Supplementary tables

Table S1: Multilevel linear regression analysis of patient experiences in doctor-patient communication (Ncountries =32; Npractices =5,618; Npatients =45,988).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Model 0** | **Model 1** | **Model 2** | **Model 3** | **Model 4** |
| ***Fixed part*** | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) |
| Constant | 0.96 (0.003) | 0.96 (0.003) | 0.96 (0.003) | 0.95 (0.005) | 0.95 (0.005) |
| *GP and practice variables* |  |  |  |  |  |
| Born in this country (1=yes) |  | 0.0009 (0.001) | 0.0003 (0.001) | 0.0002 (0.001) | 0.0004 (0.001) |
| Age GP |  |  | -7.4e-005 (4.6e-005) | -6.66e-005 (4.7e-005) | -6.6e-005 (4.7e-005) |
| Sex GP (1=female) |  |  | 0.002 (.0009)\* | 0.002 (.0009)\* | 0.002 (.0009)\* |
| Proportion of elderly in the practice |  |  | -0.002 (0.0006)\*\* | -0.002 (0.0006)\*\* | -0.002 (0.0006)\*\* |
| Proportion of ethnic minority people in the practice |  |  | -0.002 (0.0006)\*\* | -0.002 (0.0006)\*\* | -0.002 (0.0006)\*\* |
| Proportion of disadvantaged people in the practice |  |  | -0.0007 (0.0006) | -0.0006 (0.0006) | -0.0005 (0.0006) |
| Practice type (single-handed=1) |  |  | -0.001 (0.001) | -0.001 (0.001) | -0.001 (0.001) |
| Urbanisation (big city=ref)  - suburbs |  |  | 0.001 (0.001) | 0.001 (0.001) | 0.001 (0.001) |
| - town |  |  | 0.0002 (0.001) | 0.0003 (0.001) | 0.0003 (0.001) |
| - mixed urban-rural |  |  | 0.001 (0.001) | 0.001 (0.001) | 0.001 (0.001) |
| - rural |  |  | 0.003 (0.001)\* | 0.004 (0.001)\*\* | 0.004 (0.001)\*\* |
| *Patient variables* |  |  |  |  |  |
| Self-rated health (1-4) |  |  |  | -0.0005 (0.0003)\* | -0.0005 (0.0003)\* |
| Chronic disease (1=yes) |  |  |  | -1.4e-005 (0.0004) | -1.1e-005 (0.0004) |
| Patients’ sex (1=female) |  |  |  | 0.0005 (0.0003)\* | 0.0005 (0.0003)\* |
| Patients’ education (ref=low)  - middle |  |  |  | 0.001 (0.0005)\*\* | 0.001 (0.0005)\*\* |
| - high |  |  |  | 0.003 (0.0005)\*\* | 0.003 (0.0005)\*\* |
| Patients’ income (ref=low)  - middle |  |  |  | 0.0005 (0.0004) | 0.0005 (0.0004) |
| - high |  |  |  | 0.0009 (0.0007) | 0.0009 (0.0007) |
| Patients’ age |  |  |  | -4.4e-005 (1.2e-005)\*\* | -4.4e-005 (1.2e-005)\*\* |
| Patients’ migration status (ref=non-migrant)  - first generation migrant |  |  |  | -0.002 (0.0007)\*\* | -0.002 (0.002) |
| - second generation migrant |  |  |  | -0.001 (0.0009) | 0.0002 (0.002) |
| *Interaction* |  |  |  |  |  |
| GP born in this country and first generation migrant |  |  |  |  | -0.0009 (0.002) |
| GP born in this country and second generation migrant |  |  |  |  | -0.002 (0.002) |
| ***Random part*** |  |  |  |  |  |
| ICC GPs (%) | 34.8 | 34.8 | 34.8 | 35.3 | 35.3 |
| ICC countries (%) | 12.2 | 12.3 | 11.9 | 10.7 | 10.7 |

\*p < 0.05

\*\*p < 0.01

1 Data for Portugal are missing because of lacking information on practice type; data for Australia are missing because of lacking information on patients’ education.

