

SCHOOLING DOES NOT ADD TO YOUR PERSONAL HAPPINESS BUT DOES ADD TO THE AVERAGE HAPPINESS OF ALL

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Abstract

Education provides individuals with a set of skills that are assumed to allow them to have better lives and, ultimately, be happier. The fact that higher levels of education are associated with better living conditions might lead to the assumption that education as such is related to higher levels of happiness. However, this relationship is not clearly established in the literature. The aim of this chapter is to provide an overview of the existing evidence on the relationship between education and happiness to inform the discussion of the past, present, and future of the field. For this purpose, two studies were conducted, one at the microlevel of individuals and the other at the macrolevel of nations, using a quantitative approach based on findings from the archive of the World Database of Happiness (WDoH; <https://worlddatabaseofhappiness.eur.nl/>). In Study 1, at the microlevel of analysis, the link between individuals' years of schooling and educational level and happiness is explored. The analysis of 86 correlational findings shows a small average zero-order correlation ($r = +0.09$) and much variation ($SD = 0.13$). This small correlation is wiped away in multivariate analyses that control possible spurious variables, such as income; the average partial correlation is zero. In Study 2, in a macrolevel analysis comparing average education and average happiness across 147 nations, a strong positive relationship was found: $r = +0.59$. This difference of correlations at the micro and macro levels presents a question for future research: why does education add to the happiness of average citizens in nations around the world but not to the happiness of highly educated people?

Keywords: Life satisfaction, school education, research synthesis, micro-macro level difference

Past Research

During human history, investments in school education have persistently increased. In contemporary modern nations, 48% of young adults achieve their tertiary degree (OECD, 2022), meaning that they spend approximately a quarter of their life in school benches. In addition, particularly in OECD countries, the average expenditure in the educational system per student accounts for approximately 26% of GDP per capita (OECD, 2022). These observations, along with other arguments, raise the question of

whether this massive investment is worthwhile (e.g., de New et al., 2021; Psacharopoulos & Patrinos, 2018), and in that context, a major question concerns whether all this schooling makes us any happier.

Theoretically, there are good reasons to assume that school education fosters happiness. Through teaching and training, schools play an important role in individuals' development, not only through transmitting knowledge and training in skills but also through fostering students' potentialities, shaping their character and values and urging them to become citizens who contribute to society (e.g., Carneiro & Draxler, 2008). In this sense, formal education fosters individuals' autonomy, judgment and responsibility and equips them with the ability to choose among available alternatives (Haack, 1981). Thus, schools provide the conditions and opportunities for individuals to succeed personally, socially and professionally and, ultimately, to achieve a better life (Maniar, 2019), and the research literature has confirmed that higher levels of education are associated with better health, occupations and living conditions (Noddings, 2003; V. Raghupathi & W. Raghupathi, 2020).

However, despite the claims about this issue, the empirical evidence for an effect of school education on happiness is mixed. A growing body of literature in this field has found that higher levels of schooling have little effect on happiness (Araki, 2022; Michalos, 2017), other scholars have found that lower levels of schooling are associated with greater happiness (Layard, 2005), and still others have found mixed results (Kim, 2018; Ruiu & Ruiu, 2019; Stewart-Brown et al., 2015). Also, the term is typically perceived in the broad sense of living a good life, which today is referred to as 'eudaimonic happiness' and which is hardly measurable.

If school education does not add to the happiness of educated individuals personally, it is still possible that the massive investment in school education benefits the happiness of an average citizen, such as by its effects on culture and economy. Emergence of empirical research in the sense of life-satisfaction, also called "hedonic happiness", which is well measurable but the relation between happiness and education is not initiated by the educational sector, but rather a byproduct of wider research into social conditions for happiness. A pattern of this kind was previously observed for intelligence by Veenhoven and Choi (2012), who found no greater happiness among smart people within countries, while average happiness was much higher in countries where average intelligence is higher. The same could apply for school education, which is a major promoter of intelligence.

1. Is there a relation between personal education and personal happiness within countries?
2. Is there a relationship between average education and average happiness across nations?

