Chapter #27

PERSONALITY TRAITS AND LOCUS OF CONTROL AS PREDICTORS OF STUDENTS' SELF-EFFICACY

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ABSTRACT

The research problem was to determine whether the students' self-efficacy can be predicted based on their personality traits and locus of control. The sample consisted of 200 high school students (100 females), aged 18-19. Personality traits were defined in accordance with the Big Five plus Two model (Smederevac, Mitrović, & Ćolović, 2010) supposing the existence of seven broad personality dispositions: extraversion, neuroticism, openness to experience, conscientiousness, aggressiveness, positive valence, negative valence. The LOC scale (Bezinović, 1990) was used to determine whether a person believes that he/she is responsible for his/her behavior and actions or that is due to external circumstances. Self-efficacy (social, academic, and emotional) was measured by the questionnaire SEQ-C (Muris, 2001). The data were processed by the multiple regression analysis procedures, firstly including personality traits as predictors and secondly adding locus of control in the model. Extraversion and locus of control were shown as significant predictors of social self-efficacy of students. Conscientiousness, negative valence, openness and locus of control were predictors of students' academic self-efficacy. Emotional self-efficacy of students could be predicted by positive valence and aggressiveness. The results showed that personality characteristics, especially traits, were better predictors of social and academic self-efficacy than of emotional one.

Keywords: self-efficacy, personality traits, locus of control, students, regression analysis.

1. INTRODUCTION

Generally speaking, self-efficacy refers to the ability to achieve desired results. The meaning of this notion is determined by the words that are at its core: English *self* + Latin *efficax* i.e. effective, from *efficere* that means to accomplish, from *facere* to do (Colman, 2006). The concept became widely known in the 1980s and 1990s, largely through the influence of psychologist Albert Bandura and his social-cognitive theory of behavioral change (Bandura, 1977; 1997). Self-efficacy also refers to the person's confidence in his/her own capabilities of organizing and executing the actions needed to achieve a specific outcome (Larsen & Buss, 2002). The actual abilities, although necessary, are not sufficient precondition to perform certain action or to execute a specific task. For a successful functioning, it is necessary to have a belief that the existing abilities can be used effectively. Bandura emphasized that it is important to distinguish the real abilities of a person from what he/she believed and thought about his/her abilities and possibilities. It was the reason to introduce a distinction between notions of someone's real efficacy and perceived self-efficacy that includes beliefs about one's ability or competence to bring about interested results.

According to Bandura's theory, self-efficacy is considered as the crucial mechanism of behavioral change. It produces cognitive event that initiate behavior intended to achieve certain goal. On the other hand, this cognitive event is influenced by experience of mastery

arising from previous effective performance. Also, the sources of self-efficacy beliefs are vicarious experiences, verbal persuasion and emotional states. It should be kept in mind that there is an interaction between personal (cognitive) factors, individual's behavior and environmental conditions (Bandura, 1997). Individual's beliefs in his own efficacy determine how environmental conditions will be perceived and evaluated. Depending on this perception, certain activities and amount of effort will be initiated. Bandura proved that people tend to avoid activities that exceed their capabilities, while they undertake actions that they believe are consistent with their own capabilities. Such tendencies could be obtained in teachers as well. For example, there are research findings (Jaggernauth & Jameson-Charles, 2016) showing that lower self-efficacy in primary school math teachers correlates with higher avoidance of dealing with mathematics.

Bandura (1999) emphasizes the importance of self-efficacy as a mediator of a cognitive activity. People who have a strong sense of self-efficacy attribute their failure to an insufficient investment of effort and are more inclined to invest even greater efforts in overcoming difficulties. They are manifesting a higher cognitive ingeniousness, flexible strategy and efficiency in handling the external environment. People who have a doubt in their own effectiveness in confronting difficulties (because their perfectionism or past failures) reduce the invested effort and give up easily. They visualize a failure scenario that influences the behavior leading to poor outcomes.

Self-efficacy has firstly been understood as a generalized construct. Having in mind the complex structure of self-efficacy and its relation to individual's perception of his/her own efficacy in different domains of functioning or different tasks fulfilling, recent conceptions hold that concept as multidimensional. Some authors (Bandura, 1997; Muris, 2001) consider it to be a multifaceted concept including a differentiated set of self-beliefs linked to variety of personal functioning domains. The practical consequence was that the researchers in this field started making instruments for assessing self-efficacy in certain domains (Bandura, 2006; Muris, 2001;Skaalvik& Skaalvik, 2007; Smith & Betz, 2002). Although self-efficacy is differentiated, specific efficacy beliefs may co-vary because successful performance in different domains is partly managed by higher-order self-regulatory skills.

