Lenka Ďuricová
Slovakia
Estera Frgelcová
Slovakia

Development of Self-concept in Slovak Adolescents

Abstract

The aim of the cross-sectional study is to map the development of self-concept in adolescents in terms of the Piers-Harris domain approach as well as to capture gender specifics, if any, in the process of its formation. Research involved 290 adolescents, divided in three age categories. The Piers-Harris Children's and Adolescents´ Self-Concept Scale (Obereignerů et al., 2015) was used as the research tool. Results do not indicate statistically significant differences between groups of adolescents in their overall self-concept by age, except in certain self-concept dimensions. More specific results are provided by the gender analysis of age differences. Over time, change in physical self-concept (PHY) occurs in boys, and changes in behavioural self and anxiety (BEH, FRE) occur in girls. Results of the study can be taken into consideration by all school professionals in their work.

Key words: *adolescence, self-concept, development, gender differences*

Introduction

Results of studies have shown that self-concept is a multi-dimensional construct consisting of several interlinked yet different specific aspects (Zlatkovic, Stojiljkovic, Djigic & Todorovic, 2012). Piers and Herzberg (2002) state that individuals maintain relatively consistent beliefs about themselves that develop and stabilize during childhood. From a global perspective, the term self-concept refers to sub-

jective self-perception in relation to important aspects of life. Although shaped by biological and cultural factors, these perceptions are formed primarily through the interaction of the individual with the environment during childhood. Over time an individual's self-concept may change in response to environmental or developmental changes. However, these changes do not occur rapidly. Also, according to Franken (in Bharathi & Sreedevi, 2016), self-concept is formed by the individual through interaction with the environment. He considers this aspect of self-concept important because it indicates that it can be modified.

Self-concept stability is relatively low in childhood, it increases during adolescence and early adulthood. With age, self-perception becomes much more detailed and organized, because we form a better idea of who we are and what is important for us. During adolescence, several biological changes occur, such as sexual maturation; psychological and social changes such as formation of a basic identity, construction of a social identity take place; there is a shift in relationships from family to peers, and independence from adult control is increasing. Relationships become more intimate in comparison with the earlier period (Mahmud, 2005; Sarková, 2010). Changes in all areas of development transform a young person's vision of the self. During adolescence the main development of self-concept is in the way a person thinks about himself or herself, and about his or her properties. The adolescent is capable of thinking about abstract issues and applies more developed mental processes when encountering information. The fact that people show different behaviour and feeling in different situations results in differentiation of adolescents´ self-concept (Kameli & Ghooshchy, 2011). Adolescent self-concept becomes more differentiated and organized, more psychological, abstract, coherent and integrated. The adolescent becomes a sophisticated theorist of the self, capable of distinguishing and understanding the functioning of their own personality (Bharathi & Sreedevi, 2016). For the development of an identity and self-concept, physical appearance is important and this is precisely the area where many changes come about. Girls mature faster than boys and are more dissatisfied with their bodies and physical appearance than boys (Shaffer & Kipp, 2010). In the emotional area, adolescents experience emotional ups and downs, which is associated with hormonal changes. Especially in early adolescence, adolescents may appear moody, over-sensitive, impulsive and aggressive. Their emotional reactions are short-term, but intense and expressive. The high level of moodiness and emotional instability fades away in middle and late adolescence. In social development, there are changes in roles, and relationships with family and peers. Parents can help their children adjust to puberty by maintaining close relationships, being patient, supporting and helping adolescents to accept themselves and cope with

all physical and social changes (Shaffer & Kipp, 2010). Some longitudinal studies focusing on global self-concept show its decline during the transition from elementary to secondary school and then an increase during the following adolescent years (Marsh, 1989; Wigfield et al., 1991; Eccles et al., 1993; Cole, Maxwell et al., 2001 in Kuzucu, Bontempo, Hofer, Stallings & Piccinin, 2014). Results of an older domain-specific study by Crain and Bracken (1994) show that adolescents in the age group 10–11 years have a significantly higher total self-concept than 15–16 year old adolescents. In their recent study, Kuzucu et al. (2014) find differences between boys and girls in some aspects of multi-dimensional self-concept at the age of 12, but their measuring does not show any significant differences between groups by age. The discrepancy between the older and the more recent research findings has prompted our interest in the development of self-concept. Although gender roles have become less relevant over time (Chrisler & Murray, 2011), gender is still fundamental to the understanding of human behaviour. It signals a person's social status, reflects on the content of roles during the person's socialization, and therefore this variable will also be taken into account in our study.

