

STUDENTS' SELF-ASSESSMENT OF ONE'S ABILITIES FOR THEIR LIFE GOALS ACHIEVEMENT

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Abstract

Goal achievement is considered to be related to need satisfaction, motivation, and self-esteem. The self-assessed abilities for goal achievement were operationalized as positive self-talk, perceived self-efficacy, the performance level of doing a task, the aspiration level, the in/congruence between performance and prognosis, and frustration tolerance to pursue one's goals in spite of some obstacles. In total, 392 students whose mean age was 21 years old were investigated, divided in sub-samples, with the positive self-talk scale from the ASTQS questionnaire, the self-efficacy scale by Schwarzer & Jerusalem, and the AHA computerized test method from Vienna test system. Students' self-assessment of one's abilities for goal achievement revealed the most frequent high levels of perceived self-efficacy and good performance in coding tasks. The other self-assessed abilities for goal achievement were expressed more often at a medium level. The gender differences in the performance level of doing a task were compared to some previous results that indicated a variety of trends, because of the age peculiarities and the types of the tasks that were executed. The advance in age was related to more frequent use of positive self-talk and lower aspiration level, besides to lower performance level. The proposed model of the abilities for goal achievement was successfully approbated in this study revealing the strengths in the students' self-assessment of one's abilities for goal achievement and some weaknesses that should be the focus of further interventions in order to increase the students' frustration tolerance ability and the use of positive self-talk.

Keywords: aspiration level, frustration tolerance, life goal, perceived self-efficacy, positive self-talk.

Introduction

The personality characteristics are interrelated. Human performance reflects some personality characteristics as the abilities that are manifested in the behavioural acts. Performance may depend on the way one's abilities and personality traits are self-perceived and self-assessed. Human performance is considered to be successful when some positively evaluated goals are achieved. Goal achievement means successful performance in different areas of human life. Self-assessment of goal achievement may be related to the perceived life satisfaction and to the beliefs in one's abilities for coping with difficulties. Goal achievement follows from defining own needs and the motivation to satisfy them.

Goal Achievement Related to Need Satisfaction and Motivation

Human needs stimulate human activity, the direction and the goal of the behaviour. A need is an internal state of perceiving some lack or imbalance that can provoke or strengthen some behavioural response (Obuchowski, 1981, p.83; Pinder, 1998, p.544) searching for balance, comfort and survival. A need is apperception of some obstacle, harm or deficit that provokes a desire (Murray, 1938, p.153) for moving to correspondence between the external and internal conditions, as well as for internal harmony and balance at a given time period (Desev, 2006). The need stimulates the personality for seeking a resource or a means for its satisfaction that is expressed in motive for behaviour (Leontiev, 1971). Human activity is stimulated by the motives based on some needs, but also by the attitudes, the habits, the interests, the values, the health status and the temperament that interact with the motives determining the degree of expression of human activity, for example the habits support the choice between several contradictory motives (Stankova, 2007). The need has to be realized in order to become a motive and its satisfaction may have been transformed into a habit (Kiknadze, 1968).

Need satisfaction (satisfaction of physical, emotional and intellectual needs), self-limiting adaptation (needs to cope, needs for security, needs for belonging), creative expansion (needs for productivity, leadership and self-expression) and upholding internal order (needs for constancy, organization and unity of own personality) are related to self-determination, self-efficacy and achievement of life goals in human development (Bühler, 1933; Derobertis, 2006).

The goal is a component of the act of the will, together with the motives, decision, set and the act itself (Stankova, 2007). The goals may be determined in some constructive or destructive ways. An example for a constructive goal is the goal for sports achievements. An example for a destructive goal is the goal of success with all means, for example by means of cheating. There are some gender and age differences in the goals that are formulated, because of gender and age differences in motives (Stankova, 2007).

Motivation delivers energy, stimulates towards some activity, determines the direction of behaviour for achieving some goals and supports the efforts for realizing these goals (Murry, 1938) that are often voluntarily self-determined. Motivation answers why and how the human being acts (in Desev, 2006, p.290). When one feels that what he or she does gives him/her satisfaction, this person is motivated (Tomova, 2008).

Motivation gives meaning to human activity contributing to personal development and self-realization (Allport, 1961; Stankova, 2007). Motivation activates and goal-directs the human behaviour, and it contributes to building self-esteem (Stankova, 2007), because of one's goals that are realized and the achievements that are acquired. If the individuals do not manage to affirm themselves in a constructive and socially approved way, they start posing some destructive goals as the only possible way of goal achievement. That is the reason that some studies relate high self-esteem with manifested aggression (Barry, Frick & Killian, 2003) as a way of achieving one's goal of self-recognition and self-affirmation, related to the striving for one's importance formulated by Adler (1997).

