

IDEAS OF CZECH ADOLESCENTS ABOUT THEIR FUTURE PROFESSION ASSESSED FROM THE PERSPECTIVE OF THEIR FAVORABLENESS AND COGNITIVE COMPLEXITY – RELATED TO SOME COMPONENTS OF UPBRINGING AND SELF-ESTEEM

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Abstract

In the presented research, the ideas of Czech adolescents about their future profession were researched. In the research, data from examinations of 17-year-old respondents were analyzed. The views of their future vocation as well as the vocations of significant others (mother, father, significant other) were acquired by a modified version of the REP-test and assessed from the perspective of their favorableness and cognitive complexity. The aim was to detect relations between the assessment of individual vocations, the components of upbringing analyzed by the Czech Questionnaire for Determining the Upbringing Style in Family (Čáp, Boschek) and self-esteem measured by Rosenberg Self-Esteem Scale. It was discovered that adolescents, while assessing their potential future vocation, are influenced by family upbringing- there is a strong influence of the factor of emotional warmth in family related to a positive relationship to the adolescents' vocational future. Moreover, it became evident that the more negative view the adolescents have of the individual vocations, the more differentiated they try to perceive them (higher cognitive complexity), probably in order to develop appropriate coping strategies in their future performance or to justify their negative assessment by a more precise, i.e. not "black and white" perspective. However, in a more detailed analysis, it was revealed that vocations viewed as strongly negative and strongly positive are perceived as less differentiated than vocations assessed in a neutral way, which can be explained by the hypothesis of emotional engagement.

Key words: cognitive complexity, future profession, REP-test, self-esteem.

Introduction

Vocational choice is a very important process within which young people decide about their near and distant future. It is one of the main developmental tasks in the adolescence period, and adolescents themselves are aware of this fact and think a lot about their future career (Nurmi, 1991). While older research reported optimistic orientation of a majority of adolescents regarding their future, later research (e.g. Liberska, 2008) implies that young people have considerable fears concerning a number of aspects of their future lives, whereas fears related to their future vocation are among the strongest ones.

Macek (2003) reports that in order to fulfill developmental tasks of choosing one's future vocation, it is necessary to have an idea of future priorities and goals, a clear hierarchy of values, reflect and stabilize one's own relationship to the world and life. The quality of vocational choice includes the necessity to make decisions that are timely, corresponding to the situation, aware of

all conditions and rational, in which the individual confronts his/her professional interests and qualifications with professional possibilities and restrictions and work opportunities. To make a good-quality decision, there must be a certain professional decision-making competence. Gati et al. (1996, qtd. acc. to Hijazi, Tatar, & Gati, 2004) introduced the taxonomy of three main categories of difficulties in vocational choice. The first category was the lack of preparedness. This category pertains to the lack of motivation to make the decision, general indecisiveness and irrational expectations pertaining to the decision-making process (e.g. thinking only about a single ideal career). The second category is a lack of information – information about the steps necessary to make a decision, information about oneself, alternatives and sources of information. The last category of difficulties is inconsistent information – it can come from unreliable sources, imply problems stemming from making a compromise and external conflicts (e.g. the influence of the so-called significant others).

According to the theories of forming the professional self-concept in the individual developmental stages (Super, 1980), a single type of behavior always prevails during a particular stage. In adolescence it is mostly exploration, whereas this behavior occurs before the terminal vocational choice and leads to its stabilization. Explorative behavior includes experimenting, exploring, searching, questioning and testing hypotheses; successful explorative behavior is manifested by a verbal expression of vocational choice. During adolescence, choices become (or should become) more specific, obvious and certain (Super, 1963).

