

Impact Factor: 3.4546 (UIF) DRJI Value: 5.9 (B+)

# Self-concept, Ethical value and Mental health: An Exploratory Study on Adolescents

## NAMITA MOHANTY

Professor, Department of Psychology Utkal University, Bhubaneswar, Odisha, India Email: drnamitamohanty@yahoo.co.in

## SASWATI JENA

Research scholar, Department of Psychology Utkal University, Bhubaneswar, Odisha, India Email: jsaswati@gmail.com

#### PRABHUDARSAN SAHOO

Research scholar, Department of Psychology Utkal University, Bhubaneswar, Odisha, India Email: prabhudarsansahoo@yahoo.com

#### **Abstract:**

The present study focused on the role of age and gender on Self-concept, Ethical values and Mental health of adolescents. It also examined the nature of linkages among these variables. For the exploration of the objectives, a 2 (Age) x 2 (Gender) factorial design was adopted. The sample of the study consisted of 400 adolescent high school students studying in class IX and X and higher secondary students of class XI and XII. There were 200 male and 200 female students. Out of them, there were 100 males and 100 females each in early (14-15 years) and late adolescents (16-17 years). Results revealed that early adolescents had better Self-concept as well as Mental health than the late adolescents. On the other hand, female adolescents had higher Self-concept and Ethical values in comparison to their male counterparts. There were significant inter-correlations among Self-concept, Ethical values and Mental health. The findings of the present study have far reaching implications like high ethical values among

the female adolescents needs to be highlighted in policy making for the recruitment in important jobs as well as introducing counselling as an intervention programme to develop and strengthen Self-concept, Ethical values and Mental health among the adolescents, thereby enhancing the future human capital.

**Key words**: adolescence, self-concept, ethical values, mental health

Adolescence is a transitional phase in life-span development that raises the eyebrows and curiosity among most of us. It is the period of gradual change from childhood to adulthood which normally begins with the onset of puberty. The important developmental tasks that need to be accomplished during adolescence are developing an identity and becoming independent. Experiences relating to this phase vary depending upon the variation in cultural dimensions of different societies. Irrespective of all these variations, significant changes are marked in biological, cognitive and socio-emotional domains (Santrock, 2007). Adolescents constitute 1.2 billionofworld's population and such a huge number just cannot be ignored as they are the potential and promising human resources of the future. The primary focus during this stage is exploratory selfanalysis, self-evaluation and to develop an integrative and cohesive sense of self. In order to groom this part of human resource, optimum emphasis needs to be given on their appropriate and wholesome growth and development as well.

Self-concept begins to develop in this period, gets crystallized and shapes personality in later stages of development. Self-concept is defined as the sum total of how an individual views himself or herself (Tolor&Blumin, 1977; Felker, 1974). Developmental theorists like Festinger (1957) and Lecky (1951) have suggested that Self-concept is an important component of personality which maintains belief consistency and reduces cognitive dissonance. Thus, Self-concept has been posited as the major mechanism in

(Felker, 1974), maintaining psychological equilibrium determines how experiences are to be interpreted and expectancies to be set. In other words, Self-concept is one's perception or image of one's abilities and uniqueness. Initially one's self-concept is very general and changeable, but as one grows older, these self-perceptions become much more organized, detailed, and specific (Pastorino& Doyle-Portillo, 2013). Baumeister (1999) has conceptualized Self-concept as "the individual's belief about himself or herself, including the person's attributes and who and what the self is". It reflects that self-concept is a domain specific evaluation of self. Among many theorists, Bracken (1992) suggested that there are six specific domains related to self-concept like, social (the ability to interact with others), competence (ability to meet basic needs), affect (awareness of emotional states), physical (feelings physical condition, looks. health, and appearance), Academic (success or failure in school) and family (how well one functions within the family unit).

