

ISSN: 1814-2052
ISSN (online): 2311-7273

**ПСИХОЛОГИЧЕСКАЯ НАУКА
И ОБРАЗОВАНИЕ**

**PSYCHOLOGICAL SCIENCE
AND EDUCATION**

№ **2**

2023



ПСИХОЛОГИЧЕСКАЯ НАУКА И ОБРАЗОВАНИЕ

2023 • Том 28 • № 2

PSYCHOLOGICAL SCIENCE AND EDUCATION

Московский государственный психолого-педагогический университет
Психологический институт Российской академии образования

Moscow State University of Psychology & Education
Psychological Institute of the Russian Academy of Education



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Индексируется:
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 Издается с 1996 года
 Периодичность: 6 раз в год
 Свидетельство регистрации СМИ: ПИ № 013168.
 Дата регистрации 26.11.1994
 Лицензия ИД №01278 от 22.03.2000 г.
 Формат 70 × 100/16
 Тираж 1000 экз.
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Indexed in:
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 Frequency: 6 times a year since 1996
 The mass medium registration certificate:
 PN №013168 from 26.11.1994
 License № 01278 of 22.03.2000
 Format 70 × 100/16
 1000 copies
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Психологическая наука и образование**ПОДПИСКА**

Подписка на журнал
 по объединенному каталогу «Пресса России»
 Индекс — 72623

Сервис по оформлению подписки на журнал
<https://www.pressa-rf.ru>

Интернет-магазин периодических изданий «Пресса по подписке»
www.akc.ru

Полнотекстовая электронная версия журнала публикуется на
<https://psyjournals.ru/psyedu/>

Издательство ФГБОУ ВО МГППУ

Редакция:

127051, Россия, Москва, ул. Сретенка, д. 29. Офис 209
 Тел. (495) 632-99-75; факс (495) 632-92-52

Редакционно-издательский отдел:

123290, Россия, Москва, Шелепихинская наб., д. 2 а. Офис 409
 Тел. (499) 244-07-06 доб. 223

Научный редактор — В.Э. Пахальян
 Редактор, корректор — А.А. Буторина
 Компьютерная верстка: М.А. Баскакова
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Psychological Science and Education

Full-text electronic version available at
<https://psyjournals.ru/en/psyedu/>

Publishing House MSUPE

Editorial Office: Sretenka str., 29, Moscow, Russia, 127051 off. 209
 Printing Office: Shelepikhinskaya emb., 2 a, Moscow, Russia, 123290 off. 409

Scientific editor — Pahal'yan V.
 Editor and proofreader — Butorina A.
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Уважаемые читатели!

Представляем вашему вниманию весенний выпуск журнала «Психологическая наука и образование» (№ 2—2023 г.). В выпуске представлены две традиционные рубрики «Психология развития» и «Психология образования».

Рубрика «Психология образования» открывается исследованием взаимосвязи самореализации, личностных характеристик и эмоционального интеллекта у молодежи. В еще одном исследовании рубрики рассматривается роль самоэффективности (self-efficacy) в академических достижениях и успеваемости у студентов. Здесь же представлены результаты исследования представлений студентов о выборе образовательной траектории с учетом цифровой трансформации образования.

Рубрику «Психология развития» открывается исследованием спонтанных представлений учащихся младших классов о переживаниях людей с использованием авторской методики «Эмоциональное взаимодействие». Во втором исследовании рубрики представлены результаты изучения особенностей внутренней позиции взрослого как мотивационной основы готовности к самоопределению у современных старшеклассников и студентов колледже. В исследовании показано, что формирование профессиональной идентичности современных старшеклассников и студентов колледжей в большей степени соответствует объективным требованиям социальной ситуации, нежели уровню личностной зрелости, необходимому для принятия осознанных решений. В третьей статье представлены материалы исследования эффективности подготовки к родам и индивидуального сопровождения в России. Обращается внимание на распространенность практики подготовки к родам и на недоказанность эффективности для психологического и физического благополучия женщин. Полученные результаты указывают на то, что подготовка к родам не имеет связи со способом родов, самочувствием женщин и со степенью удовлетворенности опытом родов. В завершении рубрики рассматривается взаимосвязь между личностными чертами и регуляцией эмоций у спортсменов в подростковом возрасте.

Надеемся, что читатели журнала найдут интересные для себя материалы в новом выпуске журнала «Психологическая наука и образование».

Редакция журнала

Understanding Emotions as a Unique Predictor of Social Self-Realization in Part-Time and Full-Time Students

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Self-realization, as a psychological phenomenon that combines well-pronounced motivational and cognitive-evaluative components, largely determines adaptive resources of a person. This article analyzes the relationships among three types of self-realization, basic personal traits, professional experience and emotional intelligence of young adults on a sample of 125 students (girls and boys) of the Southern Federal University. A part of the sample consisted of part-time students who combined work and professional training ($n=51$), the rest were full-time students in their respective fields of study ($n=74$). The study tested three research hypotheses, namely that: (1) The respondents would report relatively low level of social self-realization, in comparison with professional and personal self-realization; (2) Significant differences would be observed in indicators of social self-realization, but not in emotional intelligence, between the sub-samples of part-time and full-time students; (3) Professional experience, basic personal characteristics and individual indicators of emotional intelligence would contribute to the respondents' subjective assessment of their social self-realization. Results of ANOVA, correlational and regression analysis of data collected using psychodiagnostic techniques by Kudinov (self-realization profiles), Lyusin (Emln), and Sschebetenko (Big Five-2), by and large, confirmed all three study hypotheses, in particular and most importantly — about the differences between the two categories of respondents in the level of their social self-realization and in various combinations of its predictors, specifically, about the unique role of the 'understanding emotions' factor. The article also discusses the importance of self-realization for successful social adaptation of young people and describes various psycho-correctional and psychological-pedagogical methods, including specialized training of emotional intelligence, designed to compensate for low social self-realization.

Keywords: emotional intelligence, understanding emotions, professional self-realization, personal self-realization, social self-realization, personality traits, social activities, young adults, part-time and full-time student, psychological training.

For citation: Obukhova Yu.V., Borokhovski E.F. Understanding Emotions as a Unique Predictor of Social Self-Realization in Part-Time and Full-Time Students. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2023. Vol. 28, no. 2, pp. 5—17. DOI: <https://doi.org/10.17759/pse.2023280201> (In Russ.).

Понимание эмоций как фактор социальной самореализации обучающейся и работающей молодежи

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Представлены результаты анализа взаимосвязей между тремя видами самореализации, личностными характеристиками, профессиональным стажем и эмоциональным интеллектом молодых взрослых. В основе исследования лежит идея о том, что психологический феномен самореализации, сочетая в себе выраженные мотивационный и когнитивно-оценочный компоненты, во многом определяет адаптационный ресурс личности. Выдвинуты три рабочие гипотезы: (1) об относительно низком уровне социальной самореализации в сравнении с профессиональной и личностной; (2) о существенных различиях в показателях социальной самореализации, но не эмоционального интеллекта между группами *Работающих* и *Обучающихся* респондентов; (3) о роли профессионального стажа, базовых личностных характеристик и отдельных показателей эмоционального интеллекта в субъективной оценке социальной самореализации. Гипотезы были протестированы на выборке из 125 студентов (девушек и юношей) Южного федерального университета, часть из которых совмещала работу и обучение по специальности (*Работающие*, $n=51$), а часть являлась студентами очной формы обучения (*Обучающиеся*, $n=74$). Результаты проведенного корреляционного, дисперсионного и регрессионного анализа данных, собранных с применением психодиагностических методик С.И. Кудинова (виды самореализации), Д.В. Люсина (ЭмИн) и С.А. Щebetенко (Вопросник Большой Пятерки—2), в целом подтвердили гипотезы исследования, в особенности — о различиях между двумя категориями респондентов и уникальной роли фактора понимания эмоций в оценке уровня самореализации. Предлагается обсуждение значимости самореализации для успешной социальной адаптации молодежи и подчеркивается роль психокоррекционных и психолого-педагогических методов компенсации низкой социальной самореализации, включая специализированный тренинг эмоционального интеллекта.

Ключевые слова: эмоциональный интеллект, понимание эмоций, профессиональная самореализация, личностная самореализация, социаль-

ная самореализация, личностные черты, социальная активность, обучающаяся молодежь, работающая молодежь, психологический тренинг.

Для цитаты: *Обухова Ю.В., Бороховский Е.Ф.* Понимание эмоций как фактор социальной самореализации обучающейся и работающей молодежи // Психологическая наука и образование. 2023. Том 28. № 2. С. 5—17. DOI: <https://doi.org/10.17759/pse.2023280201>

Introduction

“Do you strive to fully realize your knowledge, talents and abilities in socially significant events / professional activities / relationships with others?” A person who answers positively to this and similar questions confirms, first of all, to him/herself the sense of satisfaction with own actions their results in various life circumstances — such person is content/gratified with how successful the realization of creative, professional, communicative, intellectual, motivational etc. potentials is. In other words, a person positively evaluates what professional psychologists describe by the term “self-realization” or “self-efficacy” [13]. The former term characterizes a person’s self-assessment of how fully her/his personal potential is realized, while the second literally describes a person’s perception of own ability to carry out certain activities at the expected/given level of success and is very often considered in the context of educational activities [19]. Both psychological phenomena combine pronounced motivational (“what I aspire to”) and cognitive-evaluative (“how successfully I manage realization of these aspirations”) components.

Obviously, self-realization affects various spheres of human life. S.I. Kudinov identifies three basic areas of self-realization — personal, professional and social [4]. In the structure of self-realization of an individual person, a certain area may prevail, while others recede into the background. This is a natural process that reflects the vital interests and priorities of the individual.

However, a disproportionately low level of self-realization in one area potentially threatens the overall psychological adaptation — a serious dissatisfaction with the

degree of fulfilling one’s potential even in limited certain aspects of life is frustrating, gradually spreading to other areas, reducing motivation for them, causing a feeling of tension and discomfort — and, as such, need adequate psychological correction.

Study Problem and Rationale

The Fundamentals of the Youth Policy of the Russian Federation for the period up to 2025, name as the main goal educating “patriotic youth with independent thinking and a creative worldview, with professional knowledge, capable of demonstrating high cultural standards, responsibility and the ability to make independent decisions” [10], i.e., creating conditions for meaningful self-realization. According to the document, youth policy should be focused on the comprehensive promotion of self-realization of young people through their involvement in the volunteer movement, various social and educational projects, grant competitions, professional start-ups, etc. However, despite the numerous opportunities for self-realization, the social activity of young people remains rather low, as evident from various empirical studies [1; 7].

Among the three previously named types, social self-realization is especially interesting in its relation to other psychological characteristics. It has been established that individuals with a high level of social self-realization are characterized by a high level of social (dynamic in interpersonal communication) and emotional (high level of empathy and tolerance) types of intelligence, as well as a more harmonious self-concept that combines a high level of self-control, the desire for self-fulfillment, a high rate of self-actualization and meaningfulness of life. It

has also shown that volunteering in the perception of young people is no longer limited to being driven by altruistic motives [1], but also includes compensatory and pragmatic motives: benefits, personal growth and expansion of social contacts [1; 8; 11].

Empirical evidence also points to emotional intelligence as a significant predictor of successful self-realization. People with a high General Factor of Personality, which is also a recognized indicator of overall social performance, typically show higher results on emotional intelligence scales [17].

A meta-analysis of the connection of emotional intelligence to learning shows that students with a higher level of the former emotional are better able to cope with negative emotions associated with academic performance (anxiety, boredom, frustration) — supposedly, due to the ability to better control own emotions and influence the emotional reactions of others. They also demonstrate a high potential for successful interaction with others and more successfully build relationships with teachers, peers and the family [15]. Developed emotional intelligence reduces indecision when building individual professional trajectories [18], enhances the experience of positive emotions and suppresses / compensates for negative ones, thus, contributing to the development of more flexible mental models (characterized by high creative potential), and subsequently to more effective professional self-realization [23].

Ability to develop behavioral responses and thought processes (including manifestations of emotional intelligence) that are instrumental in achieving well-being, also underlies higher levels of personality development — quite in accordance with A. Maslow's hierarchy of needs. Indeed, at a higher level of self-realization, a person tends to experience less anxiety, more effectively solve emerging problems and more fully enjoy the opportunities that open up. All this puts emotional intelligence within the array of factors that contribute to successful self-realization of the individual [6].

Personal characteristics are also factors capable of influencing self-efficacy [21]. For example, consciousness, extraversion and neuroticism often significantly correlate (the latter — negatively) with self-efficacy [16; 20].

To summarize, it is worth noting we that the attention of research on self-realization is largely drawn to the problems of its age-driven dynamics and differences in the saliency of its types — personal, social and professional. Of some special interest are particularly low indicators of social self-realization in young adults — when there is even the need for employing methods of psychological compensation / correction [3; 12].

Considering the above data on the high compensatory potential of emotional intelligence, including our own earlier study [7] and the importance of taking into account personal characteristics when analyzing the adaptive capabilities of young adults, the following questions and the related research hypotheses were formulated:

1. What level of social self-realization (including in comparison with its other types) and indicators of emotional intelligence do characterize the sample of young adult participating in the study? Accordingly, the H1 hypothesis suggests that respondents' self-assessment of the level of social self-realization is lower than personal and professional ones, with a significant variation in emotional intelligence indicators.

2. Do the level of social self-realization and indicators of emotional intelligence differ between respondents in the groups of *working* (combining studies at a university with work and, accordingly, having longer professional experiences) and *studying* (full-time students who are not included in any labor activities) participants? Hypothesis H2 suggests significant differences in the level of expression of self-realization, but not in the indicators of emotional intelligence, as potential predictors of self-realization, between the groups of *working* and *studying* participants.

3. What factors influence the degree of manifestation of social self-realization in the sample as a whole and in *working* and *studying* groups? Accordingly, the H3 hypothesis tests the relationship of professional experience, personal characteristics (especially, extraversion), and indicators of emotional intelligence, first of all, the ability to understand emotions (as a potentially important compensatory / adaptive factor) with the subjective perception by young adults of their social self-realization.

Study Sample and Instruments Used

The study sample consists of 125 students of the Southern Federal University (107 girls and 18 boys) aged 18-38 years (mean age 22.15, $SD=4.70$). At the time of the study, 74 were full-time students, while the remaining 51 — combined study with work in their respective professional fields. Accordingly, we distinguished between the groups of *studying* and *working* participants. The groups did not differ in terms of gender composition: 64 and 41 women and 10 and 10 men, respectively (the chi-square value of 0.83 was not statistically significant, $p = .36$). The indicator of professional experience included the number of full years of both work and training in the respective professional speciality.

To assess the three types of self-realization of the respondents, the study used the Multidimensional Self-Realization Questionnaire by S.I. Kudinov [4]. This instrument contains 101 questions with 6 options for answers: from “no” to “definitely yes”. The values of internal consistency (Cronbach’s alpha) for the test scales range from 0.72 to 0.78, with the test-retest reliability coefficient of 0.76 ($p < .01$).

Various components of emotional intelligence were assessed with the Emln questionnaire by D.V. Lyusin [5]. The test contains 46 statements evaluated on a 4-point Likert-wise scale). Cronbach’s alpha values for the test subscales range from 0.75 to 0.79.

“Big Five Inventory-2” (in the Russian adaptation of S.A. Shchebetenko [9]: 61 ques-

tions) assessed respondents’ major personal factors (Big Five). The test has Cronbach’s alpha of 0.84 — for raw scores and 0.85 — for centered scores, thus, indicating high internal consistency. The checklist of basic socio-demographic data included questions regarding gender, age, field of study and professional specialization, as well as of structural subdivision within the university, and the length of study / work.

Participation in the study was voluntary and no remuneration was paid to participants. Participants filled out the response forms of all measures individually. The respondents’ anonymity was ensured. The collected data were processed in the SPSS 26.0 package by means of the following statistical procedures. An unpaired Student’s t-test was used to compare the groups of respondents on major variables, Pearson’s linear correlation coefficient was calculated to assess the direction and degree of relationships among variables, and multiple regression analysis was used to assess the relative contribution of various predictors to the distribution of the criterion variable of social self-realization.

Results and Discussion

Descriptive statistics for all variables and cross-correlations among them for the sample as a whole are summarized in Table 1.

First, we were interested in whether there are differences in the major variables between the *working* and *studying* groups, regardless of the age factor. There is a statistically significant relationship between age and professional experience ($r = 0.459$, $p < .01$), while professional experience (naturally higher for the *working* participants), but not age, is significantly positively correlated with several major variables, except for personality traits (their relatively stable nature throughout their life cycle is quite well documented). It should be noted that as the experience of professional activity is gradually acquired with time, the indicators of all types of self-realization decrease.

For the entire sample, the indicator of social self-realization ($M = 57.37$) is significantly lower than the indicators of personal ($M = 79.42$) and professional ($M = 62.33$) self-realization. Pairwise comparisons of social self-realization with the other two types are statistically significant ($p < .001$ and $p = .013$, respectively). The same pattern is preserved when the sample is divided into the *working* (53.20; 74.08; 57.67) and *studying* (60.24; 83.11; 65.54) groups of respondents. The numbers in parentheses reflect the average values of the subjective assessment of social, personal and professional self-realization (in this sequence) for these subgroups, respectively. Thus, H1 about the relatively low degree of social self-realization in this age group is supported.

These results are consistent with the pattern previously observed in many empirical studies. For example, when studying the priority areas of youth social activity, it was revealed that the most significant are personal (leisure-communicative activity and activity in the field of self-development) and professional (educational and developmental activity) self-realization, while social (spiritual-religious, voluntary and socio-political activity) is less significant in student population [3; 12].

Other variables involved in the study, namely the participants' personality characteristics and various indicators of their emotional intelligence, are within the ranges typical for this age group.

Table 2 summarizes the data of pairwise comparisons (between the two groups) of variables that have significant correlations with the indicator of professional experience. The absence of statistically significant differences in indicators of emotional intelligence reflects that the presence of this construct is relatively stable (compatible) throughout the entire sample — as the H2 hypothesis suggested.

In contrast, there are statistically significant (and approaching significance) differences in the levels of personal ($p = .01$)

and professional ($p = .05$) self-realization, with higher values of both in the group of *studying* respondents, but not social self-realization ($p = .10$). In other words, social self-realization “sags” in comparison with the other two types of self-realization for both *working* and *studying* respondents.

No matter how characteristic of this age period this tendency may be, it requires an explanation, and if necessary (as low social self-realization could be associated with the risk of maladjustment), adequate compensation, including by means of psychological correction.

To better understand what factors influence the respondents' subjective perception of their social self-realization, several models of hierarchical multiple regression analysis were tested with the social self-realization indicator as a dependent variable and professional experience, Big Five personality characteristics and some parameters of emotional intelligence as predictors — separately for the groups of *working* and *studying* respondents.

Only one model, using indices of ‘extraversion’ and ‘understanding emotions’ as predictors, revealed statistically significant results (Table 3).

The overall explanatory power of the model stands at 20.9% and 13.4% for the *working* and *studying* groups, respectively. Furthermore, the relationships found for these two groups were almost diametrically opposite.

Professional experience is a significant negative predictor of social self-realization among the *working* respondents ($\beta = -0.40$, $p < .01$), independently explaining up to 11.4% of the spread in values of the dependent variable, while for the *studying* respondents this factor is practically inconsequential ($\beta = 0.02$, ns). In both groups, ‘extraversion’ is a positive but not statistically significant predictor. For the *studying* respondents, this indicator appears as a trend, approaching a statistically significant value uniquely contributing to the explanatory power of the model 4.2% ($p = .08$).