The Link between Self-Esteem and Aggression as a Means for Goal Achievement

The relation between self-esteem and aggression is controversial (Donellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005), as both low and high self-esteem have been associated with antisocial and aggressive behaviour (Barry, Frick & Killian, 2003). Low self-esteem is assumed to generate feelings of inferiority that urge people to express aggressiveness (Bushman et al., 2009; Donnellan et al., 2005) in order to dominate others (Papps & O'Carroll, 1998), while individuals with high self-esteem tend to be aggressive in order to protect their self-image from threats (Barry et al., 2003; Papps & O'Carroll, 1998). The issue becomes more complicated considering that research has also shown that both aggressive and non-aggressive people are characterized by high levels of self-esteem (Garofalo, Holden, Zeigler Hill, & Velotti, 2006). Diamantopoulou, Rydell and Henricsson (2008) concluded that aggression in children is related to both low and high

self-esteem. In particular, low self-esteem was related to negative emotions and aggression, while exaggerated self-esteem was linked with externalizing problems, including aggression, especially in boys. In a similar vein, Barry et al. (2003) revealed that self-esteem level mediates the link between narcissism and conduct problems, as children with low self-esteem and high narcissism were found to manifest the highest rates of symptoms of conduct problems.

Donnellan et al. (2005) found a strong relation between low self-esteem and antisocial behaviour, aggression and delinquency. In addition, their results suggested that self-esteem can predict future externalization of problems. In contrast, Bushman et al.'s (2009) findings from their meta-analysis revealed that high self-esteem, in combination with high narcissism, results in the highest levels of aggression, while there were no indications of the contribution of low self-esteem to aggression. The researchers concluded that aggression is caused by threatened egotism, in consistency with previous literature (Baumeister, Campbell, Krueger, & Vohs, 2003; Bushman & Baumeister, 1998).

In order to advance knowledge regarding the relation between self-esteem and aggression, Garofalo et al. (2006) examined the mediating effect of emotion dysregulation. They found that individuals with deficits in emotion regulation were prone to anger, hostility and aggressive behaviour, while self-esteem had an indirect effect on anger and aggression. Aggression as a means for goal achievement was related to self-esteem, but self-esteem has some links to more constructive ways of goal achievement. It has been found that students' global self-esteem correlated positively with their academic motivation (Peneva, & Stoyanova, 2011) and their needs for achievement (in Dilova, Papazova, & Koralov, 2017; Peneva, & Stoyanova, 2011). Goal setting is effective for strengthening self-esteem (Burton & Weiss, 2008; Mooney & Mutrie, 2000) that is why it is important some categories of students, such as the students with special educational needs, to define one's goals and to strive for their achievement. Besides, goal setting is a means to enhance and maintain performance (Brawley, Carron & Widmeyer, 1992; Du Brin, 2012). The individuals with specific, challenging, but achievable goals perform better than those with effortless, or no goals at all provided that they have adequate ability, realize and accept the goals, as well as attain feedback that relates to performance (Latham, 2003). The students' abilities for goal achievement are present and self-assessed also by the students with special educational needs.

Interventions to Improve Goal Attainment of Students with Special Educational Needs

The students' involvement in the educational process, their interaction and integration enhance their healthy development and achievement of their educational goals. Educational materials, programs or books offer a variety of creative ways that the teacher can apply to support the students' achievements (Howe, 1996).

A basic prerequisite for the design and execution of specific educational programs is the knowledge of characteristics of people with disabilities (Kroustalakis, 2005, p.67). The differences in the education of these students compared to other students of their age are highlighted in such areas as curriculum content, teaching strategies used, media and materials needed to teach, acquired and used language, physical and motor skills, and social characteristics (Panteliadou & Antoniou, 2008).

Inclusive education is a process of integration that brings together all students to learn together, helping to recognize and appreciate the unique gifts everyone has. Every student with disabilities, within the framework of acceptance, can be an active member of the normal learning process by participating to the maximum extent in the events and activities. Inclusion is above all a philosophy that accepts every student as a competent and remarkable member of the community, regardless of the nature and degree of difficulty, he or she has the opportunity to participate in social life (Cortney-Frazier, Tomblin & Bishop, 2013).

