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**RELATIONSHIPS BETWEEN EMOTIONAL INTELLIGENCE
AND VOCATIONAL ORIENTATION IN PREADOLESCENCE:
GENDER DIFFERENCES**

Simona Butnaru (a)*
*Corresponding author

(a) Alexandru Ioan Cuza University of Iasi, Romania, scraciun@uaic.ro

Abstract

The aim of this study was to explore the relationships between emotional intelligence (EI) and vocational orientation in preadolescence and gender differences within these relationships. In this study participated 116 eight grade students from urban area (46.6% female). The data referring to vocational interests were collected using Vocational Interests Inventory based on Holland's hexagon model, and completed options for the preferred future studies and profession. Based on individual scores in vocational interests, indicators of vocational choice (consistence, differentiation and congruence) were computed. Emotional Intelligence Test for children, adapted from Bar-On and Goleman was administered to measure the emotional development. Positive correlation was found between EI and differentiation of interests. Gender differences were revealed: girls obtained higher scores in EI, in social and artistic interests, and in differentiation of vocational profile, while boys had higher scores in realistic interests. Results indicated significant effect of interaction between gender and EI on congruence: girls with a medium and high level of EI expressed more congruent professional choices than boys in the same condition, but boys with low-level of EI, expressed more congruent professional choices than girls in the same condition. Despite of small number of respondents participating in this study, the results endorse the necessity of EI, the importance of more permissive socialisation encouraging boys and girls to shape their vocational interests based on their aptitudes, and the importance of vocational counselling services providing students professional help to make more congruent vocational choices.

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Keywords: Emotional intelligence, vocational orientation, interests, preadolescence, gender differences.



1. Introduction

1.1. Emotional intelligence

Emotions are organized responses, crossing the boundaries of many psychological subsystems, including the physiological, cognitive, motivational, and experiential systems (Salovey & Mayer, 1990, Mayer & Salovey, 1997), which arise in response to internal or external events and have positive or negative meaning for the individual. The emotional intelligence (EI) concept was initially defined as abilities to perceive, appraise, and express emotions (Salovey & Mayer, 1990). The theoretical models explaining the EI can be organized in two complementary types: ability models or trait models (Petrides & Furnham, 2000). The former approach views EI as a set of cognitive-emotional abilities best measured by maximum performance tests that require understanding and/or use of emotions (e.g., how to resolve a conflict with a colleague). The latter approach employs self-report or observer ratings, since EI is viewed as a constellation of emotion-related self-perceptions and dispositions (Bar-On, Brown, Kirkcaldy, & Thome, 2000).

In the theoretical model of Bar-On (2006), emotional intelligence is conceptualized as a blending of emotional and social competences that determine the way in which one relates to oneself and to others and is able to deal with environmental pressures and demands. Emotional intelligence is considered an important factor in determining the capacity to be successful in life and the overall well being of individuals. Persons with high emotional intelligence have higher abilities of self-emotional appraisal, others' emotional appraisal, regulation of emotion and use of emotion (Goleman, 1995); they have a greater capacity to integrate emotional experience with thoughts and actions. For this reason, emotional intelligence may have a role in the processes of career exploration and career decision-making.

1.2. Vocational orientation in preadolescence

Vocational development during preadolescence corresponds to the transition between growth and exploration stage of career development, according to Savickas (2002). When development is on schedule, preadolescents approach the tasks of the exploration stage with the concern for the future, a sense of control over it, adaptive conceptions about how to make career decisions, and the confidence to engage in designing their occupational future and executing plans to make it real. During the years of exploration, people learn who and what they might become. Gradually, they transfer the vocational self-concept into a vocational identity. Adolescents make occupational choices. The prominent behaviour of exploration stage is exploration about the self and about occupations in order to make the matching choices that construct a career (Savickas, 2002).

The theory of personality-environment fit of John Holland 1985, Spokane, Luchetta and Richwine, 2002) describes six types of personality and work environments: realistic, investigative, artistic, social, enterprising, and conventional (RIASEC). Realistic personality possesses mechanical or athletic abilities, values money, power, status, and is inclined to be asocial, genuine, materialistic, persistent, practical, uninvolved. Investigative personality has mathematical and scientific ability and lacks leadership ability; values science; is inclined to be analytical, cautious, critical, complex, curious, independent, rational, precise, introspective. Artistic personality possesses artistic or musical abilities; values aesthetic qualities; is inclined to be emotional, imaginative, expressive, idealistic, impulsive, original, sensitive. Social personality has social competence likes to help other; values social and ethical activities; is inclined to be

cooperative, emphatic, friendly, helpful, idealistic, patient, tactful. Enterprising has leadership and speaking skills; values political and economic achievement; is inclined to be adventurous, agreeable, ambitious, energetic, extroverted, optimistic, and self-confident. Conventional possesses clerical and numerical abilities; values business and economic achievement; is inclined to be conforming, conscientious, defensive, inflexible, methodical, obedient, orderly, thrifty, unimaginative.