Table 1
Descriptive statistics and cross-correlations of the major study variables (N = 125)

Variable	Mean	Standard deviation	1	2	3	4	5	6	7	8	9	10	11	12
1 Age	22.15	4.70	-											
2 Professional experience	2.30	1.49	0.46**	-										
3 Personal self-realization	79.42	19.36	-0.08	-0.21*	-									
4 Social self-realization	57.37	23.77	0.01	-0.22*	0.56**	-								
5 Professional self-realization	62.33	22.41	0.017	-0.23**	0.57**	0.55**	-							
6 Understanding emotions	40.96	8.29	0.09	-0.19*	0.16	0.19*	0.08	-						
7 Managing emotions	39.58	8.25	0.03	-0.24**	0.00	0.22*	0.04	0.47**	-					
8 Total index of emotional intelligence	79.72	14.87	0.15	-0.24**	0.10	0.20*	0.05	0.71**	0.70**	-				
9 Extraversion	39.87	8.58	0.10	0.01	-0.05	0.15	0.13	0.32**	0.30**	0.30**	-			
10 Neuroticism	37.06	8.81	-0.09	-0.04	0.14	-0.00	-0.29**	-0.40**	-0.33**	-0.22**	-0.22**	-		
11 Openness to new experiences	42.13	8.70	0.05	-0.06	0.03	0.13	0.21*	0.21*	0.13	0.16	0.34**	-0.02	-	
12 Conscientiousness	45.38	10.18	0.06	-0.01	0.06	0.19*		0.31**	0.45**	0.39**	0.29**	-0.21*	0.39**	-
13 Agreeableness	42.80	7.67	-0.12	-0.10	-0.04	0.02	0.07	0.09	0.22*	0.16	0.26**	-0.22*	0.32**	0.29**

* $p < .05$, ** $p < .01$

Table 2

Difference in indices of self-realization and emotional intelligence between groups of Working (N = 51) and Studying (N = 74) respondents

Sample ^a	Mean & Standard Deviation	Mean difference ^c	t-value	p-value ^b
Personal self-realization:				
Studying	83.11 ± 19.58	9.03	2.62	0.01
Working	74.08 ± 17.90			
Social self-realization:				
Studying	60.24 ± 25.56	7.05	1.64	0.10
Working	53.20 ± 20.44			
Professional self-realization:				
Studying	65.54 ± 22.86	7.87	1.95	0.05
Working	57.67 ± 21.08			
Total index of emotional intelligence:				
Studying	80.50 ± 13.76	1.93	0.71	0.48
Working	78.57 ± 16.41			
Understanding emotions:				
Studying	41.68 ± 8.15	1.75	1.17	0.25
Working	39.92 ± 8.46			
Managing emotions:				
Studying	40.62 ± 8.36	2.56	1.72	0.09
Working	38.06 ± 7.92			

^a Degrees of freedom (df) — 123;^b All differences are in favour of the Studying group;^c Statistical significance of the difference

Table 3

Regression analysis of social self-realization (as a criterion variable) in the Working (N = 51) and Studying groups (N = 74)

Variable	r	R	R ²	R ² change	Sign. F	Final β
Working						
Professional experience:	-0.34**	0.34	0.11	0.11	0.02	-0.40**
Extraversion:	0.17	0.36	0.13	0.01	0.38	0.23
Understanding emotions:	-0.12	0.46	0.21	0.08	0.03	-0.32*
Studying						
Professional experience:	0.02	0.02	0.00	0.00	0.88	0.02
Extraversion:	0.20*	0.21	0.04	0.04	0.08	0.09
Understanding emotions:	0.36**	0.37	0.13	0.09	0.01	0.32**

r — Zero-order correlation;

R — Multiple correlation coefficient;

R² — Multiple correlation coefficient squared;R² change — Sequential change in R²;

Sign. F — Change statistical significance;

Final β — Final regression coefficient for each predictor; * p < .05; ** p < .01

Finally, 'understanding emotions' is a statistically significant predictor for both groups, but its contribution goes in the opposite direction. For those who combine work and study, it is negative ($\beta = -0.32$, $p < .05$) and explains 8.1% ($p = .03$) of variability of the dependent variable. The corresponding values for the indicator of 'understanding emotions' in non-working students are: $\beta = 0.32$ ($p < .01$) and 9.2% ($p = .01$).

Similar data are reported in [2]: teachers with a high level of professional burn-out, accumulated throughout a long but unsatisfying professional activity (i.e., long experience correlates with an increase in dissatisfaction) are characterized by a constantly reduced mood background and pronounced scepticism, and their activity (including socially oriented) ceases to be purposeful and productive. Their professional motivation consists predominantly of negative motives (fear of losing a job and the related payments, of been reprimanded, etc.). Such teachers think about how to radically change something in their lives for the better, but it is especially challenging for them due to the reduced ability to understand their own emotions and the emotions of other people.

Thus, as an essential part of the answer to the third research question, only the unique role of emotional intelligence received statistically significant support, although the nature of its relationship with other variables is fundamentally different for the groups of *working* and *studying* respondents. For the former, 'understanding emotions' (of their own and people around them) can make an additional contribution to a more acute awareness of the lack of demand for social pursuit in their professional activity — neither they themselves nor their colleagues attach much importance to behaviors not supported by pragmatic interests. Accordingly, high sensitivity to emotions allows them to feel it faster and perceive more accurately. On the contrary, for the latter group (who are not yet

under the pressure to focus exclusively on their professional careers and are open to other types of socially-oriented activities), a higher level of understanding emotions can help determine which social activity and which partners for its implementation to choose and, thus, optimize the degree of involvement in it (benefit more from social activities and, as a result, experience higher degree of self-realization).

Conclusion

1. The results obtained by the study are based on a sample with the predominance of females (86% — women and 14% — men), as well as young people who are not formally involved in social projects. This sample is fairly representative and has characteristics typical of most young adults in Russian higher education. This applies both to the variables common for the entire sample (personal characteristics, level of emotional intelligence and low degree of social self-realization), and for those characteristics that emphasize differences within the sample (higher rates of personal and professional self-realization among the *studying* compared to the *working* respondents). The role of professional experience (in contrast to age) is clearly observed in the differential dynamics of self-realization, but not in personal characteristics and not in the indicators of emotional intelligence. With an increase in professional experience, all types of self-realization (social, in particular) tend to decrease.

2. The difference in the nature of the pair-wise relationships between the predicting variables and the level of social self-realization (as a criterion variable) in the groups of *studying* and *working* has been established. Professional experience is a significant negative predictor of the degree of social self-realization among *working* respondents. The ability to understand emotions reduces the degree of social self-realization among *working* respondents, but increases it among *studying* respondents.

3. For both *working* and *studying* respondents, extraversion is a positive, but statistically insignificant predictor of social self-realization.

Low levels of social self-realization in young adults create potential challenges to their social and psychological adaptation, to the effectiveness of professional activities and interpersonal contacts. However, there are different ways to address this problem, including various methods of psychological correction. When carrying out some of these corrective measures with working youth, it is necessary to pay attention to the harmonization of the self-concept and the development of emotional intelligence, in particular, understanding one's own and others' emotions.

As young adults gain work experience, they may become disillusioned with their professional activities and develop professional burnout, excessive self-criticism, associated with the decreased social activity, initiative and perseverance. Early recognition of such tendencies by young people themselves (due to higher emotional intelligence and, in particular, a better ability to understand emotions) may allow them to seek earlier and more actively and to successfully find ways to compensate for the problems, for example, by dividing attention and directing efforts towards various complementary goals instead of concentrating them on a single one — such as, professional career or material well-being.

As part of the psychological and pedagogical support for young people in their student life, curators of study groups can be recommended to carry out activities aimed at involving students in socially useful, cultural, and sports activities, to form socio-centric motivation by using effective team building methods, and also by encouraging students to participate in start-ups and various business projects.

The effectiveness of such activities will be largely determined by the ability of students to reasonably balance them, find reliable partners and like-minded people,

predict the success of their efforts based on the reaction of other people involved in joint projects and of their target audiences. With an increase in the level of emotional intelligence of students, their subsequent entrepreneurial self-efficacy increases, especially for those who pay more attention to the applied and innovative education [22].

Also, for psychologists who work with students, it makes sense to use applied techniques aimed at increasing the internal resource for self-realization, in particular, at developing emotional intelligence through the appropriate psychological training.

A meta-analysis of the effectiveness of emotional intelligence training confirms its potential benefits by reporting a statistically significant overall effect size of $r = .51$ [14]. Moreover, emotional intelligence training promoted an increase in the indicator of understanding emotions significantly more than of the other scales ($r = .69$). It is possible that emotional intelligence training has the greatest effect on those competencies that are important for academic performance — several studies conducted in educational institutions confirm a greater increase in the participants' ability to understand emotions. Emotional intelligence training programs have the potential of positively impacting academic performance and, indirectly — social and personal self-realization of young adults.

Without a doubt, among the most important directions the further research could aim at are the following:

(1) comparative analysis of indicators of social self-realization of volunteers and young people who do not take part in informal socially oriented events;

(2) comparison of data obtained on samples with different gender and professional experience compositions;

(3) more in-depth analysis of the nature of the relationships between social self-realization and personal psychological characteristics of respondents, including various aspects of their emotional and social intelligence.

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Получена 02.05.2022

Принята в печать 20.02.2023

Received 02.05.2022

Accepted 20.02.2023

Promoting Academic Achievement: The Role of Self-efficacy in Predicting Students' Success in the Higher Education Settings

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Self-efficacy forms a major factor that influences many life aspects, as a result, it has been researched by many psychologists and educators worldwide from different perspectives. Embracing the context of Bandura's Self-efficacy Theory as a theoretical framework, this quantitative empirical research paper introduces an overview of the role that self-efficacy plays in shaping higher education students' academic achievement among a diverse group of college students. The diverse group comprises N=374 students who took part in this research study and responded to the General Self-efficacy Scale (GSE) to disclose the perception of their self-efficacy and the ability to perform the required academic tasks. Multiple analysis techniques including Descriptive analysis, Pearson Correlation Coefficient, t-test for independent sample, and Simple Linear Regression were conducted to achieve the paper's objectives. Data analysis demonstrated a strong positive correlation between students' general self-efficacy and academic achievement $r=0,748$, $p<0,001$. Moreover, students' self-efficacy was found as a significant predictor of students' academic achievement. Findings indicated that no gender-based differences in students' general self-efficacy among higher education students. The discoveries of this research study can be implemented in instructional designing, curriculum development, and college counseling services to promote students' academic achievement.

Keywords: self-efficacy, academic achievement, higher education, gender differences, UAE.

Acknowledgments. The author appreciates her institution the encouragement and continuous support.

For citation: Moussa N.M. Promoting Academic Achievement: The Role of Self-efficacy in Predicting Students' Success in the Higher Education Settings. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2023. Vol. 28, no. 2, pp. 18—29. DOI: <https://doi.org/10.17759/pse.2023280202> (In Russ.).

Улучшение результатов обучения: роль самоэффективности при прогнозировании успеваемости студентов в условиях высшего образования

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Самоэффективность является ключевым фактором, влияющим на многие стороны жизни, поэтому многие психологи и педагоги во всем мире исследуют ее с разных точек зрения. Используя концепцию А. Бандуры о самоэффективности в качестве теоретической основы, автор данного количественного эмпирического исследования рассматривает роль самоэффективности в формировании академической успеваемости студентов высших учебных заведений на примере неоднородной группы студентов колледжа. Группа состоит из N=374 студентов, принявших участие в данном исследовании и ответивших на вопросы шкалы общей самоэффективности (ШОС) с целью оценки своей самоэффективности, а также способности выполнять требуемые учебные задания. Для решения поставленных задач в работе применялись методы множественного анализа, включая описательный анализ, коэффициент корреляции Пирсона, t-тест для независимой выборки и простую линейную регрессию. В результате анализа данных была выявлена сильная положительная корреляция между общей самоэффективностью студентов и академической успеваемостью ($r=0,748$, $p<0,001$). Более того, самоэффективность студентов является значимой составляющей их академической успеваемости. Выводы показали, что гендерные различия между студентами высших учебных заведений по уровню общей самоэффективности отсутствуют. Полученные в ходе данного исследования результаты могут быть использованы при разработке учебных планов, учебных программ и при оказании консультационных услуг в колледже для повышения успеваемости студентов.

Ключевые слова: самоэффективность, академическая успеваемость, высшее образование, гендерные различия, ОАЭ.

Благодарности. Автор выражает признательность своему университету за содействие и постоянную поддержку.

Для цитаты: Мусса Н.М. Улучшение результатов обучения: роль самоэффективности при прогнозировании успеваемости студентов в условиях высшего образования // Психологическая наука и образование. 2023. Том 28. № 2. С. 18—29. DOI: <https://doi.org/10.17759/pse.2023280202>

Introduction

From the time when Albert Bandura started his research [5] about self-efficacy, it has become an interesting topic for researchers and educators, as a result, self-efficacy has been

used to predict several human behaviors. The past decades witnessed an expanding focus on self-efficacy and students' achievement motivation [4; 19]. Academic achievement is a valuable goal for many students from different grade

levels. The high academic achievement opens doors for more career opportunities for graduated students, allows them to enter competitive fields, and be prepared for their future careers. Accordingly, students are constantly striving to achieve better grades and show outstanding academic performance. One of the most defining factors that affect students' academic performance is self-efficacy. The United Arab Emirates (UAE) is a developed country with a strong economy located in the Gulf area and comprises individuals from more than 200 diverse nationalities. The country provides a solid education system that takes account of the different needs of all students from various backgrounds. The UAE focuses on achieving a high rank in the world in entrepreneurship by transitioning to a knowledge-based economy, which promotes innovation, creativity, research, and development in all sectors. Thus, the country relies on the higher education sector to supply the Emirati society with qualified potential future leaders. Current research studies in the UAE focus critically on students' self-efficacy from multiple perspectives such as e-learning self-efficacy and social self-efficacy. However, comprehensive research that examines the correlation between general self-efficacy and students' academic achievement in the UAE has not been fully investigated or explored.

The current research study proposes to examine the students' general self-efficacy level and interpret it in the context of Bandura's *Self-efficacy Theory*. Moreover, the study explores students' academic achievement and the association between self-efficacy and academic achievement within a diverse group of students in higher education settings in the UAE. Furthermore, this study aims to examine whether self-efficacy can predict stud' academic achievement. Additionally, gender differences in self-efficacy will be explored here. For this study, self-efficacy refers to students' beliefs in their ability to perform a general and academic task, this variable is measured by *General Self-efficacy Scale* (GSE) [27]. The academic achievement here is measured by students' academic performance in their course work, represented by their Grade Point Average (GPA).

The findings of this research paper will benefit Emirati society in the context of informing the job market about the quality of the potential candidates who are expected to meet the dynamic work demands. Thus, in the societal context, the study sheds light on the role of higher education in preparing graduate cadres who can meet the needs of the rapidly growing future, which contributes to society's development. In addition, the study results will benefit both the higher education and counseling sectors in the UAE in the context of practice and implementation. From the international viewpoint, the discoveries can benefit educators who accentuate the importance of comparative education, diverse expatriate group, or international education. Furthermore, those who are considering relocating to the UAE and becoming engaged in higher education or counseling as students, educators, or counselors will find it meaningful.

Literature Review

Self-efficacy Theory

Five decades ago, psychologist Albert Bandura created the term 'self-efficacy,' and proposed the *Self-efficacy Theory*. Bandura [5] explained the concept of self-efficacy as a person's belief in their abilities that is associated with addressing various situations. In other words, self-efficacy refers to the subjective view of one's ability to perform sequences of required actions to deal with potential situations [5]. Bandura later published research that defined and popularized the concept of self-efficacy effectively as "*The belief in one's capabilities to organize and execute the courses of action required to manage prospective situations*" [6]. Bandura's definition proposes two aspects; (1) self-efficacy is a belief about an individual's ability, it is not completely consistent with one's actual capability in a specific field. (2) Individuals relate their efficacy assessment to specific objectives, which suggests the task itself and the nature of the situation.

According to Albert Bandura [5], individuals can develop their beliefs about their self-efficacy through different four main resources of influence, including the following:

(1) Mastery experiences: it is perceived as the most effective source that supplies efficacy

knowledge as it provides the most reliable indicator of whether an individual can gather the needed requirements to succeed in a task. When an individual succeeds, he/she develops a vigorous belief in his/her own efficacy. If failures arise before developing self-efficacy, it is undermined [7].

(2) Vicarious experiences: vicarious experiences consist of observing other people complete a task successfully. As explained by Bandura [5], when individuals observe other people like them succeed in a task through continual effort, individuals' beliefs about their abilities to achieve a successful task are enhanced. The existence of definite role models promotes the belief in self-efficacy.

(3) Social persuasion: this is an influencer factor in self-efficacy; when people receive positive verbal feedback about their performance in a task, that persuades them that they can succeed. Encouragement and discouragement related to individuals' performance in a task is influenced by their self-efficacy. Verbal persuasion is more beneficial when it is administered an early age.

(4) Emotional states: people's subjective well-being determines their feeling about their capabilities in a particular situation, so self-efficacy depends on lacking physiological disorders such as anxiety, depression, stress, and fear. Feeling healthy emotionally helps people to build their self-efficacy, so managing personal mood when facing challenging situations improves the sense of self-efficacy.

The Concept of self-efficacy

As per Carpenter [12], the concept of self-efficacy is characterized by individuals' self-belief of being successful in specific tasks or achieving objectives. To simplify it, self-efficacy is the individual's belief in his capability to achieve a certain task or pass a situation successfully. Self-efficacy is associated with individuals' skills and abilities and what individuals believe regarding their capabilities and what they can accomplish. The feeling of high self-efficacy boosts people's motivation and subjective well-being. Self-efficacy indicates confidence level among individuals in their ability to practice

self-control over individual behaviors, desires, motivation, and social setting. [9] suggested that self-efficacy is believed to describe and predict an individual's belief, thought, emotion, and behavior. Daily life aspects depend on many basic components which include self-efficacy as the main one that affects not only people's feelings but also it contributes to one's success because it helps individuals to determine their goals and promotes the achievement of these goals.

In the contemporary competitive world, self-efficacy is important to stay confident to overcome complex and challenging situations. Based on the empirical tests, self-efficacy was found to function as a common mechanism that could help to integrate various modes of treatment to promote behavior changes [7]. Self-efficacy is not just a factor, but also a key to better academic achievement and achievement. When people feel secure with their capabilities, they approach hard and challenging tasks as they master them. On the other hand, people with low self-confidence in their capabilities feel threatened by difficult tasks, which encourages them to avoid them. Thus, people with low self-efficacy may have less commitment to their tasks and goals. For this study self-efficacy refers to students' belief in their abilities to address different educational situations and be able to achieve high academic achievement.

Self-efficacy and Academic A

The role of self-efficacy as a factor that shapes students' academic performance has been given a great focus by psychologists. Discussing self-efficacy within the context of social-cognitive theory, Bandura [8] defines self-efficacy as a motivational orientation that arouses grit when encountered by a challenging situation, improves careful actions, promotes long-term vision, adopts self-regulation, and enables self-correcting when it is needed. Self-efficacy performs a vital function in our lives because it enhances the productivity of individuals, and it has been highly important in many organizations and educational institutions. Soon after Bandura's focused research on self-efficacy, research evidence increased to confirm the positive associations between

students' academic efficacy and their performance. Furthermore, the research findings from the past few decades showed that, in addition to the positive effect of self-efficacy on the students' performance, there is evidence that the effort quality differs among students in using additional cognitive and metacognitive managing approaches among students with high academic efficacy than their peers with lower efficacy beliefs [24]. Self-efficacy is assumed to affect people's efforts, activities choice, and perseverance through a large variety of human functioning. In addition, individuals develop self-efficacy beliefs relative to defined objectives. [14] examined the role of self-efficacy on students' academic achievements, the research outcome demonstrated that students' self-efficacy and academic achievement are positively correlated.

The benefit of self-efficacy underlies helping students to learn and develop based on their own abilities with less need for any external support and guidance. As stated by [12], self-efficacy enhances students' self-confidence and experiences and allows them to address issues and challenges independently. [30] investigated the relationship between self-efficacy and students' achievement using a very large sample in China, their findings revealed that self-efficacy can predict students' mathematics' achievements significantly. The research findings indicated that self-efficacy was found to be a mediator factor between students' achievement in mathematics and their relationship with their teachers. Students with high self-efficacy feel more confident in their problem-solving ability to solve difficult problems and deliver outstanding achievement on the academic level, therefore, it is important to enhance the overall students' achievement and activities. [15] studied the relationship between self-efficacy and students' academic achievement, and the findings revealed a satisfaction relationship between these two variables.

Deliberating the importance of self-efficacy in supporting goal attainment revealed that self-efficacy affects students' goal achievements significantly. According to [16], an individual with self-efficacy demonstrates the skills and knowl-

edge required to achieve goals and overcome obstacles. [16] revealed that enhanced experiences and self-efficacy enable individuals to adopt the right method and avoid the challenges to achieve their goals. Currently, self-efficacy has been considered the most important element of a child's development. Self-efficacy is not only effective in achieving academic goals but also in achieving personal as well as professional goals.

As highlighted by [16], the link between mastery orientation and goal attainment is not as precise as the link between self-efficacy and goal attainment. Self-efficacy also helps in reducing study times; thus, the students can provide their best performances even by learning for not much time. It was found that, self-efficacy has played an effective role in enhancing individuals' performances in their respective fields. It has been evaluated that self-efficacy has enabled students to achieve their academic goals and adults to achieve their professional objectives. The higher education stage is quite competitive for students because they need to be prepared for the growing rapid world; hence, they are recommended to provide their greatest achievement. The research on the association between self-efficacy and academic success suggest that academic success is inspired by the self-efficacy. The study of [20] revealed that students who have high self-efficacy are more confident and are expected to achieve higher academic achievement, which suggests that self-efficacy plays a critical role in predicting academic achievement. In the UAE, [1] found that students' self-efficacy can boost their performance in online learning. [21] analyzed the correlation between self-efficacy and academic success among first-generation diverse ethnic groups of college students, it was found that education self-efficacy can significantly predict augmented academic achievement.

In organizations, self-efficacy has enabled individuals to provide their greatest performances by overcoming all potential threats and challenges [18]. On the other hand, in educational institutes, self-efficacy has enabled students to achieve their personal goals as well as to acquire higher grades in academic assessments.

As demonstrated by [17], challenges and issues are common parts of everyone's life; however, it is important to have self-efficacy to overcome them and achieve goals. In schools and universities, self-efficacy has enabled students to overcome their weaknesses and enhance their learning abilities [9].