Research Problem

Self-concept is a complex construct, so focusing on global self-concept is not sufficient (Van den Bergh & De Rycke, 2003; Young & Mroczek, 2003). Therefore, attention should be paid to multi-dimensional models of self-concept. The Piers-Harris model is one of them, already standardized in the Czech Republic (Obereignerů et al, 2015) but absent in the Slovak cultural environment. That is why we have decided to use this approach when studying the development of self-concept in Slovak adolescents.

Research Focus

In view of the above research results indicating certain changes in adolescent self-concept over time, as well as possible gender specifics, the following specific research objectives were set:

1) To capture the developmental trend in global self-concept and its individual dimensions during adolescence in general;

2) To capture the developmental trend in global self-concept and its individual dimensions during adolescence by gender.

Research Methodology

The research can be characterized as cross-sectional, descriptive and comparative research. Differences in global self-concept and its individual dimensions were investigated and compared in students of elementary and secondary schools and higher education institutions.

Research Sample

The research sample consisted of 290 pupils/students from Banská Bystrica, who were in the adolescent period of development, divided in three age groups: early, middle and late adolescence. The method of deliberate and convenience sampling was used.

Table 1. Research sample: composition by age and gender

Age	Gender	N	%
11–12	M	46	52.9
	F	41	47.1
	Total	87	100
15–16	M	53	43.1
	F	70	56.9
	Total	123	100
19–20	M	37	46.2
	F	43	53.8
	Total	80	100
Total	M	136	46.9
	F	154	53.1
	Total	290	100

N – Number of participants, % – Relative frequency, M – Males, F – Females

Instrument and Procedures

For our research purpose, the Piers-Harris Children's and Adolescents´ Self-Concept Scale 2 (Dotazník sebepojetí dětí a adolescentů Piers Harris 2, Obereignerů et al., 2015) was used. It is a standardized 60 item self-evaluation

inventory. In addition to the self-concept total score (TOT), it contains 6 dimensions evaluating its specific domains: adjustment (BEH, i.e. self-perception of behaviour), intellectual and school status, ability to cope with tasks (INT), physical appearance (PHY), freedom from anxiety, concern, fear and shame (FRE), popularity (POP), happiness and life satisfaction (HAP). The scale was translated into Slovak. Its reliability, in particular internal consistency of individual variables, was satisfactory (Cronbach´s alpha acquired values from 0.76 to 0.83).

Results of the Research

First, descriptive statistics of the variables studied are presented for the whole research sample and then for individual age groups.

Table 2. Descriptive statistics of the variables studied for the whole sample (N = 290)

	BEH	INT	PHY	FRE	POP	HAP	TOT
AM	10.99	10.23	7.41	9.06	8.69	8.00	41.89
MDN	12.00	11.00	8.00	10.00	9.00	9.00	43.00
SD	2.60	3.24	2.64	3.55	2.54	2.13	9.51
Skewness	-1.09	-.46	-.65	-.52	-.98	-1.01	-.68
Kurtosis	.73	-.39	-.38	-.73	.55	1.01	.04
Min.	1	1	0	0	1	0	10
Max.	14	16	11	14	12	10	59

BEH – behavioral adjustment, INT – intellectual and school status, PHY-physical appearance, FRE – freedom from anxiety, POP – popularity, HAP-happiness and satisfaction, TOT – total self-concept, AM – Mean, MDN – Median, SD – Standard deviation, Min. – Minimum, Max. – Maximum

Table 3. Descriptive statistics of the variables studied for age groups

	AM	SD	Min.	Max.
BEH I	10.90	2.87	1	14
II	10.58	2.65	4	14
III	11.74	2.02	4	14
Σ	10.99	2.60	1	14
INT I	10.02	3.39	2	16
II	9.94	3.19	2	16
III	10.91	3.09	1	16
Σ	10.23	3.24	1	16

	AM	SD	Min.	Max.
PHY I	6.92	2.70	0	11
II	7.48	2.74	1	11
III	7.84	2.39	2	11
Σ	7.41	2.64	0	11
FRE I	10.09	3.01	0	14
II	8.42	3.73	1	14
III	8.93	3.58	1	14
Σ	9.06	3.55	0	14
POP I	8.61	2.50	1	12
II	8.74	2.56	1	12
III	8.70	2.58	1	12
Σ	8.69	2.54	1	12
HAP I	8.09	2.11	0	10
II	7.76	2.28	1	10
III	8.28	1.27	3	10
Σ	8.00	2.13	0	10
TOT I	42.41	9.31	10	57
II	40.70	10.00	18	59
III	43.15	8.85	21	56
Σ	41.89	9.51	10	59