Present Meta-Analysis

To explore the abovementioned research questions, we followed a quantitative approach using research findings gathered in the World Database of Happiness (WdoH; <https://worlddatabaseofhappiness.eur.nl/>). A description of this findings archive is given in Veenhoven (2020). Firstly, we selected findings on the relationship between education and happiness at the individual level as observed in the general public and expressed in comparable statistics¹; our search yielded 86 findings. Secondly, we used the data-file ‘States of Nations’², which is part of the World Database of Happiness and involves nation scores on several characteristics, including indicators of average happiness and average education.

Happiness: Concept and measures

The word “happiness” is often used interchangeably with terms such as “quality of life” or “well-being” and conveys a sense of ‘a good life’. Used in this way, happiness denotes a ‘sensitizing’ concept that is not easily measurable. Today, the word is increasingly used to refer to a ‘satisfying life’, which is a more distinct concept that appears to be well measurable. In this chapter, we focus on the latter meaning.

Following Veenhoven (1984), we define happiness as the degree to which individuals judge the overall quality of their life-as-a-whole favorably. This is the conceptualization used for the World Database of Happiness, from which we draw the results of this study. Measures of happiness in that archive are self-reports on questions such as ‘Taking all together, how satisfied or dissatisfied are you with your life-as-a-whole these days’?

¹ Query “Subject Classification, Education>Current education>Level of school-education, General public, Statistics used Product-Moment Correlation Coefficient (Additionally, "Pearson's correlation coefficient' or simply 'correlation coefficient')” and “Beta coefficient in random effects model” (cf. <https://worlddatabaseofhappiness.eur.nl/search-the-database/correlational-findings/#id=5rr-VYYBZb1NVO-7aWxX>)

² <https://worlddatabaseofhappiness.eur.nl/related-sources/data-set-states-of-nations/2023>

Education: Concept and measures

With its origin in Latin, education is derived from ‘educare’, which refers to ‘raise’ or ‘bring up’, implying the act of teaching and training to bring someone forward (Gupta et al., 2014). Although education can be used as a broader concept that integrates the sum of a person’s experiences, it is often considered in a narrower sense, referring to what is accomplished at the institutional level, particularly in schools.

In this chapter, education was assessed through individuals’ “years of schooling”, which corresponds to the number of years of education completed, excluding years spent repeating grades. Education was also assessed through individuals’ “level of education”, which corresponds to the highest level of education attained when leaving formal education or, for those still in formal education, the level they are currently attending. These indicators are recognized by the United Nations Educational, Scientific and Cultural Organization [UNESCO] (n.d., 2012). The results of bivariate correlations and partial correlations were taken into account. **Bivariate correlation is the relation between two variables. Partial correlation measures the degree of association between two random variables, with the effect of a set of controlling random variables removed.**

