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Perception of Time and Situation of Uncertainty by Students with Different Strategies of Informational Behavior

Galina Zvezdina*, Natalia Komerova

Don state technical university, Rostov-on-Don, Russia

*Corresponding author: komerova.nata@gmail.com

Abstract

Introduction. The high level of uncertainty in modern life makes young people turn to the virtual environment. Modern students are active users of Internet content and demonstrate different strategies of informational behavior of a normative and risky nature. Our research is devoted to studying the relationships between time orientations, information behavior strategies and indicators of tolerance to uncertainty among university students. **Methods.** The study involved 192 students of the humanities faculties, aged from 18 to 29 years, with an average age of 20 years; 160 girls and 32 boys. Methods used: "Strategies of Information Behavior" SIP (Abakumova et al.), questionnaire "Involvement in the Internet Environment" (Grishina, Zvezdina), D. McLane's Tolerance of Uncertainty Scale, "Time Perspective Questionnaire" by F. Zimbardo. Spearman's r-rank correlation coefficient was applied. **Results.** The sample of students shows a relative balance in the expression of time perspectives. Students with a positive past orientation are more tolerant of uncertainty; normative strategies of information behavior dominate in them. Students with a negative past orientation showed an avoidance of uncertainty and a preference for monosyllabicity. Students with a negative past orientation more often resort to risky behavior and seek satisfaction of their needs in non-normative ways in the Internet environment. The respondents' perception of their present as fatal showed their great vulnerability to risks, inability to control their lives and be tolerant of uncertainty. **Discussion.** Positive past orientation and hedonic present orientation are positively associated with preferences for uncertainty and novelty and normative information behavior strategies. Negative past experience reduces the level of tolerance to uncertainty and is associated with risky strategies of informational behavior, which can act as a coping strategy for unconstructive problem solving.

Keywords

informational behavior strategies, informational behavior, tolerance to uncertainty, time orientation, negative past, positive past, fatalistic present, hedonistic present.

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Introduction

Modern young people at the stage of professional and life self-determination are facing the challenge of growing global risks, digital transformations of the economy. On the one hand, a person faces the uncertainty of the current socio-cultural situation, the impossibility of predicting the future, and on the other hand, high rates of digitalization, flows of multidirectional content. These factors inevitably influence the beliefs, strategies and life orientations of the individual. In modern psychology, tolerance to uncertainty is studied in connection with various psychological characteristics, from life orientations, psychological endurance and well-being to creativity (Oral & Karakurt, 2022; Andronnikova, 2021; Geçgin & Sahanç, 2017; Lee, 2019; Nishikawa, Fracalanza, Rector, & Laposa, 2022; Bratukhin, Bratukhin, 2024; Researchers consider the time perspective both from its influence on the cognitive and behavioral sphere of the individual, as well as its dynamic nature and the factors that determine its development (Zimbardo, Boyd, 2010; Baird, Webb, Sirois & Gibson-Miller, 2021; Syrtsova et al., 2007; Mello, Barber, Vasilenko, Chandler & Howell, 2022; Yanitsky, Sery, Goloshapova, 2012; Personal information behavior has also been the focus of researchers in the last decade (Smirnov, 2021); Luchinkina et al., 2022; Yudeeva, 2022; Ionova, Pyataeva, 2021; Kozlova, Sushkov, 2014; Grishina et al., 2022). However, the description of the relationship between all characteristics: tolerance to uncertainty, time perspective and information behavior of an individual is not sufficiently presented in modern research.

Thus, there is great scientific interest in studying the nature and characteristics of the relationship between tolerance to uncertainty, time perspective and information behavior of the individual.

Aim of the research

The purpose of the study is to study empirically students' attitudes toward time in connection with informational behavior strategies and tolerance for uncertainty.

Based on the purpose of the study, the following hypotheses were put forward:

- there may be positive connections between normative models of information behavior of students, time orientations and indicators of tolerance to uncertainty;
- risky models of students' information behavior may be associated with students' negative past and fatalistic present.