The basic principles of inclusion for a disability student are (Norwich, 2010, pp. 47-111):

1. The student is an integral part of general education.
2. The student has the right to be respected for his/her personality and a positive approach that will lead him/her to increase his / her participation and limit his / her isolation.

3. Finally, the student has the right to personalized teaching, so the institution must be prepared to respond to the diversity of each student.

According to the concept of inclusive education, separate special education should be abolished and all students with special needs should be taught in general education. This means that general education should redefine its goals, limit the emphasis only on academic progress, change curricula and emphasize students' social relationships (Porpodas, 1997, p.43).

For enhancing the possibilities of goal attainment of students with special educational needs, the mistakes in the learning process must be identified by the teacher at the time they occur, so that they are not consolidated and repeated by the students. It is recommendable a task to be delivered at a specific time, positive reinforcement to be used, and an appropriate classroom climate to be created that favours good performance by students. Even eye contact with the teacher is a prerequisite for gathering and maintaining attention (Thanopoulos, 2005, p.331). Continuous exercise and repetition may enhance students' confidence in their learning abilities, especially when positive feedback is given to them. Reflection on own personality traits and implemented actions in learning is related to the striving for self-importance (Stoyanova, 2016). It is important every student to be self-confident, self-assured in one's abilities for goal achievements in order to set positively estimated goals striving for self-importance, as Adler (1997) indicated the regulative power of striving for self-importance on human behaviour and goals in life.

Setting and Achieving Goals as a Kind of Novelty Seeking

People try to create a positive image of themselves that may be regarded as a goal in the process of communication. The first impressions are the basis for further conclusions. People use different attributes to build their first impressions – appearance, clothes, non-verbal and verbal behaviour, and they strive to make a positive first impression. The way of self-expression depends on the goals that the individual set and his/her personal preferences. The human goals determine every aspect of human behaviour. The goals that are self-defined may be changed following some modern trends in the society, the preferences for self-expression, the desire for manipulation of others' impressions, and the need for novelty seeking.

A Novelty seeker likes frequent changes that means he or she may change frequently his/her life goals, because of his/her many-sided interests, love for taking risks and the desire for change in daily routine. The results from some studies indicated that the type of Novelty seekers was among the rarest career motivators for Bulgarian students from 2007 to 2015 (Ivantchev, & Stoyanova, 2015), as it was non-preferred by the Greek students (Giannouli, & Stoyanova, 2014). Some research findings reveal the existence of age differences in Novelty seekers (Giannouli, & Stoyanova, 2014). The focus of this paper is on youth people that are in a situation of actively seeking and experimenting with different roles and goals in their life.

The consuming society imposes more and more goals as the standards to be achieved in order to be satisfied the human needs arising in comparison with the other members of the society. The widespread of information in the technological world facilitates setting more various goals. Famous people may impose their goals by means of promoting their values and desired qualities. Young people often are influenced by the vogue trends in the society imitating their favourite celebrities, referent personalities and groups in their life models and personal goals. An internal conflict may arise in the young person who conformed only externally with the goal of another person/group without being an equal partner in the process of exchange of ideas, goals, and models in the society. The processes of dehumanization and easy manipulation may occur when following others' goals, values, and models. It is important young people to realize that they are supported by their families and their referent people/groups in order to be authentic, to develop their abilities and qualities in a constructive way encouraged by the society and accepted by themselves, following one's goals and dreams.

Such personality characteristic as high frustration tolerance may facilitate the persistence for achievement of one's goals. Frustration tolerance may be stimulated by positive self-talk. Positive

self-talk entails self-belief statements with explanatory function that encourage, uplift support, and stimulate some attributes (Hardy, 2006; Moran, 1996).

Self-talk is related to performance and goal attainment, because self-efficacy affects self-talk (Kolovelonis, Goudas, & Dermitzaki, 2011; Hardy, 2006; Hardy, Oliver & Tod, 2009). In addition, the utilization of self-talk regulates anxiety and thus, it promotes efficiency (Hardy, Jones, & Gould, 1996).

Based on the above findings and literature review, three hypotheses were formulated to study students' self – assessment of one's abilities for life goals achievement:

1. It was expected students' self-assessment of one's abilities for goal achievement to reveal high levels of perceived abilities for goal achievement expressed in perceived self-efficacy, frustration tolerance (being resistant to repeated negative feedback in the attempts to goal achievement), positive self-talk, setting realistic goals, high performance level of doing a task, and congruence between performance and prognosis.
2. Some gender differences were expected in students' self-assessment of one's abilities for goal achievement (perceived self-efficacy, frustration tolerance, positive self-talk, setting realistic goals, high performance level of doing a task, and congruence between performance and prognosis).
3. It was expected age to correlate with the students' perceived abilities for goal achievement (perceived self-efficacy, frustration tolerance, positive self-talk, aspiration level, performance level, and target discrepancy).

