

ТОЛЕРАНТНОСТ КЪМ НЕОПРЕДЕЛЕНОСТ И АЗ-ОБРАЗ ПРИ ЮНОШИ

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AMBIGUITY TOLERANCE AND SELF-CONCEPT IN ADOLESCENTS

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Изследвани са юноши с висока (n=44) и ниска (n=36) толерантност към неопределеност (ТН), чиито резултати по скалата за толерантност към неопределеност на Нортън (адаптирана за български условия от Стойчева, Щетински, Баждекова, 1998) са съответно по-високи или по-ниски от половин стандартно отклонение под или над средната стойност на нормативната извадка от ученици горен курс. Скалата измерва индивидуалните различия в интензивността на преживяването на неопределеността като източник на психологически дискомфорт или заплаха. Изследваните лица са попълнили също така скалата на Офър за изследване на Аз-образа при юноши (Силгиджиян, 1998) и българската форма на въпросника за оценка на тревожността на Спилбърг (Щетински, Паспаланов, 1989). Юношите с висока ТН показват по-висока степен на удовлетвореност от себе си и имат значимо по-високи самооценки по скалите Социални отношения, Психопатология и Идеализъм от въпросника на Офър. Оценка по скалата Идеализъм на Аз-образа са значимо повлияни и от взаимодействието между ТН и личностовата тревожност. Юношите с висока ТН и ниска тревожност показват най-висока степен на себеприемане и удовлетвореност от своя Аз и тези различия се проявяват най-силно в областта на социалните отношения, копинга и социалните нагласи (ориентация към хуманистични ценности).

Introduction

The personality dimension of ambiguity tolerance denotes individual differences in the way people perceive, interpret and react to ambiguity. Ambiguity can be due to 1) multiple meanings, 2) vagueness, incompleteness, fragmentation of the stimulus, 3) as a function of a probability, 4) unstructured stimulus, 5) lack of information, 6) uncertainty as a state of mind, 7) inconsistencies, contradictions, contraries available and 8) unclear stimuli (Norton, 1975). People who are intolerant of ambiguity perceive and interpret ambiguous situations, events or ideas as source of psychological discomfort or threat. Behaviourally, intolerance of ambiguity manifests itself in the tendency to retreat rather than to attempt to understand or cope (English and English, 1958). Budner (1962) differentiated four type of reaction of intolerance: phenomenological denial (repression and

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denial); phenomenological submission (anxiety and discomfort), operative denial (destructive or re-constructive behaviour) and operative submission (avoidance behaviour).

On the other hand, the capacity to withstand the uncertainty is essential for ambiguity tolerance. Ambiguity tolerant individuals have less rigid defences, more flexibility and psychological openness and can tolerate the discomfort of an ambiguous situation long enough to find out the appropriate solution. They are willing to accept a state of affairs capable of alternative interpretations or outcomes and may experience ambiguity as desirable, challenging and interesting (English and English, 1958; MacDonald, 1970).

The personality trait of tolerance - intolerance of ambiguity was originally identified by Else Frenkel - Brunswik in the context of research on the authoritarian personality (Adorno et al., 1950). This research compared the personality organization and personality dynamics in high and low prejudiced children and adults. The analysis of clinical interview material, questionnaire data and experimental results has showed that individuals extremely high on overt ethnic prejudice tend to differ from those extremely low on prejudice with respect to a variety of personality traits. Intolerance of ambiguity, i. e. the attitude of intolerance of more complex, conflicting or otherwise open structures was but one of them. Her work provided further evidence of the way individual differences in both denial of emotional ambivalence and avoidance of cognitive ambiguity relate to 1) rigidity of the mental set and premature closure in perception and thinking, 2) the development of fixed and dichotomizing social attitudes, 3) the adoption of conventional and stereotyped approach to interpersonal relationships, relations with parents, the opposite sex and with people in general, as well as to 4) conformity to traditional values and 5) rigid adherence to norms and expectations (Frenkel- Brunswik, 1948; 1949).