When choosing the object of study, we proceeded from the fact that students, for the most part, are active users of Internet content and using their example we can trace various models of informational behavior. The modern Internet environment provides the user with a large number of pro-social resources, but this environment is risky, carrying unverified, sometimes offensive and provocative information, calls for illegal and destructive activities. Taking this situation into account, in the author's methodology aimed at studying models of information behavior, we focused on vectors of behavior based on normativity (prosociality) and deviance (riskogenicity).

Materials and methods

Sample characteristics

An empirical study was conducted on the basis of the Don State Technical University with students of the Faculty of Humanities (full-time and part-time department). The study involved 192 students, aged 18 to 29 years, the average age was 20 years.

Research methods

In accordance with the purpose of the work, the following research methods were selected:

- "Strategies of informational behavior" SIP (Abakumova I.V., Romek V.G., Kolenova A.S., Grishina A.V., Zvezdina G.P.);
- Questionnaire for studying the involvement in the Internet environment (Grishina A.V., Zvezdina G.P.);
- Uncertainty Tolerance Scale (D. McLane);
- Zimbardo Time Perspective Inventory (abbr. ZTPI).

The authors approach is based on the study of models of informational behavior using the author's technique "Strategies of informational behavior" SIP (Abakumova I.V., Romek V.G., Kolenova A.S., Grishina A.V., Zvezdina G.P.). The technique allows determining the severity of a particular strategy of informational behavior, based on the motivational orientation.

Based on the motives of informational behavior, we divided all the strategies we have identified into normative and risky ones. Normative strategies include:

- Internet for killing time;
- Internet for information search;
- Internet to tell others about yourself;
- Internet for shopping;
- Internet as a motivating force.

Risky strategies include:

- Internet as an access to alternative information (oppositional views);
- Internet for participation in communities (extremism, destructive tendencies);
- Internet for spying on others in social networks;
- Internet for the realization of sexual needs;
- Internet for expressing ideas (manifestations of nationalism).

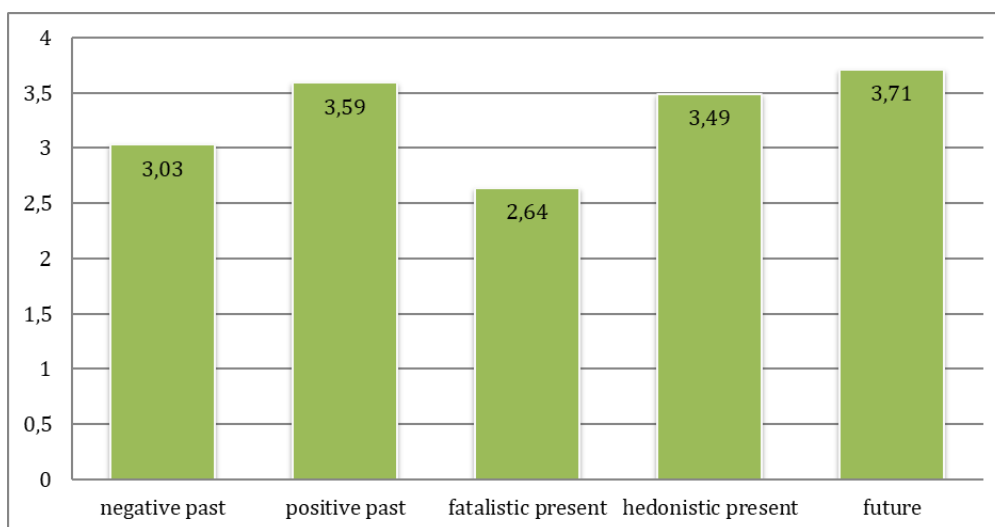
Each strategy is distinguished by a certain direction of behavior and a complex of different motives of behavior. (Grishina, et al., 2022).

Results

The study of the system of students' attitudes to time showed that the severity of time orientations is within the average values (Figure 1).

Figure 1

The severity of time perspectives among students (in points)



Students fairly evenly assess their past, present and future. The fatalistic present is less pronounced, which indicates that students rely more on themselves, their own strengths, and not on fate. Orientation to oneself and one's capabilities speaks of a realistic assessment of external and internal resources when making vital decisions.

