Personal characteristics and environmentally responsible behavior of children of the generation alpha with different leisure orientation

Evgenia V. Astapenko¹, Tatiana V. Klimova², Galina A. Molokhina¹, and Elena A. Petrenko^{1,}*

¹Southern University (IMBL), Mikhail Nagibin Ave., 33a/47, Rostov-on-Don, Russia

²South Federal University, Dneprovsky 116, 034065, Russia

Abstract. The problem of the influence of macrosocial factors that determine the trends of psychological development of entire generations of children is a unique opportunity to highlight the psychological and pedagogical conditions that have remained in the shadow of the general «ensemble» of factors. It was suggested that the specifics of leisure activities of preschool children of the Generation Alpha in the conditions of forced epidemiological self-isolation affects intrapersonal structures, their resource state and it is associated with the dominant system of child-parent relations in the family. The empirical study of the dyad «child of 5-7 years-parent» (N=72 and N=72) was conducted using projective diagnostic methods: children's anxiety was analyzed, self-assessment; blank diagnostic methods for assessing the organization of family leisure and child-parent relations. The study showed the emergence of two new forms of free leisure activities for children: virtual and mixed (virtual activity and traditional communication with peers). The dependence of the level of children's immersion in digital gadgets with an increase of their anxiety and a decrease of self-esteem, difficulties with resource recovery was revealed. It is concluded that in families where children spend virtual leisure time, child-parent relations are characterized by a reduced level of acceptance of the child, the desire for cooperation and symbiosis with him. The results obtained are of interest for solving the problems of designing conditions for the psychological and pedagogical development of children of the Generation Alpha as well as training specialists in the field of child practical psychology.

1 Introduction

During preschool childhood, the fundamental foundations of human personality development are laid the psychological and pedagogical conditions in which a child is brought up determine the intensity and direction of his personal development. Digital

* Corresponding author: petrenko19789@mail.ru

technologies expand the space of children's life, create a new environment and new social situations of child development in modern society.

The individual development of a child cannot be understood without knowledge of the sociocultural context in which the child develops (L.S. Vygotsky, 2005; J. Piaget, et al.). The formation of a child's personality takes place in the conditions of assimilation of the tools of intellectual adaptation of culture, value interaction with adults and peers, in the conditions of a joint dialogue [1, 2].

Since the time of classical theories about the determinations of child development, a lot has changed, new factors of development have appeared, which previously could not be thought of, and now they have not just appeared, but in the context of the pandemic situation they have obviously become key and they need to be worked out, investigated. In the classical ideas about the development of children in early preschool age, it is necessary to include factors of digitalization, factors of social restrictions and look at the consequences of their influence on the development of personal characteristics of children.

The intensity of involvement of preschoolers in virtual leisure increased enormously in 2020, during the spread of coronavirus infection and the lockdown introduction in many countries of the world. In Russia, hundreds of thousands of families faced forced self-isolation, restrictions on free movement and social contacts. The global experiment of forced restriction of social contacts in society has had a certain effect on the organization of the lives of millions of people, locking children and parents in their flats, forcing them to change the conditions of cohabitation, bringing together working parents and children receiving distance education in a single space, affecting the leisure time of children and adults. The changed social situation of preschool children's development has raised questions that were not so pronounced before: are the children of the Generation Alpha really digital children, then where and how do they build their communications with other people? In a situation of restrictions, children find themselves in the family and with their parents, do global social restrictions affect the personal characteristics of children? Particularly, is there a connection in the choice of leisure time (the priority of virtual leisure, mixed leisure, or direct interaction with other people) with the development of children's personal characteristics? Are child-parent relationships related to children's immersion in virtual leisure time? Can parents be partly the sources of children's immersion in virtual reality?

The developing society creates new tools that fit seamlessly into the reality of the younger generation, changing its psychology. Technological evolution has created digital tools, digital environments, which have become a kind of new cultural tool that mediates the mental functions of modern man, new types of activities, forms of social interaction and new cultural practices (Cole, 1997; Asmolov, 2019; Voyskunovsky, 2010; Soldatova et al., 2017, Rubtsova, 2019; Pea, 2019 et al.) [3]. Technosystem, as the most important mediating link between the individual and the surrounding world (Jonson, Puplampu, 2008), today is a part of the external environment, which is integrated into the cognitive and social system of a person, changing it (L.S. Vygotsky, A. Clark, D. Chalmers).

