

## EGO DEVELOPMENT AND THE ANXIETY OF GIFTED ADOLESCENTS \*

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**Abstract.** *This paper provides the results of a research project aimed primarily at discovering the differences in the stages of ego development (Washington University Sentence Completion Test of Ego Development - WUSCT) and the level of anxiety (State-Trait Anxiety Inventory- Form Y, STAI – Form Y) among artistically and musically gifted adolescents and their high-school peers (120 subjects, aged 17 to 19). The stages of ego development are determined according to the theoretical and methodological postulates of Jane Loevinger (1976) which assume that it is possible to understand interpersonal behavior, interests, values and self control with the help of specific cognitive strategies, specific personal needs and the anxiety levels. The anxiety level is being defined according to the theoretical and methodological postulates of Spielberger et al. (1983). They look into and evaluate the exposure of two anxiety dimensions: state anxiety (STAI-S) and trait anxiety (STAI-T).*

*The results we have obtained show that there is no significant difference in the stages of ego development between gifted adolescents and high school students. We have found no difference between these two groups in the level of trait and state anxiety either (both in the whole sample and in the sub-samples with regard to gender). Only the group of male high school students produced a negative correlation between the stages of ego development and the levels of trait and state anxiety.*

**Key words:** *ego development, anxiety, artistically and musically gifted adolescents.*

The fundamental characteristics of the ego are as follows: it is *a process, a structure, and a social entity* in its essence; it functions as a whole and is led by purpose and meaning. Generally speaking, empirical researches cannot always tell the indicators of the ego development from those of the intellectual development, psychosexual development or even adaptation. In theory, the nature and the triggers of ego development have not been

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clearly defined yet. As opposed to standard psychoanalytic assumptions stating the importance of the nature of motives, sexual development and the essence of conflicts, Hartman (as per Kondić, 1987), as a representative of the ego psychology orientation, indicates the relative independence and autonomy of the ego, its biological roots in inherited processes that are analogous with physiological ones. Thus, in our overview of the concept of the ego development we will limit ourselves only to the assumptions of the author Jane Loevinger whose *Washington University Sentence Completion Test of Ego Development* – WUSCT has been used in numerous researches of the same kind. Its research importance lies in the fact that WUSCT enables the transformation of qualitative data (incomplete sentences) into quantitative data (ego level evaluation).

Ever since 1970 the theory of ego development by Jane Loevinger has represented a very important approach in the studies of the personality development (Loevinger, 1976). This theory, in a way, represents a bridge between cognitive and psychodynamic concept of the development. Although there is no ambiguity in the influence of psychoanalytical theory and the cognitive-developmental approach that is primarily based on Piaget and his followers' theory and on early Kohlberg's postulates about moral development, the postulates of Jane Loevinger's theory cannot be cut down to these theoretical frames (Westenberg et al., 1998). It is important to mention Sullivan's theory of the ego stability and the concept of *anxiety taming* (according to Hy & Loevinger, 1996). The main role of the ego coherence, Sullivan calls it *self-system*, is avoiding or minimizing anxiety. A person with a tendency of recognizing only what is in compliance with his or her existing self-system and the adopted referent frame is not going to observe anything different from the existing system by using the property of selective carelessness. This point is, in fact, the theoretical basis that Jane Loevinger began with. She sees the ego development as a mid-dimension of personality. Loevinger points to the fact that it is possible to understand interpersonal behavior, interests, values and self-control by applying specific cognitive strategies found in interaction with other people, thus based on certain needs of that particular person and anxiety existing. The attained personality development is also seen through specific ways in which a person integrates the concepts and the ideas of himself, friendship, justice, religion, emotional reaction (Loevinger, 1987).

Starting with childhood, all the way through the adolescence period and up to mature age, there is an increase in orientation towards the self and the interpersonal relation. What can be said is that the continuum of the development is present, a kind of continuum in which every next stage is defined with a more differentiated self-perception, the perception of the outer world and the perception of social relations. Loevinger's theoretical approach is focused on the character development, the capacity for impulse control, conceptual insight into the self and the others. Discussing the issue of whether ego development should be seen as a gradual evolution process or as a series of discreet stages with particular steps forward from one to the next stage, Loevinger (Hy & Loevinger, 1996) states nine stages of ego development. Basic characteristics of ego development are presented in Table 1.

