

SOCIO-ECONOMIC AND PSYCHOLOGICAL PREDICTORS OF UNIVERSITY ENTRANCE EXAM RESULTS IN AZERBAIJAN

СОЦІАЛЬНО-ЕКОНОМІЧНІ ТА ПСИХОЛОГІЧНІ ПРЕДИКТОРИ РЕЗУЛЬТАТИ ВСТУПНИХ ІСПИТІВ В АЗЕРБАЙДЖАНІ

Development of human potential is one of the most important challenges for developing countries in global economic competition. Scarcity of financial resources and qualified personnel complicate the issue even for most willing policy-makers. Building new schools, sending students to foreign universities yield limited results that enable only to follow the countries ahead without closing the gap. It seems that new paradigm is necessary for developing nations to find optimal solution of the issue. Addressing the problem in its source, establishing direct communication with individuals and families can be considered as an efficient complement to the sound institutionalization. Individuals and their families are most interested parties in their own happiness and development. Beside real social and economic problems that obstruct individual progress, there are also latent unhealthy mental, behavioral and communication patterns that prevent the individuals from unleashing their potential. Consecutive governmental and non-governmental programs aimed at enlightening parents and children, helping them to develop progressive thought and behavioral patterns can motivate people for self-education, productive communication and personal initiatives. The aim of this research is to contribute to development of arguments for above ideas and establish that concentrating on interpersonal relations and self-concept people can reach considerable achievements with limited economic resources. The study utilized a Google Forms survey with 112 questions to collect data from 201 university freshmen and sophomores on parent-child relations, self-concept, motivation, and teacher perceptions, excluding direct inquiries about family income to avoid discomfort. Social and economic status indicators included private schooling and personal room possession. The survey, adapting Schaefer's parental behavior tool and incorporating motivation test, assessed factors like self-esteem and learning motivation, despite some reliability issues. The non-probability sample, skewed towards technical and medical majors, limits the research's generalizability. The research explores the socio-economic and psychological factors influencing university entrance exam results in Azerbaijan, focusing on the role of family relations, self-concept, and educational environment. Key findings include the minimal correlation between self-esteem and academic achievement, with no significant direct link identified. However, positive family interactions, particularly parental interest and autonomy, significantly correlate with lower learning anxiety and higher educational achievement. The study also highlights the impact of preschool education and private tutoring on exam performance, suggesting that early educational interventions and supportive family environments are crucial for academic success. The study faced some shortcomings, including poorly designed measurement tools for locus of control and motivation, leading to the exclusion of these factors due to low reliability. The sample was not representative, limiting the generalizability of findings. Future research should focus on expanding

samples to include a wider diversity of students for more reliable and generalizable outcomes.

Key words: self-concept, self-esteem, parenting style, interpersonal relations, autonomy, positive interest, discursiveness, hostility, learning motivation, academic achievement.

Розвиток людського потенціалу є одним із найважливіших викликів для країн, що розвиваються, у глобальній економічній конкуренції. Дефіцит фінансових ресурсів і кваліфікованого персоналу ускладнює проблему навіть для найбільш готових політиків. Будівництво нових шкіл, відправлення студентів до іноземних університетів дають обмежені результати, які дозволяють лише йти за країнами попереду, не скорочуючи розрив. Здається, що нова парадигма необхідна для країн, що розвиваються, щоб знайти оптимальне вирішення проблеми. Вирішення проблеми в її джерелі, встановлення прямого спілкування з окремими особами та сім'ями можна розглядати як ефективне доповнення до надійної інституціоналізації. Люди та їхні родини найбільше зацікавлені у власному щасті та розвитку. Крім реальних соціальних та економічних проблем, які перешкоджають індивідуальному прогресу, існують також приховані нездорові психічні, поведінкові та комунікаційні моделі, які заважають людям розкрити свій потенціал. Послідовні державні та неурядові програми, спрямовані на просвітництво батьків і дітей, на допомогу їм у формуванні прогресивних моделей мислення та поведінки, можуть мотивувати людей до самоосвіти, продуктивного спілкування та особистих ініціатив. Мета цього дослідження полягає в тому, щоб сприяти розвитку аргументів на користь вищезазначених ідей і встановити, що, зосереджуючись на міжособистісних стосунках і самооцінці, люди можуть досягти значних досягнень за обмежених економічних ресурсів. У дослідженні використувалося опитування Google Forms із 112 запитаннями, щоб зібрати дані від 201 студента першого та другого курсу університетів про стосунки між батьками та дитиною, самооцінку, мотивацію та сприйняття вчителів, виключаючи прямі запити про доходи сім'ї, щоб уникнути дискомфорту. Показники соціального та економічного статусу включали навчання в приватній школі та наявність особистої кімнати. Опитування, яке адаптувало інструмент батьківської поведінки Шефера та включало тест мотивації, оцінювало такі фактори, як самооцінка та навчальна мотивація, незважаючи на деякі проблеми з надійністю. Неімовірна вибірка, спрямована в бік технічних і медичних спеціальностей, обмежує можливість узагальнення дослідження. Дослідження досліджує соціально-економічні та психологічні фактори, що впливають на результати вступних іспитів до університету в Азербайджані, зосереджуючись на ролі сімейних стосунків, самооцінки та освітнього середовища. Ключові висновки включають мінімальну кореля-