The new social situation of development, made possible by the development of computer technology and the Internet, stimulated the emergence of the information society. Nowadays, the modern preschool child goes through not just the stages of socialization in society, but digital socialization. Появилось новое цифровое поколение, поколение смартфона и Интернета – поколение Альфа. There are no clear age limits for the digital generation at this moment. Popular theories about the modern generation of children include theories about:

- «Generation Z» by W. Strauss and N. Howe, children born in 1995-2004 [4];
- «iGen» generation by J. Twenge, children born in 1995-2012 [5];
- «Digital Natives» by M. Prensky [6];

- M. McCrindle called them – the Generation Alpha or «Glass Generation», children born in 2010-2025 [7].

The designation «Alpha» is very symbolic, as M. McCrindle himself explains, in the scientific community, if the letters of the Latin alphabet end, then they switch to the letters of the Greek alphabet, and do not return to the beginning of the Latin alphabet, that is, the use of the first letter of the Greek alphabet symbolizes something new, the Alpha generation is the first generation born in the 21st century. These children are immersed in the digital environment from birth, surrounded by information and digital technologies, gadgets, social networks and online communication, they become active Internet users from an early age [7].

The community of Internet users is actively getting younger, modern preschoolers begin to master digital technologies from the age of 1,5. Digital socialization actively stimulates changes in higher mental functions, changes the mechanisms of personality formation and the forms of people's relationships, changes accepted cultural practices or modes of action, affects network contexts and the emergence of new phenomena [8]. Modern preschoolers are characterized by early and mass acquisition of a high-tech arsenal of new cultural tools and tools for mental development [9].

In 2014-2016, as part of an international project implemented by the Institute for the Protection and Security of the Citizen, IPSC, Joint Research Centre) Together with the Internet Development Foundation and the Faculty of Psychology of the Lomonosov Moscow State University, an international pilot study was conducted in 7 countries, including Russia «Young Children (0-8) and Digital Technology». This study showed that children of preschool age (5-7 years) they actively master digital technologies, confidently use tablets and smartphones, watch cartoons and videos on the Internet. Interaction with a digital device causes positive emotions and interest in children, and excessive enthusiasm may form. It is established that virtual children's leisure distances parents and children from each other. Also, when organizing virtual leisure for children, parents very rarely use the educational opportunities of the Internet, operating exclusively on its entertainment component. Parents are not ready to provide their children with safe virtual leisure, are not ready to work out rules for working with digital technologies together with their children, often violate the regulatory rules for using devices themselves and act inconsistently in interaction with the child, which leads to violations of the rules for using digital devices, accessing the Internet, etc. [10, 11].

The concept of generations by N. Howe and W. Strauss points to the existing huge gap (digital gap) between the generations of parents and children, due to technological progress and the formation of the digital world. Smart technologies and free access to the Internet have triggered a powerful generational shift not seen before [12]. If even thirty years ago, the boundaries of generations were quite blurred and conditional, that today's Generation Alpha is radically different from previous generations [13].

The leisure time of modern preschoolers is increasingly connected with digital technologies. According to a Mediascope survey, in Russia in 2018, 44% of children aged 5-7 years had their own smartphone. Children (according to their parents) start using the Internet earlier, and these figures are growing every year. [14].

Under the leisure activities of preschoolers, we understand free active pastime aimed at restoring the psychological and physical strength of the child and is a form of emotional development and self-attitude, since in leisure activities the child can meet the needs for self-knowledge and knowledge of the surrounding world, express themselves and their interests. Interaction with peers and learning in the zone of immediate development, the development of language as a tool of intellectual adaptation and a way of communicating with the outside world is of great importance for the development of the child. In leisure activities, which are based on value interaction with other people (peers, elder children and parents), children have the opportunity to restore the resource emotional state, interaction with the gadget does not provide such a resource recovery opportunity. The specifics of the leisure activities of

preschoolers are determined by parents, therefore, the parental attitude to the child is a psychological and pedagogical factor that guides the development of the child's personality [15].

The scientific novelty of the study lies in the actualization of the problem of virtual leisure time for older preschool children in the family during the period of forced social restrictions and its impact on the development of personal characteristics of children. The study concluded that the influence of poorly controlled virtual leisure activities of older preschool children on the formation of personal characteristics of children of the Generation Alpha, expressed in increased anxiety and reduced self-esteem in children.