BEH – behavioral adjustment, INT – intellectual and school status, PHY – physical appearance, FRE – freedom from anxiety, POP-popularity, HAP-happiness and satisfaction, TOT-total self-concept, Group I – 11 to 12 years old (N = 87), Group II – 15 to 16 years old (N = 123), Group III – 19 to 20 years old (N = 80), Σ – total (N = 290), AM – Mean, SD – Standard deviation, Min. – Minimum, Max. – Maximum

Since the data fulfil the condition of normal distribution (Table 2), the parametric test ANOVA was used to compare the groups (Table 4). Results of the analysis indicate a statistically significant difference between the groups of adolescents for the variables adjustment (BEH) and freedom from anxiety (FRE) at the significance level $p \leq .01$.

Table 4. Differences between groups in overall self-concept
and its dimensions (N = 209)

	BEH	INT	PHY	FRE	POP	HAP	TOT
F	5.060	2.459	2.617	5.928	.068	1.566	1.809
Sig.	**.007**	.087	.075	**.003**	.934	.211	.166

F – Leven's test, Sig. – p value, BEH – adjustment, INT – intellectual and school status, PHY – physical appearance, FRE – freedom from anxiety, POP – popularity, HAP – happiness and satisfaction, TOT – overall self-concept

Table 5. Post hoc (Games-Howel) test results (significance of differences between means of individual groups of adolescents) in the variables identified

	Age groups	Age groups	Difference between means	Sig.	95% CI LL UL	
BEH	11–12	15–16	.319	.691	-.60	1.24
		19–20	-.841	.074	-1.74	.06
	15–16	11–12	-.319	.691	-1.24	.60
		19–20	**-1.160***	**.002**	-1.94	-.38
	19–20	11–12	.841	.074	-.06	1.74
		15–16	**1.160***	**.002**	.38	1.94
FRE	11–12	15–16	**1.669***	**.001**	.57	2.77
		19–20	1.167	.063	-.05	2.38
	15–16	11–12	**-1.669***	**.001**	-2.77	-.57
		19–20	-.502	.603	-1.74	.73
	19–20	11–12	-1.167	.063	-2.38	.05
		15–16	.502	.603	-.73	1.74

Sig. – p value, CI – confidence interval for the mean, LL – lower limit, UL – upper limit, BEH – adjustment, FRE – freedom from anxiety

There is a statistically significant difference between middle (1–16 year old) and late (19–20 year old) adolescents in the dimension adjustment (BEH) in favour of late adolescents (Table 3). There is a statistically significant difference between early (11–12 year old) and middle (15–16 year old) adolescents in the dimension freedom from anxiety (FRE) in favour of early adolescents (Table 3).

For the second objective, the analysis of development of self-concept is presented for males and females respectively.

Table 6. Descriptive statistics of the variables by age groups for males

	AM	SD	Min.	Max.
BEH I	10.72	3.16	1	14
II	9.92	2.65	4	14
III	11.11	2.18	4	14
Σ	10.51	2.75	1	14
INT I	10.04	3.08	3	15
II	10.17	2.99	4	16
III	10.89	3.15	1	15
Σ	10.32	3.06	1	16

	AM	SD	Min.	Max.
PHY I	7.30	2.56	0	11
II	8.11	2.64	1	11
III	8.70	2.28	2	11
Σ	8.00	2.56	0	11
FRE I	10.41	2.97	0	14
II	9.91	3.15	1	14
III	10.16	2.86	2	14
Σ	10.15	3.00	0	14
POP I	8.57	2.25	2	12
II	9.21	2.53	1	12
III	9.05	2.27	1	12
Σ	8.95	2.37	1	12
HAP I	8.02	2.10	0	10
II	8.04	2.35	1	10
III	8.54	1.64	3	10
Σ	8.17	2.09	0	10
TOT I	42.70	8.44	10	55
II	42.45	9.59	18	58
III	44.81	8.17	23	56
Σ	43.18	8.83	10	58

AM – Mean, SD – Standard deviation, Min. – Minimum, Max. – Maximum, BEH – adjustment, INT – intellectual and school status, PHY – physical appearance, FRE – freedom from anxiety, POP – popularity, HAP – happiness and satisfaction, TOT – overall self-concept, I – group 11 to 12 years old (N = 46), II – group 15 to 16 years old (N = 53), III – group 19 to 20 years old (N = 37), Σ – total (N = 136)

Results of the analysis (Table 7) indicate a statistically significant difference between groups of males in the variable physical appearance (PHY). The post hoc analysis (Table 8) specifies the result with respect to age sub-groups.