Table 1. Loevinger's Stages of Ego Development

Presocial and Symbiotic (E1)	Exclusive focus on gratification of immediate needs; strong attachment to mother, and differentiating her from the rest of the environment, but not her/himself from mother; preverbal, hence inaccessible to assessment via the sentence completion method.
Impulsive (E2)	Demanding; impulsive; conceptually confused; concerned with bodily feelings, especially sexual and aggressive; no sense of psychological causation; dependent; good and bad seen in terms of how it affects the self; dichotomous good/bad, nice/mean.
Self-Protective (E3)	Wary; complaining; exploitive; hedonistic; preoccupied with staying out of trouble, not getting caught; learning about rules and self control; externalizing blame.
Conformist (E4)	Conventional; moralistic; sentimental; rule-bound; stereotyped; need for belonging; superficial niceness; behavior of self and others seen in terms of externals; feelings only understood at banal level; conceptually simple, "black and white" thinking.
Self-Aware (E5)	Increased, although still limited, self-awareness and appreciation of multiple possibilities in situations; self-critical; emerging rudimentary awareness of inner feelings of self and others; banal level reflections on life issues: God, death, relationships, health.
Conscientious (E6)	Self evaluated standards; reflective; responsible; empathic; long term goals and ideals; true conceptual complexity displayed and perceived; can see the broader perspective and can discern patterns; principled morality; rich and differentiated inner life; mutuality in relationships; self critical; values achievement.
Individualistic (E7)	Heightened sense of individuality; concern about emotional dependence; tolerant of self and others; incipient awareness of inner conflicts and personal paradoxes, without a sense of resolution or integration; values relationships over achievement; vivid and unique way of expressing self
Autonomous (E8)	Capacity to face and cope with inner conflicts; high tolerance for ambiguity and can see conflict as an expression of the multifaceted nature of people and life in general; respectful of the autonomy of the self and others; relationships seen as interdependent rather than dependent/independent; concerned with self-actualization; recognizes the systemic nature of relationships; cherishes individuality and uniqueness; vivid expression of feelings.
Integrated (E9)	Wise; broadly empathic; full sense of identity; able to reconcile inner conflicts, and integrate paradoxes. Similar to Maslow's description of the "self-actualized" person, who is growth motivated, seeking to actualize potential capacities, to understand her/his intrinsic nature, and to achieve integration and synergy within the self.

Note. Adapted from Hy and Loevinger, 1996; Loevinger, 1976

Although the stages could correlate with the chronological age, they are *independently* defined. At the same time, the shift from one stage to the next is not in a straight forward direction: there are many crossing "stations" and they all significantly contribute to reaching new conceptions. Described stages of ego development should not be taken as a simple, stable step forward from *Impulsive* to *Integration* stage. There are numerous indi-

vidual differences and the tempo of the development could respectively vary. Loevinger does not discuss all the aspects of ego development in early childhood, but she focuses on development in adolescence and later periods. It is during adolescence that the *Self-protecting stadium* is being overcome and a person is able to think in a more abstract way, able to recognize complex inner states and is more turned to constructive values of the surrounding (Kegan et al., according to Westenberg, 1998).

The results of empirical research show that, in general, adolescents' function on the lower levels of ego development which is different with the adults and this is often related to specific abrupt and tempestuous events occurring at that age. During adolescence, the capacity of thinking at the formal operation level is being increased and it enables a more abstract representation of the self and the others, elaboration of self-identity, moral and interpersonal values and the balance between autonomy and closeness with the others. These key tasks of adolescence reflect ego development aspects. Earlier stages of ego development are marked with outer locus control, egocentric surrounding perception and insufficient relations to others. In the following stages, internal control is being increased as well as the feeling of closeness with the others. Adolescent sample (age 11 to 20) shows that the value of correlation between the age and ego level is  $r = 0,40$ , whereas the correlation among the adults has the value of only  $r = 0,04$ . The data from longitudinal studies reveal the increase of WUSCT scores among adolescents aged 11 to 16. During the period of undergraduate studies there are certain shifts in the level of ego development, but that shift is insignificant.

In the population of adolescents and children over 8 years of age, the *Impulsive* ego level is most prevalent among 8- to 10-year-olds, the *Self-protective* ego level is most prevalent among 11- to 13-year-olds, the *Conformist* ego level among 14- to 17-year-olds, and the *Self-aware* ego level becomes more prevalent at eighteen years of age (Cohn, 1991; Westenberg et al, 1998). Notably, however, the developmental changes depicted by Loevinger's model of socio-cognitive development are not strictly age-related; there are striking individual differences in the speed and timing of the developmental steps outlined above (Westenberg & Gjerde, 1999). An individual's pace and extent of development depend on many influences beyond the mere passage of time. Some studies have identified some of these, social and biological, influences (Hauser et al., 1984).