Table S2: Multilevel linear regression analysis of patient experiences in accessibility (Ncountries =32; Npractices =5,619; Npatients =46,270).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Model 0** | **Model 1** | **Model 2** | **Model 3** | **Model 4** |
| ***Fixed part*** | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) |
| Constant | 0.85 (0.01)\*\* | 0.85 (0.01)\*\* | 0.85 (0.01)\*\* | 0.84 (0.01)\*\* | 0.84 (0.01)\*\* |
| *GP and practice variables* |  |  |  |  |  |
| Born in this country (1=yes) |  | 0.008 (0.003)\* | 0.006 (0.003) | 0.005 (0.003) | 0.006 (0.003) |
| Age GP |  |  | 6.9e-005 (0.0001) | 6.6e-005 (0.0001) | 6.6e-005 (0.0001) |
| Sex GP (1=female) |  |  | -0.002 (0.002) | -0.002 (0.002) | -0.002 (0.002) |
| Proportion of elderly in the practice |  |  | -0.001 (0.001) | -0.002 (0.001) | -0.002 (0.001) |
| Proportion of ethnic minority people in the practice |  |  | -0.006 (0.001)\*\* | -0.006 (0.001)\*\* | -0.006 (0.001)\*\* |
| Proportion of disadvantaged people in the practice |  |  | -0.0009 (0.001) | -0.0007 (0.001) | -0.0007 (0.001) |
| Practice type (single-handed=1) |  |  | 0.002 (0.002) | 0.002 (0.002) | 0.002 (0.002) |
| Urbanisation (big city=ref)  - suburbs |  |  | 0.005 (0.003) | 0.005 (0.003) | 0.005 (0.003) |
| - town |  |  | 0.009 (0.003)\*\* | 0.009 (0.003)\*\* | 0.009 (0.003)\*\* |
| - mixed urban-rural |  |  | 0.01 (0.003)\*\* | 0.01 (0.003)\*\* | 0.01 (0.003)\*\* |
| - rural |  |  | 0.02 (0.003)\*\* | 0.02 (0.003)\*\* | 0.02 (0.003)\*\* |
| *Patient variables* |  |  |  |  |  |
| Self-rated health (1-4) |  |  |  | -0.001 (0.0001)\*\* | -0.001 (0.0001)\*\* |
| Chronic disease (1=yes) |  |  |  | 0.0002 (0.0002) | 0.0002 (0.0002) |
| Patients’ sex (1=female) |  |  |  | 0.0008 (0.001) | 0.0008 (0.001) |
| Patients’ education (ref=low)  - middle |  |  |  | 0.0009 (0.0002)\*\* | 0.0009 (0.0002)\*\* |
| - high |  |  |  | 0.001 (0.0003)\*\* | 0.001 (0.0003)\*\* |
| Patients’ income (ref=low)  - middle |  |  |  | 0.002 (0.0002)\*\* | 0.002 (0.0002)\*\* |
| - high |  |  |  | 0.001 (0.0003)\*\* | 0.001 (0.0003)\*\* |
| Patients’ age |  |  |  | 6.5e-005 (6.3e-006)\*\* | 6.5e-005 (6.3e-006)\*\* |
| Patients’ migration status (ref=non-migrant)  - first generation migrant |  |  |  | -0.004 (0.0004)\*\* | -0.003 (0.0008)\*\* |
| - second generation migrant |  |  |  | -0.001 (0.0004)\*\* | -0.0008 (0.001) |
| *Interaction* |  |  |  |  |  |
| GP born in this country and first generation migrant |  |  |  |  | -0.001 (0.0009) |
| GP born in this country and second generation migrant |  |  |  |  | -0.0005 (0.001) |
| ***Random part*** |  |  |  |  |  |
| ICC GPs (%) | 52.9 | 52.5 | 53.1 | 53.4 | 53.4 |
| ICC countries (%) | 43.3 | 43.6 | 42.9 | 42.6 | 42.6 |

\*p < 0.05

\*\*p < 0.01

1 Data for Portugal are missing because of lacking information on practice type; data for Australia are missing because of lacking information on patients’ education.

