

SC ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.826991	0.065643	-43.0664	<2e-16 ***
regionBR	-0.031855	0.181731	-0.1753	0.8609
regionWA	0.169166	0.105009	1.6110	0.1072

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 3363.257

## Intercept

Fitted model:

SC ~ 1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.772109	0.049035	-56.533	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 3360.903

## Usual activities

### Age-Sex-Region

Fitted model:

DA ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.524997	0.158053	-15.9756	< 2.2e-16 ***
sexF	0.481404	0.062226	7.7364	1.023e-14 ***
regionBR	0.052364	0.114978	0.4554	0.6488
regionWA	0.359462	0.065377	5.4983	3.835e-08 ***
age.ns1	1.225036	0.160298	7.6423	2.134e-14 ***
age.ns2	0.137364	0.170439	0.8059	0.4203
age.ns3	2.349175	0.370743	6.3364	2.352e-10 ***
age.ns4	4.781207	0.291880	16.3807	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6806.974

### Age-Sex

Fitted model:

DA ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.380562	0.154540	-15.4042	< 2.2e-16 ***
sexF	0.483393	0.062089	7.7855	6.944e-15 ***
age.ns1	1.207359	0.159889	7.5512	4.312e-14 ***
age.ns2	0.141348	0.169922	0.8318	0.4055
age.ns3	2.289269	0.369017	6.2037	5.515e-10 ***
age.ns4	4.723505	0.290591	16.2548	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6831.548

### Age-Region

Fitted model:

DA ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.264256	0.153600	-14.7412	< 2.2e-16 ***
regionBR	0.058531	0.114411	0.5116	0.6089
regionWA	0.362919	0.065081	5.5764	2.456e-08 ***
age.ns1	1.223113	0.159784	7.6548	1.936e-14 ***
age.ns2	0.133905	0.169610	0.7895	0.4298
age.ns3	2.387408	0.370519	6.4434	1.168e-10 ***
age.ns4	4.840391	0.289381	16.7267	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1



AIC: 6864.321

### Sex-Region

Fitted model:

DA ~ region + sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.822384	0.053398	-34.1286	< 2.2e-16 ***
regionBR	-0.051078	0.109939	-0.4646	0.6422
regionWA	0.303277	0.062838	4.8263	1.391e-06 ***
sexF	0.519916	0.060038	8.6598	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7264.995

### Age

Fitted model:

DA ~ age.ns1 + age.ns2 + age.ns3 + age.ns4

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-2.11704	0.15004	-14.1101	< 2.2e-16 ***
age.ns1	1.20517	0.15939	7.5612	3.992e-14 ***
age.ns2	0.13768	0.16910	0.8142	0.4155
age.ns3	2.32798	0.36884	6.3116	2.762e-10 ***
age.ns4	4.78163	0.28801	16.6022	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 6889.7

### Sex

Fitted model:

DA ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.722707	0.046261	-37.2387	< 2.2e-16 ***
sexF	0.520817	0.059937	8.6894	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 7284.742

### Region

Fitted model:

DA ~ region

```

Coefficients:
      Estimate Std. Error z value Pr(>|z|)
(Intercept) -1.534454   0.039475 -38.872 < 2.2e-16 ***
regionBR     -0.047603   0.109430  -0.435   0.6636
regionWA      0.305570   0.062502   4.889 1.014e-06 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AIC: 7338.171

```

### Intercept

```

Fitted model:
DA ~ 1

```

```

Coefficients:
      Estimate Std. Error z value Pr(>|z|)
(Intercept) -1.433184   0.029264 -48.974 < 2.2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AIC: 7358.451

```

## Pain/Discomfort

### Age-Sex-Region

Fitted model:

PD ~ sex + region + age.ns1 + sex:age.ns1 + region:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.722976	0.081674	-8.8520	< 2.2e-16 ***
sexF	0.235789	0.098035	2.4052	0.016166 *
regionBR	-0.131503	0.169562	-0.7755	0.438018
regionWA	0.145938	0.108011	1.3511	0.176650
age.ns1	2.014345	0.231425	8.7041	< 2.2e-16 ***
sexF:age.ns1	0.551324	0.283869	1.9422	0.052116 .
regionBR:age.ns1	0.517813	0.520191	0.9954	0.319528
regionWA:age.ns1	1.046700	0.319312	3.2780	0.001045 **

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9782.278

### Age-Sex

Fitted model:

PD ~ sex + age.ns1 + sex:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.677987	0.069878	-9.7025	< 2e-16 ***
sexF	0.236698	0.097754	2.4214	0.01546 *
age.ns1	2.339980	0.201190	11.6307	< 2e-16 ***
sexF:age.ns1	0.546812	0.282523	1.9355	0.05293 .

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9858.004

### Age-Region

Fitted model:

PD ~ region + age.ns1 + region:age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.60933	0.06410	-9.5060	< 2.2e-16 ***
regionBR	-0.13950	0.16885	-0.8262	0.408703
regionWA	0.14872	0.10759	1.3823	0.166887
age.ns1	2.31284	0.17930	12.8994	< 2.2e-16 ***
regionBR:age.ns1	0.56125	0.51613	1.0874	0.276851
regionWA:age.ns1	1.03662	0.31734	3.2665	0.001089 **

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9848.504

## Sex-Region

Fitted model:  
PD ~ region + sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.090375	0.038570	-2.3431	0.01912 *
regionBR	-0.061814	0.082981	-0.7449	0.45632
regionWA	0.415315	0.052032	7.9819	1.441e-15 ***
sexF	0.416620	0.046989	8.8663	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 10153.8

## Age

Fitted model:  
PD ~ age.ns1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.563591	0.048668	-11.58	< 2.2e-16 ***
age.ns1	2.636259	0.140301	18.79	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9925.121

## Sex

Fitted model:  
PD ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.035847	0.033180	1.0804	0.28
sexF	0.416199	0.046765	8.8998	<2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 10218.97

## Region

Fitted model:  
PD ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.121641	0.030211	4.0263	5.666e-05 ***
regionBR	-0.058714	0.082533	-0.7114	0.4768
regionWA	0.415418	0.051762	8.0256	1.010e-15 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 10229.34

### Intercept

Fitted model:

PD ~ 1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.247965	0.023258	10.662	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 10295.14

## Anxiety/Depression

### Age-Sex-Region

Fitted model:

AD ~ sex + region + age.ns1 + age.ns2 + age.ns3 + sex:region +  
sex:age.ns1 + sex:age.ns2 + region:age.ns2

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.886336	0.172913	-10.9091	< 2.2e-16 ***
sexF	0.836536	0.191753	4.3626	1.285e-05 ***
regionBR	0.705052	0.319417	2.2073	0.027292 *
regionWA	0.371770	0.198517	1.8727	0.061105 .
age.ns1	-0.248749	0.171757	-1.4483	0.147545
age.ns2	1.056795	0.394141	2.6813	0.007335 **
age.ns3	0.210111	0.205619	1.0218	0.306854
sexF:regionBR	0.024893	0.176005	0.1414	0.887527
sexF:regionWA	0.297138	0.111755	2.6588	0.007841 **
sexF:age.ns1	0.458904	0.213693	2.1475	0.031754 *
sexF:age.ns2	-0.929241	0.390111	-2.3820	0.017219 *
regionBR:age.ns2	0.179047	0.652858	0.2743	0.783891
regionWA:age.ns2	1.168918	0.408651	2.8604	0.004231 **

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8816.038

### Age-Sex

Fitted model:

AD ~ sex + age.ns1 + age.ns2 + age.ns3 + sex:age.ns1 + sex:age.ns2

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.66336	0.14162	-11.7449	< 2.2e-16 ***
sexF	0.95662	0.18085	5.2896	1.226e-07 ***
age.ns1	-0.27234	0.16837	-1.6175	0.105763
age.ns2	1.42256	0.33401	4.2590	2.053e-05 ***
age.ns3	0.12805	0.20031	0.6393	0.522656
sexF:age.ns1	0.47135	0.20821	2.2639	0.023581 *
sexF:age.ns2	-0.98406	0.38159	-2.5789	0.009913 **

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9198.341

### Age-Region

Fitted model:

AD ~ region + age.ns1 + age.ns2 + age.ns3 + region:age.ns2

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.4292008	0.1278888	-11.1753	< 2.2e-16 ***
regionBR	0.7085197	0.2962691	2.3915	0.016781 *

regionWA	0.5361242	0.1819206	2.9470	0.003208	**
age.ns1	-0.0041141	0.1198984	-0.0343	0.972627	
age.ns2	0.6113052	0.3184259	1.9198	0.054887	.
age.ns3	0.3436343	0.2026767	1.6955	0.089984	.
regionBR:age.ns2	0.1932702	0.6454887	0.2994	0.764622	
regionWA:age.ns2	1.1450884	0.4024806	2.8451	0.004440	**

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8962.644

## Sex-Region

Fitted model:

AD ~ region + sex + region:sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-1.501976	0.055921	-26.8587	< 2.2e-16	***
regionBR	0.803047	0.130016	6.1765	6.552e-10	***
regionWA	0.874508	0.083211	10.5095	< 2.2e-16	***
sexF	0.508746	0.073339	6.9369	4.007e-12	***
regionBR:sexF	-0.010053	0.175071	-0.0574	0.954208	
regionWA:sexF	0.287501	0.111109	2.5876	0.009666	**

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8833.306

## Age

Fitted model:

AD ~ age.ns1 + age.ns2 + age.ns3

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-1.139025	0.092195	-12.3545	< 2.2e-16	***
age.ns1	-0.018462	0.116569	-0.1584	0.8741571	
age.ns2	0.942087	0.248791	3.7867	0.0001527	***
age.ns3	0.261631	0.197938	1.3218	0.1862412	

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9341.701

## Sex

Fitted model:

AD ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-1.105958	0.038377	-28.818	< 2.2e-16	***
sexF	0.598347	0.050726	11.796	< 2.2e-16	***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9209.629

### Region

Fitted model:

AD ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-1.223854	0.035979	-34.0155	< 2.2e-16 ***
regionBR	0.789914	0.086426	9.1398	< 2.2e-16 ***
regionWA	1.021123	0.054374	18.7797	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 8976.248

### Intercept

Fitted model:

AD ~ 1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	-0.78046	0.02486	-31.394	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9347.746



## Any problem

### Age-Sex-Region

Fitted model:

```
ANY1 ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 +  
      age.ns5 + sex:age.ns2 + sex:age.ns4 + region:age.ns3
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-0.809912	0.135443	-5.9797	2.235e-09	***
sexF	0.940574	0.162684	5.7816	7.399e-09	***
regionBR	0.225035	0.088283	2.5490	0.0108029	*
regionWA	0.643185	0.057499	11.1860	< 2.2e-16	***
age.ns1	0.562803	0.126009	4.4664	7.956e-06	***
age.ns2	1.407848	0.205995	6.8344	8.237e-12	***
age.ns3	0.253865	0.206303	1.2305	0.2184941	
age.ns4	3.372295	0.402863	8.3708	< 2.2e-16	***
age.ns5	3.384605	0.424512	7.9729	1.550e-15	***
sexF:age.ns2	-0.546649	0.271718	-2.0118	0.0442384	*
sexF:age.ns4	-1.520151	0.453402	-3.3528	0.0008001	***
regionBR:age.ns3	0.517438	0.393577	1.3147	0.1886084	
regionWA:age.ns3	0.575542	0.243582	2.3628	0.0181362	*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9309.443

### Age-Sex

Fitted model:

```
ANY1 ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      sex:age.ns4
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-0.411430	0.109375	-3.7617	0.0001688	***
sexF	0.651559	0.081389	8.0055	1.190e-15	***
age.ns1	0.517975	0.124095	4.1740	2.993e-05	***
age.ns2	1.095538	0.153504	7.1369	9.548e-13	***
age.ns3	0.431423	0.188467	2.2891	0.0220722	*
age.ns4	2.870616	0.358108	8.0161	1.092e-15	***
age.ns5	3.242079	0.418026	7.7557	8.786e-15	***
sexF:age.ns4	-0.823997	0.300922	-2.7382	0.0061769	**

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9449.024

### Age-Region

Fitted model:

```
ANY1 ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      region:age.ns3
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-0.330497	0.103412	-3.1959	0.001394	**
regionBR	0.223204	0.087675	2.5458	0.010902	*
regionWA	0.637329	0.057069	11.1677	< 2.2e-16	***
age.ns1	0.534499	0.124330	4.2990	1.715e-05	***
age.ns2	1.124758	0.153696	7.3181	2.516e-13	***
age.ns3	0.238241	0.204686	1.1639	0.244450	
age.ns4	2.637613	0.321409	8.2064	2.279e-16	***
age.ns5	3.449499	0.420786	8.1978	2.449e-16	***
regionBR:age.ns3	0.541411	0.391623	1.3825	0.166825	
regionWA:age.ns3	0.581027	0.242496	2.3960	0.016574	*

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9402.297

### Sex-Region

Fitted model:

ANY1 ~ region + sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	0.127865	0.039087	3.2713	0.001071	**
regionBR	0.150938	0.085783	1.7595	0.078485	.
regionWA	0.622071	0.055397	11.2294	< 2.2e-16	***
sexF	0.494847	0.048895	10.1207	< 2.2e-16	***

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9583.43

### Age

Fitted model:

ANY1 ~ age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )	
(Intercept)	-0.084528	0.099772	-0.8472	0.39688	
age.ns1	0.502112	0.123084	4.0794	4.515e-05	***
age.ns2	1.084685	0.151911	7.1403	9.313e-13	***
age.ns3	0.424698	0.186967	2.2715	0.02312	*
age.ns4	2.497622	0.317494	7.8667	3.642e-15	***
age.ns5	3.307847	0.414783	7.9749	1.525e-15	***

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9542.35

### Sex

Fitted model:

ANY1 ~ sex

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.332238	0.033633	9.8782	< 2.2e-16 ***
sexF	0.491642	0.048466	10.1441	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9708.585

## Region

Fitted model:

ANY1 ~ region

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.375569	0.030689	12.2379	< 2e-16 ***
regionBR	0.151654	0.085170	1.7806	0.07498 .
regionWA	0.618980	0.055030	11.2481	< 2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9683.21

## Intercept

Fitted model:

ANY1 ~ 1

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.577461	0.024049	24.012	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 9808.853

## Index value

### Age-Sex-Region

Fitted model:

```
index ~ sex + region + age.ns1 + age.ns2 + age.ns3 + age.ns4 +  
      age.ns5 + sex:age.ns5 + region:age.ns1 + region:age.ns2
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.9144985	0.0131268	69.6667	< 2.2e-16 ***
sexF	-0.0548635	0.0065193	-8.4156	< 2.2e-16 ***
regionBR	-0.0246307	0.0166799	-1.4767	0.139828
regionWA	-0.0553035	0.0103672	-5.3345	1.002e-07 ***
age.ns1	-0.0458354	0.0174835	-2.6216	0.008778 **
age.ns2	-0.0879097	0.0193276	-4.5484	5.537e-06 ***
age.ns3	-0.0359029	0.0191528	-1.8745	0.060915 .
age.ns4	-0.3101206	0.0337176	-9.1976	< 2.2e-16 ***
age.ns5	-0.4062253	0.0441627	-9.1984	< 2.2e-16 ***
sexF:age.ns5	-0.1116394	0.0428733	-2.6039	0.009244 **
regionBR:age.ns1	-0.0070583	0.0408046	-0.1730	0.862677
regionWA:age.ns1	-0.0495555	0.0248021	-1.9980	0.045768 *
regionBR:age.ns2	-0.0526971	0.0370375	-1.4228	0.154858
regionWA:age.ns2	-0.0402138	0.0221568	-1.8150	0.069591 .