2 Material and methods

The theoretical and methodological basis of the study is the idea of the influence of child-parent relations on the immersion of children in virtual leisure activities, the formation of anxiety and self-esteem in preschool children of the Generation Alpha with different leisure orientation in conditions of forced social isolation.

The study sample consisted of 72 pairs of elder preschoolers and their parents: 34 girls and 38 boys aged 5-6 years. All children attend preschool institutions in Rostov-on-Don.

One parent from the family took part in the survey of parents, mostly mothers (63 mothers and 9 fathers).

All children attend preschool educational institutions, have preserved intelligence, and are brought up in well-off families.

All respondents took part in the study voluntarily. The survey of parents and the diagnostics of children were conducted in person.

The children were divided into two groups according to the criteria for the predominance of virtual activity in their leisure time: viewing virtual content in time (hours per day, days per week), the content of the viewed content, (educational, entertainment in social networks, entertainment in games) the degree of immersion and the degree of activity in the implementation of feedback (likes, reposts, etc.).

Hypotheses were formulated:

H1 – we assume that preschool children of the Generation Alpha are characterized by differences in immersion in virtual leisure, characterized by different degrees of involvement and different ways of spending leisure time;

H2 – we assume that the specifics of leisure activities of preschool children of the Generation Alpha in the conditions of digitalization and forced social restrictions affect intrapersonal structures and the resource state of children, particularly, the higher the level of involvement of the child in virtual leisure and the limited social contacts with other people, the lower the level of self-esteem and the higher the level of anxiety;

H3 – we assume that the dependence of the level of children's immersion in digital gadgets is mediated by the dominant system of child-parent relations in the family, the higher the level of acceptance of the child by the parents, their desire to jointly conduct family leisure activities with the child, the less children will be characterized by involvement in the virtual environment.

To test the hypotheses put forward, we used: the test «Ladder» by T. D. Martsinkovskaya [16]; the Test of anxiety by P. Temple, M. Dorkey, E.W. Amen in the adaptation of V. M. Astapov [17]; The Questionnaire of parental attitude by A.Y. Varga and V.V. Stolin [17]; The Questionnaire for parents «Organization of family leisure for preschoolers» (Astapenko, E.V. et al., 2019); timekeeping of the time spent by a child with a digital gadget; participant observation.

Let us give a brief description of the methods we used.

The Test of anxiety by P. Temple, M. Dorkey, E.W. Amen allows to determine the degree of anxiety of a child in relation to a number of typical life situations related to relationships with other people.

The technique is used to diagnose children 4-7 years old.

This is a projective technique, the stimulus material of which contains 14 drawings made in two versions: for girls and for boys.

The drawings contain typical situations peculiar to children's lives, the face of the drawn child is not drawn, only marked with a contour. Two children's heads are additionally drawn in each drawing, the dimensions of these heads exactly correspond to the contours of the face in the drawing. In one additional drawing, the face is joyful, in the other is sad.

The child's responses are recorded in a protocol, each protocol is subjected to a quantitative analysis that allows us to calculate the anxiety index as a percentage, and a qualitative analysis that allows us to analyze the emotional experience of the child.

The authors identified five levels of anxiety: high level (greater than 57.1%), high level of anxiety (42.9-50%), medium level (14.3-35.7%), low level of anxiety (0-7.2%), low level of anxiety (0%).

The «Ladder» technique by T.D. Martsinkovskaya is a projective technique that allows us to diagnose the child's self-esteem, to establish how the child relates to his achievements and failures, focusing on the assessment of his behavior by others, how the growth of his self-consciousness manifests itself.

The child is given a sheet with a drawn ladder consisting of seven steps, and it is suggested to place the figure of the child on the ladder, assuming on which step the child will put himself, on which step his mother, father, teacher will put him.

For a comfortable self-perception, associated with the presence of a sense of security, it is important that one of the adults put the child on the top step. A sign of trouble in the child-parent relationship is the child's responses, in which parents puts him on the bottom rungs of the ladder.

The questionnaire of parental attitude by A.Y. Varga and V.V. Stolin allows to identify features of the parental attitude to children.

This questionnaire has been used for the last thirty years and has successfully proven itself in working with people seeking psychological help on parenting and interaction with children.

The parental attitude is represented by a system of various feelings towards a child, behavior patterns that are updated in communication with children, features of perception and understanding of the character, personality and actions of the child.

