University of Groningen

Psychological well-being and self-esteem in Slovak adolescents

Sarkova, Maria

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2010

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Sarkova, M. (2010). *Psychological well-being and self-esteem in Slovak adolescents*. [Thesis fully internal (DIV), University of Groningen]. [s.n.].

Differences in self-esteem among adolescents across Central European countries and the association between psychological well-being and self-esteem in Slovak and Hungarian young adolescents

Maria Sarkova, Berrie Middel, Andrea Madarasova Geckova, Zuzana Katreniakova, Olga Orosova, Wim van den Heuvel, Jitse P. van Dijk

Submitted

Abstract

The aim of this study is to explore differences in self-esteem among adolescents across European countries and to compare factors associated with self-esteem between Slovak and Hungarian adolescents. Two data-sets were used. The first set was derived from the 53 nations study by Schmitt and Allik (2005) and the second set comprised a Slovak (N=519, 50.9% boys, mean age 11.5, response rate 88.8%) and a Hungarian sample (N=431, 52.7% boys, mean age 11.5, response rate 92.5%). Psychological well-being was measured using the General Health Questionnaire-12 and self-esteem with the Rosenberg Self-esteem Scale. The data were analysed using t-tests, Cohen's effect size and hierarchical linear regression. Large differences were found between Slovakia and Serbia, Slovenia and Croatia in overall, positive and negative self-esteem among boys and girls, with exception of Croatian boys in positive self-esteem. Large differences were also found between Slovak and Austrian adolescents in negative self-esteem and between Slovak and Hungarian girls in positive self-esteem. The findings from linear regression indicate that cultural background and both factors of psychological well-being significantly associate with self-esteem. The present findings contribute to a better understanding of self-esteem in Central European countries and could stimulate future research.

Keywords: self-esteem, cross-cultural comparison, adolescence

Introduction

The Rosenberg Self-esteem Scale is a widely used instrument for measuring personal feelings of self-worth (Rosenberg, 1965). The simplicity of this scale provides easy and quick administration. At the same time this scale has been translated into almost all Indo-European languages and also into many languages from completely different linguistic families. This enables researchers to measure self-esteem within individual countries as well as in the framework of a cross-cultural comparison. The present paper is focused on the cultural similarities and differences in self-esteem which have been in the spotlight in numerous studies (Heine et al., 1999; Kobayashi & Brown, 2003; Schmitt & Allik, 2005; Akande, 2009; Brown et al., 2009). In line with findings from the mentioned studies, it is possible to emerge from the theoretical background that self-esteem is a universal phenomenon resulting from common human motivations as well as the social environment. In addition, self-esteem may vary across subjects with different socio-cultural backgrounds. The very nature of what it means to experience feelings of self-worth takes culturally specific forms. As Schmitt and Allik's study in 53 nations (2005) demonstrated, the Rosenberg Self-esteem Scale is generally replicable across diverse samples of human cultures, including many Asian and African nations. However, their study indicates important cultural differences in self-esteem. In comparison with Western countries (Americans, Canadians, and Western Europeans), East Asians score lower on self-reporting measures of self-esteem (Schmitt & Allik, 2005). Although a good deal of previous research has assessed cross-cultural differences in self-esteem (Schmitt & Allik, 2005; Heine & Hamamura, 2007; Brown et al., 2009), there is a lack of studies testing how self-esteem associates with other variables, such as gender and psychological well-being, across cultures. Several studies have demonstrated that self-esteem is related to individual attributes such as extroversion and indicators of psychological well-being (Robins et al., 2001; Veselska et al., 2009; Kling et al., 1999). It is essential to examine the possible outcomes as well as correlates and possible sources of self-esteem. Understanding correlates and sources of self-esteem is important for the enhancement and the short and long term outcomes of self-esteem.