UDC 159.9

DOI <https://doi.org/10.32782/2663-5208.2024.57.18>

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цію між самооцінкою та академічними досягненнями без істотного прямого зв'язку. Проте позитивні сімейні взаємодії, зокрема інтерес і автономія батьків, суттєво корелюють із нижчим рівнем тривожності та вищими навчальними досягненнями. Дослідження також підкреслює вплив дошкільної освіти та приватного репетиторства на успішність іспитів, припускаючи, що раннє освітнє втручання та сприятливе сімейне середовище є вирішальними для успіху в навчанні. Дослідження зіткнулося з деякими недоліками, включаючи погано розроблені інструменти вимірювання локусу контр-

олю та мотивації, що призвело до виключення цих факторів через низьку надійність. Вибірка не була репрезентативною, що обмежувало можливість узагальнення висновків. Майбутні дослідження мають бути зосереджені на розширенні вибірки, щоб охопити більшу різноманітність студентів для більш надійних і узагальнених результатів.

Ключові слова: Я-концепція, самооцінка, стиль виховання, міжособистісні стосунки, автономія, позитивний інтерес, дискурсивність, ворожість, навчальна мотивація, навчальна успішність.

Introduction. The relationship between family socio-economic status (SES) and the academic performance of children is well established in sociological research. Putting aside the question as which one is the cause of another, however, it is well-known that SES goes hand in hand with better communication habits in the family and it is not only material well-being, but also interpersonal relations positively affect child's mental conditions and cognitive abilities. For example, study on the sample of more than three thousand students in Australia revealed that even within a group with considerable financial disadvantage, socioeconomic status as reflected by the level of parental education was a key predictor of student academic achievement [5]. Better educated parents reasonably act as good role models and create healthy mental environment, which stimulate children's healthy attitude and learning abilities. Preliminary results of research held by University of South Africa (UNISA) suggest that learners with more positive family experiences produce average to high results in science [19]. According to the report by Education Services Australia Ltd. [8], early experiences either enhance or diminish innate potential, laying either a strong or a fragile platform on which all further development and learning of the person, the body and the mind is built (p. 5). Relations of parents with their children and teachers with students can be considered as important elements of social environment that influence development of positive self-concept and learning motivation, which are directly related to academic achievement [17]. According to the results of another research held by UNISA, science and mathematics teaching can never be divorced from the socio-economic context in which it is taught [11].

Of course, income is the key factor for families to provide their children with better education, which along with better equipped buildings also means highly qualified instructors, which in its turn means that the teachers in addition to the knowledge of subject matter also have better communication skills. Communication with children must be positioned somewhere between the SES and education achievement, as the SES is meaningful as long as it produces

healthy interpersonal relations. This statement is supported by many other researches which revealed that healthy interpersonal relations in family [19] and in the classroom [13] contribute to development of positive self-concept and learning motivation in children. But self-concept and learning motivation are still too vague concepts and must be further specified for the purposes of this research. Therefore, we determined self-esteem, locus of control, extrinsic and intrinsic motivation, aspiration to achievement and fear of failure as key elements of self-concept and motivation and tried to test their relation to education achievement and components of SES. The term locus of control was first introduced by Julian B. Rotter [14] to describe differences in the degree to which people perceive themselves as having control over their own lives. "Although family income is most closely associated with adolescents' locus of control, parents' occupations and educational attainment contribute independently as well" [18]. Some researchers suggest that parenting style influence on self-esteem, and that self-esteem is correlated with locus of control and self-efficacy [19].