The realism of the behavior of the respondents is also evidenced by the severity of the hedonistic present, the value of which is slightly below the average value. Orientation to the future suggests that students build goals and see the prospect of their lives.

Thus, the obtained results indicate a balanced (harmonious) system of attitude to time. Recognizing the positive and negative experiences of the past, students live in the present and plan their future.

In modern conditions, students live in a mixed reality, the use of electronic means has become a vital necessity today. Using digital devices, students use different strategies of information behavior.

We have studied the relationship between time orientations, strategies of informational behavior of students and indicators of tolerance to uncertainty.

The study of the relationship between time orientations and motivational strategies of students' informational behavior made it possible to identify the specifics of the manifestations of normative and risky informational behavior, attitudes towards the new and uncertainty among students with different time orientations (Table 1).

Table 1

Results of the correlation analysis between the time orientation "negative past", strategies of informational behavior and indicators of tolerance for uncertainty

Variables	Correlation coefficient (Rs)	p-value
negative past & uncertainty preference	-0,38	0,01
negative past & novelty attitude	-0,33	0,01
negative past & uncertainty tolerance	-0,51	0,01
negative past & attitude towards uncertainty	-0,41	0,01
negative past & Internet as an access to alternative information	0,27	0,01
negative past & Internet to participate in communities	0,21	0,05
negative past & Internet for the realization of sexual needs	0,21	0,05

According to the position of F. Zimbardo, the negative past reflects a general pessimistic, negative attitude or attitude with an admixture of disgust towards the past. The study of correlations between the negative past and informational behavior strategies showed that this time orientation is associated only with risky informational behavior strategies; no statistically significant relationships were found with normative strategies.

The negative past has direct weak links with such risky information behavior strategies as - "Internet as an access to alternative information" ($r=0.27$, $p < .01$), "Internet to participate in communities" ($r=0.21$, $p < .05$), "Internet for the realization of sexual needs" ($r=0.21$, $p < .05$). The obtained results may indicate that the traumatized past encourages respondents to risky behavior, to seek satisfaction of their needs in non-normative ways. Perhaps a negative reconstruction of past events through participation in online communities, the search for alternative, not always verified information acts as a defense mechanism against the negative, traumatic influence of the past.

Traumatization of past experience is reflected in the acceptance of the new and uncertain. Moderate inverse relationships were found between the negative past and uncertainty tolerance scales - preference for uncertainty ($r=-0.38$, at $p < .01$), attitude towards novelty ($r=-0.33$, at $p < .01$), tolerance for uncertainty ($r= - 0.51$, at $p < .01$), attitude to uncertainty ($r= - 0.41$, at $p < .01$). Respondents with a negative attitude towards their past prefer a stricter regulation of their lives, a complete understanding of what is happening. It is difficult for them to navigate in a new situation, situations of uncertainty and unpredictability are perceived by them as unfamiliar, complex and additionally traumatize them.

Let's analyze the relationship between the positive past and the studied parameters (Table 2).

Table 2

The results of the correlation analysis between the time orientation "positive past", informational behavior strategies and scales of tolerance for uncertainty

Variables	Correlation coefficient (Rs)	p-value
positive past & preference for uncertainty	0,26	0,01
positive past & attitude towards novelty	0,32	0,01
positive past & tolerance to uncertainty	0,34	0,01

Variables	Correlation coefficient (Rs)	p-value
positive past & attitude towards uncertainty	0,26	0,01
positive background & attitude towards challenging tasks	0,29	0,01
positive past & Internet as a motivating force	0,21	0,05

Acceptance of one's own past experience correlates with only one strategy of informational behavior - "Internet as a motivating force" ($r= 0.21$, $p < .05$). A positive past acts as a kind of life support for the respondents and acceptance of the present and future. A positive past has direct moderate connections with all uncertainty tolerance scales. A positive attitude towards one's past also contributes to a positive attitude towards uncertain situations. Students who perceive their past positively are more likely to perceive themselves as a subject of their own actions and control their own lives, they are more optimistic about their own successes and failures, and more likely to expect success in the future. They easily accept complex tasks ($r=0.29$, at $p < .01$) and are optimistic about the challenges of the time, seeing them as new opportunities ($r=0.32$, at $p < .01$).