The formation of occupational orientation and occupational identity is interrelated with forming the self-concept in career development. It is exactly in the period of adolescence that occupational self-concept becomes gradually clearer and is transformed into the terms of a vocation. Occupational self-concept is an active driving force in the process of career development – it includes the self-realization of professional interests, values, abilities, self-efficacy and aspirations (Vondracek & Skorikov, 1997). Super (1957) claims that there is a dynamic correlation between the personality self-concept, vocational choice and development. There are a number of factors that can determine the development of a professional career, including primarily occupational maturity, intelligence, special abilities, interests, values, needs, attitudes, personality traits, health condition and also the psychological condition at the moment. As vocational choice is a long-term matter, it is affected by experience from the entire period of adolescence as well as from a greater part of childhood (Vondracek & Porfeli, 2003). Therefore, major influences come in particular from family and school. Family has always played the crucial role in child's career development. Children are very often educated in this environment and also confronted with parental attitudes; they follow the examples and also indirectly explore the world of work via parental narrations and reactions to their own work experience. Parents transfer their experience with their own work, their own work values and behavior to their adolescent offspring by various means, e.g. they support such work aspirations and abilities that reflect their own work values (Hauser, Tsai, Sewell, 1983). An important, even though often neglected factor, closely related to family, is the pertinence to a certain social class (e. g. Super et al., 1996) and cultural environment (Nurmi, 1991).

Problem of Research

When examining research findings, it was focused on how adolescents perceive the vocation of their significant others and their own potential vocation. The way of how adolescents perceive these vocations depends on their system of aspects or categories characterizing their cognitive structure. To define the fundamental element of the cognitive structure, the notion of “personal construct” is usually used, derived from the semantically and methodologically relatively compact theory by Kelly (1955). Cognitive complexity is one's ability to assimilate, integrate, and use a variety of perspectives and a broad amount of information in developing the understanding of a topic (Granello, 2010). It depends on the number of constructs (differentiation) and the degree of their hierarchical classification (integration) and is a relatively constant characteristic (Labouvie-Vief, Diehl, 2000). Integration is only partially dependent on the number of differentiations. In this research, cognitive complexity will be understood in the sense of differentiation. Bieri (1955, in Skarżyńska, 1981) claims that the richer the system of perception categories, the greater the dif-

ferentiation of the world and its accurate perception. Persons with a complex cognitive structure less tend to see the world in dichotomic categories than persons with a simple cognitive structure, and describe others in less extreme terms. They see others in a less “black and white” way; they perceive and tolerate certain incongruence in their behavior and differentiate more finely between the individual aspects used for their description. Yet some further research demonstrated that the relation between cognitive complexity and accurate perception is more likely non-linear (Hastorf, Schneider, Polefka, 1970, in Skarżyńska, 1981). Persons who have a great number of perceptual categories at their disposal can be just as little accurate in perceiving others as persons who have only a small amount of perceptual categories.

Research Focus

In regard to the favorableness of assessed objects, research confirmed the presumption that cognitive images of persons viewed positively are more compact than cognitive images of persons evaluated negatively. This statement was explained by a number of hypotheses, for example by the fact that objects perceived negatively are more important from the regulatory perspective and are perceived in a more differentiated way than objects evaluated positively. However, this relationship was doubted by some other approaches. Research was conducted especially within examining social perception when assessed objects were other people; in our research, we concentrated on determining the relationship between favorableness and cognitive complexity in regard to assessed vocations.

The aim of the analysis of research data was to determine the relationship between some components of upbringing, self-esteem and views of the future vocation assessed from the perspective of their favorableness and cognitive complexity; apart from assessing the potential future vocation, also the assessment of mother’s vocation, father’s vocation and significant other’s vocation was examined.

Methodology of Research

General Background of Research

The data examined in the paper are from the international project ELSPAC (The European Longitudinal Study of Pregnancy and Childhood), the psychological part of which is carried out at the Institute for Research on Children, Youth and Family at the Faculty of Social Studies, Masaryk University in Brno. For this research, selected data from the examinations of respondents aged 17 years were analyzed. When examining research findings, the aim was to focus on how adolescents perceive the vocation of their significant others and their own potential vocation.

Sample of Research

Statistical data analysis was conducted on a sample of N=58 adolescents, as only those persons were selected for our analysis from the sample of 17-year-olds in whom there were available data from all three research methods.

Instrument and Procedures

To examine upbringing styles, the Questionnaire for Determining the Upbringing Style in Family (Čáp, Boschek, 1994) was used. The original questionnaire was used in a reduced form - 20 items were selected by item analysis, out of which 10 items for the component of emotional warmth and 10 items for the component of freedom, always in relation to assessing maternal and paternal upbringing.