Based on the empirical data the researchers conclude that the majority of the adults reach the stage of *Self-awareness* or the stage of *Self-consciousness* (Cohn et al., according to Westenberg, 1998). It is believed that the stage of *Self-consciousness* represents the average level of ego development among the adults and that it remains stable over the time. Cohen explains this conclusion using the fact that the adults, as compared to adolescents, have a greater freedom of choice of interpersonal relations that correspond to their own orientations and beliefs and they are not under the pressure of their peers, the pressure that can bring about the changes. Longitudinal research among adolescents age 14 to 17 and those that are 25 years old shows that the higher levels of ego development in adolescent age can be a good predeterminer of closeness and flexibility in interpersonal relations (Hennighausen et al., 2004).

Cohn (Cohn, 1991) has come up with some interesting data. The analysis of 134 researches where WUSCT has been applied provides important data on gender differences related to ego development level. Females in adolescence possess statistically greater levels of ego development. However, such a gender difference is drastically minimized

among undergraduate students. Thus, gender differences have not been the case in the research conducted among the adult subjects.

Although there is a great number of researches based on theoretical and methodological concept of Jane Loevinger, it goes without saying that what this concept is missing are explicit indicators of eventual difficulties and disruptions of ego functioning (Loevinger generally points out that some psychopathological disturbances are more frequent at certain ego development levels (stages) but she thinks that, generally speaking, these represent two separate concepts). There is a certain step forward in the studies of Labouvie-Vief and Diehla (according to Westenberg, 1998), Anđelković (2002) and Vidanović (2005) regarding the interrelation of ego development levels and specific strategies of overcoming and defense mechanisms among adolescent population. Directly, the results of the researches mentioned show, apart from cognitive, emotional aspects of ego development that can be relevant in understanding certain dysfunctional behavior at adolescent age.

Regarding the specific relationship of ego development and anxiety, we would like to point out the research carried out by Hauser and Safyer (1994) who investigated the association between ego development and emotional communication during adolescence. The results indicated that anxiety was directly correlated with ego development. The correlation was found valid for both genders. People who have a higher level of ego development turned out to harbor a higher level of anxiety. One reason for the higher anxiety may be that it is characteristic of individuals at a higher ego development stage to have a greater awareness of complexities and uncertainties.

#### THE RESEARCH PROBLEM

Ego development has been characterized as a general marker of psychosocial maturity and therefore has special relevance to the study of adolescence. Changes in level of ego development are expected to occur during periods of rapid cognitive development and exposure to the challenges of widening social contexts. Therefore, adolescence should be a period of significant intra-individual change as well as observed interindividual differences among chronological-age peers. As many changes during this tumultuous period are often followed by corresponding anxiety levels, we have decided to investigate the nature of the relationship between the attained stages of ego development and the given anxiety level. We have opted for a comparison of the groups of musically and artistically gifted adolescents and their peers who do not possess such talents. While describing some of the specificities of the functioning of the gifted and creative people, some authors (Smith & Carlsson, 1990; Barron, 1963) emphasized that such people are, generally speaking, much more tolerant with regard to high anxiety, and although they too recruit adaptive and maladaptive defense mechanisms in coping with the tension, they resort to them only temporarily. We thought that it would be of interest to investigate this phenomenon using a sample of adolescent population, additionally including a group of gifted students. We assumed that under the heading of anxiety, the parameter of gender might also be relevant and thus we included gender as a control variable. This might be even more relevant for our research as some other researchers have showed that females exhibit a higher anxiety level than males. (Wesner et al., 1990).

Groups of gifted adolescents are thus not homogenous, but, depending on the interests, we face different characteristics. For example, the results of the research on defense mechanisms and adopted gender roles of artistically gifted adolescents show an increased level of androgyny and maladaptive defense styles (Vidanović, 2005) which is not the case with young musicians (Anđelković, 2002). We have chosen the research of the attained ego development level assuming that the theoretical and methodological models of Jane Loevinger have revealed the so far unexplored aspect of the complexity of the functioning of gifted adolescents.

In addition, the research was aimed at studying the following:

- The stages of ego development in gifted adolescents and high-school students;
- State and trait anxiety in gifted adolescents and high-school students;
- Relations between ego development stages and state and trait anxiety in gifted adolescents and high-school students;
- Are there any difference between the ego development stages in adolescents with respect to gender?
- Are there any relations between the ego development stages and state and trait anxiety in gifted adolescents and high-school students with respect to gender?

#### HYPOTHESIS

In accordance with the research objectives, the study tested the following hypothesis:

- H1. There are differences in the stages of ego development between gifted adolescents and high-school students.
- H2. There are differences in state anxiety between gifted adolescents and high-school students.
- H3. There are differences in trait anxiety between gifted adolescents and high-school students.
- H4. There is a relation between ego development stages and state anxiety in gifted adolescents and high-school students
- H5. There is a relation between ego development stages and trait anxiety in gifted adolescents and high-school students
- H6. There is a difference in the ego development stages in adolescents in respect to gender.
- H7. There is a relation between the stages of the ego development and state anxiety of gifted adolescents and high-school students in respect to gender.
- H8. There is a relation between the stages of the ego development and trait anxiety of gifted adolescents and high-school students in respect to gender.