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 283.7475

### Age-Sex

Fitted model:

```
index ~ sex + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      sex:age.ns5
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.8929523	0.0126394	70.6483	< 2.2e-16 ***
sexF	-0.0558897	0.0066257	-8.4353	< 2.2e-16 ***
age.ns1	-0.0600166	0.0147796	-4.0608	4.968e-05 ***
age.ns2	-0.1034922	0.0176060	-5.8782	4.423e-09 ***
age.ns3	-0.0346850	0.0194506	-1.7832	0.074610 .
age.ns4	-0.3036814	0.0342253	-8.8730	< 2.2e-16 ***
age.ns5	-0.3994404	0.0448761	-8.9010	< 2.2e-16 ***
sexF:age.ns5	-0.1146052	0.0435776	-2.6299	0.008568 **

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 292.8604

### Age-Region

Fitted model:

```
index ~ region + age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5 +  
      region:age.ns1 + region:age.ns2
```

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	0.887521	0.012805	69.3102	< 2.2e-16	***
regionBR	-0.025832	0.016804	-1.5373	0.124285	
regionWA	-0.055778	0.010445	-5.3404	9.699e-08	***
age.ns1	-0.045383	0.017608	-2.5774	0.009985	**
age.ns2	-0.090405	0.019469	-4.6435	3.516e-06	***
age.ns3	-0.030492	0.019224	-1.5862	0.112767	
age.ns4	-0.326502	0.033853	-9.6446	< 2.2e-16	***
age.ns5	-0.492548	0.034269	-14.3732	< 2.2e-16	***
regionBR:age.ns1	-0.003766	0.041108	-0.0916	0.927010	
regionWA:age.ns1	-0.048033	0.024987	-1.9223	0.054624	.
regionBR:age.ns2	-0.053156	0.037315	-1.4245	0.154353	
regionWA:age.ns2	-0.041997	0.022322	-1.8815	0.059970	.

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 287.8271

### Sex-Region

Fitted model:

index ~ region + sex

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	0.8464433	0.0048082	176.0422	< 2.2e-16	***
regionBR	-0.0302774	0.0103484	-2.9258	0.003452	**
regionWA	-0.0741229	0.0063417	-11.6882	< 2.2e-16	***
sexF	-0.0519520	0.0057950	-8.9650	< 2.2e-16	***

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 307.0159

### Age

Fitted model:

index ~ age.ns1 + age.ns2 + age.ns3 + age.ns4 + age.ns5

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	0.865192	0.012275	70.4826	< 2.2e-16	***
age.ns1	-0.058721	0.014883	-3.9455	8.075e-05	***
age.ns2	-0.106673	0.017733	-6.0155	1.924e-09	***
age.ns3	-0.029069	0.019522	-1.4890	0.1365	
age.ns4	-0.320406	0.034362	-9.3244	< 2.2e-16	***
age.ns5	-0.487923	0.034813	-14.0155	< 2.2e-16	***

---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 297.0891

## Sex

Fitted model:  
index ~ sex

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.8200469	0.0042196	194.3417	< 2.2e-16 ***
sexF	-0.0526167	0.0058743	-8.9571	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 315.363

## Region

Fitted model:  
index ~ region

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.8198448	0.0038143	214.9370	< 2.2e-16 ***
regionBR	-0.0305821	0.0104324	-2.9315	0.003389 **
regionWA	-0.0746787	0.0063929	-11.6816	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 311.9382

## Intercept

Fitted model:  
index ~ 1

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.7928979	0.0029594	267.92	< 2.2e-16 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

AIC: 320.4101