Method of Research

General Background

Several methodological approaches have been applied to measure goal setting such as for example think-aloud, self-monitoring, self-declaration inventories, and questionnaires (Cacioppo & Petty, 1981; Farrow, Chivers, Hardingham, & Sachse, 1998; Glass & Arnkoff, 1997). This research was a cross-sectional research – each participant was studied only once. The research lasted within several months. It was focused on students as the social category that will make their most important life goal decisions in the near future and they will strive to attain their goals related to their career and family life. The participating students were randomly divided into three groups and each group was studied with a different instrument (questionnaire/computerized test method). The proposed research model of self-assessment of one's life goals achievement included several variables to be measured in order to obtain more detailed and precise research findings. The goal achievement may be measured on the basis of the products from human activity in order to be made some conclusions about the level of performance. The goal achievement may be more precisely assessed using some additional indicators, such as:

- if the goal that was set may be considered as a realistic goal,
- if the individual persisted to pursue the goal till its realization, in spite of some obstacles,
- if the individual uses positive self-talk (for example, to encourage goal pursuit, to improve one's performance increasing self-confidence in one's abilities, etc.),
- if there is congruence between performance and prognosis,
- and if the individual perceives himself/herself as efficient.

Sample

The participants in the research were purposely selected to be students. Their participation was voluntarily. The research was approved by the institutional board of South-West University "Neofit Rilski" as a part of the project (RP-A14/17) "Study of students' self-efficiency academic and

career motivation" financed on a decree by Bulgarian Ministry of Education. The students were approached in groups in their classrooms, as well as individually. The procedure of the study was explained to them and they voluntarily agreed to participate. The sample was divided into three sub-groups, each of which was studied with one of the three instruments that were used in the study. In this way the research was conducted in three stages in order to facilitate the participants and to reduce the time of research process.

In total, 392 students were investigated. 252 were the female participants and 140 were the male participants. Their age ranged from 16 to 58 years old ($M = 21.3$, $SD = 6.3$) years old. 185 participating students (47.2%) were from 16 to 20 years old. 157 participating students (40.1%) were from 21 to 30 years old. 20 participating students (5.1%) were from 31 to 40 years old. 11 participating students (2.8%) were from 41 to 58 years old. 22 students (5.6%) did not indicate their age.

Of the 168 participants studied with Positive self-talk scale, 84 (50%) were male, and 84 (50%) were female students, whose mean age was 17.4, and $SD = 0.7$ years old.

Of the 92 participants studied with Self-efficacy scale, 11 (12%) were male, and 81 (88%) were female students, whose mean age was 29.2, and $SD = 9.5$ years old.

Of the 132 participants studied with the computerized method AHA, 45 (34.1%) were male, and 87 (65.9%) were female students, whose mean age was 22.2, and $SD = 3$ years old.

Instruments

Self-assessment of the abilities for goal achievement was operationalized by using questionnaires and computerized tests for measuring positive self-talk, perceived self-efficacy, the performance level of doing a task, the aspiration level (setting realistic or unrealistic goals); target discrepancy between performance and prognosis; and frustration tolerance (being resistant to repeated negative feedback).

For the assessment of Positive self-talk, the Automatic Self-Talk Questionnaire for Sports (ASTQS) by Zourbanos et al. (2009) was utilized. It measures positive self-talk rated on a 5-point scale from never to very often (Taylor, 2014; Zourbanos et al., 2009). It included such items as "I believe in me", "I am very well prepared", "I can make it", "I believe in my abilities", "Concentrate on your goal", etc. Its Cronbach's alpha was .732 for the data in this study. $M = 66.4$; $SD = 4.9$.

For the assessment of Self-efficacy, the unidimensional Self-efficacy scale by Schwarzer & Jerusalem (n.d.), Stamova, Schwarzer, & Jerusalem (1993) was applied. It included such items as "It is easy for me to stick to my aims and accomplish my goals", "I can usually handle whatever comes my way", "If someone opposes me, I can find the means and ways to get what I want", etc. The answers were given on a 4-point scale from not at all true to exactly true. Its Cronbach's alpha was .712 for the data in this study. $M = 30.7$; $SD = 3.2$.