#### VARIABLES

**The ego development stages** are defined within the theoretical and methodological model of Jane Loevinger (Le Xuan Ly and Loevinger, 1996).

For Loevinger (1976), the ego is a holistic construct representing the fundamental structural unity of personality organization. It involves both the person's integrative processes in dealing with diverse intrapersonal and interpersonal experiences, as well as the

consequent frame of reference that is subjectively imposed on those life experiences to create meaning. The ego is referred to by Loevinger (1976) as the "master trait," subsuming other developmental domains such as developmental sequences of intellectual or worldview conceptualizations, stages of moral development, and stages of interpersonal understanding. Loevinger described four domains as representative and inextricably interwoven aspects of the ego: character development, cognitive style, interpersonal style, and conscious preoccupations.

The following stages of ego development have been evaluated: *Impulsive, Self-protective, Conformist, Self-awareness, Conscience, Individuality, Autonomy* and *Integration*. The evaluation has been done by administering the *Washington University Sentence Completion Test of Ego Development* (WUSCT), in which quantitative data is analyzed and turned into quantitative determination of the stages of ego development.

**Anxiety level** is being defined according to theoretical and methodological postulates of Spielberger et al. (1983). They look into and evaluate the exposure of two anxiety dimensions: state anxiety (STAI-S) and trait anxiety (STAI-T).

The state anxiety level represents the actual emotional responsiveness or anxiety that an individual experiences at any one moment. The state of anxiety of any individual differs from others depending on their idiosyncratic perception of a situation as more or less threatening. Trait anxiety is considered to be a factor that affects state anxiety. The levels of trait anxiety represent the tendency of an individual to perceive a number of situations as threatening or dangerous. The state-trait anxiety theory indicates that whether or not a situation will be perceived as threatening is partly dependent on the individual's ability in the area being measured.

The scores obtained on the STAI-S represent the level of *state anxiety* while the scores on STAI-T represent the level of *trait anxiety* (according to *STAI manual for the STAI-TRAIT anxiety inventory*, Spielberger et al., 1983).

#### PROCEDURE

The research was conducted over the period October-December 2005 in the Arts School, the Music School and «Stevan Sremac» High School in Niš. The instruments (WUSCT and STAI – Form Y) were given on the group level (up to fifteen subjects).

#### SAMPLE

The sample is adequate. The research included 30 students of Arts School (15 from Painting Department and 15 from Graphics Department), 30 Music School students (Piano Department) and 60 students of both Humanities and Science Departments of «Stevan Sremac» High-School. The sample of high school students was formed after we excluded the students who excelled at arts or music from the tested sub-sample (consisting of 82 students). As for the achievements in other areas of art, only a few high school students (nine altogether) have shown a particular inclination to study literature. To conclude, the sample consists of 120 subjects (30 artistically gifted, 30 musically gifted and 60 high-school students). The groups are equal in gender (60 males and 60 females, see Table 2.) and age (17 up to 19 years old). We have chosen this particular age range in order to

make the sample as homogenous as possible, i.e. narrowing it down to adolescence period in its essential sense, thus excluding the specific features of early and late adolescence.

Table 2. Structure of the sample with regard to gender

Adolescents	Male N	Female N
Artistically gifted	16	14
Musically gifted	13	17
High School (science)	16	14
High School (humanities)	15	15
Total	60	60

#### INSTRUMENTS

WUSCT (Loevinger) - *Washington University Sentence Completion Test of Ego Development*

The WUSCT was first published in 1970, revised in 1985, and revised again in 1996 (Hy & Loevinger, 1996). The WUSCT consists of 36 incomplete sentences, in two versions: for males and females (e.g., 'If I can't get what I want -'; 'My mother and I -'). Respondents are instructed to complete the sentence stems in any way that they wish. The scoring manual for the WUSCT consists of over 2000 response categories (i.e., clusters of similar responses that were collected from a large database used to construct the manual). These response categories are catalogued by ego stage. The following stages of ego development are estimated: *Impulsive*, *Self-protective*, *Conformist*, *Self-awareness*, *Conscience*, *Individuality*, *Autonomy* and *Integration*. Examples of responses to the item 'If I can't get what I want -' are: 'I ask my father' (catalogued at the *Impulsive* ego stage); 'I don't care' (placed at the *Self-protective* ego stage); 'I must accept it' (*Conformist* ego stage); 'I feel disappointed' (*Self-aware* stage); and so forth. Response categories were catalogued by ego stage based on data obtained from large and heterogeneous samples (Ly & Loevinger, 1996).