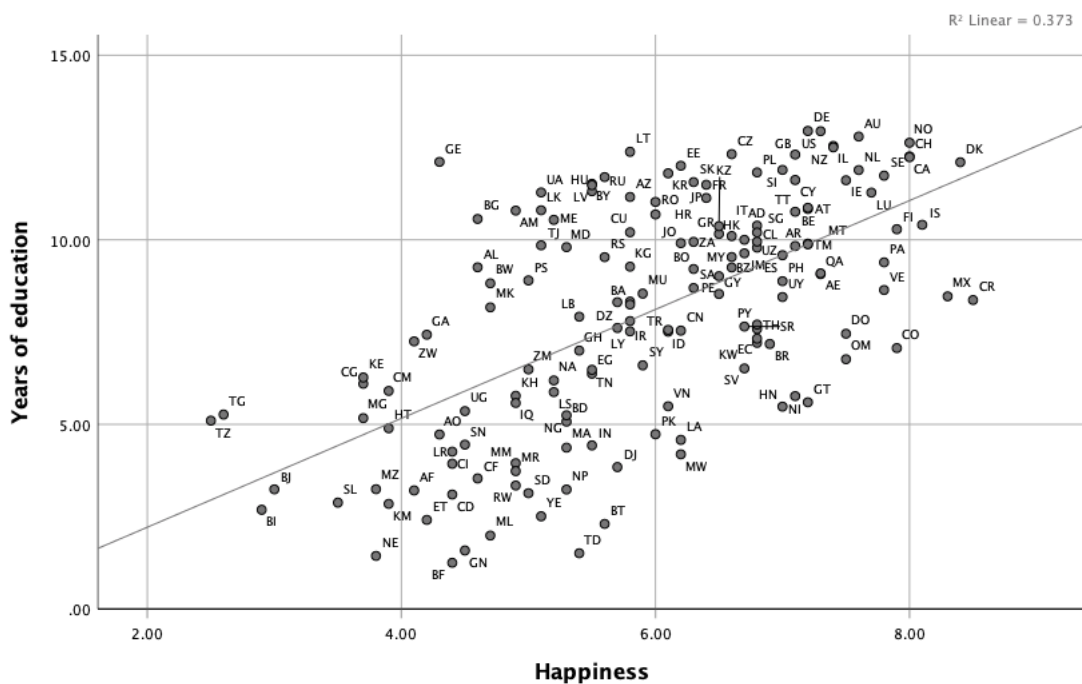
Results

In our first micro-level analysis we synthesized 86 findings, and found a weak positive link between education and happiness, but in many cases this relationship was not significant. The average zero-order correlation is +0.09, and the variation in correlations appears to be high ($SD = 0.13$). This small correlation is wiped away in multivariate analyses that control possible spurious variables, such as income; the average partial correlation is zero. See Table 1.

To assess the macro level relationship between average education and average happiness in nations, we used data from 147 contemporary nations. We found a strong positive correlation of +0.59 between years of education and happiness level across 147 countries. The plot presented in Figure 1 shows a linear relationship.

Figure 1

Scatter plot of years of education by happiness in the national macrolevel analysis.



Note: AF- Afghanistan; AL- Albania; DZ- Algeria; AD- Andorra; AO- Angola; AR- Argentina; AM- Armenia; AU- Australia; AT- Austria; AZ- Azerbaijan; BD- Bangladesh; BY- Belarus; BE- Belgium; BZ- Belize; BJ- Benin; BO- Bolivia; BA- Bosnia- and- Herzegovina; BW- Botswana; BR- Brazil; BG- Bulgaria; BF- Burkina-Fasso; BI- Burundi; KH- Cambodia; CM- Cameroon; CA- Canada; CF- Central- African- Republic; TD- Chad; CL- Chile; CN- China; CO- Colombia; CG- Congo-Brazzaville; CD- Congo- Kinshasa; CR- Costa- Rica; HR- Croatia; CY- Cyprus; CZ- Czech- Republic; DK- Denmark; DJ- Djibouti; DO- Dominican- Republic; EC- Ecuador; EG- Egypt; SV- El- Salvador; EE- Estonia; ET- Ethiopia; FI- Finland; FR- France; GE- Georgia; DE- Germany; GH- Ghana; GR- Greece; GT- Guatemala; GN- Guinea; GY- Guyana; HT- Haiti; HN- Honduras; HK- Hong- Kong; HU- Hungary; IS- Iceland; IN- India; ID- Indonesia IR- Iran; IQ- Iraq; IE- Ireland; IL- Israel; IT- Italy; CI- Ivory- Coast; JM- Jamaica; JP- Japan; JO- Jordan; KZ- Kazakhstan; KE- Kenya; KW- Kuwait; KG- Kyrgyzstan; LA- Laos; LV- Latvia; LB- Lebanon; LT- Lithuania; LU- Luxembourg; MK- Macedonia- (North); MG- Madagascar; MW- Malawi; MY- Malaysia; ML- Mali; MT- Malta; MR- Mauritania; MX- Mexico; MD- Moldova; MN- Mongolia; ME- Montenegro; MA- Morocco; MZ- Mozambique; NA- Namibia; NP- Nepal; NL- Netherlands; NZ- New- Zealand; NI- Nicaragua; NE- Niger; NG- Nigeria; NO- Norway; PK- Pakistan; PS- Palestine; PA- Panama; PG- Papua- New- Guinea; PY- Paraguay; PE- Peru; PH- Philippines; PL- Poland; PT- Portugal; QA- Qatar; RO- Romania; RU- Russia; RW- Rwanda; SA- Saudi- Arabia; SN- Senegal; RS- Serbia; SL- Sierra- Leone; SG- Singapore; SK- Slovakia; SI- Slovenia; ZA- South- Africa; KR- South- Korea; ES- Spain; LK- Sri- Lanka; SD- Sudan; SE- Sweden; CH- Switzerland; SY- Syria; TJ- Tajikistan; TZ- Tanzania; TH- Thailand; TG- Togo; TT- Trinidad- &- Tobago; TN- Tunisia; TR- Turkey; TM- Turkmenistan; AE- UAE; UG- Uganda; UA- Ukraine; GB- United- Kingdom; US- United- States; UY- Uruguay; UZ- Uzbekistan; VE- Venezuela; VN- Vietnam; YE- Yemen; ZM- Zambia; ZW- Zimbabwe.