The background of this study is a general interest in differences in self-esteem among adolescents across Central European and Eastern European countries. Schmitt and Allik found that Slovak adolescents have lower levels of self-esteem compared to other countries (Schmitt & Allik 2005). Therefore, we needed more evidence that Slovak adolescents systematically deviated from other European countries and re-analyzed the data presented in the Schmitt and Allik article (2005). Besides cultural background, the present study focuses on the association of gender

and psychological well-being with self-esteem, as former studies have consistently shown the importance of the role of both (Bolognini et al., 1996; Kling et al., 1999; Miyamoto et al., 2001; Ponsoda et al., 2008).

The following research questions were addressed:

1. Given the empirical outcomes of the international comparative study by Schmitt and Allik (2005) that Slovak and Czech adolescents have the lowest levels of self-esteem compared to subjects from other central European countries, can it be hypothesised that these differences are not due to sample fluctuation and are not trivial in size?
2. How large are gender-related differences in self-esteem between countries in terms of effect size and is the magnitude of these differences comparable?
3. Are gender, cultural background (Slovak vs. Hungarian), and psychological well-being associated with positive, negative and overall self-esteem?

Methods

Sample

This study comprises two data-sets that were used for analysis: (1) a comparison of positive, negative and overall self-esteem across nine central European countries based on data derived from the 53 nations used by Schmitt and Allik (2005) and (2) regression analyses with GHQ-12 factors which were based on two samples of Slovak and Hungarian adolescents. Further details on the sampling and assessment procedures utilised by Schmitt and Allik (2005) are provided elsewhere (Schmitt et al., 2004). The sampling procedure of Hungarian and Slovak adolescents was performed as follows. In Slovakia data were collected at 8 randomly selected elementary schools located in the city of Kosice (Eastern part of Slovakia; cca 240,000 inhabitants). The Slovak sample consisted of 519 pupils (50.9% boys, mean age 11.5 years). In Hungary data were collected at 10 elementary schools – 4 schools situated in the city of Miskolc (North-eastern part of Hungary; cca 180,000 inhabitants) and 6 schools in the city of Debrecen (North-eastern part of Hungary; cca 205,000 inhabitants). The Hungarian sample consisted of 431 pupils (52.7% boys, mean age 11.5 years). Individual schools were selected randomly. Respondents completed the questionnaires at school, in their classrooms under the guidance of the field workers and in the absence of teachers. The response rate was 88.8% in the Slovak sample and 92.5% in the Hungarian sample. Both samples initially did not differ in age as school classes were identical.

Measures

Sociodemographic variables included age, gender and native background. Age and gender were used as reported by patients in the questionnaire. Because all subjects were of the same age, this characteristic was not used in statistical analysis.

Self-esteem was assessed using the Rosenberg Self-esteem Scale (RSE) (Rosenberg, 1965). The scale was originally developed to measure adolescents' global feelings of self-worth or self-acceptance (Rosenberg, 1965). It consists of 10 items (5 positive and 5 negative). Each item has a four-point scale ranging from 1="strongly agree" to 4= "strongly disagree". The sum score for global self-esteem range from 10 to 40. A higher total score indicates higher global self-esteem. In line with previous studies (Kaplan & Pokorny, 1969; Blascovich & Tomaka, 1991; Sarkova et al. 2006; Halama, 2008) two factors of the RSE were used in the present study: "negative self-esteem" (5 items: no good at all, not proud, feel useless, lack of respect and feel a failure) and "positive self-esteem" (5 items: satisfied with self, have good qualities, equal to others, feel valuable and a positive attitude). Scores on these factors range from 5 to 20, with a higher score indicating higher positive and negative self-esteem. Both measures were translated using a forward-backward procedure and differences between the Slovak and Hungarian translation with the original English version were evaluated by an English, Slovak and Hungarian native speaker. In the Hungarian sample Cronbach's alpha was 0.65 for positive self-esteem, 0.66 for negative self-esteem and 0.75 for overall self-esteem. In the Slovak sample Cronbach's alpha was 0.55 for positive self-esteem, 0.62 for negative self-esteem and 0.65 for overall self-esteem.