Assigning the instruments is either an individual or a group task, time is not limited.

In the first phase of grading, one gets qualitative data, but in the final phase these are analyzed and turned into quantitative determination of the stage of the ego development. The items were scored by two raters (clinical psychologists) and disagreements resolved by consensus after discussion. Level of agreement between them was really high (over 90%).

According to the data from 1991 (Cohn, 1991) WUSCT was used in more than 280 researches, translated into six languages and applied to the subjects of different age and socio-economic status.

The WUSCT has excellent psychometric properties (e.g., high internal consistency of the items and high test-retest stability of total scores (Westenberg et al., 2003).

Evidence for the construct validity of Loevinger's model and measure is extensive. Findings of over 350 empirical studies generally support critical assumptions underlying the ego development construct. Longitudinal studies have confirmed the invariance of the developmental steps (i.e., no stage can be skipped); average increases with age as well as individual differences in ego level maturity have been documented (Westenberg et al.,



2003). Loevinger (1987) stated that one of the problems in establishing the construct validity of the WUSCT was that the uniqueness of her theory and measure of ego development made it difficult to find appropriate alternative measures.

#### ANXIETY INVENTORY-FORM Y (STAI: *State-Trait Anxiety Inventory- Form Y*)

STAI- Form Y, made by Spielberger (Spielberger et al, 1983), consists of two separate self-evaluation scales. The inventory measures (a) state anxiety, which is a measure of the intensity of anxiety that an individual experiences on a given occasion, (b) trait anxiety, which is considered to be a relatively enduring individual difference in the tendency to perceive stressful situations as dangerous or threatening, and in the acquired disposition to respond to such situations with elevations in the intensity of state anxiety reactions.

Each scale consists of 20 statements, and the scores for both scales can vary from minimum 20 up to maximal 80. These scales can be applied separately, individually, as a group activity without any time limitations, but STAI-S scale has to be given first because it responds sensitively to testing conditions, as opposed to STAI-T, which is relatively independent of these conditions.

Since there are no standardized norms obtained for our population we used *STAI Application Manual- Form Y*. (Spielberger et al., 1983) which contains specialized norms determined with regard to age and gender. Table 3. shows mean values for STAI-S and STAI-T.

Table 3. Mean value on STAI-S and STAI-T

	Adults		Students		High school students		Psychiatric patients
	M	F	M	F	M	F	
<i>STAI-S</i>	35,72	35,20	36,47	38,76	39,45	40,54	47,74
<i>STAI-T</i>	34,89	34,79	38,30	40,40	40,17	40,97	46,62

This instrument has been used in more than 2.000 researches in the field of clinical psychology, medicine, dentistry, education, etc and it has been translated into thirty languages, although the standardization of the instrument has not been conducted in our country yet.

The subjects are asked to describe the intensity of their feelings at the moment of testing. For example, in respect to the statement "I am upset", they evaluate their condition in the following manner: (1) not at all; (2) a little; (3) quite; (4) very much. STAI-T anxiety scale is used by the subjects to describe how they feel most of the time.

The results of previous researches indicate that high-school male students possess a greater level of trait anxiety (STAI-T) than undergraduates of the same sex.

Test-retest correlation for STAI-T was  $r = 0,765$  for the undergraduates sample, whereas it was  $r = 0,695$  for high-school students. However, index of stability for STAI-S scale was relatively low (0,33) which indicates the possibility of the influence of situational factors during testing. Score averages on both scales for the common subjects' sample, in unstressed conditions, were quite similar. Internal consistence was very high on both scales.

In respect to other instruments that are used in researches, there has been found a correlation  $r = 0,70$  STAI with Cornell index measurements which indicates the relation of STAI scores to clinical symptoms. This correlation between the Scale of Manifested Anxiety (Taylor) and STAI-T gives the result of  $r = 0,80$  (according to Spielberger et al., 1983).

What one should bear in mind are the methodological shortcomings stemming from the fact that all the instruments used in this particular research have not been standardized for our population, though they have been used in researches of Anđelković (2002) and Vidanović (2005).

## RESULTS

### Stages of the ego development

Table 4 shows the scores gained on the WUSCT in gifted adolescents and high-school students. Eight different stages have been evaluated.

Table 4. Stages of the ego development among artistically and musically gifted adolescents and high-school students.