development Moral runs parallel to cognitive development. During adolescence, boys and girls question about morality and ethics. They argue for a selfless and ethical society where people can have their independence, freedom and can live in peace and harmony. They vehemently oppose corruption, discrimination and social injustice that are being processed which act against the disciplined, rule abiding, honest and ethical citizens of the country. Ethical value is an important aspect of Self-concept. It is the combination of two terms, ethics and values and these two terms also play a major role in one's life. Ethics is the guidelines or set of rules meant for an organization, institution or society. Values are the beliefs of an individual regarding the right and wrong practices. Thus, Ethics is more societal whereas value is more individual. As science and technology are important and inevitable in improving our materialistic life; likewise ethics, morals and values are also indispensable for one's healthy personal life and

attaining sound mental health. In the first decade of 21st century, many theorists became worried about the declining ethical values and morality among people across the age group (Borba, 2001). She viewed that this is not only the case for the American society, but many countries in the world are experiencing that youths are becoming violent, lacking in responsibility and respect for others as well as self-control. She emphasizes on two major reasons for this moral and ethical degradation among the youths. First, a number of critical social factors that nurture moral character are slowly disintegrating. such as adult supervision, models of moral behavior to imitate. meaningful adult relationships, personalized schools. community support, stability and adequate parenting. Second, children and adolescents are being steadily bombarded with outside messages that go against the values of their parents. The amount of negative messages in cyberspace, for example, is staggering. The main problem is that these and all other toxic influences are so entrenched in the culture that shielding the young generation from them is almost impossible. In other words this is labeled as "soul toxic syndrome".

The most vital aspect for appropriate development is to promote their mental health. Health is a broader concept including physical, social and mental health whereas mental health has been reported as an important parameter influencing individual's various activities, and happiness. The Surgeon General's Report on Mental Health (1999) defined mental health as "successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to change and to cope with adversity." On the contrary, mental illness refers to diagnosable mental disorders that are characterized by alterations in thinking, mood, or behavior associated with distress and/or impaired functioning." A report by the World Health Organization (WHO,2004) includes a similar distinction between mental health and mental illness.

Against this backdrop, the present research makes an attempt to study how age and gender influence the Self-concept, Ethical values and Mental health of adolescents. Moreover, the study has potential strength as adolescence is the critical phase where many changes begin and these changes have a strong impact on their personality. Psychologists and therapists are using intervention strategies to bring in positive changes in the attitudes, thoughts and beliefs of individuals, thereby enhancing their mental health for a stress free life and a hassle free living. This is very much applicable to our young adolescents of the present time who are exposed to continuous academic pressure, relationship turbulence and ethical crises.

# **Objectives**

The present study aimed to explore the following objectives,

- 1. To find out the role of age on Self-concept, Ethical values and Mental health of adolescents.
- 2. To examine the effect of gender on adolescents' Self-concept, Ethical values and Mental health.
- 3. To assess the interaction effect of age and gender on Selfconcept, Ethical values and Mental health of adolescents.
- 4. To identify the linkages among self-concept, ethical value and mental health.

# Design

The study was based on a 2 (Age) x 2 (Gender) factorial design. The independent variables were the Age (Early Adolescents and Late Adolescents) and Gender (Boys and Girls) of the high school and higher secondary students. The dependent measures were students' Self-concept, Ethical values and Mental health.

# Sample

The sample for the present study consisted of 400 adolescents. There were 200 subjects in the early adolescent group (14 years to 15 years) and 200 in the late adolescent group (16 years to 17 years). In each age group there were 100 boys and 100 girls. Early adolescents were taken from class IX and X and late adolescents were from class XI and XII. The sample was selected by purposive randomized sampling technique and they were taken from an urban English medium school located in Bhubaneswar, Odisha.

## **Tools**

Three measuring instruments were used in the present study and these were described below.

# 1. Self-concept Questionnaire(Sarswat, 1992)

The questionnaire had 48 items based on six dimensions. These dimensions were: Physical, Social, Temperamental, Educational, Moral and Intellectual. There are eight items under each dimension. Subjects had to respond to the items on a five point scale from most acceptable to least acceptable. The reliability of the scale was .91 and the validity of the scale was .82.

# 2. Ethical values Scale (Lussier, 1993)

This scale consisted of 15 statements. Subjects had to respond to the items on a four point scale. The subject was asked to judge the frequency of his behavior corresponding to each statement and mark R (regularly), O (occasionally), S (seldom) N (never) against each statement as per the instructions provided to him. Each R response got 1 point, O response got 2 points, S response received 3 points and N response 4 points. The points secured by the subject were added to obtain the total score. The range for the subject's score was 15 to 60. The higher

the score, higher was the ethical value. The reliability of the scale was .85 and the validity of the scale was .74.