Psychological well-being. Psychological well-being, measured using the shortened 12-item version of the General Health Questionnaire (GHQ-12) (Goldberg, 1988), focused on various aspects of respondents' psychological disposition, for example problems with sleep, strain, happiness or stress. The questions compare how the respondents' present state differs from their usual state. The GHQ-12 was scored on a four point Likert scale (0-1-2-3) with scores ranging from 0 to 36 (0=no complaints at all). A higher total score means worse global psychological well-being. According to previous studies (Politi et al., 1994; Werneke et al., 2000; Sarkova et al.2006), we applied factor analysis to the current study data and clearly separated two dimensions of the GHQ-12: "social dysfunction" (6 items: concentrate, play useful part, making decisions, enjoy activities, face up problems, feeling happy) and "depression/anxiety" (6 items: lost sleep, under strain, overcome difficulties, feeling unhappy, lost self-confident, feeling worthless). Scores on both dimensions range from 0 to 18; a higher score indicates worse psychological well-being. In the Hungarian sample Cronbach's alpha was 0.76 for depression/anxiety, 0.62 for social

dysfunction and 0.79 for overall psychological well-being. In the Slovak sample Cronbach's alpha was 0.75 for depression/anxiety, 0.53 for social dysfunction and 0.73 for overall psychological well-being.

Statistical analysis

Continuous variables were analyzed with t-tests to compare positive, negative and overall self-esteem stratified by gender across countries. Only statistically significant differences between countries were expressed in Cohen's effect size 'd' (Cohen, 1988) to estimate the magnitude of differences between countries, as it makes no sense to estimate the size of these differences when they are due to sample fluctuation. In this study, effect sizes were calculated according to Cohen by dividing the mean difference by the pooled standard deviation. Using Cohen's thresholds an effect size 'd' < 0.20 indicates a trivial difference, an ES of $0.20 \leq .50$ a small one, an ES of $0.50 \leq .80$ a moderate one and an ES > .80 a large difference. In this study $d \geq .20$ were considered as a relevant difference.

In order to make comparisons between countries, the 95% confidence intervals for mean differences and for effect sizes were calculated. Next, the impact of gender, native country, depression/anxiety and social dysfunction was assessed using hierarchical regression analyses with each of the RSE scale factors as dependent variables. Based on statistically significant correlations of the most important background variables (gender, educational level of parents and native country) with the RSE factors as dependent variables, gender and native country were included as the covariates for GHQ factors. Native background and gender variables were then entered in the regression model at the first step and the GHQ factors 'depression/anxiety' and 'social dysfunction' (all in one) at the second step to determine whether they explained a significant percentage of the variance in positive, negative and overall self-esteem.

Results

Comparison of overall, positive and negative self-esteem between European countries

Average scores of positive, negative and as well as overall self-esteem of 23 West and Central European countries are presented in descending order (Table 4.1) (Schmitt & Allik, 2005). After sorting mean scores of self-esteem in descending order, some Central European countries (marked using †) appear in the upper levels of the table (Serbia, Estonia, Croatia, Austria, Slovenia, and Germany) followed by other Central European countries as well as West European countries, whereas Czech and Slovak adolescents

have the lowest mean levels of self-esteem compared to other countries. Moreover, after differentiating between positive and negative self-esteem, the ranking order did not show any meaningful change. Thus, Serbia and Estonia were in the top ranks and Czech and Slovak adolescents in the lowest ranks for both domains of positive and negative RSE.

