Психологическая наука и образование
2024. Т. 29. № 4. С. 104—125
DOI: https://doi.org/10.17759/pse.2024290409
ISSN: 1814-2052
ISSN: 2311-7273 (online)

Psychological Science and Education
2024. Vol. 29, no. 4, pp. 104—125
DOI: https://doi.org/10.17759/pse.2024290409
ISSN: 1814-2052
ISSN: 2311-7273 (online)

The Connection Between Basic Personal Values and Psychological Adaptation to Global Digital Risks

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The study is relevant to understanding the predictors of successful adaptation to the risks of digitalization of society. The goal is to study the connection between personal values and the characteristics of digital adaptation. The objectives included identifying groups differing in psychological adaptation to digitalization; analyzing differences in basic and social beliefs and value orientations among these groups; and conducting a comparative study of age-related characteristics of psychological adaptation to digitalization in youth and middle adulthood. The research methods included the following: the “Psychological Adaptation to the Risks of Digitalization” questionnaire (E.P. Belinskaya, O.A. Karabanova, O.A. Tikhomandritskaya, etc.); “Faith in a Competitive World” and “Faith in a Dangerous World” (DW-S) by J. Jakkita (adapted by O.A. Gulevich and others); the “Belief in a Just World” technique, adapted by S.K. Nartova-Bochaver and others; “Scale of Basic Personal Beliefs”, adapted by M.A. Padun, A.V. Kotelnikova; “Portrait Questionnaire of Values” by S. Schwartz; a new questionnaire of tolerance to uncertainty (T.V. Kornilova et al.). The sample consisted of 408 respondents aged 18 to 55 years, of whom 49,7% were men and 50,3% were women. Three groups were identified based on their adaptation to digital risks: “adapted,” “anxious-maladapted,” and “non-adapted”. Significant differences were found in basic and social beliefs among respondents of these groups. The hypothesis that basic values are connected to successful adaptation was confirmed. Age-related features of adaptation to digitalization have been identified. The heterogeneity of adaptation to digitalization according to various criteria has been revealed. The hypothesis about the connection between values of self-overcoming and change with adaptation success was confirmed. The connection of adaptation success with the developmental tasks of youth and middle maturity and activities relevant to them was revealed.

Keywords: psychological adaptation; values; risks of digitalization; basic beliefs; age-related characteristics of adaptation.

Funding. The reported study was funded by Russian Science Foundation (RSF), project number 22-18-00230 “Predictors of psychological adaptation of the individual in the situation of global risks of the digital world: intergenerational and gender analysis”.

For citation: Karabanova O.A., Tikhomandritskaya O.A., Molchanov S.V. The Connection Between Basic Personal Values and Psychological Adaptation to Global Digital Risks. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2024. Vol. 29, no. 4, pp. 104—125. DOI: https://doi.org/10.17759/pse.2024290409 (In Russ.).

Связь базовых ценностей личности с характером психологической адаптации к глобальным цифровым рискам

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Представлены материалы исследования предикторов успешности адаптации к рискам цифровизации общества. В работе изучались связи ценностей личности с особенностями цифровой адаптации. В числе основных задач авторы определили выделение групп, различающихся по уровню психологической адаптации к цифровизации; выявление различий в базисных убеждениях и социальных верованиях, ценностных ориентациях у лиц с различным уровнем психологической адаптации к цифровизации; сравнительное изучение возрастных особенностей психологической адаптации личности к цифровизации в молодости и средней зрелости. В исследовании был использован следующий инструментарий: опросник «Психологическая адаптация к рискам цифровизации» (Е.П. Белинская, О.А. Карабанова, О.А. Тихомандрицкая и др.); «Вера в конкурентный мир» и «Вера в опасный мир» (DW-S) Дж. Джаккита (в адаптации О.А. Гулевич и др.); методика «Вера в справедливый мир», адаптированная С.К. Нартовой-Бочавер и др.; Шкала базисных убеждений личности в адаптации М.А. Падуна, А.В. Котельниковой; Портретный опросник ценностей Ш. Шварца; новый опросник толерантности к неопределенности (Т.В. Корнилова и др.). Выборку составили 408 респондентов в возрасте от 18 до 55 лет, из них 49,7% мужчин и 50,3% женщин. Были выделены три группы, различающиеся по характеру адаптации к цифровым рискам — «адаптированные», «тревожно-неадаптированные» и «неадап-

тированные». Обнаружены значимые различия в базисных убеждениях и социальных верованиях у респондентов этих групп. Подтверждена гипотеза о связи базовых ценностей с успешностью адаптации. Выявлены возрастные особенности адаптации к цифровизации. Выявлена гетерогенность адаптации к цифровизации по различным критериям. Подтверждена гипотеза о связи ценностей самопреодоления и изменений с успешностью адаптации. Выявлена связь успешности адаптации с задачами развития молодости и средней зрелости и релевантными им видами деятельности.

Ключевые слова: психологическая адаптация; ценности; риски цифровизации; базисные убеждения; возрастные особенности адаптации.

Финансирование. Исследование выполнено при финансовой поддержке Российского научного фонда (РНФ) в рамках научного проекта № 22-18-00230 «Предикторы психологической адаптации личности в ситуации глобальных рисков цифрового мира: межпоколенный и гендерный анализ».

