# Correction to: The impact of low education and poor health on unemployment varies by work life stage 

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 https://doi.org/10.1007/s00038-017-0972-7During the calculation of the physical component score and the mental component score, the score of the RAND 1 was erroneously coded in the opposite direction. After correcting this mistake, the interaction between low education and poor physical health on unemployment in early work life becomes statistically significant. In addition, other RERIs and odds ratios change somewhat in magnitude but remain fairly similar.

In the abstract, the result section should read as: Results: Interactions of low education and poor mental health were found in early [RERI: 2.13; 95\% confidence interval (CI) $0.61,3.64]$, mid ( $1.41 ; 0.61,2.20$ ) and late ( $0.58 ; 0.04$, 1.11) work life. Interaction between low education and poor physical health was found in early (RERI: 1.66; 95\% CI $0.26,3.07$ ) and mid-work life ( $1.25 ; 0.56,1.93$ ).

In the result section, the last sentence of the first paragraph should read as: The prevalence of people with poor physical health increased stepwise by work life stage from $20.0 \%$ in early to $29.5 \%$ in late work life. The opposite was observed for mental health (27.2-20.3\%).

The original article can be found online at https:// doi.org/10.1007/s00038-017-0972-7.

[^0]In the result section, the second paragraph should read from the third sentence onwards as: For physical health, the highest odds of unemployment were observed for those with low education and poor health in early work (OR: 4.91; 95\% CI 3.68, 6.56) and mid-work life (OR: 5.10; 95\% CI 4.39, 5.93), respectively. However, the absolute risk of unemployment for those with low education and poor physical health was highest in late work life (20.5\%), followed by early work life ( $15.5 \%$ ) and mid-work life (14.7\%). Interaction between low education and poor physical health was observed in early (RERI: 1.66; 95\% CI $0.26,3.07$ ) and mid (RERI: $1.25 ; 95 \%$ CI $0.56,1.93$ ) work life and extended to medium education in early (RERI: $0.80 ; 95 \%$ CI $0.16,1.44$ ) and mid (RERI: 0.95; 95\% CI $0.49,1.42$ ) work life.

In the result section, the third paragraph should read as: For mental health, the highest odds of unemployment were observed for those with low education and poor health in early (OR: 5.80; 95\% CI 4.39, 7.66) and mid-work life (OR: 6.12; 95\% CI 5.21, 7.19). However, as was found for physical health, the absolute risk of unemployment for those with low education and poor mental health was highest in late work life (19.5\%), followed by early work life ( $16.8 \%$ ) and mid-work life (16.3\%). Interaction between low education and poor mental health was observed across all stages of the work life, with the interaction effect decreasing from a RERI of 2.13 ( $95 \%$ CI 0.61 , $3.64)$ in early work life to $1.41(95 \%$ CI $0.61,2.20)$ and 0.58 ( $95 \%$ CI 0.04 , 1.11) in mid- and late work life, respectively.

In the result section, the last sentence should read as: However, the general pattern of interaction effects was similar to the one observed in the main analysis.

In the discussion section, the first sentence of the second paragraph should read as: We found an interaction between low education and poor physical health on unemployment for participants in early and mid-work life.

In the discussion section, the third paragraph from the second to the second-last sentence should read as:

Normally, the pool of healthy workers is much larger in early and mid- than in late work life (Niccoli 2012). Selection into unemployment, based on health, may thus be more likely for those in their early and mid-work life, especially when they have a low education. Sensitivity analyses did show a stronger interaction between low education and poor physical health in early work life than in the regular analyses.

In the discussion section, the second sentence of the last paragraph should read as: More importantly, low education
and poor mental health may exacerbate each other's impact on unemployment across all work life stages, whereas low education and poor physical health may exacerbate each other's impact on unemployment in early and mid-work life.

Tables 1, 2, 3 and 4 should read as (corrected values are bold):

The Electronic Supplementary material is also updated.