Further research (see Furnham, Ribchester, 1991, for a review) has shown that ambiguity tolerance is related to individual differences in creative personality (Tegano, 1990), dogmatism and resistance to change (McLain, 1993; Chabassol, Thomas, 1975; Kirton, 1975), career choices and preferences (Budner, 1962; Raphael, Chasen, 1980; Merrill et al, 1994), vulnerability to depression (Anderson, Schwartz, 1992), self-actualisation (Foxman, 1976) and personality adjustment (Shavit, 1975).

Ambiguity Tolerance in Adolescents

Being ambiguity tolerant can enable young people to live their lives effectively in the present world of rapid change, growing technological complexity and increased cultural diversity. Adolescence as a stage of human development

involves a major expansion in the range and complexity of the personal experience and social life and brings a lot of confusion and changes among both the young and adults, therefore challenging their abilities to deal with uncertainty. This implies ever growing intergenerational discrepancies concerning instrumental competencies associated with social roles and thus stimulates the processes of individuation, personal growth and autonomy in young people (Jackson, Rodriguez-Tome, 1993). Adolescents today have to live with incoherence for longer periods than before and that makes ambiguity tolerance a socially significant personality dimension. Uncertainty is inherent to almost any one situation they are confronted with in their individual and social development and knowing how to cope with influences the way young people approach specific developmental tasks. Adolescents today have to make their life transition to maturity in a dynamic socio-cultural context in which developmental tasks are hardly normative, i.e. are not well defined in terms of social roles' expectations (Silguidjian, 1998). Being ambiguity tolerant can prevent adolescents from black-and-white solutions and premature reactions to indefinite and/or challenging situations. The personality growth and social integration of young people is facilitated through development of individual's capacity to withstand the uncertainty and willingness to accommodate or adapt to, but not avoid, encounters with ambiguous situations, events or ideas.

The individuation of the life transition to maturity corresponds to the universal psychological task of adolescence, namely identity formation and life choices (Erikson, 1968/1996). In the most optimal form of identity development, identity is achieved through exploration of alternatives and subsequent commitment to some occupational directions, ideological beliefs and interpersonal values (Marcia, 1988). Exploration involves considering several possible future directions and not only those that were parentally given. If no exploration has been undertaken, commitments are being parentally conferred rather than individually construed and a foreclosed identity structure is formed. When there is both unwillingness to explore alternatives and inability to make commitments, identity diffusion is the outcome (Marcia, 1988). That lack of tolerance of ambiguity influences the social and emotional development of adolescents has been suggested elsewhere too (Buescher, 1985; Kauffman, 1986).

Although empirical research on ambiguity tolerance and psycho-social development in adolescence is scanty, that which does exist supports the positive relation between ambiguity tolerance and the processes of identity formation and making life choices. For example, in Canada 100 high school girls were tested with Budner's intolerance of ambiguity scale (Budner, 1962) and ambiguity tol-

erance was found to significantly relate to identity style (Raphael, 1978). Both Foreclosure and Diffusion status females are more intolerant of ambiguity than Moratorium status females. It seems that being aware of alternatives in the areas of someone's future plans, beliefs and interests and being willing to consider them is enabled by and conducive to a greater capacity to withstand uncertainty and tolerate the discomfort of an ambiguous situation.

A link between ambiguity tolerance and readiness for experimentation and exploration of the unknown further appeared in an analysis of the ambiguity tolerance scores of 14 girls who dropped out of the study upon introduction of a relatively unstructured behavioural task: they tended to have lower ambiguity tolerance than those who continued. Drop outs were also significantly higher in trait anxiety (Raphael, Xelowski, 1981).

In a sample of 62 high school students, Budner (1962) found a positive association between intolerance of ambiguity and expressed idealisation of and submission to parents. Similarly, Chabassol and Thomas (1975) reported that adolescents who were intolerant of ambiguity had higher needs for structure. Youth high in structure needs are uncertain, suggestible and concerned about their ability to handle their own problems. Conversely, adolescents high in tolerance for ambiguity had lower needs for structure, meaning they wanted less to be offered guidance, advice, information, clarity or direction by an adult figure of authority (Chabassol, Thomas, 1975).