Each individual profile includes aspects from many or all types of interests. Also, the profile is characterized by different degrees of congruence, consistency, and differentiation (Spokane, Luchetta and Richwine, 2002). Congruence taps the degree of fit between an individual's personality and the type of work environment in which he or she currently resides or anticipates entering. An example of a highly (though not completely) congruent person would be an individual who had a three-letter code of SEI and is considering a career as a hospital administrator (classified as SER). Consistency is a measure of the internal coherence of an individual's type scores. Consistency is calculated by examining the position of the first two letters of the three-letter code on the hexagon. The closer the position, the more consistent is the individual code. Types that are adjacent to each other on the perimeter of the hexagon (for example, Realistic and Investigative) are more harmonious than types that are opposite each other on the perimeter of the hexagon (for example, Enterprising and Investigative). An individual with an I-E type might experience a chronic discomfort between Enterprising and Investigative interests, which are not often found together and require nearly mutually exclusive repertoires of behavior.

Differentiation is a measure of the crystallization of interests and provides information about the relative definition of types in an individual's profile. Typically, differentiation is defined as the highest minus the lowest score among the six types or among the three scores making up the three-letter code. The highest differentiation possible would be a high level of resemblance to one type alone, whereas the lowest would be a perfectly flat profile with identical scores on all six types.

1.3. The role of emotions in vocational orientation

The career development literature has increasingly focused on the role played by emotions in the career decision-making processes (Emmerling & Cherniss, 2003, Bubić & Ivanišević, 2016, Di Fabio & Pallazzeschi, 2009, Di Fabio & Kenny, 2012, Kanonuhwa, Rungani, & Chimucheka, 2018). Bubić & Ivanišević (2016) showed that emotional competence is a significant predictor of career decision self-efficacy in eight graders. The transition to high school is associated with emotional distress related to career indecision. According to these authors, girls experience more career concern, despite the fact that they do not differ from boys with respect to career decision self-efficacy and career decisiveness. Emotions, in addition to cognition, represent an important determining factor in career choice and career behaviour of students during tertiary education (Di Fabio & Palazzeschi, 2009). The authors found that lower emotional intelligence is tied to greater lack of readiness for career decisions. The decision difficulties of persons with less emotional intelligence also seem to be tied to lack of information and perception of inconsistent information. The emotional intelligence dimensions (especially intrapersonal and, to a lesser degree, stress management) are strongly and negatively tied to lack of readiness in making a career decision. Di Fabio & Kenny (2012) found the the emotional skills promote adaptive career decision making style in high school students.

Previous researches in career development field related EI with prominence of some types of vocational interests. For example, Kanonuhwa et al. (2018) studied the relationship between emotional intelligence and entrepreneurship as career choice, in university students. The authors found a positive association between emotional intelligence and intention to become entrepreneur.

2. Problem Statement

Based on previous research results, this study explores the role of emotional intelligence in vocational orientation of preadolescents, focusing on gender differences. Giving the importance of EI in obtaining success through all life, including in career (Goleman, 1985), and the first vocational choice eight graders must to do at finish of secondary school, we focused in this research on the emotional intelligence in relation with vocational interests and choices in eight graders. We focused on gender differences because literature (Bubić & Ivanišević, 2016) indicated that girls experience more concern about career choice, although they have the same level of career decision self-efficacy as boys. In line with Holland's vocational theory (1985) and Spokane et al. (2002), we considered important the congruence, the consistence, and the differentiation of vocational profile for the future professional satisfaction. For these reasons we related EI with vocational interest, vocational choices in transition to secondary to high school, focusing on gender differences.

3. Research Questions

The main questions of this research were:

1. There is a relationship between the level of emotional intelligence and the level of vocational interests?
2. There is a relationship between the level of emotional intelligence and the characteristics of vocational profiles (consistency, differentiation, congruence)?
3. There are gender differences in emotional intelligence development?
4. There are gender differences in vocational orientation of preadolescents?
5. Does gender moderate the relationship between emotional intelligence and the congruence of vocational preferences of preadolescence?