Discussion

The results of this research allow us to acknowledge that more education does not make individuals any happier, though it does contribute to average happiness in the nation.

One reason why more years spent in school benches does not correlate with greater happiness could be found in the possible negative effect of school-education as such,

e.g., being dependent on teachers and parents for a longer time, being more prepared for evaluations and tests but less trained for real life, and having unrealistic expectations. This can be observed, for example, in terms of intrinsic motivation, which typically decreases during schooling (e.g., Gnambs & Hanfstingl, 2016), meaning that policies and practices in schools do not allow students to satisfy their basic needs for autonomy, competence and relatedness, which are factors that are highly related to happiness. Another reason is a possible [effect of the accountability movement in education](#) (e.g., Allbright & Marsh, 2022; Thiel et al., 2017), that foster teachers directive practices and the organization of the curriculum based on tests and final exams, leaving behind the integral development of the student and his/ her happiness.

The main reason that people who live in nations with high levels of education are happier seems to be that such nations are typically modern nations where the level of happiness tends to be high. In spite of [discussions about the effects of modernity](#), seems clear that people are happier when live in their nations with higher societal-educational levels (Araki, 2022; Veenhoven & Berg, 2013). An educated population, with adequate skills and a meritocratic social system that is functionally necessary for modern nations to maintain and promote GDP as well as institutions and social systems, tends to be associated to higher citizens happiness.

A methodological point to keep in mind is that correlations at the macrolevel of nations tend to be higher than those at the microlevel of individuals because individual variations balance out in the national average.

Future Implications

The finding that more school education does not make individuals happier cannot be ignored. [The discrepancy between current statements about happiness in education and its real investment and promotion](#) should be acknowledged.

What should be [learned](#)? First, [correlations are not causations](#). Future research needs to clearly identify a causal explanation for this paradoxical finding. This will then lead to the questions like: which skills are required for a happy life in a modern society? [And to what extent is the development of these skills hampered during the years spent in school benches?](#)

For example, there is rising evidence that traditional top-down teaching undermines the self-esteem and motivation of students (e.g., Gnambs & Hanfstingl, 2016), which makes them less assertive later in life and, as a result, less happy (Brule &

Veenhoven, 2014). Conversely, there is strong evidence that **democratic, horizontal or active teaching** is more satisfying for students than directive teaching (Bartolini & O'Connor, 2022) and better prepares them for functioning in a modern individualized multiple-choice society. **These first findings point to the need and demand for innovative teaching styles which foster social and emotional skills so that students learn better and live happier lives**(Goldberg et al., 2019). Also, doubts remain considering digitalization in education and society overall, demanding a significant leap in education. Education and schools will need to adapt and change their practices to ensure the best possible preparation, development of social and emotional skills that foster happiness for upcoming generations. In a first moment, digitalization appears as a risk for education in terms of plagiarism or misconduct, but the COVID-19 pandemic, continuous research and development (e.g., Haleem et al., 2022) might bring us positive contributes to meet existing and future educational challenges.

References

- Allbright, T.N., & Marsh, J.A. (2022). Policy narratives of accountability and social-emotional learning. *Educational Policy*, 36(3), 653-688.
<https://doi.org/10.1177/08959048209047>
- Bartolini, S., & O'Connor, K. (2022). Effects of teaching practices on life satisfaction and test scores: Evidence from the Program for International Student Assessment (PISA). *Global Labor Organization (GLO) Discussion Paper*, 1009.
- Brule, G., & Veenhoven, R. (2014). Participatory teaching and happiness in nations. *Journal Advances in Applied Sociology*, 4, 235-245.
<https://doi.org/10.4236/aasoci.2014.411028>
- Carneiro, R., & Draxler, A. (2008). Education for the 21st Century: lessons and Challenges. *European Journal of Education*, 43(2), 149-160.
<https://doi.org/10.1111/j.1465-3435.2008.00348.x>
- de New, S.C., Schurer, S., & Sulzmaier, D. (2021). Gender differences in the lifecycle benefits of compulsory schooling policies. *European Economic Review*, 140,103910.
<https://doi.org/10.1016/j.euroecorev.2021.103910>.
- Goldberg, J. M., Sklad, M., Elfrink, T. R., Schreurs, K. M. G., Bohlmeijer, E. T., & Clarke, A. M. (2019). Effectiveness of interventions adopting a whole school approach to enhancing social and emotional development: a meta-analysis.