This paper will further investigate the role of ambiguity tolerance in adolescents' personality development. Resolving the identity crisis of the adolescence requires revision and transformation of the self-concept in multiple areas of adolescents' life (Silguidjian, 1998). Developing a more flexible style of interaction of one's self with both the inner and outer world is a positive outcome of this process. It needs ambiguity tolerance both as a personality disposition and a life value (Stoycheva, 1998). The failure in integrating ambiguity tolerant beliefs and behaviours in one's self-concept may lead to increasing anxiety and deviations from the normal path of personal growth.

The present study will thus explore the relations between self-concept, anxiety and ambiguity tolerance in adolescents. To the best of our knowledge, such a study is undertaken for the first time.

METHOD

392 subjects coming from three different high schools in Sofia and outside the capital, 36% of whom were boys, were given the Bulgarian adaptation of the questionnaire of Robert Norton MAT-50 (Norton, 1975). This is a paper-and-pencil

self-report inventory which items are drawn from 8 content areas: philosophy, interpersonal communication, public image, job-related, problem-solving, social, habits and art forms. Each item reflects a potentially ambiguous situation and incorporates some function of tolerance (7 items) or intolerance (54 items) of this situation. The questionnaire is scored for ambiguity tolerance: the higher score indicates higher ambiguity tolerance. Its Bulgarian adaptation contains the 52 psychometrically best items of the original pool of 61 items and has a Cronbach alpha reliability of 0.86 and test-retest reliability of 0.80 for a 3-month interval. A 4-point rating scale had been adopted for use with the Bulgarian adaptation of his questionnaire MAT - 50 / BG - 2, from "it is true" to "it is not true" and it is also scored for ambiguity tolerance (Stoycheva, Stetinski, Bajdekova, 1998).

Students scoring below or above half standard deviation from the mean of the high school sample ($M=127.10$, $SD=18.32$) were selected into groups of low and high ambiguity tolerance respectively. The Low AT group ($n = 51$) had a mean AT score of 104.61 and a standard deviation of 7.88. This mean score was below one standard deviation below the mean of the high school sample. Also, 55% of the subjects in this group had AT scores below one standard deviation below the mean of the high school sample. The High AT group ($n = 55$) had a mean AT score of 149.76 and a standard deviation of 11.41. This mean score was above one standard deviation above the mean of the high school sample. Also, 53% of the subjects in this group had AT scores above one standard deviation above the mean of the high school sample. t-test comparison of the mean AT scores in the two groups yielded a statistically significant difference - $t = 23.85$, $p = 0.000$. Therefore, the way groups were selected provided subjects to be examined who really differed in their tolerance to uncertainty and who very well represented the two contrasting strategies with respect to ambiguous situations, events and ideas.

The proportion of boys vs. girls in the selected groups was similar the proportion of boys vs. girls in the whole high school sample. Subjects' age ranged from 14 to 18, with a mean of 15.82 ($SD = 0.75$). There was no statistically significant difference between the mean age of Low AT ($M=15.78$, $SD=0.76$) and High AT ($M=15.85$, $SD=0.76$) students - $t = 0.48$.

They were administered:

1. *OSIQ - Offer Self-Image Questionnaire for Adolescents*, standardised for Bulgarian population by Silguidjian and Gerganov (Silguidjian, Gerganov, 1994). The questionnaire contains 130 items which are self-rated on a 6-point scale and describe individuals' adaptation in 12 areas of functioning thought to be significant for the adolescents' personal growth (Offer, Ostrov, Howard, 1981). A list of the OSIQ's scales and their description are given in the appendix.

It should be mentioned that subjects in general were satisfied with themselves. Twenty two out of the 24 mean scores that are shown in Table 1 fall between 2 and 3 what indicates a fairly good satisfaction with one's adjustment in these important areas of adolescent's life. The self-image characteristics of this sample are similar to those reported in other studies of the self-concept in Bulgarian adolescents (see Silguidjian, 1998).

AT, trait anxiety and self- concept

As can be seen in Table 2, High AT subjects scored lower on both state and trait anxiety, but none of the observed differences reached significance.