Для цитаты: *Карабанова О.А., Тихомандрицкая О.А., Молчанов С.В.* Связь базовых ценностей личности с характером психологической адаптации к глобальным цифровым рискам // Психологическая наука и образование. 2024. Том 29. № 4. С. 104—125. DOI: https://doi.org/10.17759/pse.2024290409

Introduction

The relevance of studying the factors and conditions of human psychological adaptation to global digital risks generated by the modern transitive information society is beyond doubt. According to the socio-cognitive concept of digital socialization, the transformation of a person into a technologically completed "extended" personality, equipped with new cultural and technological tools (gadgets) and having mastered the symbolic reality of the Internet, reflects the process of human adaptation to the opportunities and risks of a dynamic socio-technological convergent environment as an innovative ecosystem [4]. Digital hyperconnectivity as a characteristic of a changing personality permeates the entire system of social interactions [21]. We can talk about global digital risks for an adequate life of a modern person: issues of difficulties in online communication in interpersonal and professional aspects, security of personal data and a high risk of encountering fraud, searching for adequate information, issues of the effectiveness of online learning. Personal adaptive potential is a complex multi-level system characterized by a set of individual psychological features that determine the effectiveness of psychological adaptation and determine the direction, content, and intensity of the adaptive response of the individual. At the personal level, the adaptive potential includes a motivational component that determines goal setting and the choice of means to achieve the goal in accordance with the accepted system of values, and communicative component [3]. Achieving a high level of digital competence, which is an indicator of successful psychological adaptation of an individual to the digitalization of society, is based on

the motivational potential of the individual, the content and dynamics of which, in turn, are determined by the system of basic human values and social support for the individual's desire to satisfy the need for competence and autonomy, moderated by the value of self-development and self-improvement [28].

Currently, the relationship between digital competence and personal characteristics with the success of adaptation in adolescence in the context of the problem of digital socialization has become the subject of a comprehensive study in a number of works [13; 15]. It is shown that the growth of digital competence in adolescents and their parents is reflected in increased responsibility of behavior in the online environment [14]. Theoretically and on the basis of empirical research, the position is substantiated that the leading factor determining the psychological well-being of an individual in situations of hard and soft transitivity in online and offline communication is the style of information identity as an essential characteristic of the individual [10].

A relationship was found between the level of dispositional optimism as a significant personality characteristic and the effectiveness of psychological adaptation to the digitalization of professional activity [7]. At the same time, an ambiguity was found in the relationship between psychological well-being and job satisfaction with such indicators of psychological adaptation to digital transformation as the level of organizational stress and employee engagement [1]. It has been proven that digital anxiety as an indicator of unsatisfactory adaptation to the digitalization of society is negatively associated with resilience and dispositional optimism [2]. In a study of ideas about real and virtual spaces as a component of the current picture of the world in a digital society, adolescents and their parents established a connection between ideas and value orientations, and for parents — ideas about the real and virtual world, and for adolescents such a connection was recorded only for ideas about the real world [16].

Values as fundamental motivators of personality directly or indirectly determine the vector and target orientation of human behavior and relationships, their prosocial nature at any age [22; 25]. The connection between basic human values and decision-making style was established in the study of problem solving by adolescents [24]. Variables mediating the influence of values on behavior are context, situational pressure, restrictions, cognitive support, specific individual and ethnocultural factors [26]. A meta-analysis of 797 studies confirmed the theoretical hypothesis that situational restrictions, such as perceived social pressure and possible difficulties, weaken the connection between value attitudes and behavior [30]. However, in order for values to become real motives and give meaning to human activity, regulate the behavior corresponding to them, it is necessary that values be cognitively processed and acquire significance in the value structure of the individual's consciousness [29]. In a study of the relationship between the activity of using information and communication technologies and basic values in accordance

with the circular model of S. Schwartz, a relationship was found between nine out of ten basic values among Russian youth and the older generation, with the exception of "stimulation", with inclusion in ICT, regardless of age. The absence of a connection between the activity of using the Internet and the values of the Self-overcoming block and a positive connection with the values of the Openness to Change and Self-affirmation blocks were revealed [17]. At present, with the recognition of the leading role of values as an expression of culture and the understanding of ICT as new socio-cultural means that determine human psychological abilities, the connection between values with the characteristics of human psychological adaptation to digital risks has not been sufficiently studied, which determined the purpose of this study. The theoretical and methodological basis of our study was formed by the theory of values by S. Schwartz, who defines values as "transitional goals that differ in importance and are guiding principles in the life of a person as a social subject", indicating seven characteristics of values distinguished directly or indirectly in most psychological models of values [19; 27]. These characteristics include beliefs about the importance of desired goals, their connection with emotions, the goal and motivating function, which can be realized both at the level of consciousness and the unconscious; the cost effect arising from a compromise between the corresponding values, the function of the standard as a standard for evaluating actions, people and events; hierarchical ordering by significance. The improved theory of basic human values identifies 19 motivationally different values in a circular continuum, which can be reduced to four values of the highest order and 10 basic values determining the focus of values (social or personal) and the strategy of life (development and growth or anxiety and self-defense) [19].