Self-efficacy and Gender

Gender plays visible roles in many aspects such as academic success, motivation, intelligence, and self-efficacy. Understanding the difference-based gender in self-efficacy has been searched and investigated by many researchers [5; 42] conducted a research study to investigate perceived self-efficacy towards computer use and gender differences among college students, the study results revealed gender differences in perceived self-efficacy related to achieving complex tasks on computers. The study of [10] examined gender and race differences in self-efficacy and how gender could impact self-efficacy. The results demonstrated moderate differences in self-efficacy based on gender. Diseth and a group of researchers studied the relationship between self-efficacy, self-esteem, and incremental intelligence theories among middle school students aiming to examine how these variables may differ based on students' gender and their grade level, and how these form a predictor of academic achievement. The results revealed positive relations between self-efficacy, self-esteem, and intelligence theories, while middle school girls were found with lower levels of self-efficacy and self-esteem. In the UAE, the study of [2] focused on investigating the association among some factors including gender, self-esteem, loneliness, and self-efficacy of college

students. The research results revealed that gender-based differences in the measured variables reside. Female students showed higher loneliness, lower self-efficacy, and lower self-esteem compared to male students.

Research Questions

To achieve the research objectives of this paper, these research questions are recommended.

1. What is the self-efficacy level among higher education students in the UAE?
2. What is the academic achievement level of higher education students in the UAE?
3. What is the relationship between self-efficacy and student academic achievement among higher education students in the UAE?
4. Is there a gender-based difference in students' self-efficacy in the higher education settings in the UAE?

Materials and Methods

Study Sample

A diverse group of students formed the sample of this research study. A total of 374 undergraduate students enrolled in different colleges and universities in the UAE were chosen randomly to participate in this research study and respond to the General Self-Efficacy Scale (GSE) [27]. The 374 — sample is distributed as follows; 151 (40,4%) are males and the female participants represent 223 (59,6%). The descriptive analysis showed that most of the samples' age ranged from 18 to 24 years, the age categories are displayed in table 1. A diverse sample from different backgrounds and regions who reside in the UAE engaged in the research study as shown in table 2.

Table 1

Distribution and Percentages of Participants by Gender (N=374)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18—24	262	70.1	70.1	70.1
	25—31	72	19.3	19.3	89.3
	32—38	23	6.1	6.1	95.5
	+ 39	17	4.5	4.5	100.0
	Total	374	100.0	100.0	

Table 2

Distribution and Percentages of the Diverse Group of Participants (N=374)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UAE/GCC	139	37.2	37.2	37.2
	Egypt/North Africa	36	9.6	9.6	46.8
	Middle East/Not GCC	22	5.9	5.9	52.7
	Asian (India/Pakistan)	51	13.6	13.6	66.3
	USA	38	10.2	10.2	76.5
	Europe	37	9.9	9.9	86.4
	African	47	12.6	12.6	98.9
	Others	4	1.1	1.1	100.0
	Total	374	100.0	100.0	

Research Instrument

As the current study intends to discover the levels of self-efficacy and how it relate to the student’s academic performance, the *General Self-Efficacy Scale (GSE)* [27] was utilized to achieve the research objectives and examine the students’ perceived self-efficacy. The General Self-Efficacy Scale (GSE) is a 10 — item measurement scale that is created to measure individuals’ self-efficacy; one’s positive self-beliefs about their capacity to cope with challenging life situations. The GSE is a self-report measurement scale designed to measure individuals perceived self-efficacy. The GSE is a 10 — items Likert scale with 4 — points ranging from *Not at all true* = 1 to, *Hardly true* = 2, *Moderately true* = 3, to *Exactly true* = 4. All items of GSE are phrased positively. To calculate the total score, add the sum of all 10 — items, so the total score is expected to range from 10-40. The higher the score attained by students; the more self-efficacy is found.

Reliability and Validity

The scale has been used in many studies in different countries with hundred thousand participants. As explained by Schwarzer and Jerusalem [27], the GSE showed high internal consistency with Cronbach’s α ranges between 0,76 and 0,90, which indicates high internal reliability. For validity, the GSE scale was proven to be related positively to satisfaction with the workplace, emotion, and optimism and negatively correlated with some psychological disor-

ders such as stress, depression, anxiety, burn-out, and health issues, which confirms the validity of the measurement scale. For this research paper, *Cronbach’s α* was calculated to assess the internal consistency between the GSE items and measure the scale reliability. Data analysis showed that the scale items have high reliability, represented by a *Cronbach’s α* =0,850, which is consistent with the findings of [38] who revealed that the Cronbach’s α score for this test (*GSE*) is between 0,79 and 0,88 which indicates enough reliability and internal consistency.

Data Collection

The procedure of data gathering began in the mid of spring of 2021 and continued for eight weeks. After obtaining the Institutional Review Board IRB approval, the researcher contacted many professors in different universities in the UAE seeking approval to conduct this research study. The General Self-Efficacy Scale (GSE) was modelled on Google forms with a full description of the study, the method of answering the questions, and the consent form. After getting approval, participants were invited to attend a virtual meeting with the researcher. The researcher started the meeting with a presentation about the self-efficacy concept and explained the procedure for answering the questions and was available during administering the GSE to answer any questions. The students voluntarily replied to the GSE. All data was gathered and analyzed through SPSS version 22.0.

Data Analysis and Results

At the beginning of the analysis, the researcher addressed all issues that affect outliers, any missing values, normality, homogeneity of variance, and independence. To answer **RQ 1**, descriptive analysis was performed, results showed that students perceived general self-efficacy is medium to a high level of perception represented by the total of GSE ($M=32.136$, $SD=4.931$). For **RQ 2**, the descriptive analysis revealed that higher education students in the UAE are identified with medium to high academic achievement represented by

their CGPA ($M=3.376$, $Median=3.50$, $Mode=4.00$, $SD=0.4989$). Regarding the correlation between perceived self-efficacy and students' academic performance, (**RQ 3**), the Pearson Correlation Coefficient r revealed a high positive correlation, $r=0.748$, $p<0.001$ is statistically significant which shows that students' self-efficacy is positively associated with their academic achievement as measured by their GPA (see table 3).

Thus, when the self-efficacy increases by 1 unit, the student's academic achievement increases by .560 units (see figure).

Table 3
The Correlation Between Students' Self-Efficacy and Academic Achievement (N=374)

		CGPA	GSE_Total
CGPA	Pearson Correlation	1	0.748**
	Sig. (2-tailed)		0.000
	N	374	374

** . Correlation is significant at the 0.01 level (2-tailed).

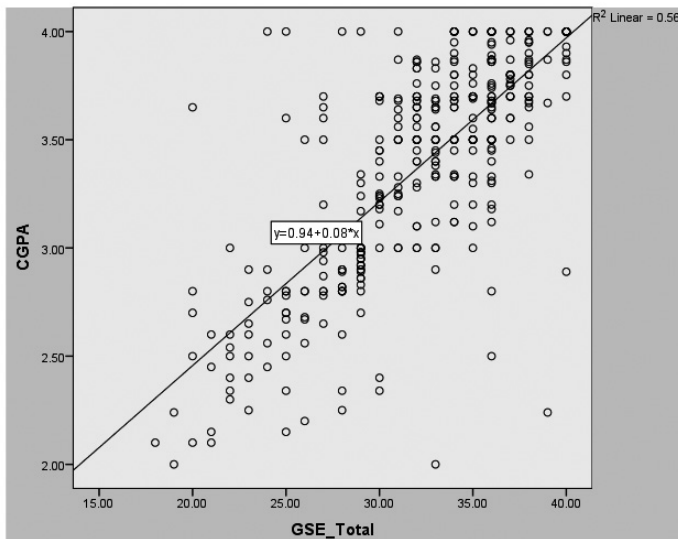


Figure. The Relationship Between Self-efficacy and Academic Achievement Predicting the impact of self-efficacy on students' academic performance mandates conducting *Simple Linear Regression*.

The researcher hypothesized all issues of assumptions of linearity and homoscedasticity. Regression analysis demonstrated that $R^2=56\%$ of the total variance in students' academic achievement represented by their (GPA) is accounted for by their feeling of self-efficacy, $F(1, 372)=473,773$, $p<0,001$ is statistically significant representing a linear relationship between students' self-efficacy and academic performance is existing. The following equation represents the regression model.

Academic Achievement=0.942+0.560 * **Self-efficacy** (1)

Answering **RQ 4**, concerning the gender-based difference in perceived self-efficacy, the mean score of self-efficacy was calculated. In addition, the *t*-test for independent samples demonstrated that the self-efficacy mean score for male students ($N=151$) is ($M=32.629$, $SD=4.907$) when compared with those of female students ($N=223$) ($M=31.803$, $SD=4.930$) was not statistically significant, in addition, *Levene's Test* for equality of variances is not statistically significant $F(372)=0.282$, $p=0.596$, which specifies the equality of sample variances, so here we study the equal variance assumed to explain the findings, $t(372)=1.594$, $p=0.112$, not statistically significant, these findings designate that the gender-based difference in the students' perceived self-efficacy does not reside.

Discussion

The current research study reports on the general self-efficacy level and academic performance among a diverse group of higher education students in the UAE. Results showed that higher education students demonstrate a medium to a high level of perceived self-efficacy as indicated by the *GSE*. These findings could be interpreted in the context of Bandura's *Self-efficacy Theory* as students have a positive perception of their capability to achieve high academic achievement but not necessarily reflects the actual ability of students, nonetheless here in this current study, however, the sample is a diverse student but their perceived self-efficacy is very consistent with their actual ability to succeed as presented by their GPA. Although students provided their perceived general self-efficacy, they employed this perception towards their academic achievement which was confirmed by the consistency between their perception and academic achievement. The results of students' positive academic achievement could be explained in the context of Bandura's Theory about resources of self-efficacy, the powerful source: mastery experiences. Thus, when students succeed, they develop a solid belief about their possessed ability to maintain success [7]. Furthermore, students' self-effi-

cacy motivates them to enhance their learning process and achieve appropriate academic success. Moreover, these findings could be interpreted as students' vicarious experiences through communicating with other students who have graduated earlier than them boosts students' beliefs that they own the ability to achieve the same academic achievement. Thus, the diversity of students enabled them to communicate, learn, and develop their skills through communicating with a group of expat learners. Here in this research study, a strong positive correlation between students' self-efficacy and their academic performance is expected because general self-efficacy can influence people's behavior and endeavors. These findings are consistent with [16] who reveal self-efficacy helps students to cope with challenges and demonstrate high academic achievement. Furthermore, these outcomes are supported by the findings of [20] who discovered that high self-efficacy boosts students' self-confidence and enhances academic performance. The high percentage (56%) that indicates the variances in academic success account for students' general self-efficacy agrees with the findings of [15; 20; 30] and who demonstrated that self-efficacy can predict and improve students' academic success significantly. The result of no gender-based difference in — self-efficacy shows that students from both genders have similar feelings about their capabilities and actions toward different situations. Thus, the findings indicate that higher education in the UAE provides equal learning opportunities to a diverse group of learners, implementing equity in education and protecting students' rights. Consequently, higher education contributes to the society's progress and prosperity.

The outcome of this research could be implemented in the counseling centers on and off campus to enhance the perception of students' self-efficacy and encourage them to work hard to achieve their academic goals. Furthermore, higher education institutions can emphasize the importance of students' self-efficacy by offering students academic advising sessions, students' orientation, and workshops to enhance their

self-efficacy, which can influence their academic performance.

Limitations of the present paper are found beneath the simple linear regression as it examines the linear relationship between two variables, the dependent and independent variables, so it suggests that a straight-line relationship between the two variables is existing, which is not accurate in some cases. Moreover, the characteristics of diversity should be discussed here to boost the results.

Conclusion

This research article was achieved to examine students' self-efficacy and their academic performance and find out how does the self-efficacy relate to and predicts students' academic achievement among higher education students in the UAE, moreover, explores the gender-based difference in students' general self-efficacy. Higher education students in the UAE showed medium to high levels in both self-efficacy and academic achievement as measured by students' GPA and the GSE. Furthermore, self-efficacy demonstrated a strong positive correlation (0,75) with students' academic achievement. Additionally, it was revealed that 56% of students' academic achievement can be explained by their self-efficacy, which indicates that self-efficacy is a significant predictor of students' success within a diverse group of learners in the higher education sector in the UAE. The results proved that no gender-based difference resides among higher education students in the UAE. Thus, higher education in the UAE includes a diverse group of students successfully and provides equal learning opportunities to all students regardless of their background or gender.

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Recommendations for Practice

Based on the discoveries of this research study, the following recommendations are presented to instructors, higher education policy-makers, stakeholders, and decision-makers, to be incorporated into the higher education sector. The study discoveries recommend measuring students' self-efficacy at the beginning of the academic year to identify their self-efficacy level so the college counseling centers can offer a training session to students with low self-efficacy and follow up with their academic success to improve their perceptions and beliefs in their ability to succeed. In the context of instructional design and curriculum development, instructors can embrace elective courses that improve students' self-efficacy for better academic achievement. Moreover, when explaining an academic task or assignment, instructors can integrate some instructional techniques to promote students' self-efficacy, it would be beneficial to evoke and awaken students' skills and ability to do it. Thus, it could be supported by connecting the assignment/task with a previously achieved one that the students accomplished. Moreover, the recommendations can be extended to include self-efficacy when designing assessment tools related to coursework in different subject areas.

Future research: The study outcomes recommend examining more factors that could influence students' academic achievement in the UAE such as diversity characteristics, self-esteem and achievement motivations. Moreover, examine the impact of offering self-efficacy training sessions on improving the self-efficacy levels and measures the impact of integrating self-efficacy components in the curriculum and instructional design on students' academic performance.

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Получена 08.09.2022

Received 08.09.2022

Принята в печать 20.02.2023

Accepted 20.02.2023

Student's Choice of an Individual Educational Trajectory: Subjective Position and Selection Strategies

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The article is devoted to the study of students' ideas about the choice of an individual educational trajectory. The features of the digital transformation of education are determined, the parameters of subjectivity as a conscious attitude of the student acting as a participant in globalization processes are described. Interpretations of the concept of choice and its determining factors are considered. It is assumed that students' ideas about the choice of an individual educational trajectory are characterized by partial formation and differ depending on the direction of training. 218 first-year students were examined. It is shown that students' ideas about the individual educational trajectory are quite meaningful and adequate. At the same time, the understanding of the essence of choice and their participation in its implementation are fragmented. The differences in the understanding of the phenomena of "individual educational trajectory" ($X^2_{emp.}=13.9, p\leq 0.05$) and "digital educational environment" ($X^2_{emp.}=12.5, p\leq 0.05$) by students of different directions are shown. It is described that the phenomenon of "individual educational trajectory" is understood by students quite well (less than 15% of incorrect answers), while students of technical and pedagogical directions give more correct answers than students studying natural sciences and social sciences.

Keywords: university students, digitalization of the educational process, individual educational trajectories, subjectivity, choice strategies.

Funding. The research was carried out with the financial support of the Kemerovo State University within the framework of the scientific project "Forming the readiness of students in the system of general, professional, higher and additional education to choose individual educational routes in the context of digitalization of education".

For citation: Morozova I.S., Bugrova N.A., Kretsan Z.V., Evseenkova E.V. Student's Choice of an Individual Educational Trajectory: Subjective Position and Selection Strategies. *Psikhologicheskaya*

Выбор студентом индивидуальной образовательной траектории: субъектная позиция и стратегии выбора

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Описаны результаты исследования представлений студентов о выборе индивидуальной образовательной траектории. Определены особенности цифровой трансформации образования, описаны параметры субъектности как осознанного отношения обучающегося, выступающего участником глобализационных процессов. Рассмотрены интерпретации понятия выбора, определяющих его факторов. Предполагается, что представления студентов о выборе индивидуальной образовательной траектории отличаются пониманием сущности выбора и своего участия в его осуществлении и связаны с направлением их подготовки. Исследовано 218 первокурсников. Показано, что представления студентов об индивидуальной образовательной траектории достаточно содержательны и адекватны. При этом понимание сущности выбора и своего участия в его осуществлении носят разрозненный характер. Показаны различия в понимании феноменов «индивидуальная образовательная траектория» ($\chi^2_{\text{эмп.}}=13,9$, $p \leq 0,05$) и «цифровая образовательная среда» ($\chi^2_{\text{эмп.}}=12,5$, $p \leq 0,05$) студентами разных направлений подготовки. Описано, что феномен «индивидуальная образовательная траектория» понимается студентами достаточно хорошо (менее 15% неправильных ответов), при этом студенты технического и педагогического направлений дают больше верных ответов, чем студенты, изучающие естественные науки и науки об обществе. Показано, что стратегии выбора индивидуальной образовательной траектории не связаны с направлением подготовки ($\chi^2_{\text{эмп.}}=8,3$, $p > 0,05$) и примерно одинаково распределены во всех группах.

Ключевые слова: студенты вуза, цифровизация образовательного процесса, индивидуальные образовательные траектории, субъектность, стратегии выбора.

Финансирование. Исследование выполнено при финансовой поддержке ФГБОУ ВО «Кемеровский государственный университет» в рамках научного проекта «Формирование готовности обучающихся системы общего, профессионального, высшего и дополнительного образования к выбору индивидуальных образовательных маршрутов в условиях цифровизации образовательного пространства».

Для цитаты: Морозова И.С., Бугрова Н.А., Крецан З.В., Евсеенкова Е.В. Выбор студентом индивидуальной образовательной траектории: субъектная позиция и стратегии выбора // Психологическая наука и образование. 2023. Том 28. № 2. С. 30—45. DOI: <https://doi.org/10.17759/pse.2023280203>

Introduction

All aspects of modern society are affected by the end-to-end digital technologies and artificial intelligence [38], nano- and biotechnologies, BigData, etc. [7]. However, the development and implementation of new technologies are associated with new risks as they increase the potential ability of each and every human to create and destroy [22, p. 8]. All people share the responsibility for all the changes that happen in the modern world [37].

Education also experiences the effect of breakthrough technologies. Digital academic environment raises the legitimate question: are the subjects of academic activity ready to become part of the new processes brought about by global digitalization?

Academic digitalization follows two main legislations. The first one includes the laws on education and is represented by the Federal Law on Education in the Russian Federation (No. 273-FZ, December 29, 2012). The second covers the laws on information technology stipulated by the Federal Law on Informatization, Information Technologies, and Information Protection (No. 149-FZ, July 27, 2006).

The year of 2019 saw the launch of the Federal Project on Digital Educa-

tional Environment, aimed at creating a digital academic environment in educational institutions and the general digital transformation of Russian education. The Project defines digital academic environment as a subsystem of socio-cultural environment and a set of pedagogical conditions for personal development with digital infrastructure, content, methods, and communication.

However, digital academic environment creates both opportunities and problems [36]. The most obvious obstacle that inhibits academic modernization is the gap between the digitalization rates of academic resources and academic processes [35].

The Digital Academic Environment Project mentions student-tailored learning path along with such goals as available horizontal learning for students and teachers and the digital footprint system. Some researchers link the digital transformation of education to the individualization of learning [21, p. 30]. This approach focuses on increasing the digital skills of academic community [40] and raising the awareness of all its subjects of their own academic path.

The emerging academic model gives rise to a certain paradigm of personal-

ity in education. Agency becomes both a goal and a condition for a person to enter the academic process. As a result, the emphasis falls on the awareness and responsibility of each student as a participant in globalization. The Federal State Education Standard sets the following requirements for personal and meta-subject results of education: the readiness and ability of students for self-development and self-education; independence in planning and implementing academic activities, as well as designing one's academic path [16]. We believe that university applicants are already fully prepared to choose and plan their own academic future.

Digital transformation is directly related to such issues as choice, career counseling, and student-tailored academic path. In this regard, the problem of students' readiness for choosing and building their own academic path is quite relevant.

Student-tailored academic path: concept and choice

Choice means overcoming uncertainty by reducing alternatives [9]. Similarly, choice is an internal activity [1]. It manifests itself in situations of coping with adverse life circumstances [14]. Profession changes one's personality in a multivariate of ways [12, p. 28].

The choice of a coping strategy depends on a variety of factors [4], which can be divided into facilitating and demotivating. Professional personality development has its own specifics [29]. Development of choice strategies requires psychological and pedagogical support [5]. However, decision-making also relies on intuition [27].

The object of choice can be represented by subjectively important rela-

tions and activities, including an individual academic path [10].

Domestic science correlates individual, or tailored, academic path with student-centered education and the pedagogy of cooperation. Studies that feature tailored academic path cover such concepts as the sequence of elements in the academic activity of each student [19], the individual path of realizing students' personal potential [23], and the individual path of the subject of academic relations [20]. The differentiated approach sees tailored academic path as an innovative pedagogical means of differentiating the educational process [1].

Foreign sources also offer a variety of definitions. For instance, the concept of *learning trajectory* is usually connected with mathematical education [30], where it represents an understanding of the process and sequence of learning [31]. *Personalized Learning Pathways* (PLPs) is an alternative term reported in foreign publications [39].

Personalized learning is the adjustment and adaptation of academic methods and techniques to adapt the learning process to each student with their own unique learning style, needs, and background [32]. Tailored academic path is a student-centered approach to e-learning, where the student designs their own education road map [35], i.e., the entire process is initiated by students themselves [31].