- European Journal of Psychology of Education*, 34(4), 755–782.
<https://doi.org/10.1007/s10212-018-0406-9>
- Gupta, N. K., Banerjee, K., Uppal, S., John, M., & Srivastava, S. (2014). *Basics in Education: Textbook For B.Ed. Course*. NCERT.
- Haack, R. (1981). Education and the Good Life. *Philosophy*, 56(217), 289-302.
<https://doi.org/10.1017/S0031819100050282>
- Haleem, A., Javaid, M., Qadri, M.A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275-285. <https://doi.org/10.1016/j.susoc.2022.05.004>.
- Kim, D. (2018). Cross-national pattern of happiness: Do higher education and less urbanization degrade happiness?. *Applied Research in Quality of Life*, 13(1), 21-35. <https://doi.org/10.1007/s11482-017-9504-0>
- Layard, R. (2005). *Happiness. Lessons from a new science*. Allen Lane.
- Maniar, V. (2019). Towards a theory of schooling for good life in postcolonial societies. *Journal of Human Values*, 25(3), 166–176.
<https://doi.org/10.1177/0971685819867080>
- Michalos, A. C. (2017). Education, happiness and wellbeing. In A. C. Michalos (Ed.), *Connecting the quality of life theory to health, well-being and education: The selected works of Alex C. Michalos* (pp. 277-299). Springer, Cham.
- Noddings, N. (2003). *Happiness and education*. Cambridge University Press.
- Organization for Economic Co-operation and Development. (2022). *Education at a Glance 2022: OECD Indicators*. OECD Publishing,
<https://doi.org/10.1787/3197152b-en>
- Psacharopoulos, G., & Patrinos, H.A. (2018). *Returns to investment in education: A decennial review of the global literature*. Policy Research Working Paper 8402. Available at
<https://documents1.worldbank.org/curated/en/442521523465644318/pdf/WPS8402.pdf>
- Raghupathi, V., Raghupathi, W. (2020). The influence of education on health: an empirical assessment of OECD countries for the period 1995–2015. *Archives of Public Health*, 78, 20. <https://doi.org/10.1186/s13690-020-00402-5>
- Ruiu, G., & Ruiu, M. L. (2019). The complex relationship between education and happiness: The case of highly educated individuals in Italy. *Journal of*

Happiness Studies, 20(8), 2631-2653. <https://doi.org/10.1007/s10902-018-0062-4>

Stewart-Brown, S., Samaraweera, P. C., Taggart, F., Kandala, N. B., & Stranges, S. (2015). Socioeconomic gradients and mental health: implications for public health. *The British Journal of Psychiatry*, 206(6), 461-465. <https://doi.org/10.1192/bjp.bp.114.147280>

Thiel, C., Schweizer, S., & Bellmann, J. (2017). Rethinking side effects of accountability in education: Insights from a multiple methods study in four German school systems. *Education Policy Analysis Archives*, 25(93). <http://dx.doi.org/10.14507/epaa.25.2662>

United Nations Educational, Scientific and Cultural Organization [UNESCO], Institute for Statistics. (2012). *International standard classification of education: ISCED 2011*. Unesco Institute for Statistics.

United Nations Educational, Scientific and Cultural Organization [UNESCO], Institute for Statistics (n.d.). *Mean years of schooling*. Retrieved at February 10, 2023 from <http://uis.unesco.org/en/glossary-term/mean-years-schooling>

Veenhoven, R. (1984). *Conditions of Happiness*. Reidel (Now Nature-Springer), Dordrecht, Netherlands.

Veenhoven, R. (2020). World Database of Happiness: A 'findings archive. In H. Welsch, D. Maddison, & K. Rehdanz (Eds.), *Handbook of Wellbeing, Happiness and the Environment* (pp 25-45). Edward Elger Publishing.