As proven by a meta-analysis of studies of more than 7,300 respondents, the identification of 19 values can increase the predictive and explanatory power of value patterns of behavior, including adaptive ones [23]. The circle reflects three critical characteristics of the relationships between values: a) neighboring values in the circle are motivationally compatible and can be realized in the same action (e.g., hedonism and stimulation); b) values located on opposite sides of the circle are motivationally opposite and usually cannot be realized in the same action (e.g., stimulation or security); c) motivational compatibility of values decreases with increasing distance between them along the circle. Relationships between values can be described in different sets of two dimensions (coordinate systems). The most common sets of core dimensions, also called core principles, that organize the value circle include the following: openness to change versus conservation values, self-improvement versus self-enhancement values, personal focus versus social focus values, and growth versus self-protection values [27]. Since a number of studies have confirmed the invariance of the circular model of Schwartz's hierarchical value system as the basis for the goal-oriented nature of human behavior, we hypothesized that there is a relationship between an indi-

vidual's orientation toward specific basic values and higher-order values and the success of psychological adaptation to the digitalization of society.

Hypothesis: there are differences in value orientations and basic beliefs in individuals with different levels of psychological adaptation to digitalization. Orientation toward the values of openness to change and self-overcoming is more significant for well-adjusted individuals.

respondents adapted to digital risks, compared to those who experience adaptation difficulties.

Objectives: 1) identification of groups differing in the level of general psychological adaptation to digitalization and adaptation in the professional, educational and family spheres; 2) identification of differences in basic beliefs and social beliefs reflecting the image of the world in individuals with different levels of psychological adaptation to digitalization; 3) identification of differences in value orientations in individuals with different levels of psychological adaptation to digitalization (testing the hypothesis); 4) comparative study of age-related features of psychological adaptation of an individual to digitalization in various social spheres in youth and middle adulthood.

Characteristics of the sample and the tools used

The study sample consisted of 408 respondents aged 18 to 55 years, 49.7% were men and 50.3% were women. The youth age group included 160 people aged 18 to 26 years, the middle maturity age group included 248 people aged 45 to 55 years. The identification of youth and middle maturity groups was proposed in the periodization of B. Newman and P. Newman, based on the model of E. Erikson, where the identification of different periods of maturity is associated with solving human development problems.

To achieve this goal, the following methods were used in our study.

The questionnaire Psychological adaptation to digitalization risks (E.P. Belinskaya, O.A. Karabanova, O.A. Tikhomandritskaya et al.) is aimed at studying the general parameters of digital adaptation (behavioral adaptation as the ability to ensure one's own safety in the digital world and as information search literacy); communicative adaptation as everyday involvement in virtual communication and the adequacy of mutual understanding in it; normative adaptation as the absence of a tendency to deception, fraud in virtual communication; digital anxiety as a person's experience of losing his or her subjectivity and the inability to influence anything), indicators of general adaptation in the professional, educational and family spheres and special indicators of readiness for online learning, adaptation to communication in online learning, anxiety regarding online learning and a positive attitude towards digitalization. The methodology was proposed in the authors' previous works [2; 7]. The questionnaire includes 97 statements and 12 scales on a 5-point R. Likert scale.

The Belief in a Competitive World (DW-S) technique by J. Jakkit (adapted by O.A. Gulevich, O.A. Anikeenok, I.K. Bezmenova) is aimed at studying the perception of the world as a competitive world. The technique contains 12 statements

that are assessed on a 5-point R. Likert scale and provide a general integrative indicator of belief in a competitive world [5].

The Belief in a Dangerous World (DW-S) technique by J. Jakkit (adapted by O.A. Gulevich, O.A. Anikeenok, I.K. Bezmenova) is aimed at studying a person's general attitude to the world in which he lives, from the point of view of its danger. The technique contains 12 statements that are assessed on a 5-point R. Likert scale and provide a general integrative indicator of belief in a dangerous world [5].

The Belief in a Just World method, adapted by a group of authors (S.K. Nartova-Bochaver, M.B. Podlipnyak, A.Yu. Khokhlova), is aimed at studying belief in a just world. The method contains 13 statements that are assessed on a 6-point R. Likert scale and provide a general integrative indicator of belief in a just world [11].

The scale of basic beliefs of the individual (Yanoff-Bulman), adapted by M.A. Padun, A.V. Kotelnikova [12]. The method includes 5 basic beliefs, the core of the subjective world of a person: the "benevolence of the surrounding world", "justice of the surrounding world", "positivity of the self-image", "belief in luck" and "confidence in control over life". The method contains 37 statements that are assessed on a 6-point R. Likert scale.

The Portrait Questionnaire of Values by Sh. Schwartz (PVQ-Revised) is a modified form of the study of value orientations, adapted by a group of authors (Sh. Schwartz, T.P. Butenko, D.S. Sedova, A.S. Lipatova). It is aimed at studying various values, describes the entire continuum of basic values (independence of thoughts and actions, stimulation, hedonism, achievements, power over resources and power as dominance, reputation, personal and public safety, traditions, conformism to rules and interpersonal, modesty, benevolence as care and a sense of duty, universalism as care for nature, for others and tolerance) and higher-order values (changes, preservation, self-overcoming and self-affirmation). The questionnaire consists of 57 statements [19].

The new uncertainty tolerance questionnaire (Kornilova, Chumakov) is aimed at identifying the personality characteristic of uncertainty tolerance based on A. Fernham's scheme. The questionnaire consists of 33 statements [9].

Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS), adapted from the works of R.S. Shilko et al. The scale-questionnaire consists of 14 statements that must be answered on a 5-point Likert scale [20].

Statistical processing of the obtained results was carried out using SPSS version 21 and Jamovi programs.

Results

Before analyzing the results, we present the data on descriptive statistics for all the methods we used in the study. The results obtained are presented in the Appendix. Using the K-means method based on the scales of psychological adaptation to digitalization, clustering of the sample was carried out, identifying three clusters and determining significant differences between the clusters using one-way ANOVA and the Tukey test (Tables 1 and 2).

Three groups of approximately equal size were identified, differing in the nature

Table 1

Distribution of respondents into groups differing in the nature of psychological adaptation to digitalization (N=408)

Scales of psychological adaptation to digitalization	Cluster 1 Anxious-maladapted N=142		Cluster 1 Adapted N=131		Cluster 3 Maladapted N=135		Differences		Effect strength
	M	SD	M	SD	M	SD	F	p	η2
Ensuring security in the digital environment	3,47	0,60	3,57	0,57	2,98	0,53	41,99	<0,01	0,17
Information retrieval literacy	3,09	0,42	3,58	0,46	3,05	0,39	60,37	<0,01	0,23
Communicative adaptation	3,33	0,53	3,25	0,53	2,94	0,45	22,08	<0,01	0,11
Normative adaptation (lack of tendency to deception and fraud)	3,11	0,83	4,11	0.52	3,31	0,63	80,82	<0,01	0,28
Digital anxiety	3,70	0,50	2,93	0,69	2,90	0,57	84,04	<0,01	0,29
Adaptation to digitalization in the family sphere	2,84	0,70	3,93	0,55	3,19	0,59	107,73	<0,01	0,35
Adaptation in the professional sphere	2,83	0,41	3,55	0,41	3,08	0,35	117,46	<0,01	0,37
Adaptation in the educational sphere	2,98	0,31	3,23	0,58	3,09	0,28	21,02	<0,01	0,10
Readiness for online learning	3,39	0,43	3,76	0,43	3,11	0,47	72,96	<0,01	0,26
Anxious attitude towards online learning	1,99	0,61	2,84	0,42	3,36	0,69	148,64	<0,01	0,42
Communicative adaptation to online learning	2,44	0,50	2,83	0,62	3,00	0,42	32,91	<0,01	0,14
Positive attitude towards digitalization	2,98	0,49	3,12	0,51	3,10	0,40	3,55	0,03	0,02

Table 2

Significant differences between clusters differing in the nature of psychological adaptation to digitalization, using the Tukey test (N=408)

Scales of psychological adaptation to digitalization	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Ensuring security in the digital environment	–0,10	0,32	0,49	<0,01	0,59	<0,01
Information retrieval literacy	–0,47	<0,01	0,04	0,66	0,51	<0,01
Communicative adaptation	0,09	0,34	0,39	<0,01	0,30	<0,01
Normative adaptation (lack of tendency to deception and fraud)	0,99	<0,01	–0,20	0,037	0,79	<0,01
Digital anxiety	0,77	<0,01	0,81	<0,01	0,03	0,88
Adaptation to digitalization in the family sphere	–1,09	<0,01	–0,35	<0,01	0,74	<0,01
Adaptation in the professional sphere	–0,72	<0,01	–0,25	<0,01	0,47	<0,01
Adaptation in the educational sphere	–0,26	<0,01	–0,11	0,01	0,14	<0,01
Readiness for online learning	–0,37	<0,01	0,28	<0,01	0,65	<0,01
Anxious attitude towards online learning	–0,85	<0,01	–1,37	<0,01	–0,52	<0,01
Communicative adaptation to online learning	–0,19	0,01	–0,52	<0,01	–0,33	<0,01
Positive attitude towards digitalization	–0,14	0,04	–0,11	0,11	0,03	0,883

of psychological adaptation. The respondents of the first cluster (N=142), "Anxiously maladapted", are characterized by the highest values of the "Digital anxiety" scale and, relative to other groups, low values of the Positive attitude towards digitalization scale. Anxiety as an expectation of a threat in connection with digitalization determines fairly high values of the Ensuring security in the digital environment scale with low values of the Information search literacy scales and adaptation scales in the family, professional and educational spheres. In the educational sphere, this group shows high readiness and low anxiety in relation to online learning, which is probably due to a clear preference for mediated indirect forms of communication, typical for people with a high level of anxiety.

The second cluster has the highest adaptation indicators, compared to other clusters, for almost all the given scales, with the exception of the Digital Anxiety and Anxious Attitude to Online Learning scales. The ability to ensure the safety of one's actions in the digital environment, literacy in information search, adaptation in the professional, educational and family spheres are combined with a high level of normative adaptation and the absence of a tendency to deception and fraud. We called this group "adapted" (N=131).

Respondents of the third cluster show the lowest adaptation scores for all scales, respondents of this cluster do not have sufficient information search and security skills, experience difficulties in communicating in the digital environment, have an insufficient level of adaptation to digitalization in the family, professional and educational environment with a low level of digital anxiety. At the same time, this group is characterized by the lowest readiness and the greatest anxiety in relation to online learning. This group can be characterized as "not adapted" to digitalization (N=135).