The issue is interdisciplinary and is a research object in various scientific fields. Legal science interprets the concept of tailored academic path based on the fact that students are aware of their responsibility to master the academic program [3, p. 53] and their ability to make a conscious choice while

exercising their rights to education [11, p. 123].

Psychologists put emphasis on students as representatives of the global community [17], the priority of personal responsibility [2], and the maximization of students' own interests [26].

The numerous pedagogical interpretations include the diversity and flexibility of academic programs and technologies [18; 22]; the variability of academic interaction, including extramural [15]; academic solutions based on pedagogical design [28]; detailed and potentially changeable goals [36; 39]; variability of academic environment [6; 33].

Methods

The empirical study included a survey conducted on the premises of the Kemerovo State University. The survey determined the attitude of students to tailored academic path and academic choice. It involved 218 first-year students, 65 boys and 153 girls, aged 17—19, the average age being 18.71 years old. The participants were divided according to their major. The group of Natural Sciences included 52 students of the Institute of Biology, Ecology, and Natural Resources. The group of Technical Sciences included 57 students that majored in Engineering Technology. The group of Education and Pedagogical Sciences involved 56 students from the Institute of Education. The group of Social Sciences included 53 students of History and International Relations. The students gave an informed voluntary consent to participate in the study. To increase the reliability, the survey was anonymous.

The first stage involved collecting empirical data through a system of diagnostic procedures.

The analysis relied on the following methods and techniques:

1) theoretical methods: a review of scientific and psychological literature;

2) psychodiagnostic methods and techniques:

- the methodology for determining the choice strategy in academic choice based on D.A. Leontiev and N.V. Pilipko's procedure for highlighting and analyzing arguments during choice-making;

- an authentic questionnaire for assessing the level of awareness of such concepts as tailored academic path and digital academic environment, as well as the peculiarities of conscious choice-making in a situation of uncertainty and ideas about one's future.

The methods followed the integrated approach to collecting data and the requirement of comparability. The scientific adequacy analysis relied on expert assessments: we selected six statements, two of which were completely true, the other two were partially true, and the remaining two were incorrect but had an associative similar meaning. The students received three points for choosing the correct statement, two points for partially correct statements, and one point for choosing an incorrect statement.

The second stage featured data processing and generalization. The statistical processing involved SPSS 23.0 for Windows and X^2 Pearson contingency tables.

The research objective was to determine the subjective position of students of different majors regarding their choice of academic path.

The research hypothesis was as follows: students' ideas about the choice of academic path differ in their understanding of choice, their participation in its implementation, and their major.

Analysis and discussion

The questionnaire consisted of questions that made it possible to assess the level of students' awareness about such concepts as tailored academic path, digital academic environment, means of obtaining information in a situation of uncertainty, and ideas about one's own future.

The first question was *What media do you appeal to when you need to make a choice in a situation of uncertainty?* Figure 1 illustrates the responses.

Most respondents appeared to be guided by their own opinions and desires. They commented that for them choice depended primarily on their own goals and aspirations. As for the media, the respondents tended to look for information on official websites and in official documents. Such a preference for objective information indicated a responsible approach to choice-making. They did not regard social networks or thematic forums as a basis for an educated

decision, which we interpreted as a positive trend. The students commendably turned to their parents for advice, but the majority of them clearly preferred the variant with their own opinions and desires.

To assess the awareness about the concept of tailored academic path, we asked the respondents to choose the correct definition. The definitions were provided by experts and obtained from teachers that worked with individual academic trajectories [24]. About half of the participants (48%) provided correct interpretation (Fig. 2) and described it as an *individual learning path* and a *sequence of obtaining knowledge and its content*.

A similar number of respondents (39%) were partially informed about the phenomenon and chose such answers as *individual path* and *individual strategy*.

Few participants (13%) chose such wrong variants as *directed activity* and *academic course*.

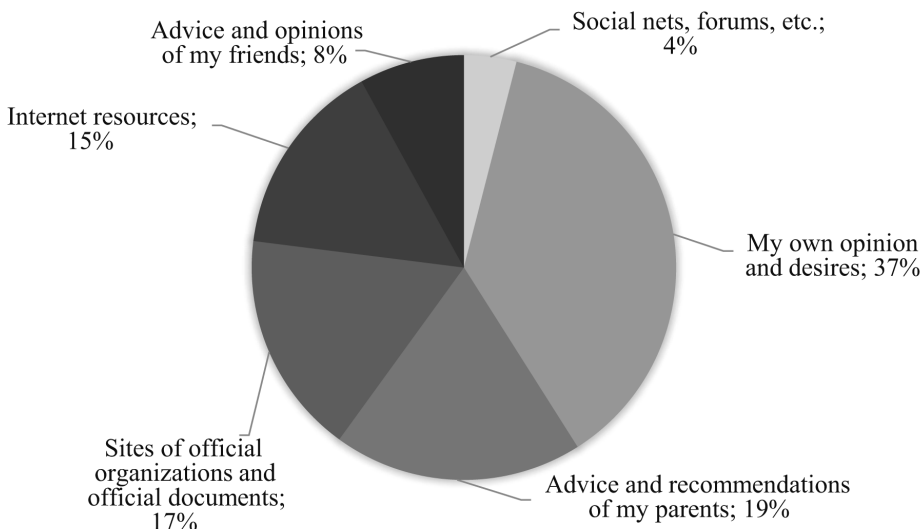


Figure 1. Media that students appealed to in choice-making

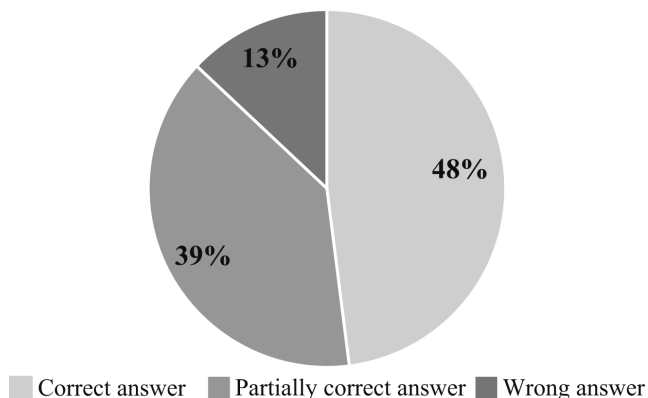


Figure 2. Students' interpretation of tailored academic path

The next question tested the understanding of the concept of digital academic environment. The correct answers were also provided by the focus groups. The introductory paragraph of this article described the concept based on regulatory documents and the Federal Project on Digital Academic Environment. The focus groups provided a number of interpretations, which is important in situations of subjective choice.

More than half of the survey participants (52%) chose the partially correct interpretation, i.e., *a set of resources*

and *a pedagogical system*. Only 9% gave the correct answer: *an open set of information systems and an open set of different information systems*. Finally, 39% of respondents demonstrated a low level of awareness (Fig. 3).

Responding to *My ideas about my future: what shall I do after graduation?*, the students covered the entire range of option answers (Table 1).

A quarter of the respondents had vague ideas about their future, which they associated more with external cir-

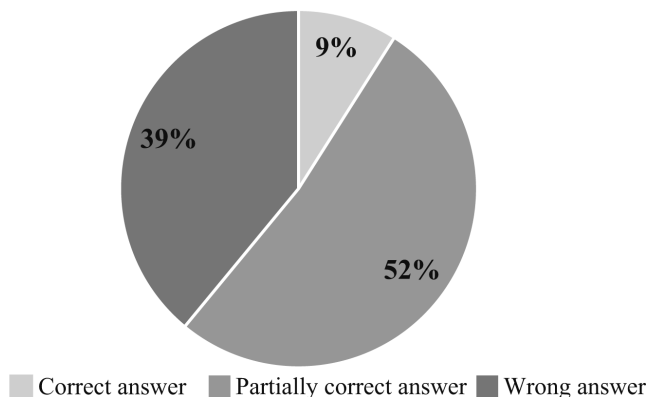


Figure 3. Students' interpretation of digital academic environment

Table 1

Responses to My ideas about my future

Variant	Respondents	
	People	%
The future is a set of actions, and its targets depend on my resources and efforts.	44	20.2
I know what I will do, and I see the ways to achieve my goals; I am aware of my capabilities and the efforts I will need to achieve my goals.	31	14.2
I have no clear idea of what I will do, but I can see the field of activity where I want to work, and I have a general idea of what I need to do to achieve my goals.	54	24.8
My choice will depend on a number of circumstances, including my attitude.	38	17.4
The future depends on where you will find yourself in the future and the people you will meet.	30	13.7
Everything depends on the situation.	21	9.7

cumstances than with their personal agency. However, more than a third of the respondents were aware of their own capabilities and the need to apply their own efforts to achieve their goal.

We compared the results by distributing the responses into groups based on the major (Tables 2, 3).

The differences proved significant: the students of technical engineering and pedagogy gave more correct answers while those that majored in other directions usually gave partially correct answers.

The differences proved to be significant, but in this case the empirical rela-

Table 2

Responses to the question about tailored academic path distributed according to the major

	Social Sciences	Natural Sciences	Technical Sciences	Education and Pedagogy	Total
Correct answer	22	22	30	31	105
Partially correct answer	21	28	16	19	84
Wrong answer	10	2	11	6	29
Total	53	52	57	56	218
$X^2_{emp.}=13.9, p \leq 0.05$					

Table 3

Responses to the question about digital academic environment distributed according to the major

	Social Sciences	Natural Sciences	Technical Sciences	Education and Pedagogy	Total
Correct answer	7	4	6	6	19
Partially correct answer	26	31	23	23	114
Wrong answer	20	17	28	28	85
Total	53	52	57	56	218
$X^2_{emp.}=12.55, p \leq 0.05$					

tive X^2 exceeded critical relative X^2 to a lesser degree than in the previous question. On average, the students were less informed about the essence of digital academic environment than about that of tailored academic path.

To determine the main academic choice strategy, we used the method of extracting and analyzing arguments during choice-making developed by D.A. Leontiev and N.V. Pilipko [8]. Choice is an internal activity of constructing foundations and semantic criteria to compare available options. The students were asked to choose one statement they agreed with. We used the data obtained in our pilot study where we defined criteria for evaluating alternatives [13]. The students were to correlate the proposed statements with one of four strategies for planning the academic path. The semantic strategy was connected with semantic arguments. The I-strategy involved assessing the choice through the prism of one’s abilities, inclinations, and skills. The activity strategy referred to the features of education itself and the future professional activity. The situational strategy could be described as situational-opportunistic reasoning (Table 4).

Most students appealed to semantic arguments to make a choice, as well as to their capabilities, inclinations, abilities, and skills. The participants were less

likely to use the activity strategy associated with a future job with a good income and stability. The revealed preferences might indicate that most students were not ready to predict their professional future, and therefore relied on their internal resources, meanings, and abilities in their choice for academic opportunities. Few students preferred the situational strategy, according to which *the choice of the academic direction cannot be planned in advance and depends on each specific situation*.

The strategies were not associated with the major ($X^2_{emp.}=8.3, p>0.05$) and were almost equally distributed in different groups of students.

Conclusion

In the context of global digitalization, the determinants that guide students in their choice of academic path are an important research issue: young people have to choose their future responsibly, understand the consequences of their choice, and select the right ways to achieve their goals. The digital transformation of education has one practical condition: personal agency of each student in determining their education goals and content. Personal agency is a conscious and responsible attitude of each student as a participant in globalization processes. Personal agency provides skills and helps to achieve

Table 4

Strategies for choosing the future academic path

Strategy	Respondents	
	People	%
Semantic strategy	70	32.1
I-strategy	59	27
Activity strategy	52	23.8
Situational strategy	37	17.1

goals throughout the entire life. The empirical data obtained in this study revealed that the students lacked meaningfulness and awareness of their own attitudes. In their choice-making, they had almost the same preferences for websites as they did for parental advice. However, most respondents were guided by their own opinions and desires. They demonstrated different degrees of awareness in terms of understanding the essence of digital academic environment and tailored academic path. The differences in their ideas about the future were also significant, but the majority saw their future as depending on external circumstances, not on their own choice.

The described empirical data testify to the manifestations of the subject position and the variability of strategies for determining the academic path. The participants had consistent and adequate ideas about tailored academic path. About 50% of them gave the correct interpretation to the essential characteristics of digital academic environment as *an individual learning path and a sequence of obtaining knowledge and its content*. More than half of the participants chose partially correct answers. However, their responses to the questions connected with the essence

of choice and one's own role in its implementation were fragmented. The responses to the question about the nature of tailored academic path depended on the major. The students that majored in Technical Sciences, Education, and Pedagogy gave more correct answers, while those from other groups mostly chose partially correct variants. The students were generally less well-informed about digital academic environment.

Most students relied on the semantic strategy while choosing their future academic path. However, their image of the future did not coincide with their ideas about how to achieve the future goals. While personal agency depended on the major, the differences in choice strategies were not affected by this factor.

In general, the identified features of personal agency and choice strategies showed that the students were not ready to plan their own academic path.

The results obtained might be a special case of age patterns. The period between 17 and 25 sees an active formation of ideals, values, and attitudes to oneself and others. On the other hand, they might have been caused by the objective difficulties connected with gender-related variations in personal agency and choice strategies, which is a prospective research topic.

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Получена 18.05.2022

Received 18.05.2022

Принята в печать 20.02.2023

Accepted 20.02.2023

Spontaneous Representations of Children of the 6th Year of Life about People’s Emotional Experiences

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The study of children’s spontaneous representations about people’s experiences is important due to the need to develop their emotional sphere, communication; the development of appropriate diagnostic techniques for preschoolers remains relevant. The article discusses the concepts of “perezhivanie”, “representations”, including emotional ones. Studies of “emotional intelligence” are mentioned, one of the components of which is the understanding of human emotions. A brief description of the methods for assessing the understanding of human emotions by preschoolers is given. The results of a survey on the pictures of 172 children of the 6th year of life, obtained according to the author’s methodology in different years (2002—2019), which are compared with each other using methods of mathematical statistics: children in general correctly determine the content of emotional experiences of people (depicted in the pictures), guided by poses, gestures, etc., sometimes indicating by what signs did they understand this. A number of diagnostic materials are published for the first time.

Keywords: representations, spontaneous representations, emotional representations, cultural-historical psychology, emotion recognition, emotion, perzhivanie.

For citation: Gorshkova E.V. Spontaneous Representations of Children of the 6th Year of Life about People’s Emotional Experiences. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2023. Vol. 28, no. 2, pp. 46—57. DOI: <https://doi.org/10.17759/pse.2023280204> (In Russ.).

Спонтанные представления детей 6-го года жизни о переживаниях людей

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Представлены результаты исследования спонтанных представлений детей 6-го года жизни о переживаниях людей. Автор подчеркивает важность результатов такого рода работы в связи с необходимостью развития на этом этапе эмоциональной сферы, общения, а также актуальность разработки соответствующих диагностических методик для дошкольников. Рассматриваются понятия «переживание», «представления», в том числе эмоциональные. Обращается внимание на исследования «эмоционального интеллекта», одним из компонентов которого является понимание эмоций человека. Дана краткая характеристика методик оценки понимания дошкольниками человеческих эмоций. Приводятся результаты опроса по картинкам 172 детей 6-го года жизни, полученные по авторской методике в разные годы (2002—2019), которые сравниваются между собой с применением методов математической статистики: дети в целом верно определяют содержание эмоциональных переживаний людей (изображенных на картинках), ориентируясь по позам, жестам и др., иногда указывая, по каким признакам они это поняли. Ряд материалов диагностики публикуется впервые.

Ключевые слова: представления, спонтанные представления, эмоциональные представления, культурно-историческая психология, распознавание эмоций, эмоции, переживание.

Для цитаты: Горшкова Е.В. Спонтанные представления детей 6-го года жизни о переживаниях людей // Психологическая наука и образование. 2023. Том 28. № 2. С. 46—57. DOI: <https://doi.org/10.17759/pse.2023280204>

Introduction

The study of spontaneous representations of preschoolers about emotions, experiences (perezhivanie¹) of people is significant due to the need to form key abilities that allow a child to master the ability to interact with others to be included in new forms of communities and activities [15], and the development of understanding of the meaning of people's perezhivanie [20; 21], necessary for produc-

tive communication. The ability to understand a person's experiences (perezhivanie) by nonverbal manifestations depends on the completeness and accuracy of the observer's ideas about the meanings and external signs of emotions, as well as the context of situations in which they may arise.

Representation is "a visual image of an object or phenomenon (event) arising on the basis of past experience (given sensations

¹ According to N.N. Veresov [3], the translation of the Russian word "переживание" [perezhivanie] into English — "experience" — does not fully reflect its psychological meaning, therefore N.N. Veresov himself prefers to use the variant "perezhivanie" in his English-language articles. That's why this version of the 'translation': perezhivanie, — is used in this article, especially when the words "experience" [perezhivanie] and "experience" [opyt] are used side by side.

and perceptions, by reproducing it in memory or imagination)" [1, p. 406]. Unlike perception, the imagery of representation is less vivid and detailed, but more generalized, reflecting the totality of external features, similar objects of the same class, without highlighting internal, regular connections and relationships in them [1; 4; 14]. L.S. Vygotsky [4] considers representations as functional equivalents of concepts — similar in appearance and performing a "similar ... function in solving similar tasks"; but — by psychological nature, composition, structure, and mode of activity — representing only the initial stage of the development of concepts [4, pp. 122—123]. A preschooler, when reflecting, comprehending perceived reality, operates with representations, using verbal speech as a means of forming, clarifying, generalizing representations, realizing their content [1; 4].

Communication of a child in joint activity with an adult or with other children is an important condition for the formation of representations [4; 16] as generalized visual images: "generalization is impossible without communication, and vice versa" [4; 15, p. 111]. Along with the provision on the role of the child's social experience as the main factor of development [4] and the conclusion that "every change in a person caused by upbringing has not an individual, but a social character" [2, p. 84], some authors claim that spontaneous representations are "a vivid embodiment of a child's unique subjective experience" [16, p. 62].

Spontaneous representations of preschoolers are more often studied in line with the development of figurative and theoretical thinking as prerequisites for scientific and theoretical concepts [16]. The function of figurative-theoretical development of objective reality is also performed by emotional, aesthetic, artistic images [13] and emotional representations [7], formed based on personal experience of perezhivanie in different social situations.

Each conscious emotion is associated with intellectual processes — with perception, representation or thought about the subject to

which it is directed [14]. The completeness and accuracy of the child's emotional representations are determined by the degree of awareness of own perezhivanie and of other people.

Emotional cognition of a special kind reflects reality in the form of "synthetic emotional-gnostic complexes" [7, p. 259]. They merge external and internal experiences: both the external picture of the environment (sometimes with exaggerated signs that reveal the personal meaning for the child of surrounding events, people, etc.), and "components in the form of organic sensations and representations" that reflect internal changes, excitement in the child, depending on the positive or negative meaning for him of the current situation situations [7]. Every emotion generates a unique set of bodily sensations [21].

Expressive movements are a "component of emotions" (Rubinstein [14]). Therefore, emotional representations include not only affective and intellectual moments, but also the image of expressive movements — how movements look from the outside and how they are felt from the inside (Bernstein). The subject's perception and understanding of a person's perezhivanie based on their emotional representations presuppose "the ability to feeling into another's movements" [17, p. 42].

"Perezhivanie" (a common name for unmediated psychological experience) is not reduced to affective states but is a complicated complex of psychological processes that "includes emotions, cognitive processes, memory and even will" [5; 24, p. 48]. L.S. Vygotsky distinguishes between the activity associated with the occurrence of the perezhivanie and the content (what is experienced) [5; 22]. N.N. Veresov clarifies, that in Vygotsky's texts there are two different meanings — perezhivanie "as a psychological phenomenon / process that can be empirically observed and studied, and ... as ... a theoretical tool for analyzing the development process" [24, p. 46], which allows to explore the role and influence of the environment on the psychological development of the child [3; 22; 24; 25].

The child's perezhivanie are more often studied in connection with the development of

his emotional sphere. Feelings, emotions (as well as forms of cognition) are a cultural and historical product; the child personality is transformed through his social activity [22], directed by adults. To influence the emotional sphere of the child, "effective expressive means of everyday communication between people" are used [7, p. 270]; over time, they become the means of the child himself in communication — as an intermediary link in the structure of his emotional processes, causing their restructuring, intellectualization, creating the possibility of experiencing both directly perceived and imagined actions and events of vital importance for the child and the people around him [7].

Thus, the child's *perezhivanie*, which are the basis of his personal experience, become the source of his emotional representations, including non-verbal manifestations of emotions. These ideas are formed spontaneously, including due to the spontaneity and immediacy of the child's *perezhivanie*, and are used by him, more or less consciously, in recognizing other people's *perezhivanie* based on understanding emotions, taking into account the context of interaction in social situations familiar to the child from personal experience.