Purpose and Objectives. The problem that this research addresses is to find whether parent-child and teacher-student relations have independent effect on students' achievements or they solely related to SES. The main purpose of the research is to develop an argument for possible government and non-government programs to address problems of children from low-income families. It aims to demonstrate that sometimes it is not the financial contribution in the direct sense of the word required, but also, which may be more important than financial contribution, trainings for parents and teachers on communication, interpersonal relations to stimulate positive self-concept and education achievements of those children. The research followed two questions: 1) What are the key elements of social environment that positively affect learning motivation and educational achievement of applicants to universities in Azerbaijan? 2) Can the adolescents develop and maintain positive self-concept and learning motivation in unfavorable social environment? Initially the research aimed to test sample of applicants to technical and medical

majors, but due to low response rate we decided to include applicants to other majors as well. We also tried to find optimal combination of elements of social environment and personal characteristics that positively correlate with learning motivation and education achievement. The research tested below hypotheses:

Interpersonal relations influence learning motivation and education achievement more than economic conditions;

Students can develop and maintain positive self-concept and learning motivation in unfavorable or partially favorable economic conditions.

Method. The research employed a Google forms survey questionnaire consisting of 112 questions for data collection. The questionnaire beside necessary personal information also aimed to collect data on relations of children with their parents, self-concept and motivation, opinion on their teachers and some other elements that may affect self-concept and motivation. Direct questions on families' income and parents' occupations weren't included to prevent any mental discomfort that may cause hesitation with regard to the rest of the questions. Instead private schools, private room of children, district of residence, parents' education were determined as indicators of social and economic status, among which first two directly linked to economic well-being. The questionnaire also included questions about relatives who may influence the overall worldview and self-concept of children.

Modified version of the tool for children's reports of parental behavior developed by Earl Schaefer's [15] was used to collect data on parent-child relations. As the questionnaire appeared too big for the purposes of this research it has been adapted and number of questions reduced to 25. Post survey examination for reliability revealed that adaptation was successful and the method worked properly. The questionnaire tests paternal and maternal behaviors within five factors, which can be labeled as positive interest, directivity, hostility, autonomy and discursiveness.

Self-esteem and locus of control were determined as components of self-concept. Achievement motivation and fear of failure, intrinsic and extrinsic motivation were considered as key components of learning motivation. Test of training and professional motivation was incorporated in the survey to gather data on above components of motivation. Analyses for internal consistency revealed some problems with reliability of batteries for assessment of locus of control, extrinsic and intrinsic motivation, achievement motivation and opinion on teachers which will be described in results. Battery for assessment of students' anxiety worked properly.

Rosenberg [13, p. 16–38] self-esteem scale was used to measure self-esteem of respondents.

Post-survey examination for internal consistency revealed high reliability.

We used self-developed questionnaire including 8 questions to measure students' relations with teachers. Answering the questions, the students reported their opinion and feelings related to teachers on 3-point scale. One question on general opinion of students on their teachers included 5-point scale.

Overall correlation analyses of factors and narrowed groups were held to determine factors affecting education achievement and self-concept of students.

Sample. Study used non-probability sampling due to some technical and organizational constraints. Available sample of 201 freshmen and sophomores, including 80 male and 121 female, have been examined. 149 respondents are below 20 years old. 26 persons are within range of 21–24 years and 10 are 25–30 years old. Only three respondents are above 30 years old, specifically 31, 35 and 38. 127 respondents are students of I group majors (Technical), 11 – II group (Management), 7 – III group (Humanitarian), 52 – IV group (Medicine, Chemistry, Biology) and only 4 students represent V group (Arts). Initially it was intended to include only freshmen of I and IV groups. But due to low response rate and time limit, we decided to engage also other available groups of students. We didn't send questionnaires to students of II, III, V groups intentionally. They are the students who took entrance test to more than one group, that's why their contacts appeared in the database of applicants to one of I and IV groups. 123 students graduated from secondary schools in Baku and other big cities, 78 in regions that can be classified as rural. The sample is not representative and the research results cannot be considered as valid beyond the limits of given sample. Below is the table with distribution of respondents over score ranges.