The questionnaire consists of 61 questions, the answers are distributed on five scales, each scale has two poles: the scale of «acceptance-rejection», the scale of «cooperation», the scale of «symbiosis», the scale of «authoritarian hypersocialization», the scale of «little loser».

These methods allow us to diagnose the anxiety and self-esteem of children of late preschool age, to identify the features of child-parent relations, and thus make the conclusion about the personal characteristics of children who took part in the study, and the parental attitude to them.

To diagnose children's leisure activities accepted in families, we have developed a questionnaire consisting of 10 questions. The questions allowed us to collect information about organization of preschool children's leisure in the family, what forms of children's leisure are accepted in families, how much time children spend with gadgets (playing games, watching videos and cartoons), how much time parents devote to joint activities with children.

The timekeeping of the time spent by the child with a digital gadget was carried out, which allowed us to determine the degree of immersion and activity of the child during virtual

leisure in the digital environment (viewing virtual content in time - day, week; content of the content; list of social networks and the degree of activity in them – likes, reposts, etc.; involvement in virtual games). The participant observation was carried out in the process of teaching parents how to keep time.

3 Results

Differentiation of children into groups was carried out on the basis of findings from a survey of parents about the features of leisure activities of preschoolers in the family.

The first group includes preschoolers, whose free time is mostly reduced to virtual leisure, the forms of which are computer games on tablets and phones, watching cartoons, entertainment programs and videos on YouTube, TikTok, etc. Children of this group spend more than half of their leisure time with gadgets. The second group of children consisted of preschoolers who do not have access to gadgets at all or who have limited access to gadgets carried out jointly with adults. Children of the second group are included in various leisure activities, such as joint sports, creativity, games, etc., organized by parents or elder children. The first group was defined as a group of children who spend virtual leisure, the second group - children who spend mixed leisure (virtual activities and traditional communication with peers and adults).

Descriptive statistics of diagnostic results of children in the group with the predominant virtual leisure of children in the family (group 1) and in the group with mixed leisure in the family (group 2) are shown in Tables 1 and 2.

Table 1. Descriptive statistics of diagnostic results of the 1st group (N=42).

Indicator	Minimum	Maximum	Mean	Std. Deviation
Anxiety	0.00	5.00	4.47	1.45
Self-esteem	3.00	7.00	4.77	1.33
Acceptance/rejection	10.00	20.00	15.59	2.24
Cooperation	2.00	5.00	3.59	0.93
Symbiosis	2.00	6.00	3.50	1.01
Authoritarian hypersocialization	1.00	5.00	3.47	0.99
«Little loser»	1.00	5.00	2.78	0.92

Children of the first group are characterized by a high level of anxiety and an average level of self-esteem. In child-parent relationships, the average values were obtained on the bipolar scales of acceptance/rejection, cooperation, symbiosis, and authoritarian hypersocialization, while the low value was obtained on the «little loser» scale.

Table 2. Descriptive statistics of diagnostic results of the 2nd group (N=30).

Indicator	Minimum	Maximum	Mean	Std. Deviation
Anxiety	2.00	8.00	2.73	1.59
Self-esteem	3.50	7.00	5.13	1.18
Acceptance/rejection	10.00	30.00	18.86	5.06
Cooperation	2.00	7.00	4.43	1.54
Symbiosis	2.00	6.00	4.06	1.08
Authoritarian hypersocialization	1.00	4.00	3.93	1.22
«Little loser»	1.00	4.00	2.50	1.04

Children of the second group are characterized by an average level of anxiety and an average level of self-esteem. In child-parent relationships, the average values were obtained on the bipolar scales of acceptance/rejection, cooperation, symbiosis, and authoritarian hypersocialization, while the low value was obtained on the «little loser» scale.

Further, a comparative analysis of the results in the groups was carried out. The calculation of the Student's *t*-test for two independent samples showed significant differences in a number of diagnostic indicators.

The results of a comparative analysis of the level of anxiety in the group with a predominant virtual leisure of children in the family (group 1) and in the group with a low level of virtual leisure in the family (group 2) are shown in Table 3.

Significance of differences: * $p \leq 0,05$; ** $p \leq 0,01$

Table 3. Results of the study of preschool children's anxiety.

Indicator	1st group	2nd group	Student's <i>t</i> -test	Significance of differences. P
Anxiety (scores)	5.47	4.03	4.817**	0.000
Anxiety Index (%)	39.12	28.81		

The results showed that the level of anxiety is higher in the first group than in the second. The calculation of the Student's *t*-test showed that these differences have a high level of statistical significance. The results of a comparative analysis of self-esteem in groups of preschool children are shown in Table 4.