2. SELF-EFFICACY AND RELATED PSYCHOLOGICAL CONSTRUCTS IN EDUCATIONAL SETTINGS

In this part of the study, some factors related to the effectiveness and experience of self-efficacy in the educational context will be mentioned. Given the complexity of the self-efficacy construct and its implications for behavior, as mentioned above, different directions of study are possible. This will not be a systematic overview of recent studies in the field. The intention is to make a brief overview of some research findings reported during the last decade.

It is important to point out several key assumptions about self-efficacy. Firstly, self-efficacy is considered to be a multi-dimensional construct, and that is why it was decided to examine a few domains of self-efficacy instead of dealing with generalized self-efficacy. Also, previous studies showed that dimensions of self-efficacy are associated with some inner and stable characteristics of a person, which have potential to govern his/her behavior (Djigić, Stojiljković, & Dosković, 2014; Stojiljković & Todorović, 2017). Considering all above mentioned, it is clear that self-efficacy could be based both on personality traits and real abilities.

According to Bandura, for a successful functioning, it is necessary that a person hasa belief that he/she can use his/her existing abilities (and dispositions) effectively. In relation to that, it is worthy to emphasize that individual's self-concept, self-esteem and other constructs describing the way person is seeing oneself, play an important role in explaining overall behavior. This is especially true in the academic context and in explaining the connection between the image of oneself, experiencing one's own efficiency and real academic achievement (Gigić, Zlatanović, Stojiljković, & Đigić, 2016; Hamachek, 1995; Zlatković, 2007).

As Bandura reported, people who doubt their own effectiveness in confronting difficulties give up easily and thus may become some kind of 'looser'. That could lead to learned hopelessness. It is why is important to study the role of factors such as optimism and pessimism, and their relationship with self-efficacy and academic achievement (Gigić et al., 2016).

Another construct included in this research is the locus of control that refers to the extent to which people believe they can control the events in their lives, and what factors they attribute to the success or failure of any significant activity (Havelka, 1992). Kirkpatrick, Stant, Downes and Gaither (2008) define it as a dimensional construct representing the degree to which individuals perceive reinforcing events in their lives to be the result of their own actions or fate.

Locus of control can be internal or external. In psychology it is described as part of the attribution theories, and it includes a dimension that relates to where is the factor that controls the outcome of an event (Havelka, 1992). According to these theories, the cause of success/failure can be internal, in the person and his/her dispositions, or external, in the situation and circumstances, or maybe to something that is totally out of person's control, such as fate or destiny. Individuals with internal locus of control believe that the outcomes of their actions are result of their own abilities and efforts. They believe that hard work leads to positive outcomes and thus to efficacy. Rotter (1975) considers they have high motivation for achievement and low outer directedness. On the other hand, externally oriented persons consider their outcomes to be beyond their control and attribute them to the external circumstances. They blame others rather than themselves for any negative outcome. Also, locus of control could be considered to be one of functional mechanisms that define the style of cognitive control, which represents one component of individual's cognitive style (Nosal, 2010).

3. RESEARCH PROBLEM AND OBJECTIVES OF THE STUDY

Having in mind the core characteristics of self-efficacy, it could be expected that some stable characteristics of the personality are related to it, and previous findings also suggested their inter-relatedness. The intention was to apply the seven-factor model of personality developed in Serbia, as well as to examine the role of locus of control that has a profound influence on people's behavior.

Generally, this study was aimed to investigate the relationship between personality traits, locus of control and self-efficacy of the students. The research was designed as a correlational study. Precisely, the research problem was to determine whether certain domains of students' self-efficacy can be predicted based on their personality traits and locus of control. So the research questions were posed and the main objectives were to determine:

a) Whether particular domains of students' self-efficacy correlate with their personality traits and locus of control;

b) Whether certain personality traits are statistically significant predictors of social, academic and emotional aspects of students' self-efficacy;

c) Whether the locus of control (internal - external) is statistically significant predictor of social, academic and emotional aspects of students' self-efficacy;

d) What students' characteristics are the best predictors of certain domains of their self-efficacy?