Results. First of all, it must be noted that batteries aimed for assessment of locus of control, intrinsic and extrinsic motivation functioned with low reliability with respectively ,338 and ,470 of

Table 1

Respondents distribution based on test scores

0–300	N	Valid	32
		Missing	0
300–400	N	Valid	40
		Missing	0
400–500	N	Valid	57
		Missing	0
500–600	N	Valid	31
		Missing	0
600–700	N	Valid	41
		Missing	0

Cronbach's Alpha. The battery for assessment of achievement motivation against fear of failure also functioned with low reliability (.553). All three factors were removed from the data. The reason of insufficient reliability probably was that the number of questions in each battery of test for training and professional motivation was reduced from original 8 to 5. Close examination of results revealed that all questions of these batteries functioned positively, but not sufficient to reach overall optimal reliability. Although questionnaire for assessment of relation of parents with children was also adapted from the modified version of the Schaefer's (1966) [15] tool for children's reports of parental behavior and each battery was reduced from 10 to 5 questions, there wasn't any significant problem with reliability. Probably the reason is that respondents managed to be more consecutive while assessing behaviors of others, specifically parents and teachers, but weren't objective or consecutive enough while assessing their own behaviors, especially with regard to some sensitive questions. In other words, it may be the result of social desirability bias. Although respondents were given confidentiality guaranty, it was also noted that the respondents who desire to get interpretation of their results should type their email address at the end of the questionnaire. This trick was introduced to create individual interest for respondents to fill the questionnaire, but might have caused biased responses. Two of 10 self-developed questions for assessment of opinion on teachers were revealed to have no meaningful contribution to the assessment and were also removed.

Correlations among factors were analyzed mostly according to Spearman's rank correlation coefficient. In addition Kendall's rank correlation coefficient was also used in some cases to double check the accuracy of the data.

One of remarkable findings is that we didn't reveal any meaningful correlation of self-esteem with the educational achievement. 177 respondents expressed average level self-esteem, which was evenly distributed among test-score ranges in entrance examinations. Remarkably 5 of 14 respondents with observed highest level of self-esteem scored between 400–500 range in entrance examinations, only 2 in 500–600 and 4 in 600–700 range. Two students who entered university with scores under 300 also showed high self-esteem. Analysis revealed that self-esteem has positive correlation with teacher-student relations (.150) and negative correlation with learning anxiety (-.360). It also correlates positively with mother's positive interest (.226), autonomy given by mother (.157) and somewhat negatively with mother directivity (-.044), mother hostility (-.207) and mother discursiveness (-.117). With regard to relations with father, self-esteem positively correlates with positive interest (.154) and

negatively with hostility (-.176) and discursiveness (-.103). It is remarkable that self-esteem has no significant negative, but some positive correlation with fathers' directivity (.041) and minor positive correlation with autonomy given by father (.036). Positive relation was observed also between self-esteem and opinion on teachers: .150 on Spearman's rank correlation coefficient and .107 according to Kendall's rank correlation coefficient. No remarkable relation was observed between self-esteem and living-conditions during school period.

Examination of battery on learning anxiety for reliability revealed .638 of Cronbach's Alpha, which is not high enough, but as this is only a preliminary study, we decided not to remove it. However, no meaningful correlation between learning anxiety and university entrance score was observed. The most interesting finding related to learning anxiety was its correlation with preschool education. Children who had preschool education reported lower anxiety in learning process comparing to those who didn't attend preschool training with U test mean rank 2,17 against 2,73.

Positive opinion on teachers positively correlate with mother's positive interest with .232 according to Spearman's coefficient, and negatively with mother's hostility (-.210) and mother's discursiveness (-.164). Opinion on teachers seems to have no significant correlation with mother's directivity and autonomy given to child by mother. Positive opinion on teachers positively correlate with father's positive interest (.264). Interestingly, opinion on teachers has slightly positive correlation with father's directivity (.089) and autonomy given to child by fathers (.089). Negative correlation of opinion on teachers was observed to father's hostility (-.181) and father's discursiveness (-.108).

Nonparametric test of the null hypothesis to reveal equal likelihood of randomly selected value from one sample is less than or greater than a randomly selected value from a second sample was held to establish relation between entrance test scores and relations with teachers. Mann-Whitney U test analysis of students grouped based on entrance scores revealed some correlation between entrance scores and students relations with teachers. As displayed in below table, there are some differences in reported relations with teachers among groups. The highest (600–700) scorers in entrance test display higher likelihood of better relations with their teachers in secondary school.