Table 2. Means, standard deviations and F-values for anxiety scores in groups of subjects with low and high ambiguity tolerance

Indicator	Low AT	High AT	F
State anxiety	M=38.28, SD=10.22	M=37.50, SD=9.44	0.12
Trait anxiety	M=43.61, SD=9.95	M=39.80, SD=9.66	3.00

For the purposes of the present analysis, subjects were divided into two groups on the basis of their trait anxiety scores. Those scoring below the mean of the normative Bulgarian high school sample (see Stetinski & Paspalanov, 1989) were classified as low Tanx subjects while those scoring above the mean of the normative Bulgarian high school sample were classified as high Tanx subjects. In this way, boys scoring 40 or below and girls scoring 45 or below comprised the Low Tanx group. Similarly, boys scoring 41 or above and girls scoring 46 or above comprised the High Tanx group. Table 3 shows the distribution of High and Low Tanx subjects across High and Low AT groups.

Table 3. Distribution of subjects with low and high trait anxiety across groups of low and high ambiguity tolerance: frequencies and percentage

Groups	Low AT	High AT
Low Tanx	15 (42 %)	31 (70 %)
High Tanx	21 (58 %)	13 (30 %)

As can be seen, this distribution is strongly reversed: subjects scoring high in trait anxiety predominated in the Low AT group while in the High AT group subjects scoring low in trait anxiety were about twice as more as subjects with high trait anxiety. The computed Pearson's Chi-square of 6.71 was significant at $p < 0.01$.

A 2x2 analysis of variance (AT group x Tanx group) was then performed in order to examine the influence of ambiguity tolerance and trait anxiety on self-concept. Table 4 shows the F values for the main and interaction effects of the two factors: level of ambiguity tolerance (high and low ambiguity tolerance group) and level of trait anxiety (high and low trait anxiety groups).

As can be seen, trait anxiety had significant effect on almost all dimensions of adolescents' self-image: subjects who were higher in anxiety reported being less satisfied with their psychological functioning, social relationships, and coping with the internal and external world.

Table 4. Main and interaction effects of ambiguity tolerance and trait anxiety on self-concept scores

Indicators	F (AT group)	F (Tanx group)	F (AT group) x F (Tanx group)
PS-1 Impulse control	0.03	8.07 **	1.02
PS-2 Emotional tone	0.75	26.71 ***	1.22
PS-3 Body and Self -image	0.50	10.26 **	0.02
SS-1 Social relationships	3.36 ^a	9.24 **	0.55
SS-2 Morals	1.86	0.64	0.02
SS-3 Vocational and Educational goals	0.32	3.11 ^a	2.37
SxS Sexual attitudes	0.001	2.24	1.02
FS Family relations	1.33	2.80 ^a	0.89
CS-1 Mastery of the External World	0.36	9.51 **	3.10 ^a
CS-2 Psychopathology	2.21	26.92 ***	0.51
CS-3 Superior adjustment	0.06	4.84 *	0.89
CS-4 Idealism	6.65 *	0.20	4.03 *

^a $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The one-way ANOVA we have discussed earlier showed that High AT group scored significantly better than the Low AT group on Social relationships (SS-1) and Psychopathology (CS-2). In the 2-way ANOVA we are now discussing the effect of the AT group on these components of the self-image was reduced to non-significant, while trait anxiety has significant impact on these self-concept scores. These findings suggest that, in these areas of the self-image, differences between High and Low AT adolescents were mainly due to the different level of

trait anxiety in the two groups. Mainly, but not exclusively: the factor AT group still has marginally significant effect on adolescents' self-perceptions of their social relationships ($F_{ss-1} = 3.36, p < 0.08$).

The two-way ANOVA confirmed the significant effect of ambiguity tolerance on Idealism scores and further showed a significant interaction between ambiguity tolerance and trait anxiety in their effect on adolescents' scores on the CS-4 scale of Idealism. High AT subjects scored better on Idealism than Low AT subjects. However, as it can be seen on Figure 1, this difference was found only among low anxiety subjects, while those with high anxiety scored similarly in both AT groups.