In addition, for the assessment of the performance level, the aspiration level, the target discrepancy and the frustration tolerance ability, one computerized test method from Vienna test system – Attitudes to work (AHA), was used. Its subtest "Coding symbols" assessed the performance level; the aspiration level (whether the subject had a tendency towards setting realistic or unrealistic goals); target discrepancy (whether prognosis for performance and performance itself correlated); and frustration tolerance (if the subject was influenced by repeated negative feedback in the attempts to achieve his/her goal). The participant corresponded four different figures following an indicated model. A high score on the performance level indicates good concentration performance in specified coding tasks. Concerning the aspiration level, low and high scores indicate unrealistic objectives. Low scores of frustration tolerance mean a low frustration tolerance. Low scores on the target discrepancy indicate high agreement between performance and prognosis, very high scores are considered to be a sign for great discrepancy (Kubinger, Ebenhöf, Karner, & Sommer, 2003).

Data Analysis

Data were statistically processed by means of SPSS 20, applying descriptive statistics for computing the frequency of the levels of perceived abilities for goal achievement (expression of perceived self-efficacy, frustration tolerance, positive self-talk, realistic goals, performance level, and congruence between performance and prognosis). The Chi-square test, along with the One-sample Binomial test were applied for comparisons of the frequencies of low, medium and high expressions of the indicators of self-assessed abilities for goal achievement. Independent samples T-test was used for gender comparisons in the indicators of self-assessed abilities for goal achievement. Pearson correlation coefficient estimated the correlations between the age and the indicators of self-assessed abilities for goal achievement.

Results of Research

The indicators of the students' abilities for goal achievement are presented in Table 1.

Table 1. Frequency distribution of levels of expression of students' abilities for goal achievement.

Indicators	Low level frequency	Low level percent	Medium level frequency	Medium level percent	High level frequency	High level percent
Performance level	2	1.5	55	41.7	75	56.8
Perceived self-efficacy	0	0	43	46.7	49	53.3
Target discrepancy level	6	4.5	77	58.3	49	37.1
Frustration tolerance level	13	9.8	98	74.2	21	15.9
Positive Self-Talk	27	16.1	122	72.6	19	11.3
Aspiration level	30	22.7	88	66.7	14	10.6

The high levels of such abilities for goal achievement as perceived self-efficacy and the performance level were the most frequent ones, followed by their medium levels of expression (see Table 1). Self-assessment of the abilities for goal achievement revealed prevalence of medium level of such abilities as frustration tolerance, positive self-talk, aspirations (i.e., setting realistic goals), and target discrepancy (i.e., medium agreement between performance and prognosis), followed by their high levels of expression (see Table 1). High level of target discrepancy indicates great discrepancy between performance and prognosis, and taking into account good performance of the participating students, they tended to underestimate their abilities for successful performance and goal attainment.

There were some significant differences between the levels of positive self-talk (Chi-square = 117.25; $df = 2$; $p < .005$). The medium level of positive self-talk was more frequent than it was expected, while the low and the high levels of positive self-talk were less frequent than they were expected (see Figure 1).

There were not any significant differences between the levels of the perceived self-efficacy (One-sample Binomial test = 43; $N = 92$; $p = .602$).

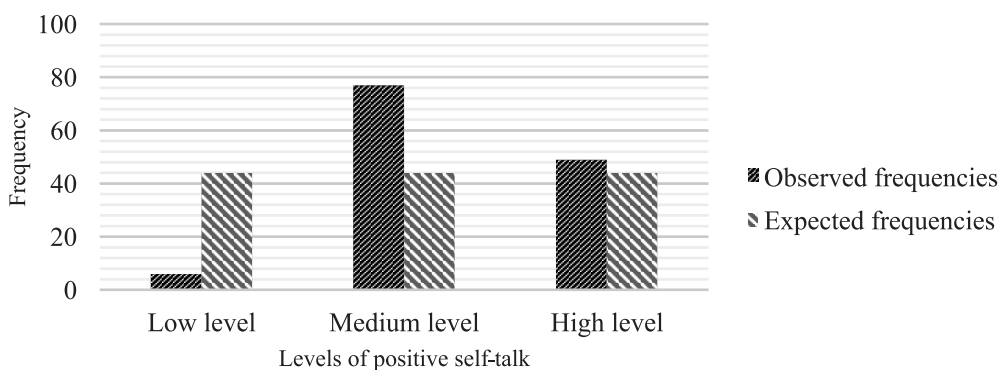


Figure 1: Observed and expected frequencies of the levels of positive self-talk used by students.