Relations among parents and children and its influence on self-concept and education achievements is one of main areas the research focuses. Correlation analysis of parents' relations with children was carried out to ensure consistency among factors. Separate analyses of factors with regard to fathers and mothers presented in below tables.

Table 2
Correlation of relations with teachers to university entrance scores

Ranks				
	entrance_score	N	Mean Rank	Sum of Ranks
Relations_with_teachers	0-300	32	27,44	878,00
	500-600	31	36,71	1138,00
	Total	63		
	0-300	32	28,41	909,00
	600-700	41	43,71	1792,00
	Total	73		
	300-400	40	35,10	1404,00
	600-700	41	46,76	1917,00
	Total	81		
	400-500	57	38,96	2221,00
	500-600	31	54,68	1695,00
	Total	88		
	400-500	57	39,72	2264,00
	600-700	41	63,10	2587,00
	Total	98		

As we see from the table fathers' positive interest has almost no correlation with directivity, whereas positively correlates with autonomy and negatively with hostility and discursiveness. Directivity positively correlates with hostility and discursiveness. Hostility negatively correlates with autonomy and positively with discursiveness. Autonomy given to children by fathers has negative correlation with discursiveness.

Analysis of cross-factor consistency for relation of mothers with children is presented below.

As we see from the table, mothers' positive interest has almost no correlation with directivity,

whereas positively correlates with autonomy and negatively with hostility and discursiveness. Directivity positively correlates with hostility and discursiveness. Hostility negatively correlates with autonomy and positively with discursiveness. Autonomy given to children by fathers has negative correlation with discursiveness.

Kruskal-Wallis *H* test and Mann-Whitney *U* test analyses revealed that relations between parents and children influence students' achievements. Below table shows how the mean ranks of positive attention of farther, autonomy given by father changes in relation with entrance test scores.

We see that both indicators drop in the groups with entrance scores 300-400 and 600-700, possible reason of which may be a small sample size. Father discursiveness and hostility negatively correlate with test scores, which is quite reasonable. Father's directivity has no significant influence on test scores within the sample.

Relations of children with mothers seem to have less influence on their test scores than relations with fathers. The only factor in mother-children relations that seem to have influence on students test scores seems positive attention.

Below tables display the relation of entrance test scores with cases when positive interest of both parents is higher and lower than average level.

As we see 45 of 101 students in first table, which includes cases when positive interest of both parents are above average, are concentrated in two rightmost columns, when in the lower table, which includes cases when positive interest of both parents are below average, only 9 of 43 students scored above 500 points in entrance test.

Relation with father

Table 3

Correlations							
		positive_father	directivity_father	hostility_father	autonomy_father	discursiveness_father	
Spearman's rho	positive_father	Correlation Coefficient	1,000	,055	-,665**	,529**	-,357**
		Sig. (2-tailed)	.	,436	,000	,000	,000
	directivity_father	Correlation Coefficient		1,000	,236**	-,254**	,241**
		Sig. (2-tailed)			,001	,000	,001
	hostility_father	Correlation Coefficient			1,000	-,393**	,566**
		Sig. (2-tailed)				,000	,000
	autonomy_father	Correlation Coefficient				1,000	-,221**
		Sig. (2-tailed)					,002
	discursiveness_father	Correlation Coefficient					1,000
		Sig. (2-tailed)					.

Table 4

Relation with mother

		Correlations						
		positive_mother	directivity_mother	hostility_mother	autonomy_mother	discursiveness_mother		
Spearman's rho	positive_mother	Correlation Coefficient	1,000	-,044	-,695**	,580**	-,504**	
		Sig. (2-tailed)	.	,535	,000	,000	,000	
	directivity_mother	Correlation Coefficient		1,000	,297**	-,366**	,306**	
		Sig. (2-tailed)		.	,000	,000	,000	
	hostility_mother	Correlation Coefficient			1,000	-,517**	,611**	
		Sig. (2-tailed)			.	,000	,000	
	autonomy_mother	Correlation Coefficient				1,000	-,386**	
		Sig. (2-tailed)				.	,000	
	discursiveness_mother	Correlation Coefficient					1,000	
		Sig. (2-tailed)					.	