3.1. Method
3.1.1. Participants

The sample is consisted of 200 four-grade high school students, aged 18-19 years (100 males and100 females). One hundred students attended grammar school (science and socio-linguistic module, 50+50 respectively), and the others attended vocational public schools (technical and medicine, 50+50 respectively) in Serbia. Participants live primarily with both parents in complete families; their place of residence is mainly town (77.5%).

3.2. Variables and instruments

Personality traits are considered to be time-stable inner dispositions of a person that are able to initiate and direct person's thinking, emotions and behavior. The most widely accepted theoretical model, based on the psycho-lexical approach, stands out five broad universal dimensions of personality.

In this study personality traits were defined in accordance with the Big Five plus Two model developed in Serbia (Smederevac, Mitrović, & Čolović, 2010). Authors considered that personality can be described by seven general dispositions, and five of them are similar to the widely known Five-factor model (Digman, 1990; John & Srivastava, 1999). Smederevac et al. (2010) identified the following seven personality dimensions: 1)*Neuroticism* (N) which refers to the negative affect, such as sadness, depression and anxiety; 2) *Extraversion* (E) that refers to sociability and cordiality, and to positive affect too; 3) *Openness to experience* (O) which refers to intellectual curiosity, open-mindedness and novelty seeking; 4) *Aggressiveness* (A) which indicates person's feelings of anger, "difficult character", obstinacy and uncompromising attitude; 5) *Conscientiousness* (C) that refers to person's tendency to be self-disciplined, persistent, showing strong sense of responsibility to commitments; 6) *Positive valence* (PV) which refers to positive self-evaluation, feeling of superiority and narcissistic tendencies; and 7) *Negative valence* (NV) that indicates a person's negative self-image and also the inclination to manipulate others. Positive and negative valence are defined as self-evaluative dimensions and their content is similar to the concept of self-esteem.

Smederevac et al. (2010) developed two versions of five-point Likert type questionnaire to measure these personality traits. For our research purposes its short version, consisted of 70 items, was used. Reliability of the instrument was good: Cronbach Alpha coefficients ranged from .79 to .88 for the subscales.

Locus of control is a construct that refers to the extent to which people believe they can control the events in their lives, and what factors they attribute to the success or failure of any significant activity (Havelka, 1992). Kirkpatrick et al. (2008) define it as a dimensional construct representing the degree to which individuals perceive reinforcing events in their lives to be the result of their own actions or fate, destiny and outer circumstances.

The LOC scale (Bezinović, 1990) was used to assess the degree of externalization in the attribution of control. Externality means that one sees its own behavior as influenced by events that are completely beyond its control, such as luck, coincidence, fate and authority.

The scale consists of 10 items and the respondent should report on five-point Likert scale the extent to which he/she agrees or disagrees with a particular statement (1=completely incorrect; 5=completely true). The score varies from a minimum of 10 to a maximum of 50, and results higher than 30 indicate external locus of control. The Alpha coefficient of reliability was $\alpha = .83$.

Self-efficacy is the concept from Bandura's social-cognitive theory of personality and behavioral change (Bandura, 1997; 1999). It refers to person's belief that he can successfully carry out the actions needed to achieve certain goals. This is a multifaceted concept including a differentiated set of self-beliefs linked to variety of personal functioning domains. In this study self-efficacy refers to students' ability to control their emotions and to behave appropriately in social interactions and in the school.

The Self-efficacy Questionnaire SEQ-C - version for children and youths, translated into Serbian (Muris, 2001) - measures three forms of self-efficacy: a) social - the belief that person is able to relate with peers in an assertive manner, b) academic - the person's belief about competence to learn and meet the expectations of the school, c) emotional - the belief that the person is able to cope adequately with negative emotions. The questionnaire is composed of 24 items that are distributed into the three scales that measure: social (*I can easily make friends with others*), academic (*It's easy for me to concentrate on learning even when there are other interesting things around me*) and emotional self-efficacy (*I can easily control my feelings*), consisting of 9, 8 and 7 items respectively. Respondents were asked to estimate their level of agreement with each of the statements on a 5-points Likert scale (1= not at all, 5 = totally agree). Cronbach Alpha coefficients were .74, .80 and .67 for social, academic and emotional self-efficacy scale respectively.