There were some significant differences between the levels of performance ($\chi^2 = 64.682$; $df = 2$; $p < .005$). The medium and high levels of positive self-talk were more frequent than they were expected, while the low level of positive self-talk was less frequent than it was expected (see Figure 2).

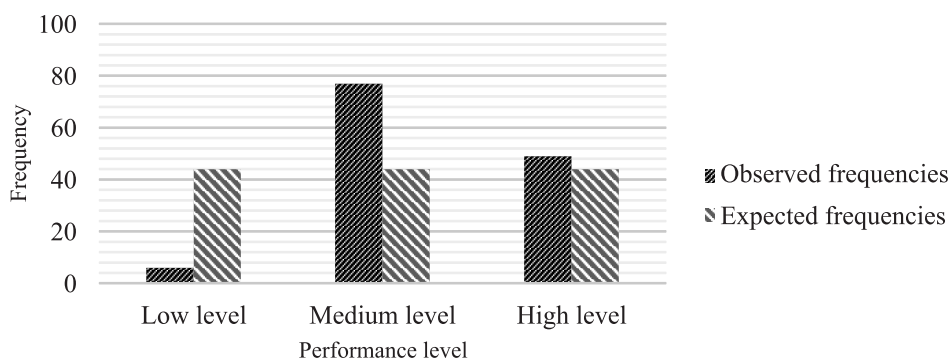


Figure 2: Observed and expected frequencies of the levels of students' performance on coding tasks.

There were some significant differences between the levels of aspirations ($\chi^2 = 68.909$; $df = 2$; $p < .005$). The medium level of aspirations was more frequent than it was expected, while the low and the high levels of aspirations were less frequent than they were expected (see Figure 3).

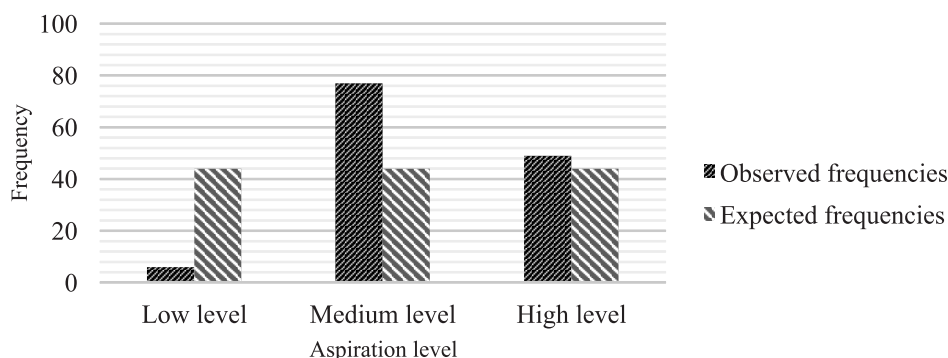


Figure 3: Observed and expected frequencies of the aspirations levels.

There were some significant differences between the levels of frustration tolerance ($\chi^2 = 100.136$; $df = 2$; $p < .005$). The medium level of frustration tolerance was more frequent than it was

expected, while the low and the high levels of frustration tolerance were less frequent than they were expected (see Figure 4).

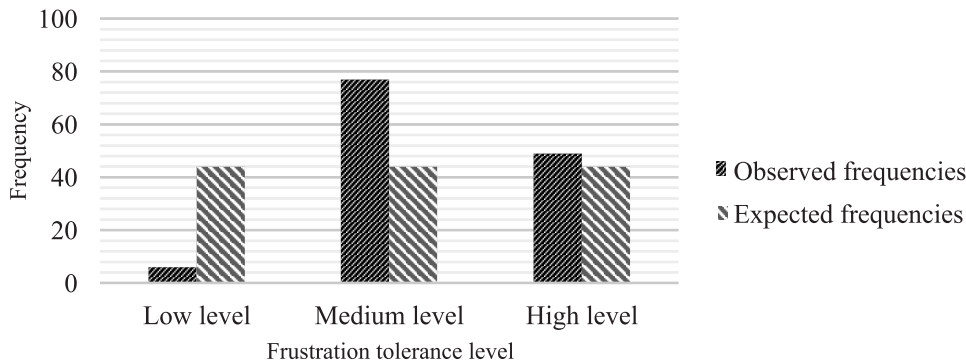


Figure 4: Observed and expected frequencies of the levels of frustration tolerance.