The study of the links between strategies of informational behavior, scales of tolerance to uncertainty and orientation to the fatalistic present showed that there are direct and reverse weak links (Table 3).

Table 3

Results of the correlation analysis between the time orientation "fatalistic present", strategies of informational behavior and scales of tolerance to uncertainty

Variables	Correlation coefficient (Rs)	p-value
fatalistic present & uncertainty tolerance	-0,26	0,01
fatalistic present & attitude towards complex tasks	-0,22	0,05

GENERAL PSYCHOLOGY, PERSONALITY PSYCHOLOGY, PHILOSOPHY AND PSYCHOLOGY

Variables	Correlation coefficient (Rs)	p-value
fatalistic present & internet as an access to alternative information	0,21	0,01
fatalistic present & Internet to participate in communities	0,21	0,01

The fatalism of the present is manifested in the fact that a person considers his life as completely dependent on external circumstances, on the will of fate, and does not see the possibility of managing it. The connection between the fatalistic present and risky strategies of information behavior - "Internet as an access to alternative information" ($r=0.21$, $p < .05$), "Internet for participation in communities" ($r=0.21$, $p < .05$) indicates that a person who is insecure about his present doubts all the time and seeks support in communities that give illusory support and instill some confidence that you are not alone in his thoughts and doubts. Access to alternative information gives the user a sense of acceptability for diversity and variation in how reality can still be viewed.

The feedback between the fatalistic present and uncertainty tolerance ($r= -0.26$, at $p < .01$) suggests that a person who attaches great importance to the will of fate and external circumstances, a dogmatic person, hardly survives new and unpredictable situations, hardly adapts to changes, which can lead to a decrease in adaptation.

Feedback with the "attitude to complex tasks" scale ($r= -0.22$, at $p < .05$) confirms the conclusion that a person with a pronounced fatalism of the present strives for simplicity, algorithmization, clarity both in business and in relationships. Such a person demonstrates helplessness and tries to find support outside, exposing himself to additional risks.

The largest number of connections was obtained in the study of the hedonic present (Table 4).

Table 4

Results of the correlation analysis between the time orientation "hedonistic present", informational behavior strategies and scales of tolerance for uncertainty

Variables	Correlation coefficient (Rs)	p-value
hedonistic present & uncertainty preference	0,41	0,01
hedonistic present & attitude to novelty	0,47	0,01
hedonistic present & Internet to tell others about yourself	0,47	0,01
hedonistic present & Internet for shopping	0,35	0,01
hedonistic present & Internet for "killing time"	-0,24	0,01
hedonistic present & Internet as a motivating force	0,40	0,01
hedonistic present & Internet for spying on others in social networks	0,32	0,01
hedonistic present & Internet for the realization of sexual needs	0,21	0,05
hedonistic present & Internet for expressing religious ideas	0,22	0,05

The hedonistic present reflects the focus on the "here and now", on getting pleasure, as evidenced by correlations. A direct moderate relationship was found between the hedonistic present and informational behavior strategies - Internet to tell others about yourself ($r=0.47$, $p < .01$), Internet for shopping ($r=0.35$, for $p < .01$), Internet as a motivating force ($r=0.40$, $p < .01$). The focus on oneself and one's actual needs is also manifested in the Internet environment. Representing and presenting themselves in the Internet space, respondents experience pleasure, amuse their pride and reinforce their self-esteem. When shopping on Internet sites, they also satisfy their hedonistic consumer needs. The example of others acts as a motivating force for them, carries them away to new adventures and pleasures.

An interesting result was obtained by revealing the correlation between the Internet strategy for "killing time" and the hedonic present ($r=-0.24$, at $p < .01$). Students focused on getting pleasure from life today do not want to waste their time on empty wandering around the Internet and wasting personal time. Their behavior on the Internet is more purposeful and objectified.