Veenhoven, R., & Berg, M. (2013). Has modernization gone too far? Modernity and happiness in 141 contemporary nations. *International Journal of Happiness and Development*, 2, 172-195. <https://doi.org/10.1504/IJHD.2013.055645>

Veenhoven, R., & Choi, Y. (2012). Does intelligence boost happiness: Smartness of all pays more than being smarter than others. *International Journal of Happiness and Development*, 1, 5-27. <https://doi.org/10.1504/IJHD.2012.050808>

Table 1

The association of years of schooling and level of education and happiness based on 86 research findings.

| Education | Observed correlation with happiness | |
|--------------------|---|---|
| | Bivariate | Partial Correlation |
| Years of schooling | <p><u>+.06/+0.08/+0.05/+0.07</u> <u>-.05</u> <u>+.12</u> <u>+.08/+0.03</u> <u>-.08/+0.01</u> <u>+.06/+0.04</u> <u>+.08/+0.02</u> <u>-.02/-0.04</u> <u>+.05/+0.00</u></p> <p><u>+.08/+0.08</u> <u>+.07/+0.06</u> <u>+.08/+0.12</u> <u>+.16/+0.15</u> <u>+.04/+0.08/+0.11/+0.01/+0.02/+0.05</u></p> <p><u>+.02/+0.13/+0.06/+0.13/+0.02/+0.06/+0.10/+0.04/+0.02/+0.02/+0.04/+0.10</u> <u>+.00/+0.19/+0.19/+0.00/+0.01/+0.01/+0.14/+0.14/-</u></p> <p><u>.02/+0.01</u> <u>-.07</u> <u>+.11/+0.10/+0.34/+0.23</u> <u>+.05/+0.03/+0.12/+0.05/+0.02/+0.07</u> <u>+.22/+0.20</u></p> <p><u>+.08/+0.06+0.01/+0.12/+0.00/+0.19/+0.15/+0.08/+0.04/+0.12/+0.00/+0.19/+0.01/+0.06/+0.14/+0.01/+0.14/+0.01/+0.04/+0.10/+0.02</u></p> <p><u>/+0.04/+0.07/+0.10</u> <u>+.14/+0.07/+0.05/+0.11/+0.06/+0.04</u> <u>+.07/-0.01/+0.06/0.00</u> <u>+.03/+0.13/+0.06/+0.06/+0.02/-</u></p> <p><u>.03/+0.03/+0.04/+0.02/+0.02/+0.04/+0.10</u> <u>-.10/-0.06/-0.04/-0.06/-0.04/-0.02</u> <u>+.12/+0.04/+0.05/+0.09/+0.03/+0.03</u></p> <p><u>+.05/+0.03/+0.05/+0.02</u> <u>+.03/-0.02/+0.09/+0.01/-0.02/+0.07</u> <u>+.03/+0.03/+0.06/+0.03/+0.02/+0.05</u> <u>+.06/-</u></p> <p><u>.02/+0.02/+0.04/+0.01/+0.03</u> <u>+.06/-0.02/+0.02/+0.03/-0.02/+0.00</u> <u>+.01/+0.10/+0.19/+0.00/+0.01/-</u></p> <p><u>.04/+0.01/+0.14/+0.07/+0.01/-0.04</u> <u>+.10/-0.02/+0.02/+0.03/-0.02/+0.01</u> <u>+.13/+0.03/+0.06/+0.08/+0.02/+0.05</u></p> <p><u>+.15/+0.08/+0.19/+0.11/+0.05/+0.15</u> <u>-.03/+0.02/+0.14/-0.04/-0.01/+0.10</u> <u>+.14/+0.11/+0.22/+0.10/+0.08/+0.16</u></p> <p><u>+.01/+0.08/+0.00/+0.19/+0.12/+0.08/+0.04/+0.12/+0.00/+0.19/+0.01/+0.04/+0.14/+0.01/+0.14/+0.01/+0.02/+0.04/+0.02/+0.04/+0</u></p> <p><u>7/+0.07</u> <u>+.17/.13/+0.06/+0.20/+0.02/-0.02/+0.16/-0.03/+0.16/+0.02/+0.04/+0.10</u></p> <p><u>+.05/+0.11/+0.04/+0.11/+0.05/+0.04/+0.09/+0.02/+0.03/+0.03/+0.02/+0.09</u></p> <p><u>+.09/+0.18/+0.03/+0.18/+0.09