There were some significant differences between the levels of target discrepancy ($\chi^2 = 58.136$; $df = 2$; $p < .005$). The medium and high levels of target discrepancy were more frequent than they were expected, while the low level of target discrepancy was less frequent than it was expected (see Figure 5).

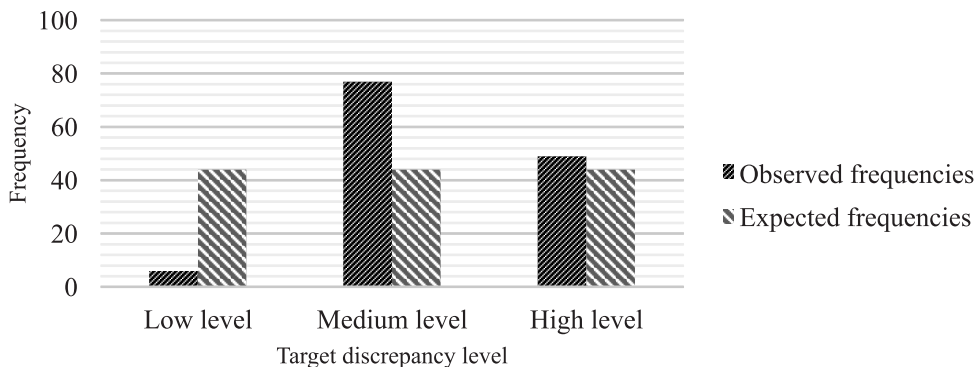


Figure 5: Observed and expected frequencies of the levels of target discrepancy.

There were not any gender differences in positive self-talk ($t(166) = 0.592$; $p = .555$), perceived self-efficacy ($t(90) = 0.763$; $p = .448$), frustration tolerance ($t(130) = 0.018$; $p = .985$), target discrepancy ($t(130) = 0.647$; $p = .519$), neither in aspirations ($t(130) = 0.647$; $p = .519$). Performance in coding tasks was better ($t(114) = 2.771$; $p = .007$; Levene's test for equality of variances = 6.713, $p = .011$) in studied male students ($M = 86.3$; $SD = 16.5$) than in female students ($M = 76.8$; $SD = 22.5$).

Advance in age was related to more frequent use of positive self-talk ($r = 0.243$; $df = 166$; $p = .001$), lower performance level ($r = -0.225$; $df = 130$; $p = .009$), lower aspiration level, i.e. setting slightly more unrealistic goals ($r = -0.244$; $df = 130$; $p = .005$). However, advance in age did not correlate significantly with frustration tolerance ($r = -0.075$; $df = 130$; $p = .39$), target discrepancy ($r = 0.145$; $df = 130$; $p = .097$), neither with perceived self-efficacy ($r = -0.021$; $df = 68$; $p = .86$).

Discussion

The results indicated that the first hypothesis was partially supported. It was expected students' self-assessment of one's abilities for goal achievement to reveal high levels of perceived

abilities for goal achievement expressed in perceived self-efficacy, frustration tolerance (being resistant to repeated negative feedback in the attempts to goal achievement), positive self-talk, setting realistic goals, high performance level of doing a task, and congruence between performance and prognosis.

Students' self-assessment of one's abilities for goal achievement revealed the most frequent high levels only of perceived self-efficacy and good performance in coding tasks. Such consistent findings indicate that the studied students realistically estimated their performance. The medium level of the other self-assessed abilities for goal achievement prevailed - the medium level of such abilities as frustration tolerance, positive self-talk, aspirations (i.e., setting realistic goals), and target discrepancy (i.e., medium agreement between performance and prognosis). In support of the first hypothesis, the medium level of such abilities was followed in frequency by their high levels of expression. There was a trend the students to be prone to underestimate their abilities for successful performance and goal attainment, not using enough positive self-talk to encourage their persistence to overcome more difficulties in the process of goal attainment.

The second hypothesis also was partially supported. Some gender differences were expected in students' self-assessment of one's abilities for goal achievement (perceived self-efficacy, frustration tolerance, positive self-talk, setting realistic goals, high performance level of doing a task, and congruence between performance and prognosis).