3. **Mental Health Inventory**(Jagdish and Srivastava, 1996)

The inventory consisted of 54 items based on 6 dimensions to measure Mental health namely, Positive self-evaluation, Perception of reality, Integration of personality, Autonomy, Group oriented attitudes and Environmental competence. Items were to be rated on 4 point scale. The response and the scoring of true keyed (positive) statements were like the following, Always (4), Often (3), Rarely (2), Never (1) and) for false keyed (Negative) statements, it was like Always (1), Often (2), Rarely (3) and Never (4). The reliability of the inventory was .73 and the validity of the inventory was .57.

#### **Procedure**

Through prior appointment permission from the school Principal was taken to conduct psychological tests on 400 students of the school. The very purpose of the research was explained to the students and they were assured of the confidentiality of data. Tests were administered in groups inside the class rooms during free periods. These tests were administered over two days. On the first day, tests on Self-concept and Ethical values were administered and on the next day Mental health test was administered. For each subject, the filled in questionnaires were compiled for the convenience of scoring and subsequent analysis.

#### Result

Data have been analyzed using Analysis of variance, Mean and Standard Deviation to arrive at the significance level and to draw definite conclusions on group difference and interaction effects. Results are given below.

Table – 1 ANOVA on Self-concept scores of Adolescent students

	-			
Source	Sum of squares	df	Mean Squares	F
Age	5707.80	1	5707.80	26.41*
Gender	2616.32	1	2616.32	12.11*
Age x Gender	627.50	1	627.50	2.90
Error	85553.97	396	216.04	

<sup>\*</sup>p<.001

Results in Table-1 show that Age has a significant main effect on Self-concept of students, F(1,396) = 26.41, p<.001. The main effect of Gender on Self-concept of adolescent students is also found to be significant F(1,396) = 12.11, p<0.001. But there is no significant interaction effect of Age x Gender on Self-concept of Adolescents F(1,396) = 2.90, p>.05.

Table - 2 Mean and SD of Self-concept scoresof Adolescent students

Age	Male		Female		Combined	
	Mean	SD	Mean	SD	Mean	SD
Early Adolescents	171.77	13.93	174.38	15.87	173.07	14.95
Lateadolescents	161.71	13.63	169.33	15.22	165.52	14.91
Combined	166.74	14.64	171.85	15.72	169.29	15.39

In Table -2 comparison of mean scores of Self- concept of Students indicate that early adolescent students have higher Self-concept(M=173.07) than late adolescent students (M=165.52). Likewise, female adolescent students (M=171.85) havebetter higher Self-concept than their male counterparts (M=166.74).

Figure-1 showing mean Self-concept scores of Early and Late adolescence

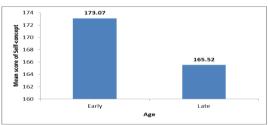


Figure-2 showing mean Self-concept scores of Male and Female adolescents

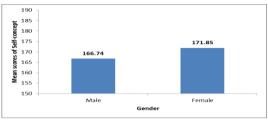


Table - 3
ANOVA on Ethical valuesscores of Adolescent students

Source	Sum of squares	df	Mean Squares	F
Age	78.32	1	78.32	1.81
Gender	1221.50	1	1221.50	28.26*
Age x Gender	6.00	1	6.00	.13
Error	17113.11	396	43.21	

<sup>\*</sup>p<.001

In Table -3results indicate thatthe main effect of Age F(1,396) = 1.81, p> .05 on Ethical values of adolescent students is not significant, but Gender has a significant main effect on Ethical values of students, F(1,396) = 28.26, p<.001. On the other hand, there is no significant interaction effect of Age x Gender on Ethical values of AdolescentsF(1,396) = 0.13, p> .05.

Table - 4
Mean and SD of Ethical value scores of Adolescent students

Age	Male		Female		Combined	
	Mean	SD	Mean	SD	Mean	SD
Early	46.56	8.74	50.30	5.36	48.43	7.47
Late	45.92	5.05	49.17	6.48	47.54	6.02
Combined	46.24	7.13	49.73	5.96	47.98	6.79

Comparison of mean scores in Result Table – 4 reveals that score on Ethical values of students in early adolescents (M=48.43) is at par with late adolescent students (M=47.54). Whereas female adolescent students show higher Ethical values (M=49.73) than their male counterparts (M=46.24).