4. Purpose of the Study

The purpose of the study was to measure the level of emotional intelligence, vocational interests, and educational and professional expectations in preadolescent students, and to test the relationships between these variables upon gender.

5. Research Methods

5.1. Participants

In this study participated 116 eight graders from two secondary schools, 46.6% girls. Instruments were applied during the school program, within a 50 minutes counselling activity. Individual results were communicated to students

5.2. Instruments

Emotional intelligence. Emotional Quotient Inventory (Roco, 2001), adapted from R. Bar-On and D. Goleman, was administered to measure abilities to cope with 10 different situations. Subjects had the choice of four responses, denoted by a, b, c, and d, as being the closest to the general way they respond. Example of item: The person is in a difficult situation that threatens his life. Three of the variants of answer relate to the ability to be aware of personal emotions and of affective situation and to respond appropriately, balanced to unusual, critical, stressful situations. The quoting of the answers was done by awarding 20 points, 5 points, and 0 points, respectively, depending on the chosen option. Points gathered for the 10 responses was added and the meaning of the global score was established as follows: 100 points - below average, between 100-150 points - average, over 150 - over average and 200 - exceptionally. The Cronbach's alpha for this instrument was 0.6.

Vocational interests were measured through a translated and adapted version of Self-Directed Search (Holland, 1994) consisting in 120 questions. Participants evaluated their vocational interests toward realistic, investigative, artistic, social, enterprising and conventional work environments. For each question, respondents awarded 2 points for "I like this activity", 1 point for „this activity is indifferent to me" and 0 points for „I don't like this activity". Examples of items are Do you like to fix car engines? (realistic), to do scientific experiments (investigative), to sing on stage (artistic), to help people with physical disabilities prepare for a job? (social), to run an administrative department of an organization (enterprising), and to record a company's financial data (conventional). For each domain was calculated the total score. Cronbach's Alpha coefficient for this instrument was 0.63.

Individual profile has been outlined based on the higher three scores in descending order. In performing the statistical processing, for the three characteristics of personality: consistency, congruence and differentiation, we have always been reported to the table with the correspondence interest – occupational type, adapted and translated by Maria Klein upon the questionnaire of Harrington and O'Shea (2000) and to the Holland's Hexagon. The consistency was analyzed by referring to Holland's hexagon. A large consistency involved areas of interest represented on the same side of the hexagon, and a small consistency has meant that the three areas of predominant interest are in opposition to the hexagon.

The differentiation of personality profile was calculated by subtracting from the highest score the smallest of the three predominant areas of interest. Thus, if a student has obtained the scores R=1, I=27, A=22, S=5, E=26, C=8 in the six domains, the difference between the highest and the lowest score of the three main areas of interest IEA is $27-22 = 5$. The small score shows that this pupil has two personality patterns with common features. The difference between the six areas of interest we achieved, lowering from the highest score, i.e. 27, in this case, the lowest score obtained from the six columns, 1. The 26 difference shows that this pupil has a great interest in a certain professional domain.

In order to compute the congruence between vocational interest and the desired profession and the preferred educational pathway we demanded to participants to declare what occupation they would like to have in the future and which educational pathway they would like to follow. The congruence was computed based on Holland's hexagon and the table above mentioned. A great congruence of the profession implies that the two areas of interest with which the highest scores are obtained correspond to the codes in the table. If a student gets a Conventional-Enterpreneurial Code and wants to become a lawyer, the congruence will be low because by referring to the table, this student would fit according to the field of interest,

administrative activities, data analysis. Similarly, we reported in the case of the congruence of vocational interests with the preferred educational pathway.

6. Findings

Descriptive statistics (Table 01) indicated that participants had a level of EI below mean ($M=93.27$, $SD=34.45$). Social, Enterprising and Investigative were the interests with highest scores in our sample. Vocational profiles of participants had generally good level of consistency, congruence and differentiation.

First question of this study was if there is a relationship between the level of emotional intelligence and the level of some vocational interests. The data indicated a weak but significant negative association between EI and realistic interests ($r=-.19$, $p<0.05$, $N=116$).

Second question of this study was if there is a relationship between the level of emotional intelligence and the characteristics of vocational profiles (consistency, differentiation, congruence)? The data indicated a small but significant association between EI and the differentiation between six domains of vocational profile ($r=.25$, $p<0.01$, $N=116$).