3.3. Procedure and data analysis

The research was conducted in several public high schools in south-east of Serbia. The questionnaires were administered in groups during regular classes. Testing was anonymous and it took about 40 minutes. Participants were informed that data will be used for research purposes and their participation was completely voluntary.

The data collected were processed by the Statistical package for social sciences SPSS, version 20.The following statistical analysis was performed: descriptive statistics such as means and standard deviations for each variable, Pearson coefficients of correlation to determine the degree of relationship between personality traits, locus of control and self-efficacy. In order to gain main research objectives, data were processed by multiple regression analysis procedures, firstly including personality traits and, secondly, adding locus of control as predictors of three aspects of self-efficacy taken as criteria. The reliability of instruments was assessed by Cronbach Alpha coefficients.

4. RESULTS

4.1. Relations of self-efficacy with personality traits and locus of control in the high school students' sample

The first analysis was conducted with the aim to establish whether examined aspects of the self-efficacy correlate with personality traits and locus of control that are supposed to be their predictors (Table 1).

Table 1.
Corelations of self-efficacy with personality traits and locus of control.

Variables	Social self-efficacy	Academic self-efficacy	Emotional self-efficacy
Extraversion	**.54****	**.17***	**.19****
Neuroticism	**-.22****	**-.23****	**-.19****
Openness to experience	**.18****	**.35****	**.25****
Aggressiveness	.09	.01	-.04
Conscientiousness	**.15***	**.42****	.14
Positive valence	**.18****	**.24****	**.36****
Negative valence	-.04	**-.23****	.13
Locus of control	**-.23****	**-.34****	-.08

N=200; *p<.05; **p <.01

In general, analysis showed that self-efficacy correlates with examined personality characteristics and that obtained correlation coefficients were in accordance with the expectations based on understanding the nature of constructs. The most consistent correlations were found between academic self-efficacy and all measured personality features, except aggressiveness which did not correlate with any domain of the self-efficacy. When it comes to emotional self-efficacy, the smallest number of significant correlations were found. Considering values of obtained correlations, it could be noticed that the highest particular correlations were found between social self-efficacy and extraversion, as well as between academic self-efficacy and conscientiousness. Concerning the relation between locus of control and domains of self-efficacy, the highest (but still moderate) correlation was with academic self-efficacy, than with social, while emotional self-efficacy was not significantly connected with locus of control.

4.2. Predictors of the social self-efficacy in the high school students sample

Two regression analyses were done and models proved to be statistically significant. In both cases, extraversion was shown as the best predictor of social self-efficacy (β = .550, p =.000, β = .562, p =.000) and locus of control was also statistically significant predictor (β = -.188, p =.004), what can be seen in Table 1. The first regression model has shown that 30.5% of the variance in the students' social self-efficacy can be predicted based on their personality traits, more precisely, only on the basis of their extraversion (R = .55, R^2 = .305, p = .000). The second regression model (Table 2), in comparison to the first one, can explain only a small proportion of variance more in students' social self-efficacy (R = .58, R^2 = .334, p = .000). Extroverts tend to be sociable, active and talkative, they prefer group activities, can be assertive in communication with others, so that relationship can be easily grasped.

Table 2.
Personality traits and locus of control as predictors of students' social self-efficacy.

Predictors	β	p	Model summary
Extraversion	**.562**	**.000**	
Neuroticism	-.016	.823	**R = .578**
Openness to experience	-.094	.232	**R^2 = .334**
Aggressiveness	.048	.501	p = .000
Conscientiousness	.065	.373	N = 200
Positive valence	-.065	.458	
Negative valence	.065	.391	
Locus of control	**-.188**	**.004**	

4.3. Predictors of the academic self-efficacy in the high school students sample

The first regression model, including personality traits, proved to be statistically significant (R=.510, R^2=.262, p=.000). Conscientiousness, openness and negative valence contributed to the prediction of students' academic self-efficacy (β was .25, .21 and -.24, p=.000). Positive correlation between conscientiousness and openness to experience, at the one hand, and academic self-efficacy, at the other hand, can easily be explained. It's also known that negative self-evaluation and lack of self-confidence may have negative effects on school performance. These findings were in accordance with empirical evidence in the field in Serbian samples (Djigić, Stojiljković, & Marković, 2016; Gigić et al., 2016; Zlatković, 2007).

Table 3.
Personality traits and locus of control as predictors of students' academic self-efficacy.