Figure-3 showing mean Ethical value scores of Male and Female adolescents

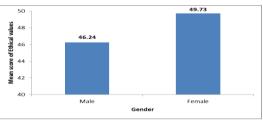


Table-5
ANOVA on Mental health scores of Adolescent students

Source	Sum of squares	df	Mean Squares	F
Age	7832.25	1	7832.25	34.95*
Gender	533.61	1	533.61	2.38
Age x Gender	75.69	1	75.69	.33
Error	88724.36	396	224.05	

<sup>\*</sup>p<.001

Result Table–5 shows that there is a significant main effect of Age on Mental health of adolescent students, F (1,396) = 34.95, p<.001. But there is no significant main effect of Gender, F(1,396) = 2.38, p>.05. Moreover, there is no significant interaction effect of Age x Gender on Mental health of the subjects F (1,396) = .33, p>.05,

Table-6
Mean and SD of Mental health scores of Adolescent students

Age	Male		Female		Combined	
	Mean	SD	Mean	SD	Mean	SD
Early	152.94	11.86	154.38	15.97	153.66	14.05
Late	143.22	15.96	146.40	15.65	144.81	15.85
Combined	148.08	14.85	150.39	16.27	149.23	15.60

In Table – 6 comparison of mean scores on Mental health of students reveals that early adolescent students (M=153.66) have better Mental health than their counterparts in late adolescents (M=144.81). On the other hand, as there is no significant Gender difference, the Mental health scores of

females (M=150.39) and their Male counterparts (M=148.08) are comparable.

Figure-4 showing Mean Mental health scores of Early and Late adolescence

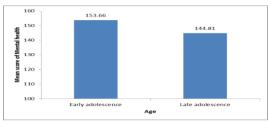


Table-7
Inter-correlation among Self-concept, Ethical values and Mental health

	Self-Concept	Ethical Values	Mental Health
Self- concept	1	.273*	.532*
Ethical Values		1	.270*
Mental Health			1

df = 398, \*p < .001

In Table-7 inter-correlation (r) values indicate that Self-concept has a significant positive relationship with Ethical values (r=.273, df = 398, p<.001) and Mental health (r = .532, df = 398, p<.001). In addition to this, a significant positive relationship is found between Ethical values and Mental health of the adolescents (r = .270, df = 398, p<.001).

### Discussion and Conclusion

The present study primarily focused to determine the role of age and gender of adolescents on their Self-concept, Ethical values and Mental health. As all these variables are extremely crucial for having a healthy life during adolescence and also for leading a healthy personal and social life in later phases of life. Therefore, these aspects need to be handled with optimum care and the sensitivity.

Results of the present have revealed that age plays a significant role on the Self-concept and Mental health of adolescents whereas gender influences their Self-concept as well as Ethical values. Early adolescents in the age group of 14-15 years have higher Self-concept and better Mental health than their counterparts in late adolescents in the age group of 16-17 years. On the other hand, females possess higher Self-concept and higher Ethical values than the male adolescents. In all societies, adolescence is about growing up, moving from the immaturity of childhood into the maturity of adulthood and of preparation for the future (Steinberg, 2008). Compared to different life-stages, except childhood, adolescence is the one, mostly marked by rapid and potentially tumultuous transition (Williams, Holmbeck, & Greenly, 2002). Many changes take place and the formations of many more new aspects begin at this stage. Adolescents experience numerous developmental challenges at varying pace, including increasing need for independence, evolving sexuality, transitioning through advanced education. consolidating cognitive abilities. negotiating changing relationships with family, peers and broader social connections and developing personal identity and healthy ethics (Cameronand Karabanow, 2003). Based on the ongoing researches on self-concept, self-esteem, identity formation, it can be said that the phase of adolescence is the most important one for the development of self. As this period is marked by increased involvement in risk behavior which eventually promotes poor adult behavior, careful supervision is required for safeguarding life and promoting well-being of the adolescents.

The awareness of self comes through the gradual process of adaptation to the environment (Piaget, 1969). Self-concept is about the self-knowledge and the belief about oneself regarding personality traits, physical characteristics, activities, values, goals, roles across different domains. It is defined as the value that an individual places on his or her own characteristics,

qualities, abilities and actions (Woolfolk 2001). In other words, it is the totality of a complex, organized and dynamic system of learned beliefs, attitudes and opinion that each person holds to be true about his or her personal existence (Purkey, 1988).