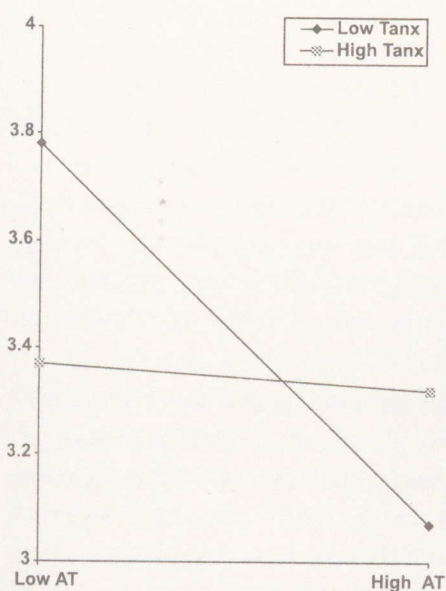


Figure 1. Differences in self-concept scores on Idealism between subjects with High and Low Trait Anxiety in Low AT and High AT groups

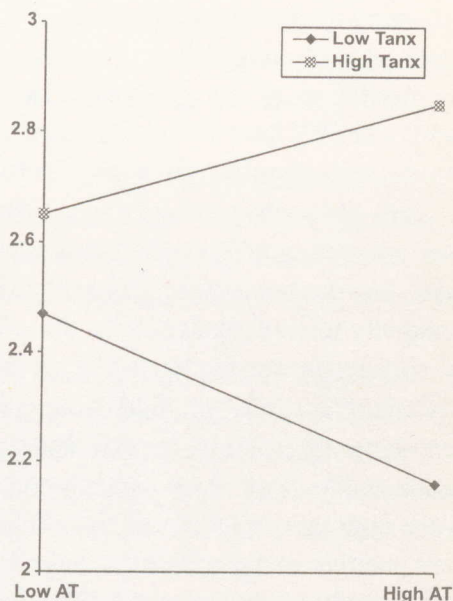


Figure 2. Differences in self-concept scores on Mastery of External World between subjects with High and Low Trait Anxiety in Low AT and High AT groups

Marginally significant interaction effect was found on scale CS-1 Mastery of the External World as well ($F_{cs-1} = 3.10, p < .09$). There was a significant main effect of Tanx group, with Low Tanx subjects reporting better adjustment than High Tanx subjects. As we can see on Figure 2, the difference in the CS-1 scores of high and low anxiety subjects was more pronounced in the High AT group than in the Low AT group.

DISCUSSION

In this study we compared the self-concept of high and low ambiguity tolerant adolescents. Although the two groups were more similar than different in their self-image characteristics, level of ambiguity tolerance made difference in adolescents' self-perceptions. High ambiguity tolerant students were more satisfied with their social self and saw their relations with peers, parents and the social objects as more favourable. On the other hand, low ambiguity tolerant students were more anxious and felt less comfortable with themselves and with their psychic life.

We also analysed the relations between ambiguity tolerance, anxiety and self-concept in adolescents. The positive association that was found between high ambiguity tolerance and low trait anxiety confirms the conceptual link between intolerance of ambiguity and high level of anxiety and therefore contributes to the validation of the ambiguity tolerance construct. Similarly, Kishore and Pandey (1980) have found, on a sample of undergraduate students, that higher anxiety was significantly related to higher intolerance of ambiguity.

Ambiguity tolerance and trait anxiety interacted in their effect on self-concept. This interacting effect manifested itself in the area of the coping self. On one hand, the way anxiety related to the self-image was different for high and low ambiguity tolerant students. On the other, the impact of ambiguity tolerance on the self-image was moderated by subjects' level of trait anxiety.

Ambiguity tolerant adolescents appeared less anxious and more self-confident. It seems easier for them to undergo the challenge of an uncertain social situation and to achieve a satisfactory level of adaptation to the ambiguous context of the interpersonal relationships. Their low anxiety significantly contributed to their positive social self: the social self of subjects who were low in anxiety and high in ambiguity tolerance exhibited the best of all self-evaluations. Being tolerant of ambiguity strengthens the idealistic concerns and the orientation towards universal humanistic values, especially among those of the students who have low anxiety. Similarly, ambiguity tolerance seems further contribute to the positive effect of low anxiety on feelings of mastery and well-functioning: adolescents who were low in anxiety and high in ambiguity tolerance could benefit of the best self-image in this area of adolescents' adjustment to the world.