/+0.03/+0.14/+0.02/+0.07/+0.07/+0.02/+0.14</u> <u>-.06/-0.07/-0.01/-0.04/-0.05/+0.02</u></p> <p><u>+.28/+0.27/+0.35/+0.24/+0.21/+0.27</u> <u>-.02/+0.03/+0.08/-0.01/-0.01/+0.06</u> <u>+.03/-0.02/-0.01/+0.03/-0.01/-0.01</u> <u>+.05/-</u></p> <p><u>.02/+0.08/+0.03/-0.01/+0.05</u> <u>+.09/+0.03/-0.00/+0.05/+0.01/-0.01</u> <u>+.05/-0.06/+0.08/+0.03/-0.06/+0.06</u></p> <p><u>+.14/+0.00/+0.05/+0.01/+0.03/-0.00/+0.01/+0.03/+0.10</u> <u>-.01/-0.04/+0.10/-0.02/-0.04/+0.06</u> <u>+.08/+0.03/+0.09/+0.06/+0.01/+0.07</u></p> <p><u>+.03/+0.01/+0.19/+0.00/+0.01/+0.07/+0.01/+0.14/+0.01/+0.03/+0.03</u></p> <p><u>+.05/+0.13/+0.06/+0.07/+0.02/+0.04/+0.06/+0.02/+0.02/+0.02/+0.04/+0.10</u></p> <p><u>+.07/+0.06/+0.07/+0.23/+0.19/+0.01/+0.19/+0.06/+0.00/+0.00/+0.01/+0.23/+0.18/+0.03/+0.06/+0.01/+0.06/+0.14/+0.01/+0.14/-</u></p> <p><u>.02/+0.03/+0.18</u> <u>+.09/+0.14/+0.13/+0.07/+0.09/+0.09</u> <u>+.06/-0.01/-0.07/+0.10/-0.06/+0.04/+0.00/+0.02/</u> <u>.02/-0.04/-0.05/+0.02</u></p> | <p><u>-.03/+0.01/+0.04</u> <u>+.06/+0.02/-0.05/-</u></p> <p><u>.05/+0.02/+0.06/</u> <u>-.03/-0.04/+0.11/-0.04/-0.03/+0.11</u></p> <p><u>-.02/-0.03/+0.05</u> <u><+.10/<+.10</u> <u>-.03/-</u></p> <p><u>.04/+0.07/+0.08/+0.06/+0.02/+0.15/+0.11/-0.04/-</u></p> <p><u>.03/+0.01/+0.11</u> <u>+.11/+0.05/+0.03</u> <u>+.04/-</u></p> <p><u>.02/+0.00/-0.05/+0.02/+0.06</u> <u>+.08/+0.02</u> <u>-.10/-</u></p> <p><u>.06/-0.08</u> <u>+.09/+0.03/+0.04</u> <u>-.02/-0.03</u> <u>-.08/-</u></p> <p><u>.07/+0.00</u> <u>.00/+0.02/+0.02</u> <u>+.04/-0.03/+0.01</u></p> <p><u>+.04/-0.03/+0.01</u> <u>-.03/-0.04/+0.04/-0.04/-0.07/+0.11</u></p> <p><u>+.03/-0.04/-0.00</u> <u>+.09/+0.02/+0.03</u></p> <p><u>+.04/+0.00/+0.10</u> <u>-.09/-0.05/+0.04</u></p> <p><u>+.04/+0.02/+0.13</u> <u>-.03/-</u></p> <p><u>.04/+0.06/+0.08/+0.06/+0.02/+0.08/+0.11/-0.04/-</u></p> <p><u>.03/+0.02/+0.11</u> <u>+.18/+0.02/+0.15/+0.15/-</u></p> <p><u>.05/+0.02/+0.06</u> <u>+.04/-0.03/-0.05/-0.05/-0.03/+0.04</u></p> <p><u>+.08/-0.04/+0.06/+0.06/-0.04/+0.08</u> <u>-.12/-0.11/-0.07</u></p> <p><u>+.12/+0.11/+0.21</u> <u>-.06/-0.02/+0.04</u> <u>+.00/-0.03/-</u></p> <p><u>.02</u> <u>+.00/-0.04/+0.01</u> <u>+.03/-0.05/-0.03</u> <u>-.03/-</u></p> <p><u>.05/+0.05</u> <u>-.01/-0.00/-0.03/-0.04/+0.13</u> <u>+.00/-</u></p> <p><u>.02/+0.09</u> <u>-.01/+0.00/-0.01</u> <u>-.03/-</u></p> <p><u>.04/+0.04/+0.04/+0.07/+0.11</u> <u>+.08/+0.02/+0.03/-</u></p> <p><u>.05/+0.02/+0.06</u> <u>+.05/+0.03/-0.04/-0.12/-0.11/-0.07</u></p> <p><u>-.04/-0.03/+0.11/+0.13/+0.05/+0.01/-0.04/-</u></p> <p><u>.03/+0.13/+0.05/+0.01/+0.11</u> <u>+.01/+0.11/+0.09</u></p> |