The presence of direct links between the hedonistic present and risky strategies of informational behavior - Internet for spying on others ($r=0.32$, $p < .01$), Internet for the realization of sexual needs ($r=0.21$, for $p < .05$), Internet for expressing religious ideas ($r=0.22$, at $p < .05$), also indicates their hedonistic orientation, the orientation of getting pleasure "here and now".

Orientation to hedonism, often takes the person away from the need to think about the future and their future prospects, their behavior is characterized by the fact that they are focused on the present and they have no concern for the future.

The relationship of present hedonistic with uncertainty preference and attitudes toward novelty suggests that the uncertainty associated with risking the unknown attracts pleasure-oriented individuals.

The study of the relationship between future orientation and information behavior strategies showed that there were direct weak links with normative strategies – "Internet as information search" ($r=0.21$, $p < .05$) and "Internet as a motivating force" ($r=0.23$, at $p < .05$) (Table 5).

Table 5

The results of the correlation analysis between the time orientation "future", information behavior strategies and indicators of tolerance for uncertainty

Variables	Correlation coefficient (Rs)	p-value
future & uncertainty preference	-0.32	0.01

Variables	Correlation coefficient (Rs)	p-value
future & internet for information search	0.21	0.05
future & internet as a motivating force	0.23	0.05

Students focused on the future, on achieving their plans and prospects actively use the Internet to search for information to solve issues of study, project implementation and research activities. An example of successful people presented in the Internet space acts as a kind of guideline for them, which they can rely on when designing their future.

An inverse relationship was established between future orientation and uncertainty preference ($r = -0.32$, $p < .01$). The more respondents prefer uncertainty, the less they are able to imagine their future. Perhaps the expectation of constant novelty, changes in situations do not allow them to determine long-term plans, see their prospects. The preference for uncertainty is associated with the hedonistic present, the respondents' acceptance of risk and unpredictability increase emotional arousal. The subsequent release brings pleasure to the respondents and fills their life with content and meanings.

Discussion

In recent years, research has been actively conducted on the attitude of the individual to the situation of uncertainty. So, Oral M., Karakurt N. (2022) state that psychological endurance is negatively correlated with tolerance for uncertainty. Thus, the greater the resistance to difficult life situations a person has, the lower the tolerance for uncertainty, the more expressed the desire for anticipation of the future, greater concretization; Andronnikova O.A. (2021) describes the relationship between uncertainty tolerance and endurance among adolescents ("Risk Taking" ($r = 0.75$), "Control" ($r = 0.71$), "Involvement" ($r = 0.65$), "Resilience" ($r = 0.65$)); Geçgin & Sahranç (2017) study the relationship of intolerance to uncertainty and psychological well-being; Lee (2019) analyzes the effect of resilience on uncertainty intolerance in medical students; Nishikawa, Fracalanza, Rector, & Laposa (2022) determine that uncertainty intolerance significantly influences the association between social interaction anxiety and negative interpretations of positive events; Sokolova (2015) notes that tolerance to uncertainty and tolerance of ambivalence

may indicate the achievement of individual maturity, constancy and integrity of "Self", capable of coping with anxieties. Bratukhin E., Bratukhin A. (2024) analyze the perception of time in individuals with a predominance of tolerance or intolerance to uncertainty. They note that in subjects with a predominance of tolerance to uncertainty, situations of the past and future are perceived as dynamic, significant, filled with personal meaning and positive emotional experiences. Panova, V.S. (2021) analyzes the relationship between tolerance for uncertainty, meaningful life and value orientations; Kondrashikhina O. A., Tikhomirova I. A. (2020) study the verbal and non-verbal creativity and uncertainty tolerance of psychology students.

Our results are partially consistent with the results of researchers: a positive past and hedonic present have positive relationships with tolerance for uncertainty, and future orientation has a negative relationship with preference for uncertainty. Time perspective is considered one of the most powerful influences on human behavior (C. Peng et al, 2021). There was a number of studies analyzing how time perspective links to psychological and behavioral peculiarities of a person, determines his values and aims.