Table 4.1 Self-esteem across 22 European Countries in descending order, derived from Schmitt and Allik (2005)

Country	total RSE	positive RSE	negative RSE
Serbia†	33.59	17.4	16.2
Estonia†	32.63	16.8	15.8
Croatia†	31.94	16.6	15.4
Austria†	31.78	16.0	15.8
Finland	31.76	16.5	15.3
Slovenia†	31.74	16.8	14.9
Germany	31.73	15.9	15.9
The Netherlands	31.60	16.1	15.5
Spain	31.52	16.6	15.0
Portugal	31.30	16.2	15.1
Greece	31.29	16.4	14.9
Italy	30.56	16.2	14.4
England	30.55	15.8	14.7
Poland†	30.34	16.0	14.4
Latvia†	29.88	15.6	14.2
France	29.86	15.5	14.3
Belgium	29.66	15.5	14.1
Lithuania†	29.60	16.0	13.6
Romania†	29.54	16.1	13.5
Hungary†	29.46	16.2	13.0
Switzerland	29.16	14.6	14.5
Slovakia†	28.94	15.7	13.3
Czech Republic†	28.47	15.3	13.1

Notes: † means Central European Countries, Baltic Countries or Balkan Countries

Comparison of statistically significant differences on self-esteem scores of overall, positive and negative self-esteem between Slovak adolescents and those from other Central European countries

Slovak and Czech adolescents differed only on overall self-esteem which was, however, a trivial finding. Differences that were classified as large were found between: (i) Slovak and Serbian, (ii) Slovak and Slovenian adolescents on positive, negative and overall self-esteem for boys as well as for girls (Table 4.2). Large differences were also found between Slovak and Croatian adolescents except for male subjects on *positive* self-esteem (small difference). Large differences in *negative* self-esteem were found between male and female Slovak and Austrian adolescents, while the differences in *positive* self-esteem were small and moderate among males and females, respectively. Differences in negative self-esteem between Slovak and Polish males and females were moderate in size, while in positive self-esteem these groups' differences were classified as small. Differences in positive and negative self-esteem between Slovak and Romanian subjects were small, except differences in positive self-esteem of female adolescents, which were moderate in size. The difference in positive self-esteem between Slovak and Hungarian girls was classified as large while the differences between Slovak and Hungarian boys were moderately in size. Both Slovak and Hungarian boys and girls did not differ in negative self-esteem.

Table 4.2 Differences in self-esteem across central European countries stratified by gender

Self-Esteem	Slovakia (SK)	SK vs. Czech Republic	95% CI	ES	95% CI effect size	SK vs. Poland	95% CI	ES	95% CI effect size
Positive SE									
men (N)	230	105				303			
mean (SD)	15.31 (2.02)	15.39 (2.48)	(-.62-.46)	ns		16.17 (2.39)	(-1.24-.49)	.38	(.21-.56)
women (N)	225	129				516			
mean (SD)	14.82 (2.26)	15.28 (2.13)	(-.93-.02)	ns		15.77 (2.31)	(-1.31-.59)	.41	(.26-.57)
Negative SE									
men (N)	230	105				302			
mean (SD)	12.77 (2.72)	13.36 (2.68)	(-1.21-.03)	ns		14.55 (2.86)	(-2.26-1.31)	.64	(.46-.81)
women (N)	228	129				516			
mean (SD)	12.65 (2.52)	12.93 (2.42)	(-.81-.25)	ns		14.17 (2.66)	(-1.92-1.12)	.58	(.42-.74)
Total RSE	452	234				812			
	27.79 (3.84)	28.47 (4.14)	(-1.32-.04)	.17	(.12-.33)	30.34 (4.47)	(2.06-3.04)	.60	(.48-.72)