Table 7. ANOVA results for males

	BEH	INT	PHY	FRE	POP	HAP	TOT
F	2.250	.895	3.244	.350	.956	.802	.879
Sig.	.109	.411	**.042**	.705	.387	.451	.418

F – Leven's test, Sig. – p value, BEH – adjustment, INT – intellectual and school status, PHY – physical appearance, FRE – freedom from anxiety, POP – popularity, HAP – happiness and satisfaction, TOT – overall self-concept

Table 8. Post hoc (Games-Howel) test results (significance of differences between means of individual groups) in the dimension physical appearance (PHY) for boys

	Age groups	Age groups	Difference be-tween means	Sig.	95% CI LL UL	
PHY	11–12	15–16	-.809	.274	-2.05	.44
		19–20	**-1.398***	**.027**	-2.67	-.13
	15–16	11–12	.809	.274	-.44	2.05
		19–20	-.589	.499	-1.84	.66
	19–20	11–12	**1.398***	**.027**	.13	2.67
		15–16	.589	.499	-.66	1.84

Sig. – p value, CI – confidence interval for the mean, LL – lower limit, UL – upper limit, PHY – physical appearance

There is a statistically significant difference between early (11–12 year old) and late (19–20 year old) adolescents – males in the dimension physical appearance (PHY) in favour of late adolescents (Table 6).

Table 9. Descriptive statistics of the variables by age groups for females

	AM	SD	Min.	Max.
BEH I	11.10	2.52	4	14
II	11.07	2.55	4	14
III	12.28	1.72	5	14
Σ	11.42	2.39	4	14
INT I	10.00	3.75	2	16
II	9.77	3.35	2	16
III	10.93	3.07	4	16
Σ	10.16	3.40	2	16
PHY I	6.49	2.81	0	11
II	7.00	2.73	1	11
III	7.09	2.20	3	11
Σ	6.89	2.61	0	11
FRE I	9.73	3.05	1	14
II	7.30	3.76	1	14
III	7.86	3.82	1	14
Σ	8.10	3.72	1	14
POP I	8.66	2.78	1	12
II	8.39	2.54	2	12
III	8.40	2.80	2	12
Σ	8.46	2.67	1	12

	AM	SD	Min.	Max.
HAP I	8.17	2.14	2	10
II	7.54	2.19	3	10
III	8.05	2.04	3	10
Σ	7.85	2.15	2	10
TOT I	42.10	10.30	12	57
II	39.37	10.15	18	59
III	41.72	9.25	21	56
Σ	40.75	9.96	12	59

AM – Mean, SD – Standard deviation, Min. – Minimum, Max. – Maximum, BEH – adjustment, INT – intellectual and school status, PHY – physical appearance, FRE – freedom from anxiety, POP – popularity, HAP – happiness and satisfaction, TOT – overall self-concept, I – group 11 to 12 years old (N = 41), II – group 15 to 16 years old (N = 70), III – group 19 to 20 years old (N = 43), Σ – total (N = 154)

Results of the analysis (Table 10) indicate a statistically significant difference between groups of females in the dimension adjustment (BEH) and freedom from anxiety (FRE). The Games-Howell post hoc analysis (Table 11) specifies the result by age sub-groups.

Table 10. ANOVA results for girls

	BEH	INT	PHY	FRE	POP	HAP	TOT
F	4.063	1.621	.676	6.026	.152	1.352	1.253
Sig.	**.019**	.201	.510	**.003**	.859	.262	.289

F – Leven´s test, Sig. – p value, BEH – adjustment, INT – intellectual and school status, PHY – physical appearance, FRE – freedom from anxiety, POP – popularity, HAP – happiness and satisfaction, TOT – overall self-concept

Table 11. Post hoc (Games-Howel) test results (significance of differences between means of individual groups) in the dimensions adjustment (BEH) and freedom from anxiety (FRE) for girls