Zimbardo P., Boyd J. (2010) note that time perspectives have a strong influence on the cognitive and behavioral sphere of the individual. Baird, H. M., Webb, T. L., Sirois, F. M., & Gibson-Miller, J. (2021) found that future time perspective is associated with self-regulation skills and influences.

Researchers point to the dynamic nature of time perspectives. Syrtsova A., et al. (2007) studied the age dynamics of the time perspective, the features of the personality's time perspective at different ages (from older adolescence to late adulthood), gender differences in the manifestation of the personality's time perspective at different ages, factors influencing the formation of the dominant time perspective. Mello, Barber, Vasilenko, Chandler & Howell (2022) concluded from their research that attitudes toward time perspective change with age: adolescents and young adults think more often about the future, but the older a person gets, the more he turns to the present. The authors also note that people with low self-esteem have a greater emphasis on the past than others, while high self-esteem is characteristic of people who highlight the present and future as the most important. Time perspectives can change over the course of a lifetime, influenced by career, economic and political instability, substance use, traumatic events, or personal successes and failures.

The formation of time perspectives is influenced by many factors, some of which are related to the process of socialization (cultural values and the predominant religious orientation, type and breadth of education, socio-economic status and family patterns). Chronotopic characteristics of the students' world image are reflected in the studies of Yanitsky M. S., Sery A. V., Balabashchuk R. O. (2019). Analyzing the value-semantic

orientation and socio-cultural determinants of the image of the future of student youth scientists conclude that two-thirds of the representatives of student youth reveal a formed value-semantic orientation of the image of the desired future, the nature of which is determined by belonging to a particular socio-cultural environment. The semantic regulation and temporal organization of the life path of a modern personality was studied by Goloshapova E.S.(2012). Features of the perception of life prospects in a difficult life situation were investigated by Timofeeva, T.S., Belikova A.V., 2021.

Researchers believe that temporal orientation, attitudes and experiences can be considered as stable personality traits (Zimbardo P.G., Boyd J., 1999). Temporal prospects are considered as an expression of one's own system of personal meanings, which allows one to create a coordinated system of coordinates for the life of a person at a particular age (level of education, marital status, etc.). Russian scientists Bastrakova, Mukhlynina, Sharov (2020) are attempting to describe the features of modeling life prospects by the digital generation; Zhemchugova (2020) presents time perspective as a factor in a person's basic beliefs.

Stolarski et al. (2020) analyzed the construct of time perspective (TP) and its connection with a number of psychological phenomena, including well-being, mental health, personality, cognitive functioning, self-control, interpersonal relations, as well as biological features and demographic variables. Sobol, Przepiórka, Meisner & Kuppens, (2021) studied the effect of fatalistic time perspective on self-esteem in extraverts and introverts. It was shown that introverts after the induction of fatalistic time perspective had higher self-esteem than introverts after neutral induction.

Russian scientists such as Bastrakova, Mukhlynina, Sharov (2020) are attempting to describe the features of modeling life prospects by the digital generation; Zhemchugova (2020) presents time perspective as a factor in a person's basic beliefs.

The connection between time perception and risky behaviour was studied (Sekścińska, Rudzinska-Wojciechowska & Maison, 2018) in the context of risky financial choices. Authors showed that chronic Future and Present Hedonistic TPs are the most important in the context of risky financial choices. Higher Future TP is related to a propensity to invest and make safe investment choices. Higher Present Hedonistic TP is related to a low propensity to invest and risky investment. These values correlate favorably with their colleges from University of Warsaw Łukasz Jochemczyk, et al, and futhersupport the idea that risk-taking can be linked to stable personality traits, such as impulsivity and extraversion. So, they propose that time perspective is another personal characteristic that affects risk taking. Specifically, authors hypothesized that a habitual focus on the hedonic aspects of the present would be associated with greater risk-taking propensity

in a variety of domains (e.g., health, investments, ethics). It means that individuals who are focused on the hedonistic aspects of the present appeared to be more interested in risk-taking than are those whose do not focus on this perspective. (L. Jochemczyk, 2017) This matches well with our findings about the correlation of hedonistic present and risky behavior online.