Table 5

Relation with farther and achievement (Kruskal-Wallis H test Ranks)

	entrance_score	N	Mean Rank
father_positive_interest	0-300	32	84,97
	300-400	40	84,81
	400-500	57	99,47
	500-600	31	128,65
	600-700	41	110,52
	Total	201	
father_autonomy	0-300	32	87,02
	300-400	40	79,71
	400-500	57	112,10
	500-600	31	115,31
	600-700	41	106,44
	Total	201	
father_discursiveness	0-300	32	117,38
	300-400	40	108,14
	400-500	57	107,87
	500-600	31	74,26
	600-700	41	91,93
	Total	201	

Table 6

Relation with mother and achievement (Kruskal-Wallis H test Ranks)

	entrance_score	N	Mean Rank
mother_positive_interest	0-300	32	100,86
	300-400	40	93,29
	400-500	57	87,56
	500-600	31	126,40
	600-700	41	108,11
	Total	201	

Table 7

Relation with mother and entrance scores (Mann-Whitney U)

	entrance_score	N	Mean Rank	Sum of Ranks
mother_positive_interest	300-400	40	30,75	1230,00
	500-600	31	42,77	1326,00
	Total	71		
	400-500	57	38,42	2190,00
	500-600	31	55,68	1726,00
	Total	88		

Table 8.1

Relation with parents and university entrance scores

			entrance_score					
			0-300	300-400	400-500	500-600	600-700	Total
			Count	Count	Count	Count	Count	Count
Mother's positive interest: 6-10 levels	Father's positive interest: 6-10 levels	Total	11	18	27	25	20	101

Table 8.2

Relation with parents and university entrance scores

			entrance_score					
			0-300	300-400	400-500	500-600	600-700	Total
			Count	Count	Count	Count	Count	Count
Mother's positive interest: 1-5 levels	Father's positive interest: 1-5 levels	Total	7	13	14	4	5	43

U test revealed that mother's positive interest was higher for children who had their own room during school period comparing to those who shared the room with siblings (101,45 against 70,10) and to those who didn't have own room at all (56,67 against 37,06). The same is true with regard to autonomy given to child by mothers. Mother directivity was higher for children who shared room with siblings than in cases when children didn't have any private space (79,77 against 55,24). Father's positive interest and autonomy given to children was higher in cases when children have their own room than in cases when the room was shared with siblings. The *U* test means are 95,69 against 73,17 and 91,26 against 75,53 respectively. The same is true comparing children who had their own room with those who had to use only common family space: *U* test means are 55,54 against 38,64 and 53,92 against 40,91 respectively.

We also analyzed relation of private space during school period to entrance test scores. Students who shared room with siblings reported higher test scores. Children of families residing in Baku who had his/her own private room, which is the indicator of economic well-being, show no superiority over those who shared rooms with siblings in terms of test scores.

Among 201 respondents only 8 students graduated from private secondary schools. Although the sample size doesn't allow to carry out comprehensive analysis, we found several interesting findings for future researches. We observed higher positive interest of fathers to children graduated from private schools comparing to those graduated from government schools (*U* test mean: 8,25 against 6,32) and higher mother hostility towards children graduated from government schools (3,87 against 2,25).

We also didn't observe any significant correlation between entrance scores and preschool education, which can be considered indicator of economic well-being to some degree. In late 1990s and early 2000s the preschool education was available for limited groups of population, especially for those with higher economic capabilities. Below table shows that among students succeeded in university entrance exams, including those entered with high scores number of students not attended preschool education institutions is considerably higher than those who attended.

Analyses revealed almost no correlation between parents' education level and students' scores in entrance examination within the sample. However, close examination of the data provides interesting tips for future studies. We separated the group (8 students) whose both parents have at least master degree and those (64 students) whose both parents had only secondary or secondary special education.

Comparison of data in above tables reveals that students whose parents have at least master degree tend to score significantly better in entrance examinations. Considering that our sample includes only students of universities, it is quite interesting result. When we mix students one or both of whose parents have bachelor degree the data becomes more balanced.