Self-esteem was measured by Rosenberg Self-Esteem Scale (1965). It is a one-dimensional scale examining the global relationship to self. In the original version, the scale is composed of

10 items in relation to which respondents express their degree of agreement/disagreement. In the ELSPAC research, the method was shortened based on an item analysis and used in a 9-item version.

To determine the views of the future vocation, a modified version of the REP-test (Kelly, 1955) was used in combination with Osgood's semantic differential (Osgood et al., 1957). The assessed elements were: my future vocation (that I will probably have), mother's vocation, father's vocation and significant other's vocation.

Data Analysis

The REP-test method was used in following way. The mutual comparing of all elements with one another in pairs (a total of 6 possible pairs of elements – individual vocations) enabled us to determine “private” constructs for each person in our sample that this person used to assess the given vocations – in each pair they were assigned to give a characteristic in which both assessed vocations resemble each other. In the next step, the acquired constructs (different for each person) were used to assess the examined elements (vocations) by means of an adaptation of the semantic differential technique – to the acquired 6 constructs specific for each person, five-point scales were always assigned (1-the assessed vocation has the given characteristic in a minimal degree; 5 – the assessed vocation has the given characteristic in a maximum degree) on which the examined persons were to assess all the evaluated vocations (my future vocation, mother's vocation, father's vocation, significant other's vocation).

Further on, the assessments of the individual vocations were analyzed from the perspective of their favorableness and cognitive complexity regardless of the particular content of the individual constructs. Favorableness is given by the sum of all scale values for the examined vocations (in constructs regarded by the respondents as negative, the scale values were inverted in the calculation) – the higher the total score, the more favorably the given vocation was assessed. Cognitive complexity was examined by a procedure by Bieri et al. (1966) – the measurements on individual scales (constructs) were compared with one another in regard to the individual vocations. The more the assessments between the individual scales mutually differed, the greater the cognitive complexity. Scoring was achieved in the following way: we counted 1 point if the two compared scales had the same values ticked and 0 points if these values differed. When using six five-point scales, there were 15 possible comparisons. The extreme score is achieved if the respondent ticks the same value on all scales (score 15) or if he or she chooses a different value on each scale (score 0). A relatively low score indicates cognitive complexity, a relatively high score cognitive simplicity.

The aim was to find the correlations between favorableness and cognitive complexity of assessed vocations and some components of upbringing style and self-esteem.

Results of Research

In Table 1, there are Pearson's correlation coefficients between the examined variables – overall cognitive complexity (cognitive complexity on the whole for all 4 assessed vocations), overall favorableness (favorableness on the whole for all 4 assessed vocations), the component of freedom in the upbringing (on the whole for mother and father), the component of emotional warmth (on the whole for mother and father) and self-esteem. It is evident that out of both examined components of upbringing, vocational assessment is affected mainly by the component of emotional warmth correlating positively with the favorableness of assessing all vocations – the warmer the upbringing in family, the more positively adolescents evaluate their parents' and significant other's vocation as well as their potential future vocation.

Moreover, it was found out that the overall favorableness (i.e. the favorableness of the view of all vocations assessed) correlates negatively with the overall cognitive complexity.

Table 1. Intercorrelation between the overall cognitive complexity, overall favorableness, overall freedom, overall emotional warmth and self-esteem (N = 58).

	Overall cogn. compl.	Overall favorableness	Overall freedom	Overall emotional warmth	Self-esteem
Overall cogn.compl.	–	-0.48**	0.11	-0.18	0.03
Overall favorableness		–	-0.15	0.27*	0.19
Overall freedom			–	0.25	-0.13
Overall emot. warmth				–	0.39**
Self-esteem					–

** $p < 0.01$; * $p < 0.05$

In Table 2, the results are presented in greater detail; both upbringing components are examined separately for mother and father. It is clear that the overall favorableness of the vocations assessed is related mainly to mother's emotional warmth, i.e. by her accepting upbringing, mother makes adolescents adopt a positive view of their significant others' vocation and their own potential future vocation.