Adolescents	WUSCT scores M	Ego development stages
Artistically gifted	161,33	Conformist (E4)/ Self-aware (E5)
Musically gifted	164,15	Conformist (E4)/ Self-aware (E5)
Total gifted	162,74	Conformist (E4)/ Self-aware (E5)
High-school students	164,22	Conformist (E4)/ Self-aware (E5)

(N= 120)

The scores on WUSCT of gifted adolescents and high-school students (Table 4.) are at the bottom level of *Self-awareness* (E5) stage, meaning a bit above *Conformist* stage (E4). This indicates that the sample of adolescents we picked up function between the stage of *Self-awareness* (inquiries into the self and other adopted and imposed rules) which is, in most cases, conformist and the *Conformist* stage characterized by conceptual simplicity, presence of stereotypes, prejudices and generalizations, and a great focus on appearance and status in the social surrounding.

T-test did not confirm statistically significant difference in score level for the ego development stages in gifted adolescents and high-school students, which means that first hypothesis (H1) has not been confirmed. Also, there is no difference in the ego development stages between gifted adolescents and high-school students of both departments (ANOVA). The differences do not exist among sub-groups of high-school students (T-test).

### State anxiety distribution

Table 5 shows the results got on the test used for evaluation of the level of state anxiety (STAI-S) and trait anxiety (STAI-T).

Table 5. Mean values on STAI-S and STAI-T in gifted adolescents and high-school students

Adolescents	STAI-S		STAI-T	
	M	sd	M	sd
Artistically gifted	44,03	8,10	51,05	8,30
Musically gifted	43,77	9,12	50,92	9,60
High-school students	44,57	7,80	51,87	7,90

N = 120

The second specific hypothesis (H2) has not been confirmed, T-test indicates that there are no statistically significant differences in the level of state anxiety (STAI-S) between artistically and musically gifted adolescents and their high-school same-age peers.

Comparing average values in Table 5 with high-school pupil norms from *STAI Application Manual- Form Y* (Spielberger et al., 1983), we reached the conclusion that the average values of state anxiety in adolescents in our research are actually greater than the average values for high-school students in general.

Also, there are no statistically significant differences in the level of state anxiety (STAI-S) and trait anxiety (STAI-T) in respect to gender (see Table 6). No statistically significant differences have been obtained within the sub-samples of the girls and boys either.

Table 6. Mean values on STAI-S and STAI-T in gifted adolescents and high-school students in respect to gender

Adolescents	STAI-S		STAI-T	
	M	sd	M	sd
Male	42,53	8,80	50,51	9,40
Female	45,71	8,00	52,05	8,09

N=120

If we take into account the whole sample group, we conclude that there is a statistically significant positive correlation between STAI-S and STAI-T scores ( $r = 0,53$ ;  $p < 0,000$ ).

### Trait anxiety distribution

Trait anxiety in adolescents (STAI-T) shown in the sample is at the level of the 60 percentile thus showing certain move from the average values for high-school students (Table 3). The results got have not confirmed the third specific hypothesis (H3) that assumes that there would exist certain differences in respect to trait anxiety between gifted adolescents and high-school students.

### Relation between the ego development stages and state anxiety

The fourth specific hypothesis (H4) has been partially confirmed. The sample of artistically and musically gifted adolescents shows that the stages of the ego development do not correlate with the level of state anxiety. On the other hand, high-school students' sample shows that there is a certain statistical negative correlation of the stages of the ego development with the level of state anxiety - STAI-S ( $r = -0,26$ ,  $p < 0,05$ ). Actually, later on we will see that it has to do with gender.

### Relation between the ego development stages and trait anxiety

The fifth specific hypothesis (H5) has been partially confirmed, as well. The stages of the ego development of musically and artistically gifted adolescents do not correlate with the level of trait anxiety, whereas the high-school students' sample shows that there is a certain statistical negative correlation of the stages of the ego development with the level of trait anxiety- STAI-T ( $r = -0,29$ ,  $p < 0,05$ ). As it is the case with state anxiety, we will see that gender plays important role in the case.

### Ego development stages in adolescents in respect to gender.

Having taken into account theoretical and empirical works related to the adolescence period and its specific features in respect to the gender, we conducted the analysis of the score values at the ego development stages of the development of male and female specimens included in our sample. Table 7 and Table 8 shows the stages of the ego development of artistically and musically gifted adolescents divided by the gender. We assumed that school department adolescents picked up could be of certain relevance

Table 7. Stages of the ego development of males high-school students and gifted adolescents

Adolescents N	School Department	WUSCT Scores M	Ego development stages
8	Painting	148.82	Conformist
8	Graphics	158.10	Confor./Self-aware
13	Musically gifted	161.13	Confor./Self-aware
16	High School (science)	160.08	Confor./Self-aware
15	High School (humanities)	161,13	Confor./Self-aware
Total		157, 85	Confor./Self-aware

N = 60

Table 8. Stages of the ego development of females high-school students and gifted adolescents