Discussion. As three key components of self-concept and motivation were removed from the analysis, we had to restrict self-concept to self-esteem and consider learning anxiety as an indirect indicator of self-concept. According to Campbell (1990) [4], self-concepts of low-self-esteem people are characterized by less clarity or certainty than those of high-self-esteem people. The fact that no significant relation between self-esteem and entrance score was observed may be caused by characteristics of the sample. However, while the majority of the research shows self-esteem does affect learning [1; 21], there are also some others which report opposite findings [16]. The reason related to the sample may be that all respondents are students of universities, in other words, they succeeded to enter universities, which is considered a significant achievement in the society. So this is sufficient reason to perceive oneself successful or capable person to some degree, but not enough to report high self-esteem. It is important to note that highest level accord-

Table 9

Entrance score and preschool_education (Crosstabulation)

		preschool_education		Total
		yes	no	
entrance_score	0-300	16	16	32
	300-400	16	24	40
	400-500	23	34	57
	500-600	10	21	31
	600-700	15	26	41
Total		80	121	201

Table 10.1

Parents' education and university entrance score of children

				entrance_score					
				0-300	300-400	400-500	500-600	600-700	Total
				Count	Count	Count	Count	Count	Count
education_mother	Master	education_father	Master	0	0	0	1	2	3
			Phd	0	0	0	0	1	1
			Total	0	0	0	1	3	4
	Phd	education_father	Bachelor	0	0	0	0	0	0
			Master	1	0	0	0	1	2
			Phd	1	0	1	0	0	2
			Total	2	0	1	0	1	4
				2	0	1	1	4	8

Table 10.2

Parents' education and university entrance score of children

				entrance_score					
				0-300	300-400	400-500	500-600	600-700	Total
				Count	Count	Count	Count	Count	Count
education_mother	Secondary or secondary specialization	education_father	Secondary or secondary specialization	10	20	20	8	6	64

ing to Rosenberg's (1965) [13] method means norm and that respondents scoring lower than highest level suffer lack of self-esteem. It is also notable that two respondents who displayed lowest level of self-esteem scored in 600-700 range in entrance examination. It may imply that some people set very high standards or feel huge pressure from their families that harm their self-esteem. Substantial literature review shows that relation between self-esteem and academic performance may be more complicated than it seems at first glance. Thus, according to Bankston and Zhou (2002) [15] who studied correlation between school performance and self-esteem among immigrants, Asians do show the lowest levels of reported self-esteem of the major racial/ethnic groups, but also the highest grade-point averages, whereas Black adolescents, on the other hand, show the highest levels of reported self-esteem, but show relatively low grade-point averages. In a study investigating the effects of an early entrance to college program on self-esteem, students in the Texas Academy of Mathematics and Science (TAMS), freshmen reported relatively negative tendency in comparison with normative group while responding to Adult Form of the Coppersmith Self-Esteem Inventory after the first semester in college [10]. The authors attribute the observed changes in self-esteem to the adjustment that all college freshmen experience when they leave home for the first time, as well as to changes in social comparisons. As all of respondents included in our study are freshmen and sophomores, the mentioned factors, espe-

cially "changes in social comparisons" may be a reasonable to consider for future study.

Positive correlation with teacher-student relations, parents' positive interest, autonomy given by mother is quite reasonable and support hypothesis of this study. Earlier researches also support that self-esteem has higher correlation with family experiences than with economic indicators [7]. The fact that self-esteem has no significant correlation with father's directivity and autonomy given by father may have some cultural implications. In Azerbaijani society authoritative behavior of father including directivity is mostly regarded as a routine of paternal communication and as long as it is within accepted limits makes no significant pressure on the child. Children's behaviors and education are mostly controlled by mothers, which explain why the autonomy given to child by father has no positive effect on child's self-esteem. On the other hand some researchers note that although authoritative parenting style has some negative correlation with child's self-esteem, it cannot be interpreted as a pure effect of parenting styles and opposite causality is also possible [12]. According to authors, more longitudinal research may needed for more confident conclusions.

Parent's hostility and discursiveness reasonably negatively correlate with self-esteem which was revealed by the analysis. This result can be considered as partially confirming the results of other studies which found negative correlation between child's self-esteem and neglectful parenting [12] and positive correlation between child's self-esteem and "acceptance-involve-

ment” and “psychological autonomy-granting” styles [22].

Numbers of researches prove that preschool education stimulates better learning and communication habits. According to one study one year of pre-primary school increases average third grade test scores by 8% of a mean or by 23% of the standard deviation of the distribution of test scores [3]. Low anxiety of children who had preschool education is reasonable. But this didn't seem to ensure any advantage in terms of achievement within studied sample. Probably if we held the study on sample representative to overall population of the country, we would observe advantages of preschool education. But the fact that such kind of advantage doesn't exist among students who already succeeded to enter universities is also understandable. Because success in entrance exams is considered within current research as an end result, it means that disadvantages caused by lack of preschool education have been somehow compensated during other stages. Motivation, better school teachers, hired tutors may be some of the compensating social and psychological intervention. Vast majority of the respondents (179 of 201 respondents) reported that they used after-school tutoring services for preparation to entrance examinations. While controlling for other factors positive impact of private tutoring on university entrance achievements has been proven by other studies held in Turkey [20] and on urban students with lower achievement or in schools with certain quality in China [5].