	Age groups	Age groups	Difference between means	Sig.	95% CI LL	UL
BEH	11–12	15–16	.026	.998	-1.16	1.21
		19–20	**-1.182***	**.039**	-2.31	-.05
	15–16	11–12	-.026	.998	-1.21	1.16
		19–20	**-1.208***	**.009**	-2.16	-.25
	19–20	11–12	**1.182***	**.039**	.05	2.31
		15–16	**1.208***	**.009**	.25	2.16

	Age groups	Age groups	Difference be-tween means	Sig.	95% CI LL UL	
FRE	11–12	15–16	2.432*	.001	.87	3.99
		19–20	1.871*	.039	.07	3.67
	15–16	11–12	-2.432*	.001	-3.99	-.87
		19–20	-.560	,727	-2.31	1.19
	19–20	11–12	-1.871*	.039	-3.67	-.07
		15–16	.560	.727	-1.19	2.31

Sig. – p value, CI – confidence interval for the mean, LL – lower limit, UL – upper limit, BEH – adjustment, FRE – freedom from anxiety

There is a statistically significant difference in the dimension adjustment (BEH) between early (11–12 year old) and late (19–20 year old) adolescent females, and between middle (15–16 year old) and late (19–20 year old) adolescent females, in both cases in favour of late adolescent females (Table 9).

A statistically significant difference appears in the dimension freedom from anxiety (FRE) between early (11–12 year old) and middle (15–16 year old) adolescent females, as well as between early (11–12 year old) and late (19–20 year old) adolescent females, in both cases in favour of early adolescent females (Table 9).

Discussion

The aim of the study was to map the self-concept of contemporary Slovak adolescents and its changes, if any, during adolescence. This aim was tested by adjusting the research sample, which was divided into three age categories. The Piers – Harris multi-dimensional model of self-concept, not yet established in our professional environment, was used as the basis. In comparison with older research studies (e. g. Crain & Bracken, 1994), which reported a decline in overall self-concept from early to middle adolescence, no statistically significant differences were recorded in overall self-concept between the individual groups in our research sample. Our results correspond more with more recent studies (Kuzucu et al., 2014) which reflect gender differences in certain domains of the self, rather than significant dynamics in overall self-concept over time. Our sample does show certain dynamics over time in two dimensions: adjustment (BEH) and freedom from anxiety (FRE). Adjustment (BEH) changes in such a way that it increases from middle adolescence to late adolescence. Freedom from anxiety (FRE) declines from early to middle adolescence.

The gender analysis of the development of overall self-concept and its dimensions provides more concrete results. It appears that the dynamics of the two variables is mainly accounted for by the female part of the population. Statistically significant differences in adjustment (BEH) are namely recorded between groups of adolescents in general, but also between groups of females. In both cases, the dimension is of a growing tendency during adolescence. This may be associated with the increased emotional instability and moodiness which gradually fades away in middle adolescence. At the beginning, adolescents rebel, run into conflicts with standards, challenge others, rules, regulations, and refuse to comply. With age, adolescent behaviour becomes more adult-like; adolescents are more accepted as adults and are expected to behave responsibly and take on more mature manners and conduct (Mahmud, 2005). Our results, too, indicate that from middle to late adolescence, adolescents already regulate their behaviour better and adjust it to the requirements of the social environment (conventions).

Statistically significant differences are also recorded in the dimension freedom from anxiety (FRE) between groups of adolescents in general, but also between groups of females. In both cases, the dimension freedom from anxiety (FRE) has a decreasing tendency during adolescence, i.e. there is a gradual increase of anxiety, which may be associated with young people experiencing several challenging changes and situations during adolescence. Their physical appearance changes, they must cope with pubertal changes and face the choice of further professional direction. Later, in middle adolescence, they cope with the transition from elementary school to secondary school where they are the youngest and least competent students. These and other changes associated with adolescence lead to a loss of old securities, which is a certain burden and may increase the anxiety experienced (Gray-Little & Hafdahl, 2000).

In males, in agreement with Orel et al. (2015), only the dimension physical appearance (PHY) changes over time, increasing from early to late adolescence. Physical self-concept gains importance with age. Initial noticeable physical changes are usually perceived intensely, in particular when physical maturation lags behind, which may invoke negative self-perception in this area. An immature, weak and short boy has a lower social status and may feel inferior. In late adolescence, satisfaction with one's own body mostly increases.