In foreign studies, the understanding, recognition of emotions, their identification by people, children are considered as one of the components of "emotional intelligence" (J. Meyer, P. Saloway, D. Caruso, D. Goleman, R. Bar-On, M.A. Manoilova, etc. [9]). There are also many supporters of this trend in Russian psychology. However, the purpose of the article is not to review research on emotional intelligence. We are interested in whether there are diagnostic methods for preschoolers in this area of psychology and the data obtained from them on the peculiarities of children's understanding of other people's *perezhivanie*? In foreign publications, the problem of diagnosing emotional intelligence is of great importance; in numerous models of emotional intelligence there are components such as the ability to understand emotions and to control them [10]. But there are very few such studies for preschoolers; more often they relate to developing technologies [8]. In domestic research and foreign Russian-lan-

guage publications there are developments on preschoolers (T.D. Savenkova, Yu.A. Afonkina, O.A. Tokareva, A.V. Sery, M.S. Yanitsky [19]; M.A. Nguyen [12]). However, such methods as expert assessment, survey and questionnaire are criticized, which do not always allow obtaining objective, reliable data. In addition, a significant "part of diagnostic tests for children belongs to the category of projective procedures that have complexity and ambiguity of interpretation of facts when processing results" [19, p. 155]. The disadvantages of the methods considered should also include an unverified data evaluation system [12] or its absence, the presentation of the results of children 5—7 years old without age differentiation [18].

Interesting are the methods of correlating images of individuals and human figures corresponding to a verbally given context ("history") [23]; recognition of basic emotions by mimic and pantomime reactions in statics and dynamics, correlating them with the sound of the voice by the similarity of the transmitted moods [18; 19]. However, the generalized description of the stimulus material does not give a complete picture of the methodology.

There are relatively few techniques that can be used to assess the emotional representations of preschoolers [12; 23]. Most of them reveal children's recognition of emotions by their faces (in photos, pictures) [11], apparently because it is easier for children to perceive *perezhivanie* by facial expressions, than by gestures, poses of the depicted people, by their relationships. Perhaps this is because facial expressions are universal, and gestures may differ in different cultures [20]. However, facial expressions are only one of the channels of nonverbal information about a person's *perezhivanie*. And the diagnosis "by persons" does not provide complete information about the emotional representations of children.

None of these techniques allowed us to answer the questions: can preschoolers recognize people's *perezhivanie* by gestures, poses and other non-verbal signs (except facial expressions)? Can they understand the context of the situation and the nature of the relationship between people by non-verbal

signs? That is, these issues were not studied, and therefore their study turned out to be relevant.

The study described below was conducted with children of the 6th year of life. The age of children is chosen as one of the earliest, when the development of speech allows them to formulate answers to given situations (in the pictures).

The purpose of the study is to identify the presence and features of spontaneous representations of children of the 6th year of life about the experiences (perezhivanie) of people associated with orientation to nonverbal signs (poses, gestures).

Hypothesis: spontaneous emotional representations of children of the 6th year of life in general correctly reflect the meaning of people's experiences with orientation to external nonverbal signs.

Features of sampling, organization of research and applied methodological tools

Characteristics of the subjects:

172 children of the 6th year of life — pupils of the middle age groups of kindergartens in Moscow and the Moscow region. Children interviewed in different years made up seven samples of subjects. The average number of children in the group is 25 (mean sq. deviation — 7.7); boys and girls are about equally.

The scheme of the study. Diagnostics (survey by pictures) was carried out as seven ascertaining “slices” in 2002, 2003, 2004, 2007, 2013, 2016 and 2019 using methods of quantitative (frequency, statistical) and qualitative analysis of the results.

The method “Emotional interactions” was used [6] (idea, development, and approbation by E.V. Gorshkova). The research data reflected in the article were obtained by the author and students under his supervision at MSUPE from 2002 to 2019.

Procedure. The child was presented with pictures and asked to tell what is depicted on each. With monosyllabic answers, he was asked additional questions about the actions, relationships of the characters, and by what

signs he understood it [6] — this made it possible to judge his understanding of the characters' experiences, the emotional content of the situation.

Stimulus material (Fig. 1) — seven pictures (9 x 14 cm); on each — two people in a silhouette image (facial expressions, gender signs are intentionally excluded); the relationship between them and the perezhivanie of each are expressed in poses, gestures, spatial arrangement. The full set of images is published for the first time. The expressive actions [14] of the depicted little men reflect their emotions and relationships, which are mutual in some pictures, and complementary in others: 1) “Whispers — listens” (emotion: mutual interest); 2) “Teases — cries” (schadenfreude — distress); 3) “Friendship” (consent); 4) “Farewell” (goodwill at parting); 5) “Fight” (anger — fear); 6) “Crying — comforting” (distress — sympathy); 7) “Meeting” (joy).

Two types of assessment were used: 1) according to the number of correct answers [6] — to identify the result for the methodology as a whole; the answer reflecting the content of the picture was considered “correct”, often using words that coincide with the name of the picture (which was not reported to the children) and/or the emotions of both characters, the nature of their relationships; 2) a point score for each answer (published for the first time) — to analyze the varieties of answers for each picture.

Points for correct answers: 1 — the child correctly and completely independently determines the content of the picture and the perezhivanie of each of the characters; can note non-verbal signs by which he understood it; 0.75 — (answering questions) correctly determines the actions and perezhivanie expressed by them of each of the two characters, can indicate non-verbal signs by which he I got it.

Points for incorrect answers: 0.5 — the actions and perezhivanie of one character are called correctly, and the other is called incorrectly; 0.25 — incorrectly determines the perezhivanie each of both characters; 0 — completely incorrectly determines the actions

and perezhivanie of both characters; answers leading questions².

Results

Individual task completion levels were generally determined by the sum of correct answers: low — 0—3 (so less than half); average — 4—6; high — 7; the percentage of children of each level was calculated separately by year (Fig. 2).

Judging by Fig. 2, most children (in different years) revealed an average level of understanding of the content of pictures, their spontaneous emotional representations in general correctly reflect the meaning of people's perezhivanie. A pairwise comparison of these data (according to the Mann-Whitney U criterion with Bonferroni correction) revealed the absence of statistically significant differences between them (with one exception: between the samples of 2003 and 2013). A similar analysis between boys and girls showed no significant differences.

The data on the prevalence of the average level in all groups are confirmed by a frequency analysis of the varieties of children's responses: based on point estimates, the average values of correct, partially correct, and erroneous answers were calculated (Fig. 3). Most

responses with scores of 1 and 0.75 points (correct answers) indicate that children of the 6th year of life in in general, they understand the content of emotional interactions based on ideas about people's perezhivanie.

Comparison by individual pictures: based on the scores, the average values for each picture within each sample were calculated (see the table).

In half of the cases (collectively for all groups), average values were obtained (rounded) from 0.7 to 0.8/0.9 points, which also confirms: in general, children correctly understand the content of a particular picture, but this is revealed when using additional questions. Averages rounded up to 0.5/0.6 points — correspond to a partially correct understanding of the content of the picture, for example (according to maps. No. 2), the child could correctly indicate that one of the characters was crying, but he determined the actions and mood of the second incorrectly: "playing the pipe".

The table shows: in all groups, the content of picture No. 6 is most often correctly identified ("sorry for the crying one"). Less often, children give correct answers to the pictures: "farewell", "fight" and "secret"; even less often (due to errors in the interpretation of gestures) — "teases", "friendship" and, finally, "meeting".

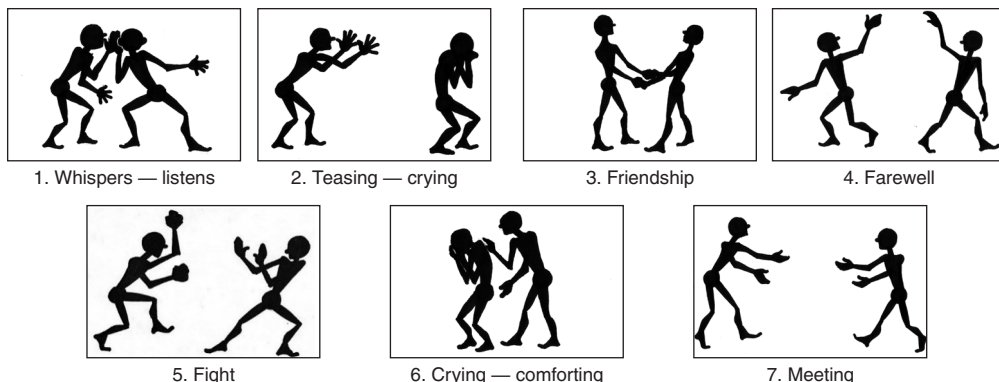


Fig. 1. Stimulus material and the order of presentation of pictures (according to the method of "Emotional interactions")

² Leading (in fact, prompting) questions were asked to the child to get at least some answer and not fix it on failure, encouraging him to continue the task (answers in these cases were not counted).

Table

Average scores for the answers separately according to the pictures — in different groups of children of the 6th year of life (in different years)

Group No. / year	Pict. No. 1 secret	Pict. No. 2 teasing	Pict. No. 3 friendship	Pict. No. 4 farewell	Pict. No. 5 fight	Pict. No. 6 comforting	Pict. No. 7 meeting
1 2002	0.66	0.52	0.69	0.73	0.67	0.73	0.58
2 2003	0.60	0.52	0.49	0.64	0.73	0.73	0.46
3 2004	0.54	0.74	0.64	0.63	0.70	0.81	0.69
4 2007	0.65	0.51	0.55	0.69	0.64	0.73	0.61
5 2013	0.81	0.58	0.75	0.85	0.81	0.83	0.70
6 2016	0.70	0.77	0.69	0.69	0.66	0.92	0.57
7 2019	0.67	0.62	0.47	0.65	0.53	0.65	0.63
Average value	0.66	0.61	0.61	0.7	0.68	0.77	0.61

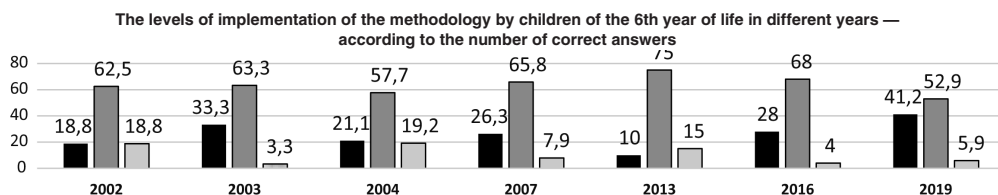


Fig. 2. Levels of performance by children of the 6th year of life of diagnostics "Emotional interactions": level designations by the number of correct answers: low (0—3); average (4—6); high (7)

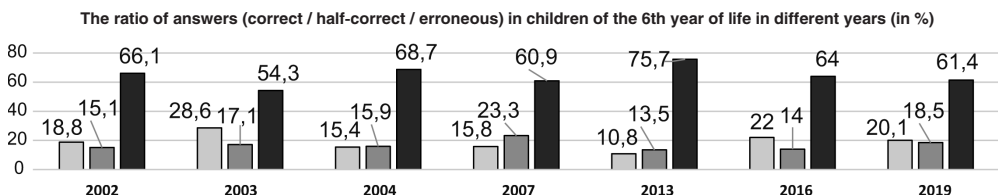


Fig. 3. The ratio of the average values of different responses by groups (2002—2019): designations of varieties of answers: incorrect answers (0 и 0,25 б.); partially correct (0,5 б.); correct (0,75 и 1 б.)

Comparison (according to the Kruskal-Wallis H criterion) of the results for individual pictures obtained in different years showed no significant differences in only two pictures: No. 4 "farewell" and No. 7 "meeting"; in other cases, statistically significant differences were revealed.

A comparison of the average values of boys and girls interviewed in different years for each of the 7 pictures (in points) and for the methodology as a whole (by the number

of correct answers) showed that differences are more common than coincidences, while there is no definite trend: in different years, boys have more accurate answers, that's the girls. In general, these differences are not statistically significant.

Qualitative analysis of children's responses

Children of the 6th year of life, when determining the meaning of perezhivanie,

are guided by nonverbal signs of behavior, but with a different measure of awareness, which can be judged by the completeness and accuracy of the answers, and if it is difficult to find words to convey the understood meaning, by the adequate use of nonverbal means (pointing, pictorial gestures) as explanations. The children's answers to the questions — what the relationships and experiences of the characters are, by what signs they understood it — are characterized by the following.

- In some cases, the child, in determining the meaning of the perezhivanie, accurately focuses on a specific gesture, verbally calls it, connects it with the general nature of the perezhivanie (comforts him, because "he strokes the back with his hand").

- Identifies specific nonverbal signs by which he understood the meaning of the emotional state, relationships, although he cannot always verbally name them; nonverbally indicates specific external signs of behavior (repeats the gesture from the picture or points to the corresponding part of the image).

- When determining the nature of perezhivanie, relationships the child proceeds from the context of the situation, interaction (sees the whole before the parts).

- Sometimes the child connects the content of the studied picture with the preceding ones in the "comforting" and conjectures its continuation.

- In interpreting the picture, the child relies on personal experience of perezhivanie, sometimes directly pointing out their similarity ("just like with Dimka and me").

- Initially, the child can correctly determine the general nature of the relationship, but then an erroneous interpretation of individual gestures leads to an incorrect definition of the meaning of the perezhivanie, the relationships of the participants in the situation and its context in general. Perhaps the "error" in interpretation arises from the desire to evade from negative content (which may remind the child of situations familiar from personal experience).

- Incorrect verbal interpretation of individual gestures can be explained by inaccuracy of perception and / or distant external similarity of the depicted gesture with other movements (of a different content) that the child is more familiar with from personal experience.

- The child "grasps" the general content, the meaning of the interaction, but does not argue the answer ("they are friends because they are friends"; "because I think so"; "I don't know") or admits that it is "difficult for him to say".

Discussion

The absence of statistically significant differences in the results of children of the 6th year of life interviewed in different years, as well as between boys and girls in each sample indicates that the data obtained by the method of "Emotional Interactions" reflect the general trend in the development of spontaneous ideas about people's experiences (perezhivanie) in children of this age, which rely on personal experience: children in general correctly "read" the meaning of relationships, emotions of the characters depicted in the pictures if such situations are familiar to child from his own perezhivanie. Personal experiences as a complicated complex of emotional-cognitive, regulatory, mnemonic processes combined with unique bodily sensations become the basis for the formation (and subsequent refinement) of representations about people's experiences, allowing not only to understand emotions, the nature of the relationships of others, but also to empathize with them both in real situations and in imaginary ones (in the game, when perceiving art works).

Children of the 6th year of life, based on their ideas about people's experiences, demonstrate (in the survey) a different degree of their awareness, which can be understood by the presence, completeness of descriptions of non-verbal signs or their absence. Some children quite definitely formulate verbal responses reflecting the

emotional content of the interactions in the picture, and accurately indicate the corresponding non-verbal signs; others hardly pick up words, but use visual means, repeating gestures as in the picture, or point to part of the image (features of the pose, gesture); someone cannot argue in any way his answer, although more or less correctly identifies the general nature of the interaction, *perezhivanie*. Probably, these differences arise because adults surrounding the child demonstrate by their own behavior different patterns of nonverbal manifestations of experiences, as well as a different degree of attention to nonverbal features of communication. The attention of adults (in the family and in kindergarten) to positive-emotional communication with children and between children, engaging them in effective empathy, mutual assistance, community of emotional *perezhivanie* and mutual sympathy between group members [7] can contribute to the awareness of emotional representations.

Perhaps, thanks to additional, not prompting, but guiding questions, it is possible to identify not only the actual degree of awareness of the observed experiences and their nonverbal signs by the child, but also the process of awareness through their verbal definition or selection (by gesture) of elements from the general context.

In general, children of the 6th year of life can recognize the meaning of emotional experiences and interactions between communication partners with a focus on non-verbal behavioral features. They give verbal explanations, more often pointing to gestures and less often — to the features of the pose, catching the nuances of *perezhivanie*. At the same time, they are very actively guided by the mutual spatial location of the participants in the situation, explaining who is moving where (direction relative to the partner) or how they are turned (angle) to the partner.

Errors in the verbal definition of the meaning of individual gestures, actions entail errors in understanding the nature of interaction and the overall content of the relationship. In ex-

ceptional cases, the child, having voiced an incorrect interpretation of the experiences of the characters or their relationships based on individual gestures, then corrected the error based on from the “returned” perception of the holistic context of the situation depicted in the picture. But much more often errors in the interpretation of gestures arose due to the isolation and inaccuracy of the perception of individual gestures outside of their connection with the holistic content of the depicted situation or because of the external similarity with another gesture familiar to the child from personal experience. So, according to the picture (No. 2) “teases — cries”, many children did not recognize the teasing gesture (show their nose), and the position of the hands of the depicted man was probably correlated with the more well-known pictorial gesture of playing an imaginary pipe, which they could observe or perform (for example, at a *matinee*). Perhaps the gesture of “showing nose” to tease another is leaving the subculture of preschoolers or is more relevant for children of other ages.

The results obtained using the “Emotional Interactions” method do not coincide with the data of another study [18], where the vast majority (up to 75%) of 5—7-year-old children revealed a high level of recognition (by pictures) of people’s emotional states. In our opinion, such a “high” result is a consequence of an incorrect evaluation system (which, unfortunately, is not described by the author). Our methodology and evaluation system more adequately and differentially reflect the characteristics of children of the 6th year of life in understanding people’s emotions, which allows us to judge their spontaneous emotional representations.

Thus, we can state the following:

1. The hypothesis is confirmed: spontaneous emotional representations of children of the 6th year of life in general correctly reflect the meaning of people’s experiences with orientation to external nonverbal signs.

2. Children of the 6th year of life, due to personal life experience (without special train-

ing), can recognize accurately the emotional meaning of interactions and experiences of people (depicted in the pictures) — with varying degrees of awareness of nonverbal signs by which they are guided: from the ability to argue their answer with naming, indicating these signs to recognition of difficulties in such justification.

3. Nonverbal signs by which children of the 6th year of life can navigate when recognizing the emotional meaning of interactions are the relative size of the personal space of each of the participants in the situation (in the picture), their mutual location (angles) and movements (converge, move away), features of posture, gestures (including the position of the hands). These verbal explanations, nonverbal references to fragments of images most often take place after recognizing the holistic context of the situation of interaction of the char-

acters in the picture or the general nature of their relationship (the whole before the parts).

4. An erroneous interpretation of a gesture arises based on inaccuracy in the perception of external features, without considering its combination with other features of nonverbal behavior and / or by external similarity with other movements more familiar to the child from personal experience. An error in the interpretation of a gesture can distort the understanding of the emotional meaning of the situation, the nature of the relationship.

The task of the upcoming research of spontaneous representations of preschoolers about people's perezzhivanie is to compare the results of children of the 6th year of life, described in this article, with the data of children of the 5th and 7th years of life, obtained by the same method.

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Получена 24.04.2022

Принята в печать 03.02.2023

Received 24.04.2022

Accepted 03.02.2023

Features of the Internal Position of an Adult in Modern Students of Early Adolescence

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The article presents the results of an empirical study dealing with the features of the adult internal position as a motivational basis for self-determination in modern high school and college students. The study aims to analyze the adult internal position in adolescent students, which is seen as a confluence of the social need for autonomy and the cognitive need for professional education. The hypothesis was tested that the peculiarity of the studied psychological phenomenon is due to the fact that the external conditions of development (environmental factors and institutional requirements for growing up) outpace the formation of internal conditions that ensure the modern young people's individual psychological readiness for self-determination. We tested the assumption that the institutional requirements for adulthood outpaced the modern young people's individual psychological readiness for self-determination. Standardized scale methods were used to diagnose the level of professional identity (A. Azbel), the level of ambition and self-esteem (the Dembo-Rubinshtein scale modified by A. Prikhozhan), the level of subjective control (modified by A. Gretsov), as well as to study the emotional attitude towards learning (modified by A. Andreeva-A. Prikhozhan). The sample of the study is 191 people, high school and colleges students from Moscow and Orsk. Correlative, cluster and factor analysis of the data obtained confirmed the assumptions made about the structure of the adult internal position in the early youth and the features of its formation in post-industrial societies. It is shown that the formation of the professional identity of modern high school and college students is more consistent with the objective requirements of the social situation, rather than the level of personal maturity necessary for making informed decisions.

Keywords: adult internal position, normative crisis, age patterns of development, adolescence, early youth.

Funding. The work was carried out within the framework of the State Assignment of the Federal State Budgetary Scientific Institution "PI RAO" No. 075-00646-21-01 dated 16.04.2021 for 2021-2023.

For citation: Andreeva A.D., Begunova L.A., Lisichkina A.G. Features of the Internal Position of an Adult in Modern Students of Early Adolescence. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2023. Vol. 28, no. 2, pp. 58—69. DOI: <https://doi.org/10.17759/pse.2023280205> (In Russ.).