Since the psychological well-being of an individual can be considered as a criterion for the success of psychological adaptation, to confirm our conclusion about the nature of psychological adaptation, we compared clusters according to psychological well-being assessments (Table 3).

Table 3

Descriptive statistics and significant differences between clusters on the psychological well-being scale (N=408)

Scale	Cluster 1 Anxious-maladapted N=142		Cluster 1 Adapted N=131		Cluster 3 Maladapted N=135		Significant differences between
	M	SD	M	SD	M	SD	
Psychological well-being	3,46	0,57	3,84	0,51	3,20	0,64	One-factor analysis ANOVA. F=41,51, p<0,01, η2=0,17 Tukey test: between 1 и 2 MD=-0,38; p<0,01, between 1 и 3 MD=0,26; p<0,01, between 2 и 3 MD=0,64; p<0,01.

The highest psychological well-being scores were found for respondents in the "adapted" cluster and the lowest for the "non-adapted" cluster. Significant differences in the level of psychological well-being were found for paired comparisons of all clusters. Thus, our conclusion about the nature of psychological adaptation for the identified clusters was confirmed.

Let us analyze the significance of differences in basic beliefs and social beliefs that reflect the image of the world in individuals with different levels of psychological adaptation to digitalization. The results of statistical analysis using one-way ANOVA and Tukey's test are presented in Tables 4 and 5.

Table 4

Descriptive statistics and significant differences between clusters for core beliefs and beliefs (N=408)

Basic Beliefs and Beliefs Scales	Cluster 1 Anxious-maladapted N=142		Cluster 1 Adapted N=131		Cluster 3 Maladapted N=135		Differences		Effect strength
	M	SD	M	SD	M	SD	F	p	η2
Friendliness of the World	3,18	0,94	3,00	0,65	2,88	0,46	4,67	0,01	0,02
Justice of the World	3,50	0,81	3,48	0.69	3,21	0,68	6.51	<0,01	0,03
Self-Image	3,46	0,73	3,63	0,67	3,14	0,63	18,39	<0,01	0,08
Belief in Luck	3,13	0,64	3,21	0,59	3,00	0,62	3,75	0,02	0,02
Belief in Control over the World	3,43	0,71	3,53	0,62	3,21	0,65	8,34	<0,01	0,04
Belief in a Dangerous World	3,30	0,45	3.11	0,46	3,19	0,39	6,10	<0,01	0,03
Belief in a Competitive World	2,70	0,49	2,38	0,53	2,69	0,47	18,17	<0,01	0,08
Belief in a Just World	3,31	0,55	3,50	0,52	3,31	0,64	4,72	0,01	0,02
Intolerance of Uncertainty	4,71	1,16	4,72	0,88	4,30	0,97	7,74	<0,01	0,04
Tolerance of Uncertainty	4,79	1,00	4,86	0,74	4,32	0,92	14,27	<0,01	0,07

Table 5

Analysis of significant differences between clusters on basic beliefs and beliefs using Tukey's test (N=408)

Basic Beliefs and Beliefs Scales	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Friendliness of the World	0,17	0,18	0,29	0,01	0,12	0,44
Justice of the World	0,02	0,96	0,29	<0,01	0,27	0,01
Self-Image	–0,17	0,09	0,32	<0,01	0,49	<0,01
Belief in Luck	–0,08	0,51	0,12	0,23	0,21	0,02
Belief in Control over the World	–0,10	0,44	0,22	0,01	0,32	<0,01

Basic Beliefs and Beliefs Scales	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Belief in a Dangerous World	0,19	<0,01	0,11	0,11	–0,08	0,30
Belief in a Competitive World	0,33	<0,01	0,01	0,99	–0,32	<0,01
Belief in a Just World	–0,18	0,02	0,01	0,99	0,19	0,22
Intolerance of Uncertainty	–0,01	0,99	0,42	<0,01	0,43	<0,01
Tolerance of Uncertainty	–0,06	0,83	0,48	<0,01	0,54	<0,01

A comparative analysis of the basic beliefs of the respondent groups that differ in the nature of their adaptation reveals significant differences between the "maladapted" group and the "adapted" and "anxious-maladapted" groups on all scales, with the exception of the belief in the goodwill of the world, compared to the "adapted" group, and the belief in luck, compared to the "anxious-maladapted" group. Thus, the group of respondents "maladapted" to digitalization is characterized by the lowest rates of beliefs in the goodwill, fairness, and controllability of the surrounding world, belief in luck, and a positive self-image. Interestingly, a significant difference between the "adapted" and "anxious-maladapted" was recorded only with respect to the self-image scale, which is less positive for "anxious" respondents than for "adapted". As for social beliefs, the "anxious-adapted" group is characterized by the highest scores for belief in a dangerous and competitive world, compared to other groups. The image of the world, defined through social beliefs, is the most positive in the "adapted" group. The "unadapted" group is more inclined, compared to the "adapted", to believe in a competitive and less fair world, revealing a contradictory attitude to uncertainty, which is expressed in the lowest assessments of both tolerance and intolerance to uncertainty.

The results of the comparative analysis of higher-order values and basic values using one-way ANOVA and the Tukey test are presented in Tables 6 and 7.