Ambiguity intolerant adolescents, being more anxious and insecure, experience more difficulties in their psychological self-regulation. Higher anxiety contributes to their less positive self-image. However, it is not always the case. When idealism and humanistic ideals were concerned, these were low ambiguity tolerant and low anxiety subjects who showed poorest self-evaluation. These

adolescents have self-confidence and don't get easily disturbed; however, they lack the capacity to withstand uncertainty and tolerate the discomfort of ambiguous situations, events or ideas what seems to prevent them from embracing more vague abstract values and idealistic orientation.

To summarise, significant differences were found between high and low ambiguity tolerant adolescents in self-image characteristics related to social relationships, social orientations (attitudes towards humanistic values) and psychological functioning (psychopathology and mental health). It is in the same areas of life that Frenkel-Brunswik has identified the emergence of an "intolerance of ambiguity" personality variable. Her descriptions of the ambiguity intolerance syndrome and its manifestations (Frenkel-Brunswik, 1948, 1949) are very similar to the differences we have observed between adolescents who are low and high in ambiguity tolerance. That is how the present study corroborates the validity of the psychological construct of ambiguity tolerance in a different population and with different research methods.

Our results support as well the validity of Offer Self- Image Questionnaire as a measure of the multifaceted nature of the adolescent self. The observed relations between self-image, anxiety and ambiguity tolerance in adolescents further provide for the understanding that self-image is an important factor related to adolescent mental health and adjustment (Offer, Ostrov, Howard, 1981).

The findings in this study were in line with the conceptually described link between ambiguity tolerance and anxiety. Our results indicated as well that the association between these two variables was not very strong, and their effects on the dimensions of the self-image were differentiated as well. Further research is therefore needed which would contrast and compare ambiguity tolerance and anxiety and their role in individual's psychological functioning.

This research has demonstrated that ambiguity tolerance, anxiety and self-concept were interrelated. The processes underlying these relations are, however, unclear. In what way does ambiguity tolerance contribute to having a positive self-image? Why ambiguity tolerance affects some dimensions of adolescents' self-image but appeared unrelated to others? How anxiety intervenes in this process? On the other hand, the positive self-image, in particular the positive perception of one's social competence and coping, seems relevant to building up individual resources in face of uncertainty. Further research in this field could focus on the psychological mechanisms underlying the development of ambiguity tolerance and the ways ambiguity tolerance influences the psycho-social adjustment and self change in adolescents. Investigating the interaction between ambiguity tolerance and self concept could also contribute to a better understanding of the positive per-

sonality development and its foundations in adolescence.

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APPENDIX

Offer's Self - Image Questionnaire

Description of the scales

PS-1 Impulse control - well developed strong ego apparatus to delay gratification and to ward off the various pressures in the internal/external environments *VS* poorly organised defensive structure, low frustration tolerance;

PS-2 Emotional tone - affective harmony in the psychic structure, ability to experience many affects satisfactorily, relatively stable feelings *VS* poor affective control, great emotional fluctuation;

PS-3 Body & Self -image - well structured self-concept with well-defined body boundaries *VS* confusion about body boundaries or awkwardness about body changes;

SS-1 Social relationships - well developed capacity for empathy with others *VS* has not developed good object relations, loneliness and isolation;

SS-2 Morals - well developed sense of duty, responsibility and concern for others *VS* poorly developed superego or conscience;

SS-3 Vocational & Educational goals - works effectively within the educational system and makes responsible plans for the future *VS* failure in learning and planning for his vocational future;

SxS Sexual attitudes - relative openness to sexuality *VS* relatively conservative attitude, feelings and behaviour toward sexuality and the opposite sex;

FS Family relations - communicates openly with his parents *VS* does not get along well with them, major communication gaps;

CS-1 Mastery of the External World - well-functioning adolescent who is able to deal with a crisis *VS* inability to visualise the self in order to finish a task;

CS-2 Psycho-pathology - relative lack of overt symptomatology *VS* severe psycho-pathology on a clinical level;

CS-3 Superior adjustment - cope well and deal adequately with himself, significant others and his world *VS* poorly functioning coping system;

CS-4 Idealism - orientation towards *VS* avoiding of universal humanistic values.

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