Особенности внутренней позиции взрослого у современных учащихся раннего юношеского возраста

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Представлены результаты эмпирического изучения особенностей внутренней позиции взрослого как мотивационной основы готовности к самоопределению у современных старшеклассников и студентов колледжей. Исследование посвящено анализу внутренней позиции взрослого у учащихся юношеского возраста, рассматриваемой как сплав социальной потребности в самостоятельности и познавательной потребности, направленной на получение профессионального образования. Проверялась гипотеза о своеобразии изучаемого психологического феномена, обусловленном тем, что внешние условия развития (средовые факторы и институциональные требования к взрослению) опережают становление внутренних условий, обеспечивающих личностную психологическую готовность современных молодых людей к самоопределению. Для решения поставленных задач использовались стандартизированные шкальные методики, направленные на диагностику уровня профессиональной идентичности (А.А. Азбель), выявление уровня притязаний и самооценки (шкала Дембо-Рубинштейн в модификации А.М. Прихожан), диагностику уровня субъективного контроля (модификация А.Г. Грецова), изучение эмоционального отношения к учению (модификация А.Д. Андреевой-А.М. Прихожан). Выборка исследования — 191 человек, старшеклассники общеобразовательных школ и студенты 1—2 курсов колледжей городов Москвы и Орска. Проведенные корреляционный, кластерный и факторный анализы полученных данных подтвердили выдвинутые предположения о структуре внутренней позиции взрослого у учащихся раннего юношеского возраста и особенностях ее становления в условиях постиндустриального общества. Показано, что формирование профессиональной идентичности современных старшеклассников и студентов колледжей в большей степени соответствует объективным требованиям социальной ситуации, нежели уровню личностной зрелости, необходимому для принятия осознанных решений.

Ключевые слова: внутренняя позиция взрослого человека, нормативный кризис, возрастные закономерности развития, ранний юношеский возраст.

Финансирование. Работа выполнена в рамках государственного задания ФГБНУ «ПИ РАО» от 16.04.2021 № 075-00646-21-01 на 2021-2023 годы.

Для цитаты: Андреева А.Д., Бегунова Л.А., Лисичкина А.Г. Особенности внутренней позиции взрослого у современных учащихся раннего юношеского возраста // Психологическая наука и образование. 2023. Том 28. № 2. С. 58—69. DOI: <https://doi.org/10.17759/pse.2023280205>

Introduction

Today's high school students as well as the students of secondary vocational schools get ready to enter independent adult life. It is assumed that the level of psychological maturity reached by this time allows them to make their first decisions regarding their own future. The criterion of the maturity, after the definition by L.I. Bozhovich, is the emergence of an adult internal position — the most important new formation of middle adolescence which is associated with self-determination and accomplishes child's ontogenetic development [2]. Nowadays the world of professions as well as the education system undergo rapid changes which make self-determination difficult for young people. [1; 6; 18; 23].

Many researchers emphasize that at the middle-adolescent age the orientation to the future becomes the main focus of the personality and the problem of choosing a career turns into the center of young people's interests. That's why psychologists consider professional and social self-determination as the most important new formation of middle adolescence. However, it should be preceded by the formation of the adult internal position [21; 22].

The very concept of the internal position as a motivational formation was introduced by L.I. Bozhovich in 1951. She considered it as a characteristic of child's psychological readiness to start school, i.e., to enter the system of its social and educational norms and requirements

[2]. The content of the "internal position" concept has been revised and refined by other researchers over several decades; now it's not only limited to the educational process but includes a wide range of situations associated with the adoption of a new social role [15; 17; 19]. The phenomenon firstly described for children experiencing the seven-year-old crisis rightfully took its place among the symptoms of personality crisis. The emergence of a new internal position indicates that a person has found a sphere for his/her further development and is ready to enter a new system of social relations. The most important semantic aspect of the internal position, according to D.V. Lubovsky, is that it cannot be imposed from outside — it is a conscious choice made by an individual in accordance with his/her internal motives [9].

This study is aimed at studying the features of an adult internal position as a new formation of a development crisis experienced by young people aged 16—18. The adult internal position as a complex psychological formation implies that individual is mature enough to accept the norms of the adult life, in other words, the social role of an adult member of society. Basing on the interpretation of the internal position developed in the scientific school of L.I. Bozhovich we define this new formation as a fusion of a social component associated with the desire and psychological readiness for independence, and the cognitive motivation

aimed at obtaining a profession as a way of gaining independence. The adult internal position is a motivational mechanism that helps high school students move to a new level of social relations requiring autonomy and responsibility.

Child age-related developmental crisis is usually explained by a deepening gap between child's increased social, personal and cognitive capabilities and needs and the external conditions that remain unchanged. The main peculiarity of the "growing-up" crisis is determined by the civilizational processes characteristic of the pre-figurative society where rapid changes in all aspects of life outpace psychological development of children and teenagers and limit their potential to plan their own future.

We assume that the formation of the adult internal position in modern adolescent students is characterized by the inverse (as compared to the classic one) relation of internal (psychological) and external (social) conditions of development. Psychological maturity of young people, their readiness to take on new challenges lag behind such institutional "growing-up" parameters as transition from one educational stage to another and making decisions associated with self-determination.

Research methods

The survey is based on the cultural-historical theory by L.S. Vygotsky, the theory of personality development by L.I. Bozhovich, the conception of adolescents' readiness for self-determination by I.V. Dubrovina. Thus, we continue and develop the ideas formulated in the classic works by Russian psychologists.

In order to study the **social component** of the adult internal position we used standardized scale methods.

Formation of students' professional identity statuses was considered as the main indicator of their readiness for professional self-determination. In order to obtain empirical data, we used the method of studying professional identity statuses by A.A. Azbel [5]. It is a questionnaire designed to reveal respondents' positions regarding their future, the role of external factors affecting their decisions as well as the presence or absence of a crisis position on the issue.

The subjective control level (SCL), the balance of internality and externality was an indicator of young people's maturity and readiness to take responsibility for their decisions and actions. We used *The Subjective Control Level* questionnaire adapted for high school students by A.G. Gretsov [5].

We also used Dembo—Rubinshtein's method for assessing self-esteem and ambition level modified by A.M. Prikhozhan [13].

The **need for cognition** was evaluated by A.D. Andreeva and A.M. Prikhozhan's method including such scales as cognitive activity, anxiety, anger and achievement motivation [13].

We analyzed the empirical data using the statistical package IBM SPSS Statistics 23.0. We conducted correlation, cluster (k-means method) and factor analyses in order to reveal general age-related characteristics of the phenomenon under study. We didn't take into account gender and environmental differences because division into subgroups would have reduced the sample size and the validity of the results.

Findings

The sample consisted of 10—11 grade students of high school and

1—2 year students of colleges in Moscow and Orsk (191 people in total).

We conducted a correlation analysis to reveal the relationship between such parameters as general internality, individual characteristics of attitude towards learning, self-esteem, ambition level, and types of professional identity. The data are presented in Table 1.

It is found out that indeterminate professional identity correlates negatively with general internality ($r = -0.147$, $p = 0.046$), cognitive activity ($r = 0.218$, $p = 0.003$), achievement motivation ($r = -0.297$, $p = 0.001$) and ambition level ($r = -0.198$, $p = 0.007$). This indicates that students are not ready to make responsible decisions.

The moratorium on decision-making in the sphere of professional self-determination causes anxiety ($r = 0.196$, $p = 0.008$). This indicates that the social situation of development for this group of students is quite tense. They know that self-determination is important but do not want to make a choice.

Determinate professional identity positively correlates with cognitive activity

($r = 0.179$, $p = 0.015$), general internality ($r = 0.250$, $p = 0.001$), achievement motivation ($r = 0.583$, $p = 0.0001$). Negative correlations between determinate professional identity and anxiety ($r = -0.258$, $p = 0.0001$), anger ($r = -0.154$, $p = 0.038$) are revealed. This may be considered as a marker for successful development of the adult internal position.

The imposed professional identity correlates negatively with general internality ($r = -0.198$, $p = 0.007$) and positively with anger ($r = 0.165$, $p = 0.026$). This may be interpreted as a sign of conscious obedience to the dictated educational route.

The analysis shows significant positive and negative correlations of the parameters of the adult internal position. This confirms that we can analyze its structure as a fusion of social and cognitive needs.

In order to analyze the structure of the adult internal position typical of modern boys and girls, we conducted an exploratory factor analysis. The factor analysis of the correlation matrix by principal component method with Varimax rotation showed that, basing on the Kaiser crite-

Table 1

Correlations of general internality, attitudes towards learning (cognitive activity, achievement motivation, anxiety, anger), professional identity, self-esteem and ambition level

Parameters	General internality	Cognitive activity	Anger	Anxiety	Achievement motivation	general rate Self-esteem	(general rate) Ambition level
Indeterminate professional identity	-0.147*	-0.218**			-0.297**		-0.198**
Moratorium				0.196**			
Determinate professional identity	0.250**	0.179*	0.154*	-0.258**	0.583**		
Imposed professional identity	-0.198**		0.165*				

Note. ** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).

tion, we could identify 3 factors including 53.83% of the cumulative variance.

The appropriateness of factor analysis was confirmed by the Kaiser-Meyer-Olkin test ($KMO = 0.781$) as well as by Bartlett's test of sphericity ($\chi^2 = 3707.62$ and $p < 0.001$). Factor loadings are shown in Table 2.

The data presented in Table 2 show dominant personal characteristics of modern middle-adolescent students. It has been found out that personality traits and motivations typical of adolescents have the highest loadings, while personal features associated with readiness for professional self-determination are characterized with the smallest significant

rates. Some parameters characterized by low values (less than 0.4) are not considered.

The next step of the analysis was to divide students into groups (clusters) basing on the type of professional identity (imposed professional identity, indeterminate professional identity, moratorium, determinate professional identity). For clustering the k-means method was used. The data are presented in Table 3.

Cluster analysis makes it possible to reveal connections among the studied parameters and divide students into four typological groups depending on different levels of the adult internal position forma-

Table 2

Factor loading matrix

Parameters	Factor 1 (authority among peers % of total variance 33.933)	Factor 2 (claim for recognition % of total variance 11.434)	Factor 3 (readiness for self-determination % of total variance 8.472)
Self-esteem authority among peers	0.752	0.276	
Self-esteem attractive appearance	0.160	0.736	
Self-esteem easy-going		0.228	0.705
Self-esteem talented	0.692		
Self-esteem self-confidence	0.690	0.195	0.319
Self-esteem clever	0.630	0.193	
Achievement motivation	0.347	0.292	0.281
Level of ambition clever	0.129	0.850	
Level of ambition self-confidence	0.186	0.769	0.240
Level of ambition talented	0.207	0.708	
Level of ambition authority among peers	0.406	0.670	
Level of ambition easy-going	0.300	0.667	
Level of ambition attractive appearance	0.391	0.634	
Anxiety	-0.258		-0.755
Anger	-0.101		-0.699
General internality	0.119	0.129	0.694
Cognitive activity	0.394	0.160	0.579
Determinate professional identity			0.512

Note. The highest factor loadings are given in bold.

Table 3

**Mean values of social and cognitive components
 of the adult internal position in clusters**

	Indeterminate professional identity n = 18 (9, 2%)	Moratorium n = 49 (25, 8%)	Determinate professional identity n = 105 (55%)	Imposed professional identity n = 19 (10%)
Indeterminate professional identity	4.82	3.26	2.33	3.13
Moratorium	11.39	12.73	11.96	12.00
Determinate professional identity	6.27	9.37	9.88	8.63
Imposed professional identity	1.18	1.28	1.31	1.35
General internality	15.60	16.62	18.22	13.31
Cognitive activity	24.80	26.74	29.97	24.63
Achievement motivation	25.67	26.44	28.74	25.31
Anxiety	22.60	20.65	19.62	23.44
Anger	16	15.79	15.07	18
General rate of self-esteem	58.5	64	82	54
General rate of ambition level	63	83.5	93.5	87

tion. Detailed description of these groups will be given in the discussion section.

Discussion of results

According to the results of factor analysis, the first factor (authority among peers) that combines self-esteem on such scales as “authority among peers”, “talented”, “self-confident”, “clever”, and achievement motivation in the educational sphere is characterized by the highest loading. This structure of personality sphere has traditionally been described as typical of adolescent students. L.I. Bozhovich, relying both on her own data and on the researches by contemporary foreign authors, notes: “... the leading motive for students’ behavior at school is the desire to find their place among their comrades” [2, p. 242; 5].

The second factor — claim for recognition — combines ambitions on such

scales as “clever”, “self-confident”, “talented”, “authority among peers”, “easy-going”, “attractive appearance”. The classic Russian researches on adolescent psychology have shown that this is a sensitive period for self-esteem development [2; 11; 14].

Both factors indicate that status expectations based both on real achievements and ambitions in the sphere of interpersonal relationships are of high importance for our respondents. The data obtained demonstrate that this trend is characteristic of the majority of today’s high school and college students.

The third factor (readiness for self-determination) is the only one which includes orientation towards the adult future. It combines self-esteem on the “easy-going” scale, general internality, cognitive activity, and indeterminate professional identity. This factor has the

lowestloading. It correlates negatively with anxiety and anger. This shows that young people consider themselves as “good”, “proper”, i.e., they suppose that they satisfy the requirements of the current social situation of development (the need to choose further educational route and professional self-determination) [5; 12].

Thus, as regards personal maturity, today's middle adolescents are closer to the early adolescents of the Soviet epoch. Soviet high school students demonstrated a sharp change of the internal position as well as the dominance of motivation associated with choosing a career path and getting an education [2; 7; 8; 10; 16; 20, 21; 22].

According to the results of cluster analysis, the smallest group (9.2%) includes students with an indeterminate professional identity, low mean values of general internality, cognitive activity, achievement motivation, self-esteem and ambition level. This is the most passive group of students who do not consider their own future as well as present as a sphere of interest and personal effort.

The next group includes students (25.8%) who put a moratorium on professional self-determination. This group is characterized by mean values of general internality, cognitive activity, achievement motivation, self-esteem and ambition level. Anxiety and anger mean values are low. These students understand that career choice is inevitable but they are not psychologically ready to make it. We can assume that they are close to accepting the adult internal position, “at a low start”. This sort of delayed orientation towards the future explains the low rates of anxiety and anger.

The largest cluster (55%) includes students with a determinate professional

identity, high mean values of cognitive activity and achievement motivation, low mean values of anxiety and anger, high mean values of general internality, self-esteem and ambition level. This combination of parameters can be considered as productive. It demonstrates that these students are ready to make an independent and responsible decision regarding their future career, they are eager to learn and highly assess their ability to achieve their goals. The low level of negative emotions confirms that their orientation towards the future conforms with the main tasks of their age period.

Imposed professional identity, combined with high mean values of anxiety and anger, the lowest mean values of self-esteem, general internality and cognitive activity, but high mean values of ambition level, is found in 10% of students. The immaturity of social and cognitive components of the adult internal position combined with the forced choice of the professional education route causes a negative attitude towards studying. High rates of the ambition level act as a kind of a protective mechanism justifying the low level of personal responsibility for one's own future.

The cluster analysis demonstrates that the adult internal position has formed in more than a half of middle-adolescent students. We can also assume that another 25% of the respondents will be ready to accept this position in the near future. Only one fifth of the participants experience difficulties forming an adult position. The result obtained conforms with the main age-related pattern of psychological development that implies orientation towards the future. It also confirms that the adult internal position can be interpreted as a fusion

of social and cognitive motives aimed at obtaining a profession. This structure of professional identity can be considered as normative for middle-adolescent students experiencing self-determination crisis caused by the contradiction between the institutional requirements for a school graduate and the subjective problems of career choice in a rapidly changing labor market.

Conclusion

The data obtained confirm that the adult internal position in the middle adolescence should be seen as a fusion of two basic needs: the social one that is associated with gaining autonomy and taking responsibility for one's own future and the cognitive one aimed at choosing a career as a condition for gaining independence from the parents.

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Comparing the results of cluster and factor analyses we can conclude that the formation of professional identity, i.e. readiness for professional self-determination, is ahead of the personal maturity in modern students aged 16—18.

We assume that this gap is associated with the pressure of the institutional requirements for professional self-determination. The age limits of these norms (graduation from high school, reaching the age of majority, age of conscription) haven't changed for several decades. However, today they are imposed on young people who are mostly not mature enough. In other words, the formation of professional identity in modern high school and college students is regulated more by the objective requirements of the social situation than by the level of personal maturity necessary for making responsible decisions.

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Получена 17.02.2022

Received 17.02.2022

Принята в печать 20.02.2023

Accepted 20.02.2023

Childbirth Education and Support During Labour: Association with Birth Satisfaction

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Antenatal education is a common practice with disputable effects on women’s psychological and physical wellbeing. By contrast, there are hundreds of studies that confirm benefits of continuous support during labour, however, women have much less chances to have such support. The purpose of this study was to compare the effectiveness of antenatal education and individual labour support in the context of childbirth experience (the mode of birth and obstetric violence) and its psychological perception (birth satisfaction and physical wellbeing of women after childbirth) in Russia. The study was conducted in February—March 2021 and included mothers of infants aged 0—13 months (N=1645). We found that antenatal education had no direct association with the mode of birth, women’s physical wellbeing after childbirth and birth satisfaction ($p>0,70$). Women who gave birth without individual labour support were less satisfied with their birth experience, more likely to experience obstetric violence, and more often gave birth via caesarean section ($p<0,001$). Thus, labour support is a safe way to improve childbirth experience and maternal quality of life in general.

Keywords: labor and birth, childbirth education, labour support, doula, emotional support, obstetric violence, birth satisfaction.

Funding. The reported study was funded by Russian Science Foundation (RSF), project number 22-18-00356 (“PTSD and postpartum depression in mothers as a risk factor for the emotional and cognitive development of the child”).

Acknowledgements. The authors are grateful to Anna A. Kharchenko for assistance in data collection and to all participants of this study.

For citation: Suarez A.D., Shraibman L.A., Yakupova V.A. Childbirth Education and Support During Labour: Association with Birth Satisfaction. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2023. Vol. 28, no. 2, pp. 70—82. DOI: <https://doi.org/10.17759/pse.2023280206> (In Russ.).

Подготовка к родам и сопровождение: связь с опытом родов

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Представлены материалы исследования эффективности подготовки к родам и индивидуального сопровождения родов в России. Обращается внимание на то, что подготовка к родам — распространенная практика со спорной эффективностью для психологического и физического благополучия женщин. Отмечается, что преимущества непрерывной поддержки в родах показаны в сотнях исследований, но ее реальная возможность значимо ниже. Целью проведенного авторами исследования было сравнение эффективности подготовки к родам и индивидуального сопровождения родов в контексте опыта родов (способа родов и опыта акушерского насилия) и его психологического восприятия (степени удовлетворенности родами и самочувствия женщин после родов) в России. Для этого в феврале—марте 2021 г. матери младенцев в возрасте 0—13 месяцев (N=1645) приняли участие в исследовании. Полученные результаты указывают на то, что подготовка к родам не имеет связи со способом родов, самочувствием женщины после родов и со степенью удовлетворенности опытом родов ($p>0,70$). Женщины, которые рожали без поддержки, были менее удовлетворены своими родами, чаще сталкивались с акушерским насилием, их роды чаще проходили путем кесарева сечения, было худшее самочувствие после родов ($p<0,001$). Таким образом, поддержка женщин во время родов — это безопасный способ улучшения опыта родов и качества жизни матерей в целом.

Ключевые слова: роды, подготовка к родам, сопровождение родов, доула, психологическое сопровождение родов, акушерское насилие, удовлетворенность родами.

Финансирование. Исследование выполнено при финансовой поддержке Российского научного фонда (РНФ) в рамках научного проекта № 22-18-00356 «ПТСР и послеродовая депрессия у матерей как фактор риска для эмоционально-когнитивного развития ребенка».

Благодарности. Авторы хотят выразить благодарность Анне Харченко за ее вклад в сбор данных и всем женщинам, принявшим участие в нашем исследовании.

Для цитаты: Суарэз А.Д., Шрайбман Л.А., Якупова В.А. Подготовка к родам и сопровождение: связь с опытом родов // Психологическая наука и образование. 2023. Том 28. № 2. С. 70—82.
DOI: <https://doi.org/10.17759/pse.2023280206>

Introduction

Antenatal education is a common practice, however, its effects on childbirth outcomes remain disputable due to a great variety of educational programs and heterogeneity of their content, as well as researchers' confirmation bias [18]. For example, two studies published in 2021 show contradictory results: in one of them women who had attended antenatal education had statistically higher rates of vaginal births [17], while the other study did not find any correlation between antenatal education and the mode of birth [33]. Moreover, antenatal education can decrease the risk of obstetric violence, i.e. physical, sexualized and/or verbal abuse, intimidation, coercion, humiliation, and/or assault committed by medical staff during childbirth [35]. However, studies report mixed results: for example, in Italy not having attended an antenatal education class was one of the factors most associated with obstetric violence [31], while women who attended such classes in Spain experienced obstetric violence more frequently [28].

Nevertheless, some studies report that antenatal education can improve long-term psychosocial outcomes due to lower rates of birth dissatisfaction that, in turn, often leads to postpartum depression and posttraumatic stress disorder [19; 14; 20]. Another way of how antenatal education may impact birth satisfaction is by reducing discrepancies between birth expectations during pregnancy and actual birth experience [22; 23].

Childbirth education courses started to emerge in Russia and post-Soviet coun-

tries in 1980-s and represented closed communities of parents with shared values where one or several experienced mothers (often without any medical/obstetrical background) assumed a role of a childbirth educator to prepare other members to childbirth [6]. As time passed by and in response to changing demands of pregnant women, these courses transformed into qualified antenatal schools and centers that follow Code of Ethics for Childbirth Educators [6].