Significant differences in the assessments of higher-order values were found between all clusters that differ in their level of adaptation to digitalization. "Adapted" respondents differ from groups of respondents with a low level of adaptation to digitalization by a higher significance of the value of self-overcoming and a lower significance of the opposite value of self-affirmation. Respondents from the "unadjusted" cluster have the lowest scores for all value groups, inferior to the other two clusters, with the exception of the value of self-affirmation. "Anxiously maladapted" respondents surpass "maladapted" respondents in the values of change, preservation, self-overcoming, with the exception of the value of self-affirmation. An analysis of differences in basic values allowed us to give the following characteristics of the value sphere of each cluster. Respondents with a high level of digital adaptation differ significantly from other groups in their high value of independence of thoughts and actions,

Table 6

Descriptive statistics and significant differences between clusters for higher-order and basic values (N=408)

Value scales	Cluster 1 Anxious-maladapted N=142		Cluster 1 Adapted N=131		Cluster 3 Maladapted N=135		Differences		Effect strength
	M	SD	M	SD	M	SD	F	p	2
Values of change	4,38	0,71	4,52	0,56	4,02	0,84	17,48	<0,01	0,08
Values of preservation	4,43	0,73	4,50	0,67	4,02	0,82	15,86	<0,01	0,08
Values of self-overcoming	4,51	0,74	4,76	0,62	4,08	0,86	26,50	<0,01	0,12
Values of self-affirmation	3,78	0,79	3,54	0,84	3,59	0,86	2,95	0,05	0,02
Independence of thoughts	4,68	0,84	5,16	0,58	4,29	1,11	30,34	<0,01	0,13
Independence of actions	4,81	0,90	5,23	0,61	4,32	1,06	35,55	<0,01	0,15
Stimulation	4,06	0,81	4,16	0,84	3,71	0,93	9,20	<0,01	0,04
Hedonism	4,27	0,95	4,17	0,92	4,01	1,09	2,33	0,10	0,01
Achievements	4,02	0,98	3,99	1,07	3,83	1,06	1,34	0,26	0,01
Power-dominance	3,30	1,10	2,93	0,94	3,17	0,99	4,66	0,01	0,02
Power over resources	3,46	1,14	3,05	1,19	3,37	1,12	4,75	0,01	0,02
Reputation	4,62	0,85	4,56	0,94	4,15	1,05	10,54	<0,01	0,05
Personal security	4,64	0,97	4,72	0,82	4,24	0,98	10,40	<0,01	0,05
Public security	4,98	0,95	5,25	0,77	4.44	1,10	25,09	<0,01	0,11
Traditions	4,29	1,18	4,42	1,15	3,79	1,26	10,44	<0,01	0,05
Conformism in relation to rules	4,00	1,00	4,13	1,05	3,85	0,99	2,49	0,08	0,01
Interpersonal conformism	4,21	0,96	4,02	0,96	3,82	0,94	5,81	<0,01	0,03
Modesty	3,99	0,84	3,88	0,81	3,67	0,93	4,98	<0,01	0,02
Universalism — concern for others	4,70	0,89	4,72	0,98	4,15	1,03	16,09	<0,01	0,07
Universalism — concern for nature	4,14	1,06	4,32	0,96	3,85	1,08	6,96	<0,01	0,03
Universalism — tolerance	4,22	0,89	4,45	0,83	3.81	1,03	17,68	<0,01	0,08
Benevolence — care	4,73	0,91	5,15	0,69	4,34	1,16	23,17	<0,01	0,10
Benevolence — duty	4,75	0,90	5,11	0,62	4,29	1,05	29,57	<0,01	0,13

Table 7

Analysis of significant differences between clusters on higher-order values and basic values using Tukey's test (N=408)

Value scales	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Values of change	–0,15	0,21	0,36	<0,01	0,51	<0,01

Value scales	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Values of preservation	–0,07	0,74	0,41	<0,01	0,48	<0,01
Values of self-overcoming	–0,24	0,02	0,42	<0,01	0,66	<0,01
Values of self-affirmation	0,23	0,06	0,18	0,18	–0,06	0,85
Independence of thoughts	–0,48	<0,01	0,39	<0,01	–0,87	<0,01
Independence of actions	–0,42	<0,01	0,49	<0,01	0,91	<0,01
Stimulation	–0,10	0,62	0,34	<0,01	0,44	<0,01
Hedonism	0,10	0,70	0,25	0,08	0,16	0,40
Achievements	0,04	0,95	0,19	0,27	0,16	0,44
Power-dominance	0,37	<0,01	0,14	0,51	–0,24	0,14
Power over resources	0,41	0,01	0,09	0,81	–0,32	0,06
Reputation	0,06	0,87	0,47	<0,01	0,41	<0,01
Personal security	–0,08	0,76	0,40	<0,01	0,48	<0,01
Public security	–0,27	0,05	0,54	<0,01	0,81	<0,01
Traditions	–0,12	0,69	0,50	<0,01	0,63	<0,01
Conformism in relation to rules	–0,13	0,54	0,15	0,45	0,28	0,07
Interpersonal conformism	0,19	0,24	0,39	<0,01	0,20	0,19
Modesty	0,12	0,51	0,32	<0,01	0,21	0,12
Universalism — concern for others	–0,01	0,99	0,56	<0,01	0,57	<0,01
Universalism — concern for nature	–0,17	0,35	0,29	0,05	0,47	<0,01
Universalism — tolerance	–0,23	0,09	–0,47	<0,01	0,64	<0,01
Benevolence — care	–0,42	<0,01	0,39	<0,01	0,80	<0,01
Benevolence — duty	–0,37	<0,01	0,46	<0,01	0,83	<0,01