Table S3: Multilevel linear regression analysis of patient experiences in continuity of care (Ncountries =32; Npractices =5,618; Npatients =46,135).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Model 0** | **Model 1** | **Model 2** | **Model 3** | **Model 4** |
| ***Fixed part*** | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) |
| Constant | 0.90 (0.02) | 0.90 (0.02) | 0.90 (0.02) | 0.87 (0.03) | 0.87 (0.03) |
| *GP and practice variables* |  |  |  |  |  |
| Born in this country (1=yes) |  | 0.006 (0.004) | 0.006 (0.004) | 0.004 (0.004) | 0.005 (0.004) |
| Age GP |  |  | 0.0007 (0.0001)\*\* | 0.0006 (0.0001)\*\* | 0.0006 (0.0001)\*\* |
| Sex GP (1=female) |  |  | 0.004 (0.003) | 0.004 (0.003) | 0.004 (0.003) |
| Proportion of elderly in the practice |  |  | -0.003 (0.002) | -0.006 (0.002)\*\* | -0.006 (0.002)\*\* |
| Proportion of ethnic minority people in the practice |  |  | -0.002 (0.002) | -0.001 (0.002) | -0.001 (0.002) |
| Proportion of disadvantaged people in the practice |  |  | 0.0009 (0.002) | 0.0009 (0.002) | 0.0009 (0.002) |
| Practice type (single-handed=1) |  |  | 0.006 (0.003) | 0.006 (0.003) | 0.006 (0.003) |
| Urbanisation (big city=ref)  - suburbs |  |  | 0.01 (0.004)\* | 0.01 (0.004)\* | 0.01 (0.004)\* |
| - town |  |  | 0.02 (0.004)\*\* | 0.02 (0.004)\*\* | 0.02 (0.004)\*\* |
| - mixed urban-rural |  |  | 0.02 (0.004)\*\* | 0.02 (0.004)\*\* | 0.02 (0.004)\*\* |
| - rural |  |  | 0.03 (0.004)\*\* | 0.03 (0.004)\*\* | 0.03 (0.004)\*\* |
| *Patient variables* |  |  |  |  |  |
| Self-rated health (1-4) |  |  |  | 0.003 (0.0007)\*\* | 0.003 (0.0007)\*\* |
| Chronic disease (1=yes) |  |  |  | 0.01 (0.001)\*\* | 0.01 (0.001)\*\* |
| Patients’ sex (1=female) |  |  |  | 0.002 (0.002) | 0.002 (0.002) |
| Patients’ education (ref=low)  - middle |  |  |  | -0.0006 (0.001) | -0.0006 (0.001) |
| - high |  |  |  | -0.002 (0.002) | -0.002 (0.002) |
| Patients’ income (ref=low)  - middle |  |  |  | 0.003 (0.001)\*\* | 0.003 (0.001)\*\* |
| - high |  |  |  | 0.006 (0.002)\*\* | 0.006 (0.002)\*\* |
| Patients’ age |  |  |  | 0.0006 (3.6e-005)\*\* | 0.0006 (3.6e-005)\*\* |
| Patients’ migration status (ref=non-migrant)  - first generation migrant |  |  |  | -0.005 (0.002)\* | -0.006 (0.005) |
| - second generation migrant |  |  |  | -0.003 (0.003) | 0.003 (0.006) |
| *Interaction* |  |  |  |  |  |
| GP born in this country and first generation migrant |  |  |  |  | 0.001 (0.005) |
| GP born in this country and second generation migrant |  |  |  |  | -0.007 (0.007) |
| ***Random part*** |  |  |  |  |  |
| ICC GPs (%) | 25.2 | 25.1 | 25.2 | 25.4 | 25.4 |
| ICC countries (%) | 37.3 | 37.4 | 36.5 | 35.8 | 35.8 |

\*p < 0.05

\*\*p < 0.01

1 Data for Portugal are missing because of lacking information on practice type; data for Australia are missing because of lacking information on patients’ education.