Positive correlation of parents' positive interest and negative correlation of parents' hostility and parents' discursiveness with students' relations with their school teachers implies that communication habits with authorities developed in the family influence their relations with teachers. Correlation of students' opinions on their school teachers with their test scores is one of key points with regard to hypothesis of this study. It points that interpersonal relations in this case expressed by relations between teachers and students are among key factors influencing students' performance. Authors who reviewed existing research, primarily from U.S. samples, insist that parents' and teachers' expectancies for children's math competence ... can influence children's math attitudes and performance [9].

The results revealed correlation of relation between children and parents with entrance examination scores which is another argument to support hypothesis. The difference is even more evident when comparing students who had high positive interest of both parents with those who received lower than average positive interest from both parents. Positive interest of both parents implies overall positive family environment, which has much more positive effect on children than

when they receive attention of only one parent. According to another study, support from parents, but not from friends or romantic partners, significantly predicted students' GPA [6].

Results show that parents pay more positive attention and give more freedom to children when they have private room. Availability of separate room for children beside economic conditions means more space and comfort at home which can stimulate positive mood toward children. This can be interpreted as influence of economic conditions to family relations. Higher directivity of mothers in cases when siblings share the same room is reasonable, as sharing single space means more conflicts and consequently more parental intervention. This kind of environment may stimulate development of behavioral patterns associated with directivity.

Separate room for children is related with economic well-being especially for those families who reside in Baku. Nevertheless, analysis of data revealed no significant correlation between separate room and exam results neither for students residing in Baku nor in regions.

Other indicators of economic well-being like attending private schools and preschool education institutions don't seem to provide any advantage to students within our sample. The key reason of this may be high percentage of using tutoring services. Although tutoring is paid service, it cannot be associated with high economic well-being as strongly as the attendance of private school. This also proves that families with limited financial resources can find reasonable economic solutions to ensure quality education for their children in terms of critical subjects for university entrance exams.

Although overall data doesn't provide any significant relation of parents' education with children's achievement in entrance test, deeper analysis reveal this impression is superficial. We get balanced distribution if to take bachelor degree as a point of divergence in education level of parents. But as soon as we move higher to take a master degree as a benchmark in our analysis we observe real differences. Group of students whose both parents has at least master degree display significant superiority against those whose parents has lower than bachelor. It is important to remind that this comparison is made within the sample of students who already succeeded in entrance exams. It means that even if parents with poorer education background support their children, for example by hiring tutors and trying to keep positive relations, their poor behavioral patterns may drag their children down putting them in disadvantageous position in competition with children of parents with better education background. This idea was supported by other research data as well. According to Dara Shifrer

(2018) [18] higher SES parents discuss school more often with children, their homes have more books and other cognitive resources.

Conclusions. Although it is not correct to claim that the research reached its goal and the hypothesis is totally proven, however it made several realistic findings that support its hypothesis and show that it is moving in the right direction. The findings indicating low correlation of some of direct and indirect attributes of economic well-being like private room, private school, preschool education and in contrast higher positive correlation of relation with parents and teachers with students' achievements create strong arguments towards proving that interpersonal relations is the key component of social environment in terms of child upbringing and key predictor of education achievement.

Despite yielding some meaningful findings, the research had some serious shortcomings. First of all batteries aimed at measuring locus of control and motivation were not well-designed and displayed low reliability. As a result the corresponding factors were removed from the data analyses and study produced poor data on self-concept. Study sample wasn't representative and the results cannot be generalized to wider population.

The research also produced some considerations for upcoming researches. It became clear that such complex factors like locus of control and motivation cannot be measured with minimum number of questions. Aim to measure wider diversity of factors within single survey and sacrificing number of questions to number of factors puts the reliability of the study under risk.

The research results underline the importance of replicating the similar research with improved questionnaire on bigger sample including students of secondary special education institutions and 10-11 grades of general education schools.

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