Significance of differences: * $p \leq 0,05$; ** $p \leq 0,01$

Table 4. Results of the study of the self-esteem level of preschoolers.

Indicator	1st group	2nd group	Student's <i>t</i> -test	Significance of differences. P
Self-esteem	4.77	5.13	-1.178	0.243

Self-esteem values are slightly lower in the first group of preschoolers than in the second group. The calculation of the Fisher statistical criterion showed that there were no significant differences in the groups preschoolers with different leisure activities according to the average group self-esteem indicator.

Then we analyzed the ratio of the levels of self-esteem formation in the groups. The results of the analysis of the percentage of self-esteem levels in the groups of preschoolers are presented in Table 5.

Significance of differences: * $p \leq 0,05$; ** $p \leq 0,01$

Table 5. Results of the study of the self-esteem level of preschoolers.

Indicator	1st group	2nd group	Fisher criterion. ϕ^*	Significance of differences. P
Inflated self-esteem (%)	21.43	43.33	0.146	-
Adequate self-esteem (%)	21.43	20	1.136	-
Low self-esteem (%)	57.14	33.33	2.021*	0.05

The analysis of the results shows that there are no statistically significant differences in the groups in terms of inflated and adequate self-assessment, an adequate and inflated level of self-esteem is the norm in preschool age.

There are significantly more children with low self-esteem in the first group than in the second group.

The identified differences are statistically significant.

Further, the diagnosis of child-parent relations was performed, the results are presented in Table 6. In general, there are no alarming trends in the direction of child-parent relations.

Significance of differences: * $p \leq 0,05$; ** $p \leq 0,01$

On the scale of «Acceptance/rejection», both groups are characterized by average values, but this indicator is statistically significantly higher in the second group of preschoolers with a low level of virtual leisure.

Table 6. Results of the study of child-parent relations of preschoolers.

Scales	1st group	2nd group	Student's <i>t</i> -test	Significance of differences. <i>P</i>
Acceptance/rejection	15.59	18.86	-3.716**	0.000
Cooperation	3.59	4.43	-2.856**	0.006
Symbiosis	3.50	4.06	-2.641*	0.026
Authoritarian hypersocialization	3.47	3.93	-2.270	0.086
«Little loser»	2.78	2.50	-1.742	0.224

According to the «Cooperation» scale, the average indicators in both groups were established, in the second group the value is statistically significantly higher than in the first group. According to the «Symbiosis» scale, the results in both groups are average, in the second group they are statistically significantly higher than in the first group. According to the «Authoritarian hypersocialization» scale, an average value was found in both groups, this indicator is slightly lower in the first group, and there are no significant differences in the severity of parental control. According to the «Little loser» scale, average values with a tendency to low were obtained in both groups, no significant differences were found in the groups, and the indicator on the scale was slightly lower in the second group.

Further, a correlation analysis of the data was carried out, which showed the presence of relationships between indicators of anxiety, self-esteem and indicators of child-parent relations. In the first group, there are fewer correlations between the indicators and they are weaker than in the second group.

In the first group, the level of anxiety is negatively correlated with the indicators of self-esteem ($r = -0.407^{**}$), the scale of acceptance/rejection ($r = -0.703^{**}$), the scale of cooperation ($r = -0.410^{**}$); self-esteem is negatively correlated with anxiety ($r = -0.407^{**}$) and is positively correlated with the scale of cooperation ($r = 0.342^{*}$); virtual leisure time is positively correlated with anxiety ($r = 0.528^{**}$).

In the second group, the level of anxiety is negatively correlated with the indicators of self-esteem ($r = -0.529^{**}$), the scale of acceptance/rejection ($r = -0.695^{**}$), the scale of cooperation ($r = -0.574^{**}$), the scale of symbiosis ($r = -0.570^{**}$) and is positively correlated with the scale of «little loser» ($r = 0.422^{*}$); self-esteem is negatively correlated with anxiety ($r = -0.529^{**}$) and is positively correlated with the scale of cooperation ($r = 0.364^{*}$); virtual leisure time is positively correlated with anxiety ($r = 0.439^{*}$).