Conclusions

Despite the fact that we did not confirm the dynamics of overall self-concept, but only of some of its dimensions during adolescence, we consider our research

findings to be beneficial. They may provide an incentive for further research on the development of self-concept and its context (school achievement, social integration, parenting style…) or on gender differences in this development, as the case may be. Another challenge could be to attempt more representative sampling, which we consider, due to the local character of our sampling, to be the major limit of our study. The results on gender specifics may be useful for teachers, educational consultants, school psychologists and help them to concentrate on self-concept dimensions which are sensitive and vulnerable during adolescence. Although the gender differences in self-concept formation should be verified by further research, our study indicates some gender specifics, thus there arises the need for an individual and gender-differentiated approach oriented on facilitation of positive self-concept in adolescents. Its importance for the social and emotional health of adolescents was also confirmed by Pašková (2017). The school's responsibility is not only the development of knowledge and skills, but also the development of versatile pupil personality with which the subject of self-concept is associated.

References

Bharathi, T.A. & Sreedevi, P. (2016). A Study on the Self-Concept of Adolescents. *International Journal of Science and Research, 5* (10), 512–516.

Crain, R.M. & Bracken, B.A. (1994). Age, race, and gender differences in child and adolescent self-concept: Evidence from a behavioral-acquisition, context-dependent model. *School Psychology Review, 23* (3), 496–511.

Gray-Little, B. & Hafdahl, A.R. (2000). Factors influencing racial comparisons of self-esteem: A Quantitative Review. *Psychological Bulletin, 126* (1), 26–54.

Chrisler, J. & Murray, A. (2011). Sex and Gender. *Oxford Bibliographies.* Retrieved 20/02/2019, from http://www.oxfordbibliographies.com/view/document/obo-9780199828340/obo-9780199828340–054.xml.

Kameli, S. & Ghooshchy, S.G. (2011). Studying the self-discrepancy of students in different species of family in process model and family content. *Procedia – Social and Behavioral Sciences 30*, 1113–1117.

Kuzucu, Y., Bontempo, D.E., Hofer, S.M., Stallings, M.C. & Piccinin, A.M. (2014). Developmental Change and Time-Specific Variation in Global and Specific Aspects of Self-Concept in Adolescence and Association with Depressive Symptoms. *The Journal of Early Adolescence, 34* (5), 638–666.

Mahmud, J. (2005). *Development psychology.* New Delhi: A.P.H. Publishing Corporation.

Orel, M., Obereignerů, R., Reiterová, E., Malůš, M. & Fac, O. (2015). Rozdíly v celkovém sebepojetí u dětí a adolescentů České republiky podle věku a pohlaví. (Differences in self-concept in children and adolescents in the Czech Republik based on their age and sex). *Psychologie a její kontexty 6 (2)*, 65–77.

Obereignerů, R., Orel, M, Reiterová, E., Mentel, A., Malčík, M., Petrůjová, T., Fac, O. & Friedlová, M. (2015). *Dotazník sebepojetí dětí a adolescentů Piers-Harris 2.* (*The Piers-Harris Children's and Adolescents´ Self-Concept Scale* 2). Praha: Hogrefe-Testcentrum.

Piers, E. & Herzberg, D. (2002). *Piers-Harris Children's Self-Concept Scale.* Los Angeles: WPS.

Pašková, L. (2017). Socio-Emotional Health of Secondary School Students. *The New Educational Review*, *48* (2), 117–131.

Sarkova, M. (2010). *Psychological well-being and self-esteem in Slovak adolescents.* Bratislava: Slovak Academy of Science. Retrieved 20/10/2019, from: https://www.rug.nl/research/portal/en/publications/psychological-wellbeing-and-selfesteem-in-slovak-adolescents(adb22ee9-69ca-4663-8740-9548bb13073b).html.

Shaffer, D.R. & Kipp, K. (2010). *Developmental psychology: Childhood and adolescence.* Wadsworth: Cengage Learning.

Van Den Bergh, B.R.H. & De Rycke, L. (2003). Measuring the Multidimensional Self-concept and Global Self-Worth of 6- to 8- Year-Olds. *The Journal of Genetic Psychology, 164* (2), 201–25.

Young, J. & Mroczek, D. (2003). Predicting intra-individual self-concept trajectories during adolescence. *Journal of Adolescence*, *26* (5), 586–600.

Zlatkovic, B., Stojiljkovic, S., Djigic, G. & Todorovic, J. (2012). Self-concept and teachers professional roles. *Procedia – Social and Behavioral Sciences, 69,* 377–384.