Table S4: Multilevel linear regression analysis of patient experiences in comprehensiveness of care (Ncountries =32; Npractices =5,618; Npatients =46,000).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Model 0** | **Model 1** | **Model 2** | **Model 3** | **Model 4** |
| ***Fixed part*** | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) |
| Constant | 0.68 (0.02) | 0.68 (0.02) | 0.68 (0.02) | 0.65 (0.03) | 0.65 (0.03) |
| *GP and practice variables* |  |  |  |  |  |
| Born in this country (1=yes) |  | 0.005 (0.005) | 0.004 (0.005) | 0.004 (0.005) | 0.004 (0.005) |
| Age GP |  |  | 0.0002 (0.0002) | 0.0002 (0.0002) | 0.0002 (0.0002) |
| Sex GP (1=female) |  |  | 0.01 (0.003)\*\* | 0.01 (0.003)\*\* | 0.01 (0.003)\*\* |
| Proportion of elderly in the practice |  |  | -0.004 (0.002) | -0.004 (0.002) | -0.004 (0.002) |
| Proportion of ethnic minority people in the practice |  |  | -0.002 (0.002) | -0.002 (0.002) | -0.002 (0.002) |
| Proportion of disadvantaged people in the practice |  |  | 0.004 (0.002) | 0.004 (0.002) | 0.004 (0.002) |
| Practice type (single-handed=1) |  |  | 0.001 (0.004) | 0.001 (0.004) | 0.001 (0.004) |
| Urbanisation (big city=ref)  - suburbs |  |  | 0.004 (0.005) | 0.004 (0.005) | 0.004 (0.005) |
| - town |  |  | 0.006 (0.004) | 0.006 (0.004) | 0.006 (0.004) |
| - mixed urban-rural |  |  | 0.01 (0.005)\*\* | 0.01 (0.005)\*\* | 0.01 (0.005)\*\* |
| - rural |  |  | 0.02 (0.005)\*\* | 0.02 (0.005)\*\* | 0.02 (0.005)\*\* |
| *Patient variables* |  |  |  |  |  |
| Self-rated health (1-4) |  |  |  | 0.0005 (0.0002)\*\* | 0.0005 (0.0002)\*\* |
| Chronic disease (1=yes) |  |  |  | 0.002 (0.0003)\*\* | 0.002 (0.0003)\*\* |
| Patients’ sex (1=female) |  |  |  | 0.002 (0.002) | 0.002 (0.002) |
| Patients’ education (ref=low)  - middle |  |  |  | -0.0000 (0.0003) | -0.0000 (0.0003) |
| - high |  |  |  | -0.0006 (0.0004) | -0.0006 (0.0004) |
| Patients’ income (ref=low)  - middle |  |  |  | -0.0002 (0.0003) | -0.0001 (0.0003) |
| - high |  |  |  | -0.0002 (0.0005) | -0.0002 (0.0005) |
| Patients’ age |  |  |  | 4.6e-005 (8.6e-006)\*\* | 4.7e-005 (8.6e-006)\*\* |
| Patients’ migration status (ref=non-migrant)  - first generation migrant |  |  |  | -0.0000 (0.0005) | -0.001 (0.001) |
| - second generation migrant |  |  |  | -0.001 (0.0006)\* | -0.001 (0.001) |
| *Interaction* |  |  |  |  |  |
| GP born in this country and first generation migrant |  |  |  |  | 0.002 (0.001) |
| GP born in this country and second generation migrant |  |  |  |  | 0.0000 (0.002) |
| ***Random part*** |  |  |  |  |  |
| ICC GPs (%) | 56.0 | 55.9 | 56.5 | 57.6 | 57.6 |
| ICC countries (%) | 41.1 | 41.3 | 40.7 | 39.5 | 39.5 |

\*p < 0.05

\*\*p < 0.01

1 Data for Portugal are missing because of lacking information on practice type; data for Australia are missing because of lacking information on patients’ education.