Table 1 Baseline
characteristics of the study population by work life stage (The Netherlands, 2006-2013)

|  | Work life stage |  |  |
| :--- | :--- | :--- | :--- |
|  | Early $(25-34)$ <br> $(n=13,479)$ | Mid (35-49) <br> $(n=39,879)$ | Late (50-64) <br> $(n=15,760)$ |
| Age [mean (SD)] | $29.9(2.8)$ | $42.8(4.2)$ | $54.6(4.1)$ |
| Female gender (\%) | 57.1 | 56.4 | 53.2 |
| Living in couple (\%) | 74.7 | 86.0 | 87.8 |
| Educational level (\%) |  |  |  |
| High | 44.5 | 30.5 | 28.3 |
| Medium | 42.5 | 43.6 | 33.7 |
| Low | 13.0 | 25.8 | 38.0 |
| Unemployed (\%) |  | 7.1 | 11.6 |
| Dutch definition | 5.9 | 2.5 | 3.6 |
| International definition | 3.4 | $\mathbf{5 2 . 3}$ | $\mathbf{5 1 . 3}(\mathbf{7 . 1}$ |

$S D$ standard deviation, $P C S$ physical component score, $M C S$ mental component score
Table 2 Associations and interactions of education, and physical and mental health on unemployment, stratified by work life stage: odds ratios for unemployment per category of health and work life stage and associated RERIs (The Netherlands, 2006-2013)

|  | Physical health |  |  |  | Mental health |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $n$ unemployed $/ n$ total (\% unemployed) |  | OR (95\% CI) | RERI (95\% CI) | $n$ unemploye unemployed) |  | OR (95\% CI) | RERI (95\% CI) |
| Early work life |  |  |  |  |  |  |  |  |
| Good health | 556/10,781 | (5.2) |  |  | 458/9819 | (4.7) |  |  |
| High education | 192/5059 | (3.8) | 1 (Ref) |  | 151/4493 | (3.4) | 1 (Ref) |  |
| Medium education | 243/4458 | (5.5) | 1.55 (1.28, 1.89) |  | 204/4133 | (4.9) | 1.58 (1.28, 1.96) |  |
| Low education | 121/1264 | (9.6) | 3.14 (2.47, 4.00) |  | 103/1193 | (8.6) | 3.18 (2.45, 4.14) |  |
| Poor health | 235/2698 | (8.7) |  |  | 333/3660 | (9.1) |  |  |
| High education | 44/941 | (4.7) | 1.12 (0.80, 1.58) |  | 85/1507 | (5.6) | 1.52 (1.16, 2.00) |  |
| Medium education | 115/1268 | (9.1) | 2.47 (1.94, 3.15) | 0.80 (0.16, 1.44) ${ }^{\text {a }}$ | 154/1593 | (9.7) | 2.88 (2.28, 3.63) | 0.78 (0.15, 1.40) ${ }^{\text {c }}$ |
| Low education | 76/489 | (15.5) | 4.91 (3.68, 6.56) | 1.66 (0.26, 3.07) ${ }^{\text {b }}$ | 94/560 | (16.8) | 5.80 (4.39, 7.66) | 2.13 (0.61, 3.64) ${ }^{\text {d }}$ |
| Mid-work life |  |  |  |  |  |  |  |  |
| Good health | 1776/30,043 | (5.9) |  |  | 1819/30,142 | (6.0) |  |  |
| High education | 325/9907 | (3.3) | 1 (Ref) |  | 268/9300 | (2.9) | 1 (Ref) |  |
| Medium education | 757/13,060 | (5.8) | 1.72 (1.50, 1.97) |  | 826/13,264 | (6.2) | 2.12 (1.84, 2.44) |  |
| Low education | 694/7076 | (9.8) | 3.38 (2.95, 3.88) |  | 725/7578 | (9.6) | 3.77 (3.26, 4.36) |  |
| Poor health | 1063/9880 | (10.8) |  |  | 1020/9737 | (10.5) |  |  |
| High education | 122/2274 | (5.4) | 1.47 (1.19, 1.82) |  | 179/2881 | (6.2) | 1.94 (1.60, 2.37) |  |
| Medium education | 466/4330 | (10.8) | 3.13 (2.70, 3.63) | 0.95 (0.49, 1.42) ${ }^{\text {a }}$ | 397/4126 | (9.6) | 3.03 (2.58, 3.56) | - 0.02 (-0.50, 0.46) ${ }^{\text {c }}$ |
| Low education | 475/3276 | (14.7) | 5.10 (4.39, 5.93) | $1.25(0.56,1.93)^{\text {b }}$ | 444/2730 | (16.3) | 6.12 (5.21, 7.19) | $1.41(0.61,2.20)^{\text {d }}$ |
| Late work life |  |  |  |  |  |  |  |  |
| Good health | 1113/11,108 | (10.0) |  |  | 1393/12,564 | (11.1) |  |  |
| High education | 197/3423 | (5.8) | 1 (Ref) |  | 235/3584 | (6.6) | 1 (Ref) |  |
| Medium education | 313/3734 | (8.4) | 1.53 (1.26, 1.84) |  | 380/4235 | (9.0) | 1.43 (1.21, 1.70) |  |
| Low education | 603/3951 | (15.3) | 2.53 (2.13, 3.00) |  | 778/4745 | (16.4) | 2.43 (2.07, 2.84) |  |
| Poor health | 708/4652 | (15.2) |  |  | 428/3196 | (13.4) |  |  |
| High education | 101/1034 | (9.8) | 1.60 (1.24, 2.07) |  | 63/873 | (7.2) | 1.09 (0.81, 1.47) |  |
| Medium education | 190/1581 | (12.0) | 2.09 (1.69, 2.59) | - 0.04 (-0.56, 0.49) ${ }^{\text {a }}$ | 123/1080 | (11.4) | 1.82 (1.44, 2.30) | $0.30(-0.21,0.81)^{\text {c }}$ |
| Low education | 417/2037 | (20.5) | 3.62 (3.01, 4.35) | 0.49 (-0.06, 1.05) ${ }^{\text {b }}$ | 242/1243 | (19.5) | 3.10 (2.54, 3.78) | 0.58 (0.04, 1.11) ${ }^{\text {d }}$ |