Predictors	β	p	Model summary
Extraversion	-.064	.373	
Neuroticism	-.037	.613	**R = .559**
Openness to experience	.147	.068	**R^2 = .312**
Aggressiveness	.121	.096	p = .000
Conscientiousness	**.283**	**.000**	N = 200
Positive valence	.061	.497	
Negative valence	**-.188**	**.016**	
Locus of control	**-.246**	**.000**	

In the second regression model (Table 3), conscientiousness (β = .283, p =.000), negative valence (β = -.188, p =.016) and locus of control (β = -.246, p =.000) proved as predictors of students' academic self-efficacy, while openness remained no longer, what is a little bit surprising, but could indicate some sort of interaction. Proportion of the explained variance of academic self-efficacy was slightly higher (R=.559, R^2=.312, p =.000) than in the first model. Knowing that high score on LOC scale pointed to the person's tendency to externalization, negative partial correlation showed that internal locus of control contributed to higher academic self-efficacy. That is in line with previous findings, summarized in the following: internal attributions are associated with higher academic self-efficacy, and thus the greater achievements (Živčić-Bećirević, Juretić, & Miljević, 2009). On the other hand, externally oriented individuals consider their outcomes beyond their control and attribute them to the external circumstances; so they blame others rather than themselves for any negative outcome (Kirkpatrick et al, 2008; Onyekuru & Ibegbunam, 2014; Poropat, 2009; Šabanović, Tiosavljević, & Novalić, 2016; Šarčević & Vasić, 2014; Zlatković, 2007).

4.4. Predictors of the emotional self-efficacy in the high school students sample

When it comes to the emotional self-efficacy of students, both regression models showed the same. This domain of self-efficacy could be explained by two of seven personality traits, positive valence (β = .321, p =.001) and aggressiveness (β = -.199, p =.013) while locus of control wasn't found to be its significant predictor (Table 4). In addition, proportion of the explained variance of emotional domain of efficacy was lower than predictive power of regression models concerning social and academic self-efficacy of students (R=.420, R^2=.176, p = .000). Positive self-evaluation and low aggressiveness can contribute to the person's competence to govern his/her emotions and specially to manage with negative emotions and states such as sadness, anger, feeling of inferiority and so on.

Table 4.
Personality traits and locus of control as predictors of students' emotional self-efficacy.

Predictors	β	p	Model summary
Extraversion	.072	.359	
Neuroticism	-.048	.550	**R = .420**
Openness to experience	.046	.600	**R² = .176**
Aggressiveness	**-.199**	**.013**	p = .000
Conscientiousness	-.030	.714	N = 200
Positive valence	**.321**	**.001**	
Negative valence	.142	.094	
Locus of control	-.036	.619	

5. CONCLUSION / DISCUSSION

It's well-known that many capable people do not try to actualize their potentials because they do not believe in their competences, i.e. because of their low perceived self-efficacy. In such a case supporting people's believes in their own abilities could make them more efficient in dealing with different tasks. This is why it is important to study self-efficacy and related psychological constructs. Such deeper knowledge about the nature of self-efficacy is needed as the basis for designing and delivering appropriate support to students, as well as to people in any working environment.

This study was aimed to investigate the relationship between personality traits, locus of control and student's self-efficacy and obtained results suggested a few conclusions. In general, these constructs were inter-connected but the intensity and direction of correlation varied.

When it comes to the relations between personality traits and self-efficacy, main conclusions will be presented for each particular domain of self-efficacy.

The most of personality traits are significant correlates of social self-efficacy, except aggressiveness and negative valence. The highest correlation was obtained with extraversion which is simultaneously the only personality trait proved to be significant particular predictor of social self-efficacy explaining (together with low contribution of the internal locus of control) 33.4% of variance. The other correlates of social self-efficacy among the personality traits were not found to be significant predictors. The finding that extraversion is the most powerful predictor of social self-efficacy could be seen in line with previous research results obtained on the teachers' sample, although data were collected using different instruments (Djigić et al., 2014). This finding could be interpreted as well having in mind the nature and content of extraversion as personality trait, which mostly refers to individual's interpersonal relations.