public safety, universalism as tolerance and benevolence both in the form of care and duty, as well as a lower significance of power, dominance and power over resources. Significant differences were also revealed in the greater significance of the values of stimulation, reputation, personal safety, traditions, normative conformism and all types of universalism for the “adapted” group, compared to the “unadapted” group. The differences in the value sphere of the “unadapted” and “anxious-unadapted” clusters consist in the greater significance of the values of independence of thoughts and actions, stimulation, reputation, personal and public safety, traditions, interpersonal conformism and modesty, universalism as care for others and tolerance, benevolence in the form of care and duty for respondents of the “anxious-unadapted” cluster. It can be stated that the characteristics of the value sphere of respondents of the “adapted” and “anxious-maladapted” groups are very close, and there are large differences with the “maladapted” group. Accordingly, it can be concluded that the importance of the value of self-overcoming acts as a motivator for setting and implementing goals of psychological adaptation to the challenges of the digital society, while the value of self-affirmation, on the contrary, hinders the effectiveness of the adaptation process.

A comparative study of age-related features of psychological adaptation of an individual to digitalization in various social spheres in youth and middle adulthood was aimed at identifying differences in the scales of psychological adaptation and features of value consciousness (Table 8).

An ambiguous picture of psychological adaptation to the digitalization of society was revealed when analyzing the results of the age groups of youth and middle maturity. Respondents of the older age group surpass the younger in literacy of information search and normative adaptation, adaptation in the family and professional spheres, while respondents of the younger group are more adapted to Internet communication and to digitalization in the educational sphere. Respondents of the older group are more prone to digital anxiety, but at the same time show greater readiness for online learning. Young people show greater adaptation to digitalization in the educational sphere and communication in online learning. Thus, our data indicate different involvement and mastering of digital tools in various social spheres of representatives of age groups, which is associated, in our opinion, with the significance and degree of mastery of a particular area of activity. For the youth group, more effective mastering was revealed for the sphere of education and communication, and for the middle maturity group for the professional and family spheres. However, adaptation to digitalization in the older age group is combined with high digital anxiety with a positive attitude towards the digitalization process itself.

Table 8

Differences between age groups in the level of psychological adaptation to digitalization (N=408)

Scales of psychological adaptation to digitalization	Youth (18—26 years)		Medium maturity (45—55 years)		Differences		Effect strength
	M	SD	M	SD	F	p	η2
Ensuring security in the digital environment	3,47	0,60	3,57	0,57	0,38	0,54	<0,01
Information search literacy	3,37	0.58	3,33	0,64	5,65	0,02	0,01
Communicative adaptation	3,16	0,47	3,26	0,47	4,70	0,03	0,01
Normative adaptation (lack of tendency to deception and fraud)	3,26	0,53	3,15	0,54	71,95	<0,01	0,14
Digital anxiety	3,12	0,81	3,73	0,72	5,09	0,03	0,01
Adaptation to digitalization in the family sphere	3,10	0,69	3,74	0,72	42,39	<0,01	0,09
Adaptation in the professional sphere	3,01	0,73	3,47	0,75	9,47	<0,01	0,02
Adaptation in the educational sphere	3,06	0,51	3,20	0,46	5,22	0,02	0,01
Readiness for online learning	3,14	0,31	3,07	0,35	11,33	<0,01	0,02
Anxious attitude towards online learning	3,33	0,49	3,49	0,51	5,62	<0,01	0,01
Communicative adaptation to online learning	3,12	0,44	3,05	0,49	43,3	<0,01	0,09
Positive attitude towards digitalization	2,83	0,84	2,64	0,89	2,61	0,10	0,01

Based on the hypothesis about the role of the value sphere of the individual as the basis for motivation and goal-setting in the process of psychological adaptation to the digitalization of society, we compared the indicators of higher-order values in the studied age groups, which found significant differences in the nature of psychological adaptation to digitalization (Table 9).

The results obtained using one-way ANOVA reveal significant differences in all higher-order values, with the exception of the value of self-affirmation in respondents of the middle-maturity age group. It can be assumed that the greater significance of the values of change and self-overcoming in respondents of the older age group determines the motivation for adaptation in the professional and family spheres that are significant for this age, as well as the behavioral digital adaptation in the form of high information retrieval literacy necessary for the success of professional activity. The greater significance of the value of self-affirmation, compared to the older group, is the basis for the motivation and purposefulness of young respondents to solve the development problems of this age — finding partners in joint activities and close interpersonal relationships (adaptation in communication) and obtaining an education. Thus, we have received confirmation that values, forming the basis for goal-setting and motivation for activities that are significant for the age stage of personality development, are a condition for the successful psychological adaptation of the individual to the digitalization of various social spheres. The stated assumption requires continuation of the study and constitutes its prospects.