Notes: ES of .20 ≤ .50 a small, ES of .50 ≤ .80 a moderate and ES > .80 a large difference

vs. = versus

Self-Esteem	Slovakia (SK)	SK vs. Hungary	95% CI	ES	95% CI effect size	SK vs. Austria	95% CI	ES	95% CI effect size
Positive SE									
men (N)	230	223				207			
mean (SD)	15.31 (2.02)	16.95 (2.818)	(-2.09-1.19)	.67	(.49-.86)	15.99 (2.34)	(-1.09-0.27)	.31	(.12-.50)
women (N)	225	204				260			
mean (SD)	14.82 (2.26)	16.92 (2.81)	(-2.59-1.61)	.83	(.63-1.02)	16.05 (2.64)	(-1.67-.80)	.50	(.32-.68)
Negative SE									
men (N)	230	225				207			
mean (SD)	12.77 (2.72)	12.39 (3.39)	(-.18-.94)	ns		15.73 (2.84)	(-3.48-2.43)	1.07	(.86-1.26)
women (N)	228	202				108			
mean (SD)	12.65 (2.52)	12.67 (3.613)	(-.61-.58)	ns		16.79 (2.36)	(-4.57-3.70)	1.70	(1.49-1.90)
Total RSE	452	423				466			
	27.79 (3.84)	29.46 (5.381)	(-2.29- -1.05)	.36	(.23-.49)	31.78 (4.68)	(-4.55-3.43)	.93	(.79-1.07)

Notes: ES of .20 ≤ .50 a small, ES of .50 ≤ .80 a moderate and ES > .80 a large difference
vs. = versus

Self-Esteem	Slovakia (SK)	SK vs. Serbia	95% CI	ES	95% CI effect size	SK vs. Slovenia	95% CI	ES	95% CI effect size
Positive SE									
men (N)	230	100				73			
mean (SD)	15.31 (2.02)	17.12 (2.37)	(-2.34–1.28)	.85	(.60-1.09)	16.91 (2.43)	(-2.21–.98)	.80	(.51-1.08)
women (N)	225	100				108			
mean (SD)	14.82 (2.26)	17.79 (2.06)	(-3.47–2.47)	1.35	(1.09-1.60)	16.79 (2.36)	(-2.50–.43)	.86	(.62-1.10)
Negative SE									
men (N)	230	100				73			
mean (SD)	12.77 (2.72)	16.28 (3.35)	(-4.25–2.77)	1.20	(.96-1.45)	15.29 (3.09)	(-3.31-1.73)	.90	(.62-1.17)
women (N)	228	100				108			
mean (SD)	12.65 (2.52)	16.10 (3.39)	(-4.19–2.71)	1.23	(.97-1.48)	14.63 (2.74)	(-2.59–1.37)	.80	(.53-1.00)
Total RSE	452	200				180			
	27.79 (3.84)	33.59 (4.99)	(-6.50-5.10)	1.37	(1.19-1.55)	31.74 (4.15)	(-4.63-3.27)	1.00	(.82-1.19)

Notes: ES of .20 ≤ .50 a small, ES of .50 ≤ .80 a moderate and ES > .80 a large difference

vs. = versus

Self-Esteem	Slovakia (SK)	SK vs. Romania	95% CI	ES	95% CI effect size	SK vs. Croatia	95% CI	ES	95% CI effect size
Positive SE									
men (N)	230	123				113			
mean (SD)	15.31 (2.02)	16.22 (2.22)	(-1.38-.44)	.44	(.21-.66)	16.27 (2.02)	(-1.41-.51)	.48	(.25-.70)
women (N)	225	128				109			
mean (SD)	14.82 (2.26)	15.99 (1.97)	(-1.62-.72)	.54	(.32-.76)	16.98 (1.95)	(-2.63-1.69)	1.00	(.75-1.24)
Negative SE									
men (N)	230	123				113			
mean (SD)	12.77 (2.72)	13.83 (2.46)	(-1.62-.50)	.40	(.18-.62)	14.91 (2.39)	(-2.70-1.58)	.82	(.58-1.05)
women (N)	228	128				109			
mean (SD)	12.65 (2.52)	13.26 (2.48)	(-1.14-.06)	.25	(.12-.46)	15.87 (2.68)	(-3.82-2.62)	1.25	(1.00-1.50)
Total RSE	452	251				222			
	27.79 (3.84)	29.54 (3.99)	(-2.36-1.14)	.45	(.29-.60)	31.94 (4.12)	(-4.80-3.50)	1.05	(.88-1.22)