The results indicated that genders differed only in their performance level when doing a task. The studied male students performed better in coding tasks than the female students in contrast to the findings by Dekker, Krabbendam, Aben, de Groot, & Jolles (2013) who support that girls performed better than males on tasks related to information coding, but the age of the students in both studies differed. Dekker et al. (2013) studied such students whose age varied between 13 and 15 years old, whilst our sample included the students above 16 years old. Another study of children (4-7 years old) revealed no gender differences in performance on some simple tasks, but better male performance than female on some advanced tasks (Sullivan, & Bers, 2016). Another study revealed no gender differences in performance or beliefs about one's performance in 18-23 years old participants, but men were prone to choose more challenging tasks (more hard and difficult tasks) than women, because of high risk taking in men, while women were either risk averse or uncertain about their ability (Niederle, & Yestrumskas, 2008). Some other authors also stated about some gender differences in the formulated goals, explaining them with gender differences in motives (Stankova, 2007).

As Dekker et al. (2013) conclude, efficiency of information processing is developing in human life, i.e. performance on some tasks related to coding may vary in dependence on gender and age. Besides, the task in our study and the tasks in the studies conducted by Dekker et al. (2013), Niederle, & Yestrumskas (2008), Sullivan, & Bers (2016) differed that could explain the variety of the findings regarding gender differences in task performance. The type of the executed tasks may contribute to the contradictory results regarding gender differences in performance.

This research did not find any significant gender differences in self-assessment of such abilities for goal achievement as positive self-talk, perceived self-efficacy, frustration tolerance, target discrepancy, neither in aspiration level. These results were in correspondence with the findings by Niederle, & Yestrumskas (2008) who found no gender differences in the beliefs about one's performance that may be considered as self-assessed abilities for goal achievement.

The third hypothesis was partially supported. It was expected age to correlate with the students' perceived abilities for goal achievement (perceived self-efficacy, frustration tolerance, positive self-talk, aspiration level, performance level, and target discrepancy). The results indicated that the advance in age was related to more frequent use of positive self-talk, lower performance level, and lower aspiration level, i.e. setting slightly more unrealistic goals, in support of the third hypothesis. Lower performance level with the age advance could be explained by a decline in the abilities, because of the somatic and physiological changes in the human body when getting older. Developing positive self-talk may be a means for an individual's encouragement to put more efforts in order to compensate the loss of some abilities. Diminishing the level of the aspirations with the age advance, i.e. setting more unrealistic goals in the direction of underestimation of the results that may be achieved, corresponds to the age differences in novelty seeking (Giannouli,

& Stoyanova, 2014) related to some changes of the goals during human life, as some authors (Stankova, 2007) consider the existence of some age differences in the goals that are set. Besides, diminishing the level of the aspirations with the age advance could facilitate the maintenance of high enough level of perceived self-efficacy. The findings revealed that advance in age did not correlate significantly with perceived self-efficacy, target discrepancy (in/congruence between performance and prognosis), neither with frustration tolerance, i.e. the persistence to pursue one's goals seemed a stable personality trait, as some authors (Schröder, 1997, p.84) consider frustration tolerance as emotional stability in reaction to (potentially) frustrating events such as failures, loss, obstacles, etc.

Further studies may differentiate self-assessment of one's abilities for goal achievement in the students with special educational needs that as a category of students were not included in this study, being one of its limitations. If the same subjects were studied with all the used instruments, then some correlations between the operationalized indicators of the abilities for goal achievement might be computed and examined that would reveal further information about self-assessment of the structure of such abilities and the relationships between them. A longitudinal study and a cross-cultural study with the same methods would contribute to further clarifying the dynamics of the abilities for goal achievement and the significance of the environment for their development and manifestation.

Conclusions

A model of the abilities for goal achievement has been created that includes such abilities as positive self-talk, perceived self-efficacy, the performance level of doing a task, the aspiration level (setting realistic or unrealistic goals); target discrepancy/congruence between performance and prognosis; and frustration tolerance (being resistant to repeated negative feedback). It has been applied in practice exploring the way these abilities were self-assessed. The results indicated a relatively realistic self-assessment of one's abilities for goal achievement by the students, as the correspondence of the results on the different indicators implied. The abilities for goal achievement are important for success in every activity. The sample in the research consisted of students whose abilities for goal achievement are a necessary condition for their successful learning, because they have chosen their occupation and status as one of their life goals. The results from the research suggest that the students can successfully achieve their goals by setting mainly realistic objectives and prone to high discrepancy between their performance and prognosis for it (underestimating one's abilities or efforts), but, however, performing successfully, and perceiving themselves as self-efficient, whose medium frustration tolerance and medium use of positive self-talk for self-encouragement should be further developed to contribute more to their goal attainment.

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