ORs and RERIs are adjusted for age, gender and marital status OR odds ratio, RERI relative excess risk due to interaction
${ }^{\text {a }}$ RERI of unemployment for medium education and poor physical health
${ }^{\mathrm{b}}$ RERI of unemployment for low education and poor physical health
${ }^{\mathrm{c}}$ RERI of unemployment for medium education and poor mental health
${ }^{\mathrm{d}}$ RERI of unemployment for low education and poor mental health

Table 3 Associations of education and unemployment within categories of physical and mental health, stratified by work life stage (The Netherlands, 2006-2013)

|  | Physical health | Mental health |
| :--- | :--- | :--- |
| OR (95\% CI) | OR (95\% CI) |  |

Early work life
Good health

| High education | 1 (Ref) | 1 (Ref) |
| :--- | :--- | :--- |
| Medium education | $\mathbf{1 . 5 6}(\mathbf{1 . 2 8 , ~ 1 . 8 9 )}$ | $1.60(1.29,1.99)$ |
| Low education | $\mathbf{3 . 1 7}(\mathbf{2 . 4 9 , ~ 4 . 0 4 )}$ | $\mathbf{3 . 3 2}(\mathbf{2 . 5 4 , ~ 4 . 3 3 )}$ |
| Poor health |  |  |
| High education | 1 (Ref) | $1($ Ref $)$ |
| Medium education | $\mathbf{2 . 1 9 ( 1 . 5 3 , ~ 3 . 1 4 )}$ | $1.86(1.41,2.45)$ |
| Low education | $\mathbf{4 . 3 3 ( \mathbf { 2 . 9 1 , 6 . 4 4 } )}$ | $3.64(2.65,4.99)$ |