Notes: ES of .20 ≤ .50 a small, ES of .50 ≤ .80 a moderate and ES > .80 a large difference

vs. = versus

A Slovak and Hungarian comparison: gender, native cultural background and depression/anxiety and social dysfunction factors as predictors of self-esteem

Table 4.3 presents the results of the regression analysis designed to explain the relative role of each background characteristic and psychological health in the association with the extent of self-esteem evaluated by the three scales of self-esteem. Anxiety-depression and social dysfunction contributed significantly to a unique segment of the variance for all domains of self-esteem, social dysfunction in particular. The expected direction of standardised β weights is negative, meaning that the lower score of social dysfunction and lower levels of perceived depression/anxiety are associated with higher levels of positive, negative and overall self-esteem.

All standardised β weights were in the expected direction and showed that 'Hungarian descent' was a significant predictor for positive and overall self-esteem, meaning that Hungarian adolescents reported higher positive self-esteem compared to their Slovak counterparts, while negative self-esteem was not associated with native background. Limitation in social functioning was an important predictor in all domains of self-esteem, meaning that adolescents who were less limited in social functioning reported higher self-esteem. The depression/anxiety factor was a significant predictor in the self-esteem domains. Gender and native background explained 11% of the variance in positive self-esteem while in negative and overall self-esteem the percentage explained by these background variables was 5% and 3%, respectively.

Table 4.3 Slovak and Hungarian comparison: hierarchical multiple regression analysis with gender, native background and psychological well-being as determinants of positive, negative and overall self-esteem

Rosenberg Self-Esteem	Total Self-Esteem β	Positive Self-Esteem β	Negative Self-Esteem β
Socio-demographic characteristics			
Country	**.21*****	**.38*****	*-.19*
Gender	*-.01*	*-.04*	*.03*
General Health Questionnaire			
Depression/anxiety	**-.19*****	**-.22*****	**-.10****
Social dysfunction	**-.41*****	**-.30*****	**-.36*****
Adjusted R^2	.29	.31	.29
R2 change	**.26**	**.20**	**.24**
F	86.57***	97.99***	42.28***
F change	156.06***	121.13***	83.52***

Notes: **p<.01;***p<.001. In bold: statistically significant β values and R ˛ change values, Italic: not significant

Discussion

The study presented an overview of differences in global, positive and negative self-esteem in 22 European countries, then explored whether differences between Central European countries in global, positive and negative self-esteem were not due to sample fluctuation and was not trivial in size. Furthermore, the study examined how large gender-related differences between mentioned countries are in terms of effect size and whether the magnitudes of these differences were comparable. As was hypothesised, differences between Slovakia and other Central European countries were found, and these differences were not trivial in size. Large differences were found between Slovakia and Serbia, Slovenia and Croatia in overall, positive and negative self-esteem among boys and girls, with exception of Croatian boys in positive self-esteem. Large differences were found also between Slovak and Austrian adolescents in negative self-esteem and between Slovak and Hungarian girls in positive self-esteem.

Finally, this study examined whether gender, cultural background (Slovak vs. Hungarian) and psychological well-being associated with positive, negative and overall self-esteem. The findings from linear regression indicate that cultural background and both factors of psychological well-being significantly associate with self-esteem. Though large differences between Slovak and Hungarian girls in positive self-esteem were found, the linear regression model does not show a significant association between gender and self-esteem.

The top as well as the bottom of the table of self-esteem mean scores from the 22 European countries were occupied by Central European countries. It suggests that within countries which belong to one geographical and political area in Central Europe could be found a different cultural background influencing the way people in this country evaluate themselves. Levels of self-esteem vary across cultures, as has been demonstrated in several studies (Schmitt & Allik, 2005; Brown et al., 2009; Farruggia et al., 2009). The explanation could be found – albeit this remains speculative – in the way a person is expected to adjust one's self to meet the expectations of significant others and to work for the good of the dyad, the group, the organization or the nation and to fit into existing cultural background (Kwang Ng et al., 2003).