The accelerated pace of digitalization has stimulated greater research activity in the study of individual informational behavior. Thus, Smirnov (2021) considers digitalization as a factor in the formation of deviant illegal behavior among students; Luchinkina et al. (2022) analyze the gender characteristics of media consumption by modern youth; Yudeeva (2022) describes the features of motivation for destructive communicative behavior of adolescents on social networks; Ionova, Pyataeva (2021) study the personal characteristics of students prone to Internet addictive behavior; Kozlova and Sushkov (2014) studied the relationship between virtual identity and the user's emotional orientation; psychological predictors of risky information behavior among student youth were reviewed by Grishina and others (2022).

Our findings are also in good agreement with results of Luca Chittaro, Andrea Vianello (2013): Past Negative and Present Fatalistic temporal frames are predictors of problematic Internet use.

As hypothesized, our experiment demonstrates that time perspective can be considered as one of psychological predictors of risky behavior.

Conclusion

Our study was devoted to the students' attitudes to time in connection with information behavior strategies and tolerance to uncertainty. Based on the empirical study, the following conclusions were drawn:

- The sample of students who took part in the study demonstrated a fairly balanced system of attitudes towards time - past, present and future;
- Negative past has direct links with risky information strategies and feedbacks with indicators of tolerance for uncertainty, which indicates that situations of uncertainty are more difficult for people with traumatic past experience and they more often resort to risky behavior in the Internet environment, compensating for their experiences and traumas;
- Positive past has direct links with the normative strategy "Internet as a motivating force" and acts as a predictor of tolerance to uncertainty, acceptance of new and complex situations;
- Fatalistic present has direct links with risky information strategies and reverse

with indicators of tolerance to uncertainty, belief in fate and fatalism make a person vulnerable to risks, deprives him of control over his own life and makes him less tolerant to uncertainty and complex ambiguous tasks;

- The obtained results confirm the hypothesis that risky models of information behavior of students can be associated with a negative past and a fatalistic present among students;
- Hedonistic present has direct links with both normative and risky strategies of informational behavior, with a preference for uncertainty and an attitude towards novelty. A hedonistic orientation shows that students are willing to take pleasure in a variety of ways, including taking risks from the unknown and the uncertain;
- Orientation to the future has direct links with the normative strategies of informational behavior aimed at searching for information and using others as motivational guides and feedback with a preference for uncertainty.
- The results obtained indicate that the first hypothesis was partially confirmed.

The evidence from this study suggests that the current situation of uncertainty, a high rate of change requires a quick response, focus on the "here and now", risk, so it is more in line with the "hedonic present" time perspective and makes it difficult to predict the future, especially in the long term. The present findings might be used in preventive and psycho-corrective work with student youth on the development of pre-adaptive abilities, readiness to accept the new and uncertainty, on forecasting of models for the implementation of the future.

Limitations of the study

Limitations may include the following circumstances: 1) we conducted research on a student sample; 2) we did not take into account the gender characteristics of the respondents. It is obvious that informational consumption (in particular, preferred strategies of informational behavior) among representatives of different generations and among men and women may differ for various reasons.

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Galina Pavlovna Zvezdina – concept and design of the study, selection of diagnostic techniques, data collection.

Natalya Evgenievna Komerova – analysis of literature on the research topic, preparation of sections “introduction” and “discussion of results”.

Author Details

Galina Pavlovna Zvezdina – Candidate of Psychological Sciences, Associate Professor, Don State Technical University, Rostov-on-Don, Russian Federation; Scopus Author ID: 57218105639, RSCI SPIN code: 3786-8656, ORCID ID: <https://orcid.org/0000-0003-3284-2221>, e-mail: galzvezdina@yandex.ru

Natalya Evgenievna Komerova – assistant at the Department of General and Consultative Psychology, Don State Technical University, Rostov-on-Don, Russian Federation; Scopus Author ID: 57224224034, RSCI SPIN code: 8656-9790, ORCID ID: <https://orcid.org/0000-0001-7129-3320>, e-mail: komerova.nata@gmail.com

Conflict of Interest Information

The authors have no conflicts of interest to declare.