The correlation analysis of the total sample of preschool children showed the presence of additional relationships between the indicators of anxiety, self-esteem and indicators on the scales of child-parent relations. In the total sample of preschool children, a negative correlation between anxiety and authoritarian hypersocialization ($r = -0.278^{*}$) and a positive correlation between self-esteem and the acceptance/rejection scale ($r = 0.259^{*}$) were found.

4 Discussion

Successful psychological development of children becomes possible in the situation of interaction with other people. Parents and a parent family are a system of translation of certain values of various levels, the assimilation of which is carried out in childhood, including through leisure activities. The formation of personal characteristics of preschool children depends on the leisure orientation in the family and on the system of child-parent relations chosen by parents in the process of orientation of children to leisure activities.

In the context of the pandemic that swept the whole world in 2020, certain adjustments were made to the leisure activities of children and adults. Forced social isolation, the prohibition on free movement, the transition to remote work and distance education, including preschool children, put parents and children in new conditions of interaction,

significantly limiting the available forms of leisure activities. Considering leisure as a resource direction associated with the emotional perception of activity, we have come to understand leisure activities as a form of emotional development and self-attitude. In leisure activities focused on value-based interaction with other people (peers, elder children and parents), children have the opportunity to restore the resource emotional state, interaction with the gadget does not provide such an opportunity for resource recovery.

With the development of digital technologies in the modern world, there is a merger of offline and online activity formats, which allows us to determine the types of children's leisure and distinguish three groups of preschoolers who spend their leisure time in different ways within the family:

- children remaining within the traditional development system, i.e. they interact with other children, peers, younger and elder children, their main leisure time is focused on building relationships in a real environment;

- children using both the virtual and real system of relationships, i.e. the virtual system of relationships appeared as an alternative, taking into account the fact that the whole world was in a new environment of interpersonal interaction;

- children immersing in virtual relationships.

This approach allowed us to identify children of the Alpha generation with different leisure orientations in conditions of forced social isolation. Based on the timekeeping of leisure time spent by children with gadgets, and the data of the participant observation, the children were divided into two groups. The first group included preschoolers who spend mostly virtual leisure time. These children in conditions of forced social isolation spend more than two hours a day with the gadget, most of them seven days a week. As for digital gadgets, they have access to a tablet PC, a smartphone, a Playstation or Xbox game console, less often a laptop or a desktop computer, and many children also have access to the Internet via a TV with a digital set-top box.

Children are actively involved in digital interaction, like the content they like, and make reposts. Preschoolers prefer video content: cartoons and animated series, video blogs (unpacking toys, «Do It Yourself» or creative ideas, animals), entertainment programs, broadcasts of computer games. It turned out that children are very fond of watching someone else go through a virtual game. But there are children who prefer to play virtual games themselves, games popular with the surveyed children: «Roblox», «Minecraft», «Fishing for kids», «Subway surfers», «Fruit ninja», «Dentist».

The second group, with mixed leisure, consisted of children whose time spent in the digital environment is limited to 1-2 hours, these children usually view entertainment content on the Internet (informational, provocative, demonstrational), more often together with adults, children of this group also like to watch cartoons, video blogs, game broadcasts, or spend time playing. Parents actively control the content viewed by their children, try to follow the time limit, and often view Internet content together with their children.

Based on the results of the analysis, it can be said that preschool children of the Alpha generation are characterized by differences in immersion in virtual leisure, expressed in different degrees of involvement of children in the Internet reality and the variability of ways of conducting virtual leisure.

Let's consider further the features of anxiety and self-esteem of children with different degrees of involvement in virtual leisure. In the conditions of forced restrictions, parents have a choice, they can agree or disagree with the proposed conditions, while the child does not have such a choice, he depends on the factor of the parents' orientation to the organization of intra-family leisure, their actions are directly related to their attitude to the child.

There are few options, either to spend joint leisure time with the child, or to organize interaction with other children within the family or outside the family through the gadget, or to engage the child with the gadget itself, giving him the opportunity to immerse himself in

digital content. Moreover, when experiencing stress, being included in a situation of isolation, parents are carriers of destructive states, transmit tension, anxiety, and negative emotional states to children. A child who finds himself in such conditions becomes a hostage of a situation that affects his resource emotional state, he is deprived of the opportunity to work out problems, destructive states.

The established increased level of anxiety in the group of children included in virtual leisure suggests that preschoolers of this group are more likely to assess situations of direct interaction with other people as negative, in contrast to children of the second group who spend mixed leisure.