Mid-work life
Good health

| High education | $1($ Ref $)$ | $1($ Ref $)$ |
| :--- | :--- | :--- |
| Medium education | $1.71(1.49,1.95)$ | $2.10(1.82,2.42)$ |
| Low education | $\mathbf{3 . 3 9}(\mathbf{2 . 9 5}, \mathbf{3 . 8 9})$ | $\mathbf{3 . 8 1}(\mathbf{3 . 2 9 , 4 . 4 0 )}$ |
| Poor health |  |  |
| High education | $1($ Ref $)$ | $1($ Ref $)$ |
| Medium education | $\mathbf{2 . 1 3}(\mathbf{1 . 7 3 , \mathbf { 2 . 6 3 } )}$ | $\mathbf{1 . 5 7}(\mathbf{1 . 3 0 , 1 . 8 8 )}$ |
| Low education | $\mathbf{3 . 4 1 ( \mathbf { 2 . 7 7 } , \mathbf { 4 . 2 2 } )}$ | $\mathbf{3 . 0 5}(\mathbf{2 . 5 4 , 3 . 6 7 )}$ |


| Late work life <br> Good health |  |  |
| :--- | :--- | :--- |
| High education | 1 (Ref) | 1 (Ref) |
| Medium education | $1.53(1.27,1.85)$ | $1.44(1.21,1.72)$ |
| Low education | $\mathbf{2 . 5 0}(\mathbf{2 . 1 0 , ~ 2 . 9 7 )}$ | $\mathbf{2 . 3 9}(\mathbf{2 . 0 4}, \mathbf{2 . 8 0})$ |
| Poor health |  |  |
| High education | 1 (Ref) | 1 (Ref) |
| Medium education | $\mathbf{1 . 3 0}(\mathbf{1 . 0 0}, \mathbf{1 . 6 8})$ | $\mathbf{1 . 6 3}(\mathbf{1 . 1 8 , \mathbf { 2 . 2 5 } )}$ |
| Low education | $\mathbf{2 . 2 7 ( 1 . 7 9 , \mathbf { 2 . 8 8 } )}$ | $\mathbf{2 . 9 3}(\mathbf{2 . 1 8 , \mathbf { 3 . 9 3 } )}$ |

ORs are adjusted for age, gender and marital status
Some categories in this table are similar to those in Table 2, but ORs may slightly differ because these are within category analysis (i.e., different size of the sample being analyzed and therefore a slightly different correction for age, gender and marital status)
$O R$ odds ratio

Table 4 Associations of physical, and mental, health and unemployment within categories of education, stratified by work life stage (The Netherlands, 2006-2013)

|  | Physical health OR ( $95 \%$ CI) | Mental health OR ( $95 \% \mathrm{CI}$ ) |
| :---: | :---: | :---: |
| Early work life |  |  |
| High education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.20 (0.85, 1.68) | 1.59 (1.20, 2.09) |
| Medium education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.57 (1.25, 2.00) | 1.79 (1.44, 2.24) |
| Low education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.52 (1.11, 2.09) | 1.79 (1.31, 2.43) |
| Mid-work life |  |  |
| High education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.50 (1.21, 1.86) | 2.02 (1.65, 2.45) |
| Medium education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.83 (1.62, 2.07) | 1.43 (1.26, 1.63) |
| Low education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.50 (1.32, 1.70) | 1.60 (1.40, 1.82) |
| Late work life |  |  |
| High education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.66 (1.28, 2.15) | 1.15 (0.85, 1.54) |
| Medium education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.39 (1.14, 1.69) | 1.28 (1.02, 1.60) |
| Low education |  |  |
| Good health | 1 (Ref) | 1 (Ref) |
| Poor health | 1.43 (1.24, 1.66) | 1.26 (1.06, 1.49) |

ORs are adjusted for age, gender and marital status
Some categories in this table are similar to those in Table 2, but ORs may slightly differ because these are within category analysis (i.e., different size of the sample being analyzed and therefore a slightly different correction for age, gender and marital status
$O R$ odds ratio


[^0]:    Electronic supplementary material The online version of this article (https://doi.org/10.1007/s00038-018-1123-5) contains supplementary material, which is available to authorized users.

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