Third question of this study was if there are gender differences in emotional intelligence development. Results indicated significant gender difference: girls obtained higher levels of emotional intelligence ($t(114)=2.36$, $p<.05$, M girls= 101.2 , $SD=29.73$, M boys= 86.37 , $SD=36.95$).

Table 01. Descriptive statistics N, Minimum, Maximum, Means, SDs

	N	Minimum	Maximum	Mean	Std. Deviation
EI	116	20.00	170.00	93.2759	34.45289
Realistic	116	0.00	34.00	4.3966	5.70565
Conventional	116	0.00	38.00	12.9224	8.48749
Social	116	0.00	36.00	16.1293	9.51660
Investigative	116	0.00	38.00	15.6897	11.20203
Enterprising	116	0.00	34.00	16.0259	7.92296
Artistic	116	0.00	35.00	11.6983	9.01132
Consistency	116	1.00	3.00	2.4569	.65132
Differentiation 3	116	1.00	32.00	11.6034	7.51217
Differentiation 6	116	5.00	38.00	22.3017	7.74060
Congruence P	91	0.00	3.00	2.1758	1.02841
Congruence S	91	0.00	3.00	2.3516	.88661

Differentiation 3 – the difference between the highest and the lowest score of the three main areas of interest; Differentiation 6 - The difference between the highest and the lowest score of the six areas of interest; Congruence P – the fit between the preferred profession and main vocational interests; Congruence S - the fit between the preferred educational pathway and main vocational interests.

Fourth question of the study was if there are gender differences in vocational orientation of preadolescents? Results indicated gender differences: girls obtained higher scores in social interest ($t(114)=4.55$, $p<0.01$), in artistic interest ($t(114)=3.7$, $p<0.01$) and showed more congruence between their

educational expectations and the vocational interests than boys ($t(70)=2.48, p<0.05$). Boys obtained higher score in realist interest ($t(102.8)=-4.25, p<0.01$) than girls.

The fifth question of this study was if gender moderates the relationship between emotional intelligence and the congruence of vocational preferences of preadolescence. EI negatively correlated with realistic interest in girls' sample, but not in boys' sample.

Univariate ANOVA indicated significant effect of interaction between gender and EI on congruence ($F(2, 85)=3.325, p<0.05$): girls with a medium and high level of EI expressed more congruent professional choices than boys in the same condition, but boys with low-level of EI, expressed more congruent professional choices than girls in the same condition (Figure 01).

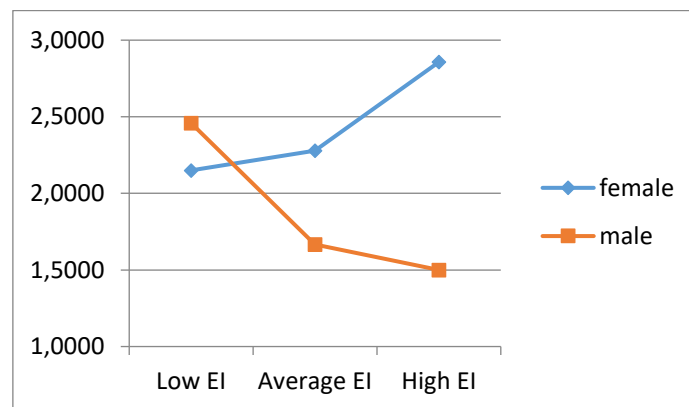


Figure 01. Interaction effect of emotional intelligence with gender on the congruence between professional aspirations and vocational interests

7. Conclusion

This study investigated the relationship between emotional intelligence and vocational orientation in preadolescents. Results indicated that students with realistic vocational interests have lower level of emotional intelligence. In line with previous studies results (Di Fabio, Palazzeschi, Asulin-Peretz, & Gati, 2013), in this sample, students with higher level of EI have more differentiated vocational profile.

Our data indicated gender differences are in EI: girls were more able in solving emotional situations than boys, have more prominent social and artistic interests, while boys have higher realistic interests. Emotional intelligence has different effects on congruence of professional aspirations with vocational interests in boys and girls. In girls sample, the higher is EI, the higher is the congruence. In boys' sample, the congruence decrease while EI increase. Despite of small sample participating in this study, the results endorse the necessity of training of EI, the importance of more permissive socialisation encouraging boys and girls students to shape their vocational interests based on their aptitudes, and the importance of vocational counselling services providing students professional help to make more congruent vocational choices.

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