The linear model has also revealed that the second variable significantly associated with self-esteem and its factors is psychological well-being, specifically the depression/anxiety and social dysfunction factors. Numerous studies have demonstrated that self-esteem is linked to depression (Owens, 1994; Lucas et al., 1996; Veselska, et al., 2009). In the frame of the present regression model, gender was one variable which was not significantly associated with self-esteem. This finding is in line

with the meta-analysis of Kling et al. (1999), which revealed that gender differences in self-esteem have a trivial effect size. Kling et al. (1999) offered the following explanation. It was noted earlier that gender roles may contribute to low self-esteem in some girls but that gender roles may also contribute to self-esteem problems for boys. Contemporary theorizing on the male role emphasises a perspective in which gender roles are seen as sources of psychological stress for boys and men (Pleck, 1981). It is also plausible that girls and women engage in several processes that protect their self-esteem (Kling et al., 1999).

Strengths and limitations

The present study has several strengths. Data from 22 European countries were used and provide an interesting intercultural comparison. Additional data from Slovak and Hungarian samples provide the opportunity to examine associations between self-esteem and others variables in more depth. A limitation of this study is that self-liking and self-competence factors which could be computed from Rosenberg Self-esteem Scale (Tafarodi & Swann, 1995) were not used. Schmitt and Allik's study (2005) has shown that the use of these self-esteem factors reveal intercultural differences between collectivistic and individualistic cultures.

Implication and conclusion

Our findings revealed the cross-cultural importance of self-esteem through the evidence of differences in overall, positive and negative self-esteem across European countries. Regarding the theoretical background, these findings extend the existing knowledge about self-esteem. At the same time, our study found that psychological well-being as a correlate of self-esteem is similar among Slovak and Hungarian adolescents. In practice our findings might contribute to the design and implementation of effective health promotion programs aimed at enhancing self-esteem in the target group.

Acknowledgment:

References

Akande, A. W. (2009). The self-perception and cultural dimensions: cross-cultural comparison. *Educational Studies, 35, 1*, 81-92.

Blascovich, J., & Tomaka, J. (1991). Measures of self-esteem. In J. P. Robinson, P.R.Shaver, L., & Wrightsman, S. (Eds.) Measures of personality and social psychological attitudes, Volume I. San Diego, CA: Academic Press.

Bolognini M., Plancherel B., Bettschart W. & Halfon, O. (1996). Self-esteem and mental health in early adolescence: development and gender differences. *Journal of Adolescence, 19*, 233–245.

Brown, J.D., Cai, H., Oakes, M.A. & Deng, C. (2009). Cultural similarities in self-esteem functioning. *Journal of Cross-Cultural Psychology, 40, 1*, 140-157.

Cohen J. (1988). *The t Test for means. Statistical Power Analysis for the Behavioural Sciences*. 2 ed. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 19-74.

Farruggia, S. P., Chen, Ch., Greenberger, E., Dmitrieva, J., & Macek, P. (2009). Adolescent self-esteem in cross-cultural perspective. Testing measurement equivalence and a mediation model. *Journal of Cross-Cultural Psychology, 35, 6*, 719-733.

Goldberg, D., & Williams, P. (1988). A user's guide to the General Health Questionnaire. *Windsor, NFER- Nelson.*

Halama, P. (2008). Confirmatory factor analysis of Rosenberg self-esteem scale in sample of Slovak high school and university students. *Studia Psychologica, 50*, 255 – 266.

Heine, S.J. & Hamamura, T. (2007). In search of east Asian self-enhancement. *Personality and Social Psychology Review*, 11, 204.

Heine, S. J., Lehman, D. R., Markus, H. R., Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review*, 106, 766-794.