Individuals with high self-concept tend to have confidence in their own abilities to make decision, expectations successful outcomes and relationships characterized by respect and dignity (Tuttle and Tuttle, 2004). Physical changes, skill developments, skill evaluations and multiple role expectations are the main sources for the development of self-concept. Thus, age is considered to be a very important factor in Self-concept. There is also evidence to suggest that self-concept of children and adolescents is negatively correlated with chronological age and years of schooling in the research study of Wicker (1977) which supports the present research. Similarly another research study conducted by Parker (2010) revealed that early adolescents have a positive self-concept and there is a subsequent decline in self-concept as the adolescents move to higher classes or their transition to late adolescence, which also corroborates the present study. Thus, the finding has promising implications. Early years of adolescents have to be cashed on for yielding future benefits. Besides parental care and nurturance, supervision and monitoring on their thoughts and behavior patterns are essential. More so, teachers in schools need to help them in developing healthy self-concept, and continuously monitoring them.

Results of the present study also indicate that females have higher Self-concept than the males. The differences in thought process, emotional maturity and behavioral manifestation are quite obvious because of the differences in Gender. Therefore, Self-concept is no exception to this. The discrimination in treatment of adolescent boys and girls prevail in society. Boys are treated well and given more attention and importance than the girls in almost all societies. Self-concept is

the outcome of person's views and beliefs about himself/herself and the socialization process. In one research study conducted by Pauriyal, Sharma &Gulati (2010), it has been reported that in total Self-concept and Gender differences were not significant because in domains like physical and intellectual Self-concept males scored higher than females whereas in domains like social and moral Self-concept females were better than males. This study deals with Self-concept as a whole and not with its different aspects. Thus, young female adolescents need to be encouraged and supported psychologically and socially for their upliftment and empowerment,

Regarding Ethical values, it has been observed that females are more ethical than the males. To put in perspective, ethics, values and morals are indispensable parts of our daily life. These traits are inculcated and nurtured very early in life by parents and other significant members of the family with the hope of creating an impartial, justified and non-biased society in future for the benefit of mankind. Though these three concepts are used with some ambiguity in their meanings but they should be clearly explained while teaching them to the members of new generation. Values are the personal fundamental beliefs regarding right or wrong, morals are the system of personal beliefs and ethics are all about our action to be right or wrong and to be more societal in nature (Navran, 2010). An individual's whole life is shaped by the ethic, morals and values he/she owns. It is generally assumed that gender plays a significant role in the manifestation of Ethical values among adolescents and female adolescents possess better ethical values than their male counterparts. However, in a research work Bhatia et al., (2007) viewed that there is no significant difference between male and female adolescents rather both of them have similar ethical beliefs and use almost similar processes for evaluation of ethical situations which does not support the findings of current study.

However, appropriately nurtured ethical values prevent the degradation and deterioration of these values in our day-to-day life. Too much of restrictions, curbing of freedom, high academic academic pressure, criticisms, influence aspirations. television especially easy access to adult sites in internet often push these adolescents in late teens for immediate gratification of needs without any impulse control or thoughts about the consequences of their behavior. Through individual and group counseling sessions; discussion between parents and teachers and awareness generation in schools on pro-social behavior, a positive mindset can be created among the adolescents to view them in a positive way and develop respect towards ethical values. The findings of the present study have far reaching implications in the context of gender role development. As females have better Self-concept and higher Ethical values, this should be taken cognizance of in the policy formulation for recruitment in different jobs of the youth. It is to be recognized. appreciated and implemented in the selection process of different jobs. Such a step is likely to enhance success rate of women in job performance compared to their male counterparts.

It has also been noticed in the study that age is a factor which affects Mental health as early adolescents have better Mental health compared to the late adolescents though there is no difference between males and females. Correlational analysis have further shown that Self-concept and Ethical values together promote Mental health among the adolescents which help them in making better adjustments in later life. Thus, early adolescence is an extremely crucial period for promoting Mental health. As it is a known fact that many problems relating to Mental health begin during adolescence and if remain unnoticed and uncared for, it will lead to all kinds of physical and psychological problems in adulthood. Rathi & Rastogi (2007) viewed that there is no significant difference in well-being between pre-adolescent and adolescent students but

the present finding carries weightage as there is a significant difference between early and late adolescence.

There is an immediate need to focus on promoting the Self-concept of adolescents by nourishing it both at home and school by parents and teachers respectively. Training them to love themselves, accept themselves and respect themselves without unhealthy comparisons with others will definitely promote self-confidence and self-assertiveness in them. Mental health of adolescents can be enhanced by introducing ethical value classes in schools. These values will not only help them to become productive and useful citizens of a society but also to protest and fight against unethical, unjust and corrupt social practices. Thus, in the process India with its large youth population will be able to serve the society in a much more effective way in the days to come.