A qualitative analysis of children's responses showed that children who often interact with virtual reality are more likely to experience anxiety in situations that model child-child relationships. Situations involving the modeling of everyday actions or the child-adult relationship are less likely to cause negative reactions. Children of the second group, whose family leisure is significantly filled with active interaction with adults and other children, experience less anxiety, give a more positive assessment of situations that model child-child and child-adult relationships.

Inadequate self-esteem is more typical for children who spend active virtual leisure time poorly controlled by their parents. A sign of trouble in the child-parent relationship is the child's responses, in which the relatives place him on the lower rungs of the ladder [T.D. Martsinkovskaya]. Virtual leisure activities, a decrease in parental participation in the child's leisure life, has an impact on the formation of his overall self-esteem. The development of value judgments in relation to oneself, self-knowledge occurs in childhood under the influence of the totality of all opinions about it. Thus, the high level of involvement of the child in virtual leisure and the limited social contacts with other people contribute to a decrease in self-esteem and an increase in the level of anxiety.

The conducted correlation analysis confirmed the presence of a negative relationship between the self-esteem indicator and the level of anxiety, the higher the level of anxiety, the lower the self-esteem, and vice versa, low self-esteem can lead to excessive emotional tension and anxiety.

Correlations between anxiety, self-esteem, and indicators of child-parent relationships were also found. In child-parent relationships in a group of children with mixed leisure, parents are more focused on accepting the child, demonstrate a positive attitude towards him and spend a lot of time with him, also in this group, despite the fact that they are busy, parents are more interested in the inner world of the child, his hobbies, positively assess the child's abilities, stimulate his initiative and independence. Children in these dyads do not have a deficit in communication and interaction with their parents, in the child-parent relationship model there is no psychological distancing of parents, they are aimed at meeting the reasonable needs of the child, including social needs in communication, belonging, and joint interaction. The situation is different in dyads of children and parents, where children have a high degree of involvement in virtual leisure. We cannot say that the parents of this group are characterized by destructive types of family relationships, but the level of acceptance of the child, cooperation with him, the desire for close contact in the relationship of these parents is significantly less. The results of the level of parental control in these groups are interesting. In general, the relationships of parents to children in both groups are not characterized by authoritarianism. Control over preschoolers is twofold: on the one hand, parents are authoritarian, strict and keep the child within certain limits, strive to realize their unfulfilled dreams through him, control the state of health and determine what is more important for the child at the moment, on the other hand, they are democratic, giving him a certain independence in the manifestation of activity and self-expression. There is a tendency to the significance of differences, this indicator is slightly lower for parents of children who spend

virtual leisure time. The virtual leisure of children, which is poorly controlled by parents, aggravates the situation of separation of children and parents.

The absence of differences on the «little loser» scale in both groups indicates that parents positively assess the children's abilities, their merits and successes, and are ready to help the child, at the same time, many parents noted that they feel some regret that the child ceases to be small, grows up, and again try to control his contacts, in particular the choice of his friends.

Summarizing the comparative analysis of the results of the diagnosis of anxiety, self-esteem and the characteristics of child-parent relations, we can state that in the group of children with predominant virtual leisure, anxiety indicators are statistically significantly higher, and low self-esteem prevails, child-parent relations are characterized by a restrained acceptance of the child, a medium involvement in productive interaction with him, a weak focus on understanding the inner world of the child and taking an interest in his personal characteristics. The level of immersion of children in digital gadgets is mediated by the dominant system of child-parent relations in the family, the higher the level of acceptance of the child on the part of parents, their desire to jointly conduct family leisure activities with the child, the less children will be characterized by involvement in the virtual environment.

5 Conclusions

The analysis of the research results allows us to draw certain conclusions.

Preschoolers of the Generation Alpha, who find themselves in conditions of forced social restrictions, are characterized by differences in the degree of immersion in virtual leisure, two main groups of children are distinguished, differing in the degree of involvement and methods of conducting virtual leisure, most children are characterized by a weakly controlled immersion in virtual reality with an entertainment orientation.

It is confirmed that the specifics of leisure activities of preschool children of the Generation Alpha in the conditions of digitalization and forced social restrictions, the predominance of virtual leisure, affect the personal characteristics and resource state of children. Poorly controlled, prolonged immersion of the child in virtual leisure and limited social contacts with other people contribute to a decrease in the level of self-esteem, an increase in the level of anxiety and social distancing from parents.