Table 2. Intercorrelation between the overall cognitive complexity, overall favorableness, freedom on the part of father and mother and emotional warmth on the part of father and mother (N=58).

	Freedom father	Freedom mother	Emotional warmth father	Emotional warmth mother
Overall cognitive complexity	0.05	0.15	-0.20	-0.08
Overall favorableness	-0.07	-0.18	0.16	0.30*
Freedom father	–	0.57**	0.46**	0.06
Freedom mother	0.57**	–	-0.02	0.17
Emotional warmth father	0.46**	-0.02	–	0.39**
Emotional warmth mother	0.06	0.17	0.39**	–

** $p < 0.01$; * $p < 0.05$

In further analysis, attention was paid to verifying the presumption that the relationship between the favorableness of assessment and cognitive complexity may possibly be non-linear. In Table 3, there are distributions of scores of the overall cognitive complexity dependent on self-esteem and the favorableness of assessing their own potential future vocation. By median bisection, two levels of the self-esteem variable were formed; three levels of the favorableness variable were formed by quartile division. According to the self-esteem factor and the favorableness of assessment, we then distributed the scores of cognitive complexity.

Table 3. Distribution of scores of the overall cognitive complexity depending upon self-esteem and favorableness of assessing the future vocation.

	Self-esteem high	Self-esteem low	Total
Favorableness high	M=24.20 SD=18.43 N=5	M=33.25 SD=4.99 N=4	M=28.22 SD=14.21 N=9
Favorableness middle	M=43.60 SD=5.91 N=20	M=42.14 SD=7.29 N=14	M=43.00 SD=6.45 N=34
Favorableness low	M=46.43 SD=4.20 N=7	M=40.50 SD=6.39 N=8	M=43.27 SD=6.11 N=15
Total	M=41.19 SD=11.19 N=32	M=40.27 SD=7.21 N=26	M=40.78 SD=9.54 N=58

Table 4 shows that the interactional effect of both examined independent variables is insignificant and so is the stand-alone effect of the self-esteem variable.

Table 4. Analysis of variance ANOVA 3x2 for the distribution of data in Table 3.

Source of variability	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2010.308a	5	402.06	6.58	0.00	.387
Intercept	63096.36	1	63096.36	1031.84	0.00	0.95
Self-esteem	3.30	1	3.30	0.05	0.82	0.00
Favorableness	1543.39	2	771.70	12.62	0.00	0.33
Self-esteem X Favorableness	316.86	2	158.43	2.60	0.09	0.09
Error	3179.78	52	61.15			
Total	101625.00	58				
Corrected Total	5190.086	57				

a. R Squared = .387 (Adjusted R Squared = .328)

Table 4 shows that the interactional effect of both examined independent variables is not significant and neither is the independent effect of the self-esteem variable. However, the effect of the favorableness variable is highly significant ($F=12.62$, $p < 0.00$) – the favorableness variable turned out to have a statistically significant influence on cognitive complexity (differentiation of assessments). In the group with above-average favorableness of assessments, cognitive complexity is higher (the lower the score, the higher the cognitive complexity) than in groups with average or below-average favorableness.

Table 5 shows that there are statistically significant differences between the groups with high and average favorableness of assessment and the group with high and low favorableness of assessment; the difference between the group with average and low favorableness of assessment is not of statistical significance. Therefore, if favorableness is low or average, the differentiation of assessments is similar; however, differentiation is considerably higher in the group with an above-average favorable assessment. Hence the emotional engagement hypothesis was not confirmed in our research.

Table 5. Pairwise comparisons for dependent variable cognitive complexity.