#### REFERENCES

- Baumeister, R. F. (1999). The self in social psychology. Philadelphia, PA: Psychology Press (Taylor & Francis).
- Bhatia, M. S., Bhasin, S. K., Upreti, R., Pandit, M. & Singh, N.P. (2007), A Study of Personal Values in Adolescents, Delhi Psychiatry Journal Vol. 10, No. 1
- Borba, M. (2001). Building Moral Intelligence. San Francisco: Jossey-Bass.
- Bracken, B. A. (1992). Examiner's Manual for the Multidimensional Self-esteem Scale. Austin, TX: Pro-Ed.
- Cameron, G. & Karabanow, J. (2003). The nature and effectiveness of programme models for adolescents at risk of entering the formal child protection system. *Child Welfare*, 82 (4), 443-474.
- Felker, D. W.(1974). Building positive self-concepts.

  Minneapolis, Minn.: Burgess Publishing Corp.

- Festinger, L. (1957). A theory of cognitive dissonance. Stanford, Calif.: Stanford University Press.
- Lecky, P. (1951). Self-consistency. New York: Joland Press.
- Navaran, F. J. (2010). Defining Values, Morals and Ethics. Navran Associates, 73 Zephyr Lily Trail, Palm Coast, FL 32164, (386) 503-5926
- Parker, A. K, (2010), A Longitudinal Investigation of Young Adolescents' Self-concepts in Middle Grades, Research on Middle Level Education (RMLE Online), Vol:10, No:10
- Pastorino, E. E. & Doyle-Portillo, S. M. (2013). What Is Psychology? Essentials. *Belmont, CA: Wadsworth*
- Pauriyal, K., Sharma, S. & Gulati, J. (2010). Developmental Trends in Self-concept of Urban Adolescents: Gender Differentials, *J Psychology*, 1 (2): 113-118
- Piaget, J. (1969). *The Psychology of the Child*. London: Routledge and Kegan Paul.
- Purkey, B. (1988). The role of self in cognition and emotion. In T Dalgleish, MK Power (Eds.): *Handbook of Cognition and Emotion*. United Kingdom: Chichester, pp. 125-142.
- Rathi, N. & Rastogi, R. (2007). Meaning in Life and Psychological Well-Being in Pre-Adolescents and Adolescents, *Journal of the Indian Academy of Applied Psychology*, January, *Vol. 33*, No.1, 31-38.
- Santrock, J.W. (2007). *Adolescence*, Tata McGraw-Hill Edition, 11<sup>th</sup> edition.
- Shaffer, D., & Craft, L. (1999).Methods of adolescent suicide prevention. *Journal of Clinical Psychiatry*, 60 (Suppl. 2), 70–74. (Cited in Mental Health: A Report of the Surgeon General, 1999).
- Steinberg, L.D. (2008). *Adolescence* (8<sup>th</sup>ed.). Boston: McGraw-Hill Higher Education.
- Tolor, A., Tolor, B. & Blumin, S. (1977) Self-concept and locus of control in primary grade children identified as requiring

- special education programming. *Psychological Reports*. 40, 43-49.
- Tuttle, D. & Tuttle, N.(2004). Self-concept and Adjusting with Blindness.3rd Edition. Springfield: IL. Charis C Thomas.
- Wicker, L.C. (1977). Racial awareness and racial identification among American Indian children as influenced by native American power ideology and self-concept. Unpublished doctoral dissertation, University of North Carolina.
- Williams, P. G., Holmbeck, G. N., &Greenley, R. N. (2002). Adolescent health psychology, Journal of Consulting and Clinical Psychology, 70 Needham Herght, MA: Allyn and Bacon.
- World Health Organization (2004), Young people's health in context. Health behavior in school-aged children (HBSC) study: international report from 2001/2002 survey. Copenhagen: WHO.
- World Health Organization (2004). Promoting Mental Health: Concepts, Emerging Evidence, Practice (Summary Report). Geneva, Switzerland: Department of Mental Health and Substance Abuse.
- www.josephsoninstitute.org/Survey2004/2004reportcard\_pressr elease.htm (accessed on 112.09.2015).