Adolescents N	School Department	WUSCT Scores M	Ego development stages
6	Painting	172.01	Self-aware
8	Graphics	166.40	Self-aware
17	Musically gifted	167.17	Self-aware
14	High School (science)	167.00	Self-aware
15	High School (humanities)	168,68	Self-aware
Total		168, 25	Self-aware

N= 60

The sixth hypothesis (H6) has been confirmed. There is a statistically significant difference ( $p < 0,01$ ) regarding the scores at the stages of the ego development between male and female adolescents (ANOVA). Namely, in males, taking the whole sample, *Conformist*(E4) stage and *Confor./Self-aware* stages are prevailing, whereas in females *Self-aware stage*(E5) proves to be dominant. Gender differences at the level of the ego devel-

opment for the whole sample do exist; moreover, they exist among the subjects in gifted sub-group, i.e. high school students. It appears evident that the greatest difference, however, has been found between male and female subjects in the sample from the Painting Department students (however no plausible conclusions can be drawn due to the scarcity of subjects and, consequently, data). If we take into account numerous theoretical and empirical research carried out so far, we cannot but agree that in adolescence girls do function at a higher level of ego development than it is the case with boys.

#### **Relation between the stages of the ego development and state anxiety**

There is no correlation between the stages of ego development and state anxiety in the gifted adolescents and in respect to gender. However, high-school students sub-sample reveals that the male students' sample shows a negative correlation between the ego development stages and the level of state anxiety ( $r = 0,42$ ;  $p = 0,05$ ), so the seventh hypothesis (H7) has been partially confirmed.

#### **Relation between the stages of the ego development and trait anxiety in respect to gender**

The eighth hypothesis (H8) has been partially confirmed as well. As with state anxiety, only the ego development stages in high-school male students are in negative correlation with trait anxiety ( $r = 0,44$ ;  $p = 0,05$ ).

### GENERAL DISCUSSION

The results got at WUSCT reveal that gifted adolescents and high-school students do not differ in the ego development stage reached - the whole sample of adolescents reveals functioning at the lower *Self-awareness* (E5) stage which is somewhat above *Conformist stage* (E4). In general the results are in accordance with the theoretical expectations and empirical researches, which state that functioning on both these stages actually does characterize adolescence period (Westenberg et al., 1998).

Taking into account the specific characteristics of the development of artistically and musically gifted adolescents (Smith & Carlsson, 1990; Kits, according to Anđelković, 2005), we have expected that the stages of ego development they reached would differ from those in young people who do not expose specific talents. According to theoretical and methodological assumptions of Jane Loevinger, which represent the basis of the instrument used in our research, the subjects are expected to project their frame of reference on testing material. There is a general consensus among the theoreticians of different hues and colors that cognitive style and inner processing of emotional contents are most often specific in the case of gifted adolescents. For example, Getzels i Csikszentmihalyi (1976) reported to have obtained a very good result in artistic expression by subjects whose cognitive style was directed at problem finding. Also, moral judgment standards, the nature of interpersonal relations and the concepts about the self and the others reveal a strong influence of an early professional orientation (Kemp, 1981; Kemp, 1982; Getzels & Csikszentmihalyi, 1976). However, despite all the gifts, the research results reveal that, as it is the case with their high-school peers, the complex structure of the adolescent period determines the dynamics of ego development.

On the other hand, score values at the stages of ego development of male and female subjects reveal that the stages reached do differ. Female subjects of the same age as males function at a higher level, which is expected and already confirmed in earlier researches (Hy & Loevinger, 1996; Anđelković, 2002; Vidanović, 2005). It is interesting to notice that the whole sample in our research shows the greatest difference between male and female subjects attending the Painting Department. Vidanović (2005), in her research on accepted gender roles of artistically gifted adolescents also proves these specific issues of sexual identity development. Namely, females, future painters, showed a significantly greater level of masculinity than males who, in turn, showed a significant level of femininity; these observations particularly define this group of gifted adolescents. Regarding the ego development, it seems that the male subjects attending Painting Department are immature, their perception of the surrounding is egocentric and they are not related to others which all define another important feature of their emotional and cognitive development.

This research also confirms the postulate that the sample of gifted adolescents is not homogeneous. Specifically, among the piano players girls function at a higher level of ego development than boys, the quantitative data show that the differences are much smaller than those found in the sample of young painters of both genders (see Table 7 and Table 8). Although these young performers were still in the process of education, it is possible that strict and complex requirements of their teachers regarding playing skills, numerous participations in various competitions over years somehow contributed to their growing mature and reaching mature stages of the ego development; and this is the case with both male and female young performers.