		Mean Difference (I-J)	Std. Error	Sig.a	95% Confidence Interval for Differencea	
					Lower Bound	Upper Bound
Favorableness high	Favorableness low	-14.74*	3.31	.00	-21.39	-8.09
	Favorableness middle	-14.15*	2.96	.00	-20.08	-8.22
Favorableness low	Favorableness high	14.74*	3.31	.00	8.09	21.39
	Favorableness middle	0.59	2.44	.81	-4.30	5.49
Favorableness middle	Favorableness high	14.15*	2.96	.00	8.22	20.08
	Favorableness low	-0.59	2.44	.81	-5.49	4.30

Based on estimated marginal means * The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Discussion

It was found out that when assessing potential future vocation, adolescents are affected by the upbringing style in family. All the above-mentioned factors of emotional warmth in family are significant – related to the positive relationship to adolescents' vocational future. Therefore, it is likely, as is claimed in literature (Hauser, Tsai, Sewell, 1983), that parents with the emotionally warm upbringing style could support such work aspirations in their children that reflect their own work values and work experience; hence adolescents think highly of the parental occupation and simultaneously also their own considered future occupation. Thus, the importance of supporting and positive emotional upbringing in family proves to be important for the formation of a positive relationship of adolescents both to significant others and their future.

The differentiation of this assessment is in the strong negative relationship with its favorableness. Similarly to research of social perception when evaluating other people, it is also confirmed that the more negatively objects are assessed, the more we perceive them in a differentiated way; hence we evaluate them more accurately. It is possible that also for the perception of objects other than other people, we can apply the so-called vigilance hypothesis (Miller and Bieri, 1965, in Papica, 1979), i.e. that adolescents can find the negatively perceived vocations as self-threatening and they dedicate more time to their analysis to develop suitable defense strategies in potential coping with them. However, a more probable explanation could be the explanation by means of the so-called justification hypothesis (Soucar, DuCette, 1972), i.e. that to justify a negative assessment of individual vocations, a more accurate and differentiated view is necessary. If the accuracy of evaluation regarding the use of the semantic differential scale is considered, it is necessary to take into the account that the accuracy of evaluation can be affected by the centrality of some characteristics in the list of bipolar adjectives, i.e. their tendency to show in the evaluation a higher intercorrelation with other characteristics. However, that can be related to cognitive complexity - Bowler, Bowler and Phillips (2009), when examining the correlation between cognitive complexity and the so-called Big Five Model, found out that the personality of individuals with a lower level of cognitive complexity is best reflected in the three-factor model, while the personality of individuals with a higher level of cognitive complexity is best described by the seven-factor model.

Cognitive complexity is understood as a relatively stable characteristic of an individual and it must be paid a great attention in the educational process, i.e. also in career counseling. Bullough et al. (2008) discovered that differences in cognitive complexity are connected with expectations,

understanding educational problems and using proofs to verify statements in class. Moreover, it is also essential to point out that cognitive complexity can be further developed, as is shown by Granello (2010) on the example of non-professional counselors. Thus it is possible that the ability of differentiated evaluation grows with age, and this is so regarding both negatively and positively evaluated objects.

According to the emotional engagement hypothesis (Harvey, Reich, Wyer, 1968, in Skarżyńska, 1981), emotional engagement leads to the overflow of the perceptual field, which results in less accepted information and a reduced ability to differentiate objects – objects evoking strong positive or negative emotions are thus perceived in a less differentiated way than neutral objects. Our presumption of nonlinearity between the favorableness and cognitive complexity of the assessment was confirmed only partially. A series of contradicting research findings over the past decades may be attributed to various explanations of cognitive complexity itself. In this research, it was conceived as the differentiation of evaluation, but some authors (e.g. Van Hiel, A., Mervielde, 2003) emphasize that in the research of cognitive complexity, its second aspect must be taken into the account as well, i.e. integrity of constructs and hence certain abstractedness of thinking. This concept could serve as the basis for further research.

Conclusions

It was found out that when assessing their potential future vocation, adolescents are affected by the upbringing in family. It is especially the factor of emotional warmth in family that is manifested the most strongly (more likely mother's emotional warmth) related to the positive relationship to adolescents' vocational future demonstrated by the positive assessment of their own potential vocation.

The crucial aspect of assessing the potential vocation by adolescents is the differentiation of this assessment referred to as cognitive complexity. This variable proved to have a strong negative relationship with the favorableness of the assessment. When assessing the individual vocations, older research findings from the area of social perception were confirmed – the more negatively adolescents view the individual vocations, the more they try to perceive them in a differentiated way in order to develop suitable coping strategies for their future performance or to justify their negative assessment by a more accurate, i.e. not “black and white” perspective.

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