It is revealed that the system of child-parent relations in the family can indirectly determine the level of children's immersion in digital gadgets, since parents, as organizers of children's family leisure, set the direction of this leisure by their attitude to the child, the higher the level of acceptance of the child by the parents, the understanding of the child's interests, the desire to spend free time together with the child, to build relationships in a real environment, the less children will be characterized by involvement in the virtual environment.

The conducted research actualized a whole range of issues related to understanding the social and personal development of a child in the digital environment.

In the future, we would like to expand the sample and study the features of digital immersion of preschool children. Identify the reasons that lead children to immersion in virtual leisure: this is their inner need, as growing up in a digital environment; or it is an incentive coming from parents, who are partly stimulators of children's immersion; or it is still a system of relations between parents – «digital emigrants» with children – «digital natives».

The solution of these questions generates the problem of creating diagnostic tools, since there are no questionnaires that allow us to study the features of digital education of modern preschoolers. It also seems promising to conduct research in the format of an experiment, which will allow us to get a qualitative extension, analyze the content of virtual content that attracts the child, establish where the child looks, how he looks, what he is interested in.

In this study, we tried to answer a number of questions related to the development of preschool children in the conditions of digitalization of society and forced social restrictions. An attempt is made to determine the general scheme of determinants of the development of children of the Generation Alpha, which include digital diversity and individual digital trajectory, as factors of the child's social and personal development.

Prospects for further research are presented.

References

1. L.S. Vygotsky, *Psychology of Human Development* (Smysl Publ.; EKSMO Publ., Moscow, 2005)
2. J. Piaget, *The Psychology of the Child* (Peter, St. Petersburg, 2003)
3. G. Soldatova, V. Shlyapnikov, O. Olkina, *Young children (0-8) and digital technology* (Publications Office of the European Union, Luxembourg, 2015) <http://publications.jrc.ec.europa.eu/repository/handle/JRC93239> 2019/11/23.
4. W. Strauss, N. Howe, *Generations The History of America's Future, 1584 to 2069* (New York, 2016)
5. J.M. Twenge, *iGen. Why today's super-connected kids are growing up less rebellious, more tolerant, less happy – and completely unprepared for adulthood* (New York, 2017)
6. M. Prensky, *On the Horizon* **9(5-6)**, 1-6 (2001) DOI: 10.1108/10748120110424816
7. M. McCrindle, A. Fell, *Understanding Generation Alpha* (McCrindle Research Pty Ltd, Australia, 2019)
8. G.U. Soldatova, E.I. Rasskazova, *Experimental Psychology (Russia)* **13(4)**, 88–101 (2020). doi:10.17759/exppsy.2020130406
9. G.U. Soldatova, O.I. Teslavskaya, *National Psychological Journal* **12(4)**, 12–27 (2019) doi: 10.11621/npj.2019.0402
10. S. Chaudron, R. Di Gioia, M. Gemo, *Young children (0-8) and digital technology, a qualitative study across Europe, JRC 110359, EUR 29070 EN* (Publications Office of the EU, 2018) <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/young-children-0-8-and-digital-technology-qualitative-study-across-europe> 2019/10/14
11. S. Chaudron, R. Di Gioia, M. Gemo, *Young children (0-8) and digital technology, a qualitative study across Europe, EUR 29070* (Publications Office of the EU, 2018) doi:10.2760/294383
12. W. Strauss, N. Howe, *The Fourth Turning: An American Prophecy – What the Cycles of History Tell Us About America's Next Rendezvous with Destiny* (Broadway Books, New York, 1997)
13. E.O. Smirnova, S.Yu. Smirnova, E.G. Sheina, *Journal of Modern Foreign Psychology* **8(4)**, 79-87 (2019) doi: 10.17759/jmfp.2019080408
14. D. Holloway, L. Green, S. Livingstone, *Zero to eight. Young children and their internet us* (LSE, EU Kids Online, London, 2013) <http://eprints.lse.ac.uk/52630/> 2021/03/05
15. V. Pishchik, *Procedia - Social and Behavioral Sciences* **60**, 461-468 (2018) doi: org/10.15405/epsbs.2018.07.60
16. T.D. Martsinkovskaya, *Diagnostics of mental development of children: textbook* (Moscow, 1998)
17. R.S. Nemov, *Psychology. Book 3. Psychodiagnostics* (VLADOS, Moscow, 2008)