Discussion of the results

The central system-forming characteristic of human psychological adaptation as a complex systemic phenomenon is a person's attitude to the surrounding reality and to himself [6], when human activity, prompted by motives and regulated by values that mediate goal-setting, acts as an active formation by the subject of strategies and methods of mastering the situation at different levels of behavior regulation [8]. Value hierarchies as supra-individual systems that determine the relationship "personality — society" can both facilitate and hinder adaptation processes [18]. We assumed that basic values, as well as higher-order values, acting as motivators and transitional

Table 9

Descriptive statistics and significance of differences in value assessments by a group of respondents of youth and middle maturity (N=408)

Higher-order values	Youth (18—26 years)		Medium maturity (45—55 years)		Differences		Effect strength
	M	SD	M	SD	F	p	η2
Values of change	4,17	0,83	4,41	0,65	12,25	<0,01	0,03
Values of preservation	4,05	0,81	4,48	0,71	37,59	<0,01	0,08
Values of self-overcoming	4,24	0,85	4,59	0,70	22,29	<0,01	0,05
Values of self-affirmation	3,85	0,79	3,51	0,79	20,32	<0,01	0,04

goals of the individual, will be associated with the success of the psychological adaptation of the individual to the digitalization of various social spheres of a dynamically changing society. We identified three groups of respondents differing in adaptation features: a group of well-adapted, maladapted, characterized by high anxiety in connection with digitalization, and maladapted, not experiencing anxiety in connection with digitalization. Our assumption about the nature of adaptation of the selected groups was confirmed by the established fact of a higher level of psychological well-being in the group of well-adapted respondents. A comparative analysis of the features of deep convictions and social beliefs of the groups revealed significant differences in their image of the world and attitude towards themselves and the world around them. In the case of successful adaptation, in contrast to the group of "unadjusted", the surrounding world is perceived as benevolent, fair and controllable, and the self-image is of an unconditionally positive nature. For "unadjusted" respondents, the world is perceived as competitive and not fair enough, and in the case of anxiety towards digitalization — as dangerous and uncontrollable, and the self-image is characterized negatively.

Based on the circular model of basic values by S. Schwartz, we identified significant differences in the value sphere of groups with different psychological adaptation to digitalization. The value sphere of respondents adapted to digitalization is distinguished by the expression of the social focus of values, balanced with the values of personal development, freedom from anxiety and self-defense, and is characterized by the high significance of the values of self-overcoming and the significance of the values of change. This is consistent with the results of the study of the relationship between the basic values identified in the concept of S. Schwartz with involvement in ICT activities, in particular, with the provision on the significance of the values of change [17]. This means that the more significant the values of preservation (traditions, conformism, personal and public safety), the less pronounced the readiness for innovative forms of learning using digital technologies and the more difficult it is for an individual to accept new forms of communication in online learning. The identified connection between basic values and the characteristics of psychological adaptation to digitalization only at the theoretical level based on the provisions of S. Schwartz's theory suggests cause-and-effect relationships in which values act as a cause of adaptation. Such an assumption requires further research.

Our results are further evidence of the inconsistency of the myth about the total superiority of the younger generation over the older generation in mastering digital technologies in various spheres. Age differences in psychological adaptation to various aspects of digitalization in the professional and educational spheres were found, indicating that the significance and, as we assume, the meaning of the activity, determined by the content of the value sphere of the individual, determine the a person's readiness to master new digital technologies as cultural means of carrying out activities and,

thus, the productivity of psychological adaptation to the digitalization process. Adaptation to innovative digital technologies in the communicative and educational spheres, relevant to the developmental tasks of the age stage, occurs more successfully at a young age, and in the professional and family spheres during middle maturity.

The limitations of the study are associated with the need to study the cause-and-effect relationships of the success of psychological adaptation to digitalization with the value structure of consciousness, taking into account a more complete range of conditions and factors influencing the implementation of the subject's activities. We see prospects for further research in studying the connections between goal-setting, conditioned by the value sphere, regulation and control of activities, coping strategies and the nature of adaptation to digitalization.

Conclusions

1. The nature of psychological adaptation to the digitalization of society as a complex systemic process reveals heterogeneity and unevenness both in relation to various parameters of digital adaptation and in relation to various social spheres.

2. A connection has been established between the basic beliefs and social beliefs of an individual and the success of psychological adaptation to digitalization. Successful adaptation is associated with beliefs in the goodwill, fairness and controllability of the world, while difficulties in adaptation are associated with the perception of the world as dangerous, competitive and not fair enough.

3. The results confirm the hypothesis about the connection between basic values and the success of psychological adaptation to digitalization. The values of self-overcoming, oriented towards a social focus, including the well-being of people around and universalism as understanding, recognition, tolerance and protection of the well-being of all people and nature, combined with the value of openness to change in the form of active choice based on the values of independence of thoughts and actions, determine the structure of the value sphere of an individual in case of successful adaptation. In the case of low adaptation, on the contrary, the values of self-affirmation and self-exaltation are significant, as well as the values of preservation in the conditions of increasing anxiety associated with digitalization.

4. Age-related features of psychological adaptation to digitalization are associated with the tasks of age development and the importance of social spheres and activities — in the period of youth, compared with middle maturity, the success of adaptation to digitalization is higher in the communicative and educational spheres, and in middle maturity — in the professional with a high level of digital anxiety.

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Получена 28.06.2024
Принята в печать 30.08.2024

Received 28.06.2024
Accepted 30.08.2024