Regarding the anxiety level, our sample did not, however, reveal any statistically significant differences at the level of state and trait anxiety between gifted adolescents and high school students, although the stages got are a bit above the average value for high school students, the value given in the *Manual STAI Application Manual- Form Y* (Spielberger et al, 1983). Such results should be considered in respect to the context of very complex social circumstances in which these young people grew up and live nowadays. Statistically significant differences were not obtained with the sub-samples of the boys and girls either and this is not in accordance with the majority of previous empirical findings (see Wesner, 1990).

The search for an eventual link between the attained stage of ego development and the level of anxiety brought us to the conclusion that such a link only exists in the group of high school students. When gender is taken into account in the sample of high school students, the results obtained have shown that only among the young male members of the group there is a negative correlation between the attained stage of the ego development and both trait and state anxiety levels. In other words, a higher stage of ego development, among other things, is marked by a more efficient and mature strategy of coping with stress control and anxiety, and vice versa. The results of this research indicate that one should bear in mind the differences between the genders while trying to understand the relations among the stages of ego development and anxiety, at least when tackling the mystery of adolescence. Any findings related to this issue must not be generalized and must not comprise the groups of artistically and musically gifted subjects. One must ask a question: why isn't the above-mentioned relation between ego development and anxiety detected in gifted adolescents?

It has often been stressed that the research dealing with art and music artists has emphasized that the ability to tolerate anxiety (including negative impact of the primary process) is related to creativity (Kubie, 1958). Barron (1968) even ascribes to creative people the necessity for "tension quest", irregularity. Many artists find a certain level of tension very close and it is quite often present during creation process. Also, celebrities, especially those performing on stage, are expected to stand a very high level of anxiety and that high level of "professional uncertainty" Kits (according to Anđelković, 2005) labels as the capacity of standing the negative. Albert and Runco (1987), while discussing the issue of the relation between creative potential and conflict management in adolescents, suggest that it seems that gifted adolescents have greater cognitive capacities on different conscious levels than less creative people.

### CONCLUSION

Most of the research has been conducted by taking eminent artists as samples, so it is not easy to determine whether or not some personality features, that are often contradictory, have been present even during adolescence or have developed later on through creative activity. This particular research project has attempted to understand the adolescence of future artists by discussing elements of the ego development and the nature of anxiety. No statistically significant difference has been obtained in the stages of ego development in gifted adolescents and high-school students. Gifted adolescents and high-school students are at the bottom level of *Self-awareness* (E5) stage, meaning a bit above *Conformist* stage (E4). In males, taking the whole sample, *Conformist*(E4) stage and *Confor./Self-aware* stages are prevailing, whereas in females *Self-aware stage*(E5) proves to be dominant. The results of the research indicate that on average the complex structure of the adolescent period determines the dynamics of the ego development with all peculiarities of both gifted adolescents and their high-school peers.

There are also no differences in the level of state and trait anxiety between artistically and musically gifted adolescents and their high-school peers, as well as between the genders (both in the whole sample and within the sub-samples). However only male high school students showed a negative correlation between ego development stages and the level of both state and trait anxiety.

The results that we have obtained indicate that in the understanding of the relation between ego development and anxiety one should bear in mind the differences between the genders, but also that the findings must not be extrapolated onto the group of artistically and musically gifted subjects.

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## EGO RAZVOJ I ANKSIOZNOST NADARENIH ADOLESCENATA

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*U radu se iznose rezultati istraživanja koje je pre svega bilo usmereno na otkrivanje razlika u stadijumima ego razvoja (Washington University Sentence Completion Test of Ego Development – WUSCT) i nivoima trenutne i opšte anksioznosti (State-Trait Anxiety Inventory- Form Y, STAI – Form Y) kod likovno i muzički nadarenih adolescenata i njihovih vršnjaka iz gimnazije (120 ispitanika, uzrasta od 17 do 19 god.). Stadijumi ego razvoja su određeni prema teorijskim i metodološkim postavkama Jane Loevinger prema kojim je moguće razumeti interpersonalno ponašanje, interesovanja, vrednosti i samokontrolu na osnovu specifičnih kognitivnih strategija, specifičnih potreba osobe i prisutne anksioznosti. Nivo anksioznosti je definisan u okviru teorijskih i metodoloških postulata Spielberger i sar. (1983).*

*Rezultati istraživanja pokazuju da ne postoji razlika u stadijumu ego razvoja između nadarenih adolescenata i gimnazijalaca. Takođe, između ove dve grupe ne postoji razlika u nivou trenutne i opšte anksioznosti (kako na celom uzorku, tako i na poduzorcima i u odnosu na pol). Samo kod gimnazijalaca muškog pola postoji negativna korelacija između stadijuma ego razvoja i nivoa obe dimenzije anksioznosti.*

**Ključne reči:** ego razvoj, anksioznost, muzički i likovno nadareni adolescenti