| | Bivariate Mean (SD) 0.06 (.07) | Partial Mean (SD) -0.00 (.30) |
|--|--|---|
| Level of education | <u>+0.03/+0.05</u> <u>+0.07/+0.08</u> <u>+0.10/+0.22</u> <u>-0.02/-0.02</u> <u>+0.09/+0.14</u> <u>+0.21/+0.36</u> <u>+0.15/+0.29</u> <u>+0.13/+0.20</u> <u>-0.09/+0.04/+0.02/+0.06</u> <u>+0.13/+0.17/+0.24/+0.23</u> <u>+0.16/+0.24/+0.17/+0.18/+0.16</u> <u>+0.35/+0.12/+0.17/+0.16/+0.22/+0.35/-0.12/-0.17/-0.16/+0.22</u> <u>+0.16/+0.29/+0.25/+0.02/+0.10/-0.16/-0.29/-0.25/-0.02/+0.10</u> <u>-0.02</u> <u>+0.01</u> <u>+0.00/+0.01/-0.02</u> <u>+0.03</u> <u>+0.03/+0.16/+0.06</u> <u>-0.01</u> <u>+0.08</u> <u>+0.13/+0.06</u> <u>+0.12/+0.08</u> <u>-0.00/-0.05</u> <u>+0.13/+0.08</u> <u>+0.12/+0.08</u> <u>+0.13</u> <u>+0.12/+0.11</u> <u>+0.04</u> <u>+0.00</u> <u>+0.08</u> <u>+0.09</u> <u>+0.01</u> | <u>+0.13/+0.21/+0.50</u> <u>+0.13</u> <u>+0.17</u> <u>+0.07</u> <u>-0.07/-0.08</u> <u>-0.06/-0.04</u> <u>+0.11/+0.05/+0.03</u> <u>+0.04/-0.02/+0.00/-0.05/+0.02/+0.06</u> <u>+0.08/+0.02</u> <u>-0.10/-0.06/-0.08</u> <u>+0.09/+0.03/+0.04</u> <u>-0.02/-0.03</u> <u>-0.08/-0.07/+0.00</u> <u>.00/+0.02/+0.02</u> <u>+0.04/-0.03/+0.01</u> <u>+0.04/-0.03/+0.01</u> <u>-0.03/-0.04/+0.04/-0.04/-0.07/+0.11</u> <u>+0.03/-0.04/-0.00</u> <u>+0.09/+0.02/+0.03</u> <u>+0.04/+0.00/+0.10</u> <u>-0.09/-0.05/+0.04</u> <u>+0.04/+0.02/+0.13</u> <u>-0.03/-0.04/+0.06/+0.08/+0.06/+0.02/+0.08/+0.11/-0.04/-0.03/+0.02/+0.11</u> <u>+0.18/+0.02/+0.15/+0.15/-0.05/+0.02/+0.06</u> <u>+0.04/-0.03/-0.05/-0.05/-0.03/+0.04</u> <u>+0.08/-0.04/+0.06/+0.06/-0.04/+0.08</u> <u>-0.12/-0.11/-0.07</u> <u>+0.12/+0.11/+0.21</u> <u>-0.06/-0.02/+0.04</u> <u>+0.00/-0.03/-0.02</u> <u>+0.00/-0.04/+0.01</u> <u>+0.08/-0.03/-0.02</u> |
| | Bivariate Mean (SD) 0.09 (.13) | Partial Mean (SD) 0.01 (.08) |
| Note: + positive but not significant; + bold positive and significant; – negative but not significant; – bold negative and significant; +\– different results in the same study; +/- = same results in the same study; | | |