Meanwhile, there are few studies in Russia that would explore the impact of antenatal education on birth outcomes. K.A. Silayev in his dissertation showed that antenatal education can reduce rates of cesarean births (CBs) and obstetric complications (such as hypotonic labor) and improve maternal and perinatal outcomes [4]. Similar results were reported in a study on antenatal preparation of pregnant woman to VBAC: such comprehensive antenatal education helped more mothers decide to try VBAC and increased the success rate of VBACs [11].

By contrast, there are hundreds of studies that confirmed benefits of continuous support during labor for tens of thousands of women. In 2003 Hodnett et al. published the first Cochrane review¹ on continuous support for women during childbirth, with the latest revision published by Bohren et al. in 2017 [15]. The authors reviewed data of 26 studies and came to a conclusion that continuous support during labor had numerous benefits, including higher rates of spontaneous vaginal births, lower rates of instrumental vaginal births and CBs and

¹ Cochrane Reviews are systematic reviews of research in health care and health policy published in the Cochrane Database of Systematic Reviews <https://russia.cochrane.org/ru>

less need in pharmacologic management of pain [15]. Mothers who had a support person who only focused on providing their comfort were more satisfied with their childbirth experience and more rarely suffered from symptoms of postpartum depression. Labour support was most effective when provided by a companion who was neither part of the hospital staff nor the woman's social network prior to her pregnancy and labor [24]. Based on all these benefits from a presence of a support person during labour and the lack of any side effects, the American College of Obstetricians and Gynecologists (ACOG) and World Health Organization (WHO) recommend that all women are provided with continuous labour support by a companion of choice [12; 36]. The emotional component of doula support during labour includes non-judgmental reflection of a labouring woman's emotions, reassurance, encouragement, breathing techniques for alleviating anxiety, and providing information on the process of childbirth [21; 29].

The presence of a birth partner in Russia has only become a legal right in 2012 [16]. However, small maternity care hospitals can still restrict a birth partner's presence during labor due to absence of individual wards. It is even more difficult for any other person, such as doula or private midwife, to get access to a maternity care hospital and provide support during labour. Most maternity care hospitals allow individual support by a doula/midwife only under a paid contract but not during labour under state compulsory health insurance. Moreover, maternity care hospitals may restrict doula access to the unit as there is no law in Russia that would ensure a woman's right to have a doula during labour [5]. Therefore, women in Russia face an acute problem of inaccessibility of continuous labour support, despite the fact that there are studies on Russian samples that already confirmed positive effects of labour support such as

lower rates of CBs, medical interventions, and obstetric violence [37].

Thus, the aim of this study is to examine the associations between antenatal education and individual labour support with the following factors of childbirth: the mode of birth, obstetric violence, birth satisfaction, and women's physical wellbeing after childbirth in Russia.

Methods

2.1 Procedure and participants

In February — March 2021 women were invited to take part in the study via specialized online and offline communities and antenatal education classes. The survey was conducted online using 'Testograph' platform. The inclusion criteria were respondent's age of 18 years and over, ability to read and write in Russian, and having given birth no longer than 14 months prior to the study. A total of 1,645 mothers of infants aged 0—13 months ($M=6.93$) met these criteria and completed the online survey.

The study was approved by the Ethical Committee of the Russian Psychological Society, Lomonosov Moscow State University. All participants were offered to sign an informed consent via the online 'Testograph' platform. The study was conducted in accordance with the WMA Declaration of Helsinki.

2.2 Demographic, pregnancy and childbirth experience questionnaire

2.2.1 Demographic characteristics

The participants specified their age at the time of childbirth, education (basic school education/vocational education/higher education), marital status (married/cohabiting with a partner/single), and the place of childbirth (Moscow and capital region/Other city in Russia with population >1 million/Other city in Russia with population <1 million/Post-Soviet States/Other).

2.2.2 Obstetric and medical characteristics

The survey included questions regarding childbirth experience: the respondents provided information regarding gestational age at the time of birth (in weeks), time since birth (in months), parity, and mode of birth (vaginal/CB). We also collected information about the type of the childbirth healthcare plan (childbirth in a maternity care hospital under state compulsory health insurance/childbirth in a maternity care hospital with a paid contract/home birth).

In addition, the participants reported whether they had experienced obstetric violence during childbirth. If they had faced any, we asked the women to specify the type of obstetric violence (medical interventions without patient's consent and approval/verbal aggression /physical aggression (such as immobilization, forbiddance to drink)/threats and accusations/Kristeller maneuver/pain relief denial/ignoring the needs of the birthing woman).

The participants also rated how they felt physically after childbirth on a scale from 1 to 10, where 1 is very bad and 10 is excellent.

2.2.3 Individual labour support and antenatal education

Further we collected information about the sources of support during labour (none/partner/doula or private midwife/partner+doula or private midwife) and antenatal education type (none/self-education/educational courses/mixed educational strategies, where participants chose several sources for childbirth preparation). We also asked the participants whether their labour support plan prepared during pregnancy was actually fulfilled during birth.

2.3 Birth Satisfaction Scale Revised Indicator

We used the Russian version of the Birth Satisfaction Scale Revised Indicator

(BSS-RI) [27] to assess the levels of birth satisfaction. It is a short 6-item self-report questionnaire to assess birth satisfaction where the subscales represent the level of stress and anxiety, feeling of control, and caregivers' support. A 3-point Likert scale is used for each question (range 0—2, where 0 means “no”, 1 means “partly” and 2 means “yes”). Minimum score is 0, maximum score is 12. The Cronbach's α in this study was 0.805.

2.4 Statistical analysis

We explored the association between the type of support during labour and type of antenatal education and birth experience factors specified in metric variables (birth satisfaction, the number of types of obstetric violence and physical wellbeing after childbirth) using ANOVA.

Pearson Chi-square tests were performed to explore the association between the type of support during labour and type of antenatal education and birth experience factors specified in qualitative variables (the mode of birth and experience of obstetric violence).

We analyzed obstetric violence both as a qualitative variable (the fact of experienced obstetric violence) and as a metric variable — the total number of types of obstetric violence a woman experienced during childbirth.

All statistical procedures were adjusted for covariates (maternal age at the time childbirth, time since birth, gestational age at the time birth) and random factors (the place of childbirth, education, marital status).

The statistical analysis was performed using IBM SPSS 25 software.

Results

The main characteristics of the sample are presented in Table 1 in the following OSF repository: <https://osf.io/>

trvh4. As you can see, the majority of the participants are officially married (94%), have higher education (91.8%), and gave birth in big cities in Russia with population >1 million (60.2%). The majority of the participants were primiparous (59%), gave birth in a maternity care hospital under state compulsory health insurance (62%) and had vaginal births (69%). 58% of the participants reported that their labour support plan could not be fulfilled due to COVID-19 restrictions. More than a quarter of the women (27.7%) experienced minimum one type of obstetric violence, most often in form of verbal aggression and rudeness (15.6%). Two thirds of the participants reported that they used some type of antenatal education (75.1%), most often — self-education (45.2%). The overall majority of the participants (73%) gave birth without individual labour support.

3.1 Association between the type of antenatal education and birth experience

We identified four types of antenatal education: none, self-education, educational courses and mixed educational strategies (where a woman used several types at the same time). We also analyzed presence

or lack of antenatal education in general. We did not find any significant association between birth satisfaction and type of antenatal education ($F=0.151$ (3; 10, 263), $p=0.70$). No significant association was found between presence of antenatal education and the mode of birth (Pearson Chi-Square=3.201, (3), $p=0.074$). We also did not find any statistically significant association between the type of antenatal education and women’s physical wellbeing after childbirth ($F=10.192$ (3; 7, 637), $p=0.72$).

The results show a statistically significant association between the number of types of obstetric violence a woman experienced during birth and antenatal education ($F=12.438$ (3; ,654), $p<0.001$). The lowest mean number of types of obstetric violence was in the group of women who did not have any antenatal education (Table 2).

3.2 Association between individual labour support and birth experience

After the data processing, we identified four types of labour support: none; partner; partner+private midwife or doula; private midwife or doula (Table 3). We found significant differences in the level of birth satisfaction depending on

Table 2

Mean values of the main variables depending on the type of antenatal education

Type of antenatal education	Birth satisfaction (within 0—12 range) Mean/Standard deviation	Obstetric violence (within 0—4 range) Mean/Standard deviation	Wellbeing after childbirth (within 0—10 range) Mean/Standard deviation
None	7.83 / 3.18	0.24 / 0.59	6.27 / 2.74
Self-education	7.48 / 3.25	0.43 / 0.83	6.33 / 2.80
Educational courses	7.78 / 3.05	0.45 / 0.84	6.44 / 2.78
Mixed educational strategies	7.59 / 3.37	0.67 / 1.03	6.58 / 2.72

the type of labour support ($F=13.094$, (3; 9.819), $p<0.001$). The lowest mean values of birth satisfaction were observed in the group of women who gave birth without labour support (Table 3). There were significantly higher rates of obstetric violence experienced by women who gave birth without labour support (PearsonChi-Square= 21.483 , (3), $p<0.001$). There were also significant differences in the number of types of obstetric violence a woman experienced during birth depending on the group ($F=9.910$ (3; ,648), $p<0.001$): the highest mean number of types of obstetric violence was found in the group of women who gave birth without labour support (Table 3).

We found a statistically significant association between labour support and the mode of birth (PearsonChi-Square= 25.731 , (3), $p<0.001$). The rate of CBs was higher among women who gave birth without labour support (PearsonChi-Square= 4.484 (3), $p=0.034$).

The ratings made by a woman on her physical wellbeing after childbirth also correlated with the type of labour support ($F=6.534$, (3; 7.560), $p<0.001$): the highest mean rating was seen in the group of women who were supported by a private midwife or doula (Table 3).

Discussion

This is the first in Russia study exploring antenatal education and individual labour support within one cohort at the same time to compare their effects on the mode of birth, number of types of obstetric violence, birth satisfaction, and women's physical wellbeing after childbirth.

We did not find any statistically significant association between antenatal education, birth satisfaction, and birth outcomes, which corresponds with a study in Spain by Artieta-Pinedo et al. [13] who assumed that it is associated with high medicalization of childbirth in Spain where antenatal education cannot impact the general birth culture and actions of healthcare professionals. The maternal healthcare system in Russia also often fails to consider the needs of labouring women and remains rather medicalized [32; 10], which is confirmed by our study in the previous year on a Russian sample 84.6% of which reported that they experienced at least one medical intervention during their childbirth [37]. Medicalization of childbirth is understood as high rates of medical interventions, including their use for non-medical problems, and intensive medical control over childbirth process [9; 30].

Table 3

Mean values of the main variables depending on the type of labour support

Type of labour support	Birth satisfaction (within 0–12 range) Mean/Standard deviation	Obstetric violence (within 0–4 range) Mean/Standard deviation	Wellbeing after childbirth (within 0–10 range) Mean/Standard deviation
None	7.33 / 3.32	0.49 / 0.89	6.18 / 2.80
Partner	8.24 / 2.83	0.25 / 0.54	6.81 / 2.60
Partner + private midwife or doula	8.52 / 2.97	0.20 / 0.50	6.91 / 2.79
Private midwife or doula	8.67 / 2.62	0.23 / 0.55	6.99 / 2.55

At the same time, several studies showed beneficial effects of the psychological component of antenatal education on birth outcomes and adjustment to a new social role [2; 3]. Moreover, antenatal education can serve as an orientation in a new parenting role [1]. In this study we did not investigate the contents of different antenatal educational courses, yet these could vary tremendously from hospital-based classes to traditional “women circles”, providing evidence-based information or ethnoscience [7]. Therefore, there is a need in a more detailed study on the quality of different models of antenatal education and their potential impact on birth satisfaction and subjective birth experience.

It is important to note that according to our data women who used some type of antenatal education faced obstetric violence more often. However, most probably that not is associated with a higher risk of obstetric violence for those who had some antenatal education, it might mean that these women are more able to recognize acts of obstetric violence. Unfortunately, even if women are informed about their rights, they are too vulnerable during childbirth to confront violent actions of medical staff [32]. There is a pressing need for raising awareness about ethical communication with patients and humanization of childbirth in Russia and around the world.

Approximately a quarter of the participants (27%) gave birth with individual labour support. This is first of all explained by the fact that we collected data during the COVID-19 pandemic when most maternity care hospitals and maternity units around the world imposed restrictions on continuous labour support in order to prevent the spread of the virus and protect pregnant women and newborns from a potential threat to their life and health [8]. Therefore, according to our data, actual support during labour was of even higher importance. Unlike antenatal education,

individual labour support was associated with all the variables we studied. Women who gave birth without labour support were less satisfied with their birth, experienced more obstetric violence, had more CBs, and felt worse in after childbirth. Thus, non-medical labour support is a safe way to reduce the rates of CBs and obstetric violence and to improve birth experiences and maternal quality of life in general. Based on our data, we can assume that presence of a close one or a helper during labour may be of great support for a woman because in a stressful situation she might find it hard to apply the skills and knowledge acquired at antenatal educational courses. Some studies report that women who give birth with labour support receive breastfeeding support more often, which is a great contribution to children’s health and development [26]. Our data emphasize that women need not only medical assistance, but also psychological comfort during labour and delivery.

It is interesting to note that in our study the highest scores on the birth satisfaction scale and physical wellbeing after childbirth were reported by women who gave birth with a doula/ private midwife. This corresponds with data of previous studies where support was most effective when provided by a woman who was neither part of the hospital staff nor the woman’s social network before pregnancy [24]. There are also studies that analyze the psychological component of labour support where women emphasize that continuous presence of a companion, non-judgmental emotional support, presence of someone to share their emotions with were especially valuable and helped reduce their anxiety [15; 25; 33]. Hence, it is important that perinatal specialists, maternity care hospitals, and society in general ensure continuous labour support both by a partner/child’s father and by any other companion of choice, including a private midwife or doula.

Conclusions

This is the first in Russia study exploring association between antenatal education and individual labour support and birth outcome and subjective birth experience. Our results showed no direct association between antenatal education and birth satisfaction and birth outcomes. However, we revealed an important trend: women that prepare to childbirth more often recognize unacceptable behavior of healthcare professionals, specifically, obstetric violence. This means that women are getting more and more involved in the process of their childbirth, are aware of their rights, and want respectful attitude from medical staff. Our results show that individual labour support is very important for significant improvement of childbirth experience and outcomes. Non-medical labour support can potentially reduce the rates of CBs and obstetric violence and improve maternal physical wellbeing and quality of life in general.

Thus, it is important that perinatal specialists, maternity care hospitals, and society in general ensure continuous individual labour support both by a partner and any other companion of choice, including a private midwife or doula.

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Limitations and Future Research Directions

The main limitation of our study is that the data were collected anonymously and online. The researchers and participants do not have any direct contacts, which may reduce the participants' trust to the researchers and as a result impact the reliability of their responses. Second, all the data are based on self-reports, with no medical records such as statements from medical charts. Finally, the third limitation is related to the characteristics of our cohort: the majority of the respondents are officially married, have higher education, and live in big Russian cities, which may limit the generalizability of our results to other social strata.

An important direction for future research would be a more detailed study of the content of antenatal education courses and self-education to explore significance of effects of their different components on birth satisfaction. Psychological components of labour support also need further in-depth research.

Access to childbirth medical records would have enabled more substantial conclusions based on our data.

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Получена 02.12.2022

Принята в печать 20.02.2023

Received 02.12.2022

Accepted 20.02.2023

Relationship Between Personality Traits and Emotion Regulation Among Adolescent Athletes

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Emotions are inevitable in our day-to-day life and play most important role in maintaining interpersonal relationship, communication, and overall quality of life. The ability to regulate emotion is also very important to deal effectively with everyday life stressors. Personality is an important aspect of human being and determines the unique adjustment of human being with his/her environment. Personality traits also influence the perception of an individual and thereby impact the way an individual regulates his/her emotions. Emotion regulation varies significantly across individuals so as the personality traits. The present study aims at determining the relationship between personality traits and emotion regulation among athletes and non-athletes. The present cross-sectional study was conducted on participants (N=180), consisting of athletes (N=80; Male=55 and Female=25) and non-athletes (N=100; Male=45 and Female=55). All participants were selected through convenient sampling method. Pearson's product moment correlation of coefficient reveals that for athletes openness to experience and extraversion are significantly and positively correlated to cognitive reappraisal and neuroticism is significantly and positively correlated to expressive suppression. This means that athletes high on openness to experience and extraversion tend to use cognitive appraisal as an emotion regulation strategy whereas athletes high on neuroticism tend to prefer suppression strategy. For non-athletes, openness to experience, conscientiousness are significantly and positively correlated to cognitive reappraisal and neuroticism is significantly and positively related to suppression. This suggests that individuals high on openness to experience and conscientiousness are also high on cognitive appraisal and those who are high on neuroticism are also high suppression. Multiple regression analyses suggest for athletes, openness to experience and neuroticism are the significant predictors of Cognitive reappraisal and neuroticism is the most significant predictor of expressive suppression. For non-athletes, conscientiousness and openness to experience are the significant predictors of Cognitive reappraisal. and neuroticism is the most significant predictor of expressive suppression. The study discusses the pertinent potential implications of results.

Keywords: athletes, big five factor, cognitive reappraisal, neuroticism, suppression.

Acknowledgements. The authors are grateful to all participants took part in this study and to Amity University Kolkata.

For citation: Karmakar R., Ghosh A. Relationship Between Personality Traits and Emotion Regulation Among Adolescent Athletes. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2023. Vol. 28, no. 2, pp. 83—94. DOI: <https://doi.org/10.17759/pse.2023280207>

Взаимосвязь между личностными чертами и регуляцией эмоций у спортсменов в подростковом возрасте

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Эмоции — неотъемлемая часть нашей повседневной жизни; они играют важнейшую роль в поддержании межличностных отношений, общения и качества жизни в целом. Умение регулировать эмоции также очень важно для эффективного преодоления ежедневно возникающих стрессовых ситуаций. Индивидуальность является значимым аспектом человеческого существа, определяющим уникальную адаптацию человека к окружающему миру. Черты личности также влияют на мировосприятие человека и, следовательно, на то, как он регулирует свои эмоции. В зависимости от личностных особенностей регуляция эмоций существенно различается. Цель настоящего исследования — определить взаимосвязь черт личности и регуляции эмоций у спортсменов и неспортсменов. В данном кросс-секционном исследовании приняли участие 180 человек — 80 спортсменов и 100 неспортсменов. Все участники были отобраны методом случайной выборки. Коэффициент продукционно-моментной корреляции Пирсона показывает, что у спортсменов открытость опыту и экстраверсия в значительной степени и положительно связаны с когнитивной переоценкой, а невротизм таким же образом связан с экспрессивным подавлением. Это означает, что спортсмены с высокими показателями открытости опыту и экстраверсии склонны использовать когнитивную переоценку в качестве стратегии регуляции эмоций, тогда как спортсмены с высокими показателями невротизма предпочитают стратегию вытеснения. У неспортсменов открытость опыту и добросовестность в значительной степени и положительно связаны с когнитивной переоценкой, а невротизм таким же образом связан с вытеснением. Это говорит о том, что люди с высокими показателями открытости опыту и добросовестности также имеют высокие показатели когнитивной переоценки, а те, кто продемонстрировал высокие показатели невротизма, имеют высокие показатели вытеснения. По результатам множественного регрессионного анализа выяснилось, что значимыми предикторами для стратегии когнитивной переоценки являются добросовестность и открытость опыту, а для стратегии вытеснения — невротизм. Исследование показывает, что у спортсменов открытость опыту и экстраверсия значимо и положительно коррелируют с когнитивной переоценкой, а невротизм — с экспрессивным подавлением. У неспортсменов открытость опыту и до-

бросовестность значимо и положительно связаны с когнитивной переоценкой, а невротизм — с вытеснением.

Ключевые слова: спортсмены, фактор «Большой пятерки», когнитивная переоценка, невротизм, вытеснение.

Благодарности. Авторы выражают благодарность всем участникам исследования, а также университету Амита, Калькутта.

Для цитаты: Кармакар Р., Гхош А. Взаимосвязь между личностными чертами и регуляцией эмоций у спортсменов в подростковом возрасте // Психологическая наука и образование. 2023. Том 28. № 2. С. 83—94. DOI: <https://doi.org/10.17759/pse.2023280207>

Introduction

A meaningful life consists of close interpersonal relationships, and understanding emotions is pivotal as they govern our actions, thoughts, and relationships. The word “emotion” originated in the *Rasa* theory of ancient Indian literature. *Rasa* means ‘juice’ or ‘flavour’, which refers to the different feelings aroused by the ancient Indian arts. Some Sanskrit texts such as *bhāva* (feeling) and in particular *rāga* (love, attraction), *dveṣa* (hatred, aversion), *harṣa* (joy), *bhaya* (fear) and *śoka* (sorrow) elucidated the term “emotion”. Cognition (*jñāna*) and emotions are interrelated, and their relationship affects an individual’s behavioral aspects. The interrelationship among Affect (emotion), Cognition and Behaviour may be represented by the well-known ABC model in psychology shown in Figure 1.