Kaplan, H.B. & Pokorny, A.D. (196). Self-derogation and psychosocial adjustment. *Journal of Nervous and Mental Disease*. 149, 421 – 434.

Katreniakova, Z., Sarkova, M., Madarasova Geckova, A., Lok, W. †, van Dijk, J. P., van den Heuvel, W. & Middel, B.. Intra-individual change over time in psychological well-being and self-esteem among early and middle adolescents in Slovakia. (submitted)

Kling, K.C., Shibley Hyde, J., Showers, C.J. & Buswell, B. N. (1999). Gender differences in self-esteem: A meta-analysis. *Psychological Bulletin, 125,* 470-500.

Kobayashi, C. & Brown, J.D. (2003). Self-esteem and self-enhancement in Japan and America. *Journal of Cross-Cultural Psychology*, 34, 567-580.

Kwang Ng, A., Ho, D. Y. F., Wong, S. S., & Smith I. (2003). In search of the good life: A cultural Odyssey in the East and West. *Genetic, Social, and General Psychology Monographs, 129, 4*, 317-363.

Lucas, R., Diener, E., & Suh, E. M. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology, 71,* 616-628.

Miyamoto, R. H., Hishinuma, E. S., Nishimura, S.T., et al. (2001). Path models linking correlates of self-esteem in multi-ethnic adolescent sample. *Personality and Individual Differences, 31*, 701-712.

Owens, T. J. (1994). Two dimensions of self-esteem: reciprocal effects of positive self-worth and self-deprecation on adolescent problems. *American Sociological Review, 59,* 391-407.

Pleck, J.H. (1981). The myth of masculinity. Cambridge, MA: MIT Press.

Politi, P.L., Piccinelli, M. & Wilkinson, G. (1994). Reliability, validity and factor structure of the 12-item General health Questionnaire among young males in Italy. *Acta Psychiatrica Scandinavica*, 6, 432-437.

Ponsoda, V., Abad, F. J., Francis, L. J. & Hills, P. R. (2008). Gender differences in the Coopersmith Self-esteem Inventory. The Incidence of Differential Item Functioning. *Journal of Individual Differences, 29*, 217-222.

Robins, R.W., Tracy, J.L., & Trzesniewski, K. (2001). Personality correlates of self-esteem. Journal of Research of Personality, 35, 463-482.

Rosenberg, M. (1965). Society and the adolescent child. *Princeton, NJ: Princeton University Press*.

Sarkova, M., Nagyova, I., Katreniakova, Z., Madarasova-Geckova, A., Orosova, O., Middel, B., van Dijk, J.P., & van den Heuvel, W. (2006) Psychometric evaluation of the General Health Questionnaire-12 and Rosenberg Self-esteem Scale in Hungarian and Slovak early adolescents. *Studia Psychologica, 48,* 69–79.

Schmitt, D.P. et al. (2004). Patterns and Universals of Adult Romantic Attachment Across 62 Cultural Regions. *Journal of Cross-Cultural Psychology, 35,* 367-402.

Schmitt, D.P. & Allik, J. (2005). Simultaneous administration of the Rosenberg Self-esteem Scale in 53 nations: Exploring the universal and culture-specific features of global self-esteem. *Journal of Personality and Social Psychology, 89, 4,* 623-642.

Tafarodi, R.W. & Swann, W.B. (1995). Self-liking and Self-competence as Dimensions of Global Self-esteem – Initial Validation of a Measure. *Journal of Personality Assessment*. 65, 322-342.

Veselska, Z., Madarasova Geckova, A., Gajdosova, B., Orosova, O., van Dijk, J.,P., & Reijneveld, S. A. (2009). Socioeconomic differences in the self-esteem of adolescents mediated by personality, mental health and social support. *European Journal of Public Health* (accepted)

Werneke, U., Goldberg, D.P., Yalcin, I. & Üstün, B.T. (2000). The stability of the factor structure of the General Health Questionnaire. *Psychological Medicine*, 30, 823–829.