Table S5: Multilevel linear regression analysis of patient experiences with discrimination by GP or practice staff (Ncountries =321; Npractices =5,618; Npatients =45,525).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Model 0** | **Model 1** | **Model 2** | **Model 3** | **Model 4** |
| ***Fixed part*** | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) | Coefficient (se) |
| Constant | 0.06 (0.01) | 0.06 (0.01) | 0.06 (0.009) | 0.06 (0.02) | 0.06 (0.02) |
| *GP and practice variables* |  |  |  |  |  |
| Born in this country (1=yes) |  | -0.0005 (0.006) | 0.001 (0.006) | 0.002 (0.006) | 0.0008 (0.006) |
| Age GP |  |  | -0.0001 (0.0002) | -0.0001 (0.0002) | -0.0001 (0.0002) |
| Sex GP (1=female) |  |  | 0.009 (0.004)\* | 0.009 (0.004)\* | 0.009 (0.004)\* |
| Share of elderly in the practice |  |  | 0.004 (0.002) | 0.005 (0.002) | 0.005 (0.002) |
| Share of ethnic minority people in the practice |  |  | 0.007 (0.003)\* | 0.006 (0.003)\* | 0.006 (0.003)\* |
| Share of disadvantaged people in the practice |  |  | 0.005 (0.003)\* | 0.004 (0.003) | 0.004 (0.003) |
| Practice type (single-handed=1) |  |  | 0.002 (0.004) | 0.002 (0.004) | 0.002 (0.004) |
| Urbanisation (big city=ref)  - suburbs |  |  | -0.001 (0.006) | -0.001 (0.006) | -0.001 (0.006) |
| - town |  |  | 0.005 (0.005) | 0.005 (0.005) | 0.005 (0.005) |
| - mixed urban-rural |  |  | 0.006 (0.005) | 0.006 (0.005) | 0.006 (0.005) |
| - rural |  |  | -0.01 (0.005) | -0.01 (0.005) | -0.01 (0.005) |
| *Patient variables* |  |  |  |  |  |
| Self-rated health (1-4) |  |  |  | 0.003 (0.0007)\*\* | 0.003 (0.0007)\*\* |
| Chronic disease (1=yes) |  |  |  | 0.003 (0.001)\* | 0.003 (0.001)\* |
| Patients’ sex (1=female) |  |  |  | 7.3e005 (0.0009) | 7.4e005 (0.0009) |
| Patients’ education (ref=low)  - middle |  |  |  | -0.001 (0.001) | -0.001 (0.001) |
| - high |  |  |  | -0.004 (0.001)\*\* | -0.004 (0.001)\*\* |
| Patients’ income (ref=low)  - middle |  |  |  | -0.007 (0.001)\*\* | -0.007 (0.001)\*\* |
| - high |  |  |  | -0.004 (0.002)\* | -0.004 (0.002)\* |
| Patients’ age |  |  |  | -0.0002 (3.2e-005)\*\* | -0.0002 (3.2e-005)\*\* |
| Patients’ migration status (ref=non-migrant)  - first generation migrant |  |  |  | 0.009 (0.002)\*\* | 0.0005 (0.004) |
| - second generation migrant |  |  |  | 0.004 (0.002) | 0.006 (0.005) |
| *Interaction* |  |  |  |  |  |
| GP born in this country and first generation migrant |  |  |  |  | 0.01 (0.005)\* |
| GP born in this country and second generation migrant |  |  |  |  | -0.003 (0.006) |
| ***Random part*** |  |  |  |  |  |
| ICC GPs (%) | 56.3 | 56.3 | 56.3 | 56.3 | 56.3 |
| ICC countries (%) | 10.8 | 10.8 | 10.5 | 10.5 | 10.5 |

\*p < 0.05

\*\*p < 0.01

1 Data for Portugal are missing because of lacking information on practice type; data for Australia are missing because of lacking information on patients’ education.