Emotion regulation is crucial to maintaining a healthy mental equilibrium, as inefficient regulation can be detrimental to our mental health. Emotion regulation as the ability to regulate one’s own emotions and to express emotional responses effectively. Successful emotion regulation plays a vital role in maintaining mental health [2], while ineffective emotion regulation

may lead to affective disorders [34], anxiety [26] and long-term substance use [12]. The current study focuses on two emotion regulation strategies, namely, cognitive reappraisal and suppression. Cognitive reappraisal, or adaptive emotion regulation, or antecedent focused strategy uses cognitive resources to modify the thought process and thereby change emotional impact. It helps to perceive emotion-provoking situations as more positive and non-threatening, which is beneficial to mental health and thereby promotes sustainability in the long term. On the other hand, suppression or maladaptive emotion regulation or a focus on reactivity (suppressing the behavioral expression of emotions) may hamper mental health and thus reduce the likelihood of resilience. Therefore, cognitive reappraisal can effectively regulate negative emotional reactions compared to suppression [5; 9].

Research evidence on Emotion Regulation

Behavioral studies [6; 10; 14; 15; 17; 19] have found that reappraisal is more effective than suppression. This provides indirect evidence that antecedent-oriented strategies are generally more effective in regulating emotions

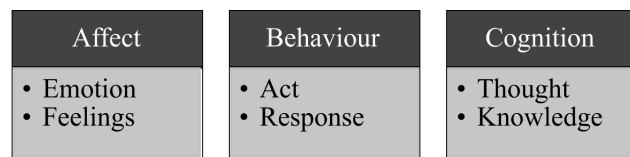


Figure 1. ABC model (Triad) in psychology, Ostrom [32]

than response-focused strategies [37; 38]. Re-appraisal decreases the emotional experience and reduces negative expressive behaviour [33]. Emotion regulation is a skill that shifts over time and these changes are more visible in adulthood because adulthood is a life stage full of challenges and hardships. Emotion regulation goals are closely related to situational factors and vary across different events within the same individual. For achieving pre-hedonic goals, emotion regulation strategies that are effective in altering emotional experience are crucial. However, expressive suppression can be useful for attaining social goals [43]. Emotion regulation also varies with respect to the nature of the situation. During competition, athletes experience high level of positive and negative emotions that are generated by spectators and situational demands, so emotional regulation has become crucial in the field of sport [18; 21]. Furthermore, it has been observed that athletes perceive cognitive reappraisal as an adaptive strategy in terms of well-being and efficacy in regulating stressful situations during competition, as this strategy helps them better adapt to the situation by enhancing positive emotions [29; 40], while the opposite effect is observed in case of emotional suppression [30; 40]. Martinet et al. [24] suggested that high perceived efficacy leads to automaticity in emotion regulation. Automatic strategies corresponded to several specific emotions, such as anger, joy and relief. They stated that positive emotions are well controlled in most circumstances, compared to negative emotions such as anxiety, discouragement and disgust, as there is greater variability in the effectiveness of these emotions.

Personality is another important factor in explaining human behaviour. In ancient Indian literature personality (*prakriti*) is considered from two different perspectives — biological and psychological. The biological perspective is viewed in Ayurveda, an ancient medical scripture, and psychological perspective is considered in Tri-gunas such as Sattva, Rajas and Tamas. The meaning of being sattvic is associated with strength of character, firmness, courage and generosity. Sattva is characterized by

idealism, analyticism, intelligence, prudence, lack of selfishness, self-control, extrovertedness, malleability and conscientiousness. Rajasic guna seems to be related to emotion-driven, self-oriented traits such as openness to experience and emotional stability. The meaning of tamasic is exhaustion, depression, rigidity, mental imbalance and neuroticism. Although the origin of Triguna can be found in Bhagavad Gita, it still explains the understanding of individuals' psyche. Moreover, Personality plays an important role in goal setting and an athlete needs to set goal/s before performance and then work out a certain strategy to reach the goal/s. Hence the study of personality is also important in sports research.

Research evidence on Personality

Research indicate that athletes do not differ from non-athletes with regard to the extraversion personality trait [4]. Butt [8], Cox [11], Saint-Phard [35] reported that the competitive athletes present some psychological characteristics that distinguish them from other populations. Among these differences, the authors consider that athletes have higher emotional stability, extroversion, self-confidence and higher mental stability compared to non-athletes. Maresh et al. [23] compared a group of runners with a group of non-athletes and noted that these athletes were more withdrawn, thoughtful and presented lower anger levels than non-athletes. Weinberg and Gould [42] and Hernández Ardieta et al. [16] demonstrated that athletes are more aggressive, independent, emotionally more stable and more work-focused than non-athletes. Weinberg and Gould [42] reported that team athletes are more extroverted. Piepiora [32] reported that team sport champions are characterized by a lower level of neuroticism, a higher level of extraversion and openness to experience than other sportsmen. Morgan and Costill [27] reported that players who succeed in team sports tend to show a higher level of extraversion, openness to experiences and a lower level of neuroticism compared to other sportsmen. Nia and Besharat [28] suggested that athletes who played individual sports have higher scores on conscientiousness and autonomy compared to those

who played team sports. However, athletes who played team sports scored significantly higher on sociotropy and agreeableness. They reported no significant differences between two groups on domains such as neuroticism, extraversion and openness. Wang, Shi and Li [41] found that there is a relationship between extraversion, neuroticism and positive and negative emotions, mediated by the contribution of reappraisal and suppression. Extraversion indicators such as warm-heartedness, assertiveness, vigor, positive emotions have relationship with emotion regulation [22]. Lane et al. [20] suggested that players often use strategies to reinforce unpleasant emotions, yet an increased state of anger frequently improves performance, while an elevated state of anxiety interferes.

Research evidence on Personality and Emotional Regulation

Tao et al. [39] conducted a study on male professional firefighters in China and revealed that conscientiousness through cognitive reappraisal can reduce anxiety and depression symptoms among Chinese firefighters. Alcaraz-Ibáñez et al. [1] conducted a study examining Big Five personality traits and body-related self-conscious emotions among Spanish undergraduate students, and the results showed that neuroticism, extraversion, conscientiousness and openness to experience were significant predictors of body-related self-conscious emotions. Hamzah et al. [36] conducted a study on Malaysian elite and non-elite tennis players, and the findings demonstrated that elite and non-elite tennis players scored the highest on the Agreeableness indicator. Moreover, the study showed that female tennis players had higher scores on Neuroticism than their male counterparts. The study also revealed that the Big Five personality traits can have a great influence on tennis sport. Brito et al. [7] carried out a study on boxing athletes' mental toughness and physical fitness performance using Big Five Factors. The results showed that Neuroticism was related to mental toughness, and agreeableness was related to muscular endurance capability. The study concluded that mental toughness and endurance were correlated with boxing athletes'.

Based on the studies presented above, it may be observed that there are several differences between athletes and non-athletes with respect to personality traits. However, there is a lack of researches stating the relationship between emotional regulation and personality traits among athletes and non-athletes. Studying emotion regulation is very important for athletes before and during competitions.

Another uniqueness of the present study is that it was conducted during the COVID-19 outbreak, when people experience uncertainty in their daily lives and a radical shift from normal to abnormal situation. This radical shift from a routine schedule to a completely new schedule has created many problems in their daily lives, as the uncertainty factor prevailed in this time frame. While dealing with these problems, people are confronting new emotional perspectives, and sometimes it becomes very difficult for them to control and regulate their emotions in a desired and socially acceptable way.

The **objectives** of the present study are to determine:

1. The relationship between Personality traits (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) and emotion regulation (Cognitive reappraisal and suppression).
2. Significant differences between athletes and non-athletes with respect to personality traits (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) and emotion regulation (Cognitive reappraisal and suppression).
3. Significant predictor/s (if any) of emotion regulation among athletes and non-athletes.

Method

A. Participants

The convenience sampling method was used to collect data from a sample of 180 individuals, among whom 80 were athletes (Male=55 and Female=25) and 100 were non-athletes (Male= 45 and Female= 55). The athletes were aged 13—18 years (M=15.75 years; SD=3.45) and the non-athletes were aged 13—19 years (16.94 years, SD=2.82). The present study included professional athletes who

participated in various inter-district and inter-state sports competitions. Non-athletes were the participants not professionally engaged in sports. The sample comprised of individuals residing in West Bengal, India and belonging to the middle socio-economic status. The athlete group played collective sports such as cricket, soccer and volleyball.

B. Tools Used

a) NEO-FFI-3 form S [25]: NEO-FFI-3 form S was administered for measuring the five main personality dimensions of the Big Five factor model (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness). It is suitable for respondents aged 12 and over. Higher scores on each dimension indicate high scores on the respective personality dimensions. The participants were asked to answer 60 items using a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). The internal consistency coefficients of the different NEO-FFI-3 dimensions ranged from 0,75 to 0,83 for the five scales. Neuroticism (N) is an indicator for the degree of emotional instability, lack of impulse control and anxiety. People with high N score are considered to have a higher incidence of distress, low adaptivity, irrational ideas, negative feelings and low self-esteem. Extraversion (E) is an expression of sociability and assertiveness. Extraverts tend to enjoy gathering and working in groups, have a cheerful disposition and are optimistic. Openness to experience (O) reflects a propensity for intellectual curiosity, innovation and open-mindedness. Individuals with high scores for this domain are regarded as having less conventional behavior. Agreeableness (A) is characterized by altruism, helpfulness, sympathy for others, trust in others' intentions and respect for others' beliefs, and high scores on this domain indicate cooperativeness. People with a high Conscientiousness (C) score are generally purposeful, organized, punctual, determined, trustworthy, and achievement-oriented.

b) Emotion Regulation Questionnaire (ERQ): Developed by Gross & John [15], this 10-item self-report questionnaire is based on Gross's

[13] model of the emotion regulation process. The ERQ is designed to measure people's usage of two regulation strategies: an antecedent-oriented strategy called cognitive reappraisal and a response-focused strategy called suppression. Cognitive reappraisal consists of 6 items, where a person attempts to modify the way he or she thinks about a situation in order to change its emotional impact (e.g., "When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm"). Suppression includes 4 items, where a person tries to inhibit the behavioral expression of his or her emotions (e.g., "I keep my emotions to myself"). Separate scale scores are derived for these two regulation strategies. All items are answered on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating greater usage of that strategy. The Cronbach's alphas for cognitive reappraisal and suppression are 0.78 and 0.71, respectively.

C. Procedure

The convenience sampling method was used to collect data from a sample of 180 individuals via Google form. Consent was obtained by explaining the purpose of the study to participants and assuring that they had the right to withdraw from the study anytime during the entire process. The participants were guaranteed confidentiality and were therefore requested to answer as objectively as possible. The participants were informed that there was no time limit, but it would be preferable if they answered the statements quickly and did not ponder upon each statement for a long time. Finally, each participant was thanked for his/her cooperation.

Results and Discussion

The raw data collected via Google Form (online) were validated and analyzed using SPSS 21. The means, standard deviations (SD) and Pearson's product-moment correlation of coefficients were calculated between personality traits and emotion regulation among athletes and non-athletes and are presented in Tables 1 and 2.

Table 1

Descriptive statistics and correlations between measures of Big Five Factor Traits and Emotional Regulation of Athletes (N=80)

	Mean (SD)	1	2	3	4	5	6	7
1. Extraversion	25.09 (2.09)	1						
2. Agreeableness	29.52 (6.10)	.09	1					
3. Openness to experience	30.18 (3.04)	.11	.10	1				
4. Conscientiousness	33.76 (4.09)	-.27*	.30**	.10	1			
5. Neuroticism	25.93 (3.04)	-.10	-.22*	-.25*	-.39**	1		
6. Cognitive reappraisal	32.54 (3.91)	.32**	.10	.41**	.09	-.35**	1	
7. Suppression	16.58 (9.31)	-.26*	.09	-.31**	.10	.32**	-.39**	1

Note: **p<0.01 level of significance, *p<0.05 level of significance.

Table 2

Descriptive statistics and correlations between measures of Big Five Factor Traits and Emotional Regulation of Non-Athletes (N=100)

	Mean (SD)	1	2	3	4	5	6	7
1. Extraversion	25.80 (3.17)	1						
2. Agreeableness	28.27 (2.99)	.04	1					
3. Openness to experience	27.17 (4.41)	-.15	.13	1				
4. Conscientiousness	28.26 (2.26)	.10	.38**	.11	1			
5. Neuroticism	27.62 (3.45)	.08	-.19	-.24*	-.36**	1		
6. Cognitive reappraisal	28.90 (4.03)	.08	.10	.33**	.39**	-.10	1	
7. Suppression	18.29 (2.91)	.10	.07	-.11	.08	.29**	-.27**	1

Note: **p<0.01 level of significance, *p<0.05 level of significance.

Tables 1 and 2 represent that athletes' openness to experience and extraversion are significantly and positively correlated to cognitive reappraisal, while neuroticism is significantly and negatively related to cognitive reappraisal. Openness to experience and extraversion are significantly and negatively related to suppression, while neuroticism is significantly and positively related to suppression. For athletes, extraversion is negatively related to conscientiousness, whereas a significant positive relationship is evident between agreeableness and conscientiousness. Neuroticism is found to be significantly and negatively related to agreeableness, openness to experience and conscientiousness.

For non-athletes, openness to experience and conscientiousness are significantly and positively correlated to cognitive reappraisal, while neuroticism is significantly and positively related to suppression. Agreeableness is significantly

and positively correlated to conscientiousness. Openness to experience and conscientiousness are significantly and negatively correlated to neuroticism. It may be due to the fact that individuals with high conscientiousness, openness to experience and extraversion often modify situations positively, accept others' opinions, are energetic and enthusiastic, and hence are better able to manage emotions effectively and maintain good mental health. On the other hand, Neurotic individuals are emotionally less stable, find it difficult to restructure their emotions and, as a result, are unable to regulate their emotions. An inability to regulate emotions effectively may lead to emotional suppression and worsening mental health.

Independent t-tests were calculated to determine significant differences between athletes and non-athletes with regard to personality traits and emotional regulation and are presented in Table 3.

Table 3

Mean, Standard Deviation (SD) and t-value of Big Five Factor traits and emotional regulation among athletes and non-athletes

Variables	Athletes	Non-athletes	t values
	Mean (SD)	Mean (SD)	
Extraversion	25.09 (2.09)	25.80 (3.17)	1.73
Agreeableness	29.52 (6.10)	28.27 (2.99)	1.79
Openness to experience	30.18 (3.04)	27.17 (4.41)	5.20**
Conscientiousness	33.76 (4.09)	28.26 (2.26)	11.44**
Neuroticism	25.93 (3.04)	27.62 (3.45)	3.44**
Cognitive reappraisal	32.54 (3.91)	28.90 (4.03)	6.10**
Suppression	16.58 (9.31)	18.29 (2.91)	1.74

Note: **p<0.01 level of significance.

Table 3 represents that athletes are significantly higher on Openness to experience and Conscientiousness compared to non-athletes, whereas the opposite is true for Neuroticism. In case of emotional regulation, athletes are significantly higher on Cognitive reappraisal compared to their non-athlete counterparts. It may be due to the fact that conscientiousness, such as perseverance and diligence, as well as the ability to manage stress and emotions (emotional stability) are crucial to an athlete’s performance. In addition to conscientiousness, Openness to experience, characterized by flexibility, creativity, acceptance of other people’s ideas, is also very important, especially for team sports. This finding is favored by researchers [3; 44] who suggest that a higher level of openness may play a greater role in predicting participation in non-traditional sports due to the level of receptivity to ideas and opportunities for new experiences. Regarding emotion regulation, athletes are

significantly higher on Cognitive reappraisal compared to their non-athlete counterparts. The likely reason for this is that athletes need to effectively manage their emotions in order to concentrate on performance, as suppressing emotion can interfere with concentration and thereby have a detrimental effect on their performance. Athletes need to have emotional balance, effective team communication and tactical thinking skills that affect their readiness to compete [16].

In order to determine the significant predictor/s of emotion regulation, multiple regression analyses (separately for athletes and non-athletes) were carried out and presented in the following tables:

Table 4a shows that for athletes, openness to experience and neuroticism are the significant predictors of Cognitive reappraisal. Adjusted R^2 is found to be 0,38, indicating that openness to experience and neuroticism explain 38% of the variance in cognitive reappraisal. The second

Table 4a

Regression analysis of dimensions of the Big Five personality traits on the athletes’ emotion regulation

Criterion	Predictors	B (Unstandardized coefficients)	β Standardized coefficients	t value
Model 1: Cognitive reappraisal	Openness to experience	1.58	0.30	6.15**
	Neuroticism	-1.57	-0.26	5.61**
Model 2: Suppression	Neuroticism	-1.45	-0.25	4.94**

Note: Model 1. $R^2=0.39$, Adjusted $R^2=0.38$, ** p<0.01 level, Model 2. $R^2=0.18$, Adjusted $R^2=0.17$.

Table 4b

**Regression analysis of dimensions of the Big Five personality traits
 on the non-athletes' emotion regulation**

Criterion	Predictors	B (Unstandardized coefficients)	β Standardized coefficients	t value
Model 1: Cognitive reappraisal	Conscientiousness	0.62	0.12	2.55**
	Openness to experience	2.16	0.59	4.55**
Model 2: Suppression	Neuroticism	-0.54	-0.10	2.10*

Note: Model 1. $R^2=0.43$, Adjusted $R^2=0.42$, ** $p<0.01$ level, Model 2. $R^2=0.19$, Adjusted $R^2=0.18$, * $p<0.05$ level.

model represents that neuroticism is the most significant predictor of expressive suppression. Adjusted R^2 is found to be 0.17, suggesting that neuroticism explains 17% of the variance in expressive suppression. Table 4b reveals that for non-athletes, conscientiousness and openness to experience are the significant predictors of Cognitive reappraisal. Adjusted R^2 is found to be 0.42, indicating that conscientiousness and openness to experience explain 42% of the variance in cognitive reappraisal. The second model represents that neuroticism is the most significant predictor of expressive suppression. Adjusted R^2 is found to be 0.18, suggesting that neuroticism explains 18% of the variance in expressive suppression.

The intriguing finding of regression analysis is that people who are ready to accept new ideas, concepts and actions tend to reappraise an emotional situation by altering its meaning and emotional impact, whereas people experiencing frequent negative emotional states tend to suppress emotions and thereby are more likely to experience low self-esteem, anxiety and reduced well-being in the long run.

Conclusion

Concentration is a desideratum for athletes to perform effectively in sport. To maintain good mental health, athletes tend to use cognitive resources to modify the thought process. This study concludes that athletes are significantly higher on the Openness to experience and Conscientiousness dimension of personality compared to non-athletes, while neuroticism tends to be inverted. Interestingly, the study shows that open-minded people are flexible by nature,

tend to experience new things and relationships in life, and prefer to reinterpret an emotionally arousing situation in a way that changes the emotional impact and alters its meaning. On the other hand, emotionally unstable people are not capable of cognitive re-interpretation and tend to hide, inhibit or reduce ongoing emotional expression. For non-athletes, conscientiousness is significantly and positively correlated to cognitive reappraisal and neuroticism is significantly and positively related to expressive suppression. It can therefore be concluded that people who control their impulses tend to be goal-directed and, consequently, reframe the meaning of emotion-laden situations in an effective way. Openness to experience and conscientiousness are the significant predictors of Cognitive reappraisal. The most significant predictor of expressive suppression is neuroticism.

Limitations and Implications

The present study has limitations. First, we cannot draw causal inferences from the results because of the cross-sectional design. Longitudinal and sequential research design would be helpful. The second limitation is that responses are self-reported and collected online. Future research should replicate these findings using other offline methods (e.g., observations and face-to-face interviews, etc.). The third limitation of this study is the relatively small sample size which is also location specific (West Bengal district only). Further study based on samples selected from wider regional/cultural backgrounds may also be useful. The fourth limitation could be the lack of knowledge about the extent to which the specificity of sports disciplines and training influences

an athlete's personality development. Last but not least, due to time and situational constraints, the study has not included other variables that directly influence emotion regulation, such as psychological and social capital, etc.

Despite these limitations, the present study has implications for our daily lives. Emotion regulation has proved to be a crucial strategy for maintaining a positive climate in our daily lives, especially in the current situation. The study highlights the need to introduce counselling in academic institutions to make students aware of the pros and cons of different emotion regulation strategies in real life situations. Critical evaluation of such strategies would ameliorate students' decision to utilize them to deal with stressful situations in future, thereby promoting well-being, social connectedness, academic performance and sustainability in the long run. Educational institutions must include emotion regulation interventions (such as psychoeduca-

tion, emotional awareness and the introduction of behavioural science) as a part of the curriculum. The study is relevant in the field of team sports, as emotion regulation is generated by both players and other teammates. Sports psychologists and counsellors need to be appointed in teaching the ability to cognitively reinterpret a situation so that athletes learn strategies to reduce additional anxiety and stress during performance and refocus on the competition. Effective emotion regulation also increases athletes' acceptance of any situation, which in turn proliferates their adaptability in life. Understanding one's own personality traits gives insight to the individuals and also helps them comprehend others better, leading to stronger intra- and interpersonal relationships. This understanding helps an individual to evolve and shape him/herself into a better person and adopt an appropriate emotion regulation strategy to deal effectively with the hardships of life.

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Получена 23.04.2022

Принята в печать 20.02.2023

Received 23.04.2022

Accepted 20.02.2023