Academic self-efficacy correlates with almost all personality traits. Even though personality traits are significant correlates, only conscientiousness and negative valence are proved as particular predictors of this domain. Together with internal locus of control, they could explain significant amount of variance in academic self-efficacy. The relation between conscientiousness and academic self-efficacy deserve particular attention because both this personality trait and academic self-efficacy are proved as the important factors of academic performance. Moreover, according to recent findings in the field, academic self-efficacy mediates the effects of conscientiousness as personal disposition on school achievement (Caprara, Vecchione, Alessandri, Gerbino, & Barbaranelli, 2011). Also, relevant framework

for understanding these results may be found in the meta-analytic study on effects of personality features on academic performance (Poropat, 2009).

Concerning emotional self-efficacy, obtained results show that four among seven personality traits are its significant correlates: positive valence, openness to experience, extraversion and neuroticism. Surprisingly, regression models pointed out positive valence and aggressiveness as significant predictors explaining 17.6% of variance in emotional self-efficacy that is considerable lower amount comparing to other two domains of self-efficacy. Such results seem to be not quite consistent and clear and need further exploration.

Locus of control proved to be important predictor of both academic and social domain of self-efficacy in students' sample, which is in line with previous findings (Onyekuru & Ibegbunam, 2014; Šabanović et al., 2016; Živčić-Bećirević et al., 2009). Precisely, internal locus of control can contribute to individual's better functioning, which is the basis for building stronger self-confidence and higher self-efficacy. At the other hand, externality did not correlate with emotional self-efficacy, i.e. with the person's ability to govern his/her negative feelings and intensive emotional states. Students who have internal attribution and positive expectations will invest more efforts and achieve better results. On the other hand, those who attribute success to external factors will be more prone to express intensive anxiety and avoid task, and therefore will have lower achievement. The finding that locus of control is the predictor of academic self-efficacy could be understood bearing in mind dynamic character of locus of control as a component of cognitive style which regulates behavior in learning situation (Nosal, 2010).

Having in mind all domains of self-efficacy and the results of all tested regression models, it could be concluded that extraversion and conscientiousness are the two most powerful predictors of self-efficacy in our students' sample. Among all variables included into regression models, neuroticism and openness did not show significant contribution to the prediction of any aspect of self-efficacy. That is not in line to our expectation based on the research findings in the field (Chamorro-Premuzic & Furnham, 2003; Poropat, 2009). Precisely, it could be expected that these personal dispositions would be significant predictors at least in academic and emotional domain of self-efficacy. The meaning of these constructs suggests that high neuroticism should have negative influence on one's academic performance and would be a source of emotional instability, while openness should have positive effect on functioning in academic context. According to above mentioned results, both self-evaluative personality dimensions are proved as predictors of perceived self-efficacy in students. These results could be set in line with previous research findings which showed that positive self-concept (similar to positive valence) was the best predictor of emotional self-efficacy while negative self-image (similar to negative valence) could interfere with person's functionality in the academic context (Zlatković, 2007).Locus of control (internal) contributed to prediction of self-efficacy both in academic and social domains, but its contribution is still lower in comparison with mentioned personality traits. Also it is important to emphasize that social and academic domains of self-efficacy could be better explained by tested predicting models (including personality traits and locus of control) than emotional self-efficacy. Perhaps this can be attributed to the age of students from the research sample and to difficulties they encountered when building their own personal identity.

6. FUTURE RESEARCH DIRECTIONS

The main finding of this research is the fact that self-efficacy can be predicted good enough based on the personality traits as a stable dispositional characteristics of a person. The inclusion of the locus of control, seen as a way of explaining the source of one's own behavior, contributed slightly to this prediction of self-efficacy.

Having in mind that the proportion of explained amount of variance in particular domains of self-efficacy is about one third or less, it could be concluded that there are still many factors which may be important in this way. So, future research is necessary in order to reach more complete understanding of this complex phenomenon. Further studies should focus on a greater number of possible correlates of the self-efficacy, such as: abilities (cognitive abilities, cognitive and learning styles, emotional and social intelligence); motivation (motivation for achievement, personal and academic aspirations, self-regulation and self-determination); personal features and mechanisms (self-concept, optimism and pessimism, perfectionism, procrastination, coping strategies);real success or failure experience; family, working and broader social context. Also, it could be useful to conduct research on different samples and using other instruments.

Taking self-efficacy as the crucial mechanism of behavioral change, on the basis of additional research it should be possible to get practical implications aimed to improve the quality of personal, professional and everyday life.

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