

ICPE 2018
International Conference on Psychology and Education

**STRESS RESISTANCE AND TEMPORAL PERSPECTIVE OF
CHINESE AND RUSSIAN STUDENTS**

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Abstract

The study of stress-resistance characteristics and time perception of Chinese and Russian students in the process of international education is becoming particularly relevant in connection with it come to adaptation to the culture of another country. It was suggested that there are differences in stress-resistance and temporary prospects for Chinese and Russian students. To study the peculiarities of stress-resistance and temporary prospects for Chinese and Russian students. In the study, 4 questionnaire techniques were used. 120 Chinese and Russian students participated in a sample presented in 4 subgroups aged 18-22: 30 boys from China, 30 girls from China, 30 boys from Russia, 30 girls from Russia (RUDN University, Moscow). The perception of present-hedonistic in stressful situations to a great degree prevails among Russian students, which confirms that Russian students are less emotionally excited under stress than Chinese students. The data obtained on organizational stress indicate a predominance of organizational stress among Chinese students. According to cognitive results, Chinese students have a higher ability to mentally absorb and process external information than Russian students. There are differences among the characteristics of stress-resistance and temporary prospects for Chinese and Russian students. Common factors found among students were: the factor of present-fatalistic with past negativity; the factor of flexibility of behavior during the experience of stress, high factor in the excitation at low tonus; specify was presented in: a high emotional excitement and a propensity to develop stress among Chinese students.

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Keywords: Stress resistance, time perception of the person, multicultural environment, Chinese students, Russian students.



1. Introduction

me perception of personality and its ability to overcome anxiety has significant variables in overcoming stress (Papastamatelou, Unger, Giotakos, & Athanasiadou, 2015). Personal orientation for the future is clearly linked to the choice of cognitive and behavioral coping strategies, while the orientation toward the negative past leads to attempts at emotional coping (Bolotova, & Hachaturova, 2013). There are intercultural differences in the future-oriented, present-oriented, balanced and negative time perspective (Boniwell, Osin, Linley, & Ivanchenko, 2010). Productive coping is associated with successful acculturation (Sam, & Berry, 2006). The particular acculturation experience in the case of Chinese students studying in Russian universities has the task of overcoming the stress of adaptation, as well as changing the temporal perspective (Berry, 1999). Russian students experience stress in connection with being immersed in a multicultural educational environment that requires the use of productive copying and better management of their time in stressful situation (Cuccioletta, 2002).

2. Problem Statement

The need to study the characteristics of stress-resistance and time perception is conditioned by: 1) scientific reasons for properly understanding the relationship between stress-resistance, time perception and ethno-cultural differences (Morselli, 2013); 2) the need for psychological support for students, taking into account their ethno-cultural characteristics when perceiving time in a stressful period. Thus, the question of how similar or different are stressful experiences in cultures with low and high tolerance to uncertainty remains undeveloped (Hofstede, Hofstede, & Pedersen, 2012). Understanding this issue could greatly improve the quality of psychological assistance given to students (Shafaei, Nejadi, & Abd Razak 2018) and improve the psychological climate in a multicultural educational environment (Chai, Krägeloh, Shepherd, & Billington, 2012).

3. Research Questions

The research hypothesis assumption is that there are differences of stress-resistance characteristics and time perception among Chinese and Russian students. The issue raised in the study are about the similar and different aspects of coping with stress between the two groups of participants, taking into account their temporal perspective, ethnicity and gender. The main questions of this study were whether there are differences between the two groups when it comes to using different coping strategies, how the temporary perspective is related to stress in both groups and what time resources are used by participants to increase stress resistance.

4. Purpose of the Study

The goal of the investigation is to study the characteristics of the stress-resistance and time perspective of Chinese and Russian students. Interpretation of the results in this investigation is consistent with the theory of temporary perspective F. Zimbardo, which says that assessing one's past, present and future personality can be resourceful in overcoming a stressful situation (Zimbardo & Boyd, 2010).

5. Research Methods

5.1. Participants

The investigation was made up of an equal number of males and females and had a sample of 120 Chinese and Russian students from various faculties in the Peoples Friendship University of Russia. This was represented in four mini-groups aged 18 to 22, with an average age of 20; 30 males from China, 30 females from China; 30 males from Russia, 30 females from Russia.

5.2. Measures

The investigation used: the Zimbardo Time Perspective Inventory (Zimbardo & Boyd, 1999). A questionnaire "Current status" was used for determining development of stress trends by T.A. Nemchin, & J. Taylor, the scale of organizational stress by A. Macklin (Vodopiyanova, 2009). Each participant was instructed to answer all the questions on the questionnaires.

5.3. Statistical Analysis

Comparative and factorial analysis (with SPSS 22.0) were used to process and interpret results.

6. Findings

Comparative analysis of Chinese and Russian students in connection with the peculiarities of stress resistance and temporal perspective between two samples through the nonparametric Mann-Whitney U-test revealed that there are significant differences in the scales, presented in the table below.

Table 01. Significant differences in the characteristics of stress-resistance and temporal prospects of Chinese and Russian students

| Name of the scale | Average rank by the scale for Chinese students (M _{China}) | Average rank by the scale for Russian students (M _{Russia}) | Mann-Whitney U criteria | Significance level (p<0.05) |
|----------------------------------|---|--|-------------------------|--------------------------------|
| Present hedonistic | 49.93 | 71.07 | 1166.0 | 0.001 |
| Emotional excitement: low – high | 68.16 | 54.84 | 1340.5 | 0.016 |
| Tonus: low - high | 54.44 | 68.56 | 1316.5 | 0.011 |
| Propensity to develop stress | 79.43 | 41.58 | 664.5 | 0.001 |
| Organizational stress | 70.70 | 50.30 | 1188.0 | 0.001 |
| Cognition | 68.43 | 52.57 | 1324.0 | 0.012 |

Based on the data reflected in Table 1, it can be seen that the perception factor of the hedonic adaptation largely prevails among Russian students. This may be due to the fact that the Chinese are very diligent, so they probably spend a lot of time working and studying, and they have no time for entertainment. The results of the factor "Emotional excitement: low - high" indicate that Russian students are less emotionally excited than Chinese students. This may be due to the fact that most of the Chinese are characterized by high excitability. In addition, Chinese students face many difficulties, as they study in a

foreign country. The factor "Tonus: high - low" indicate that Russian students have a higher tonus than Chinese students. This may be due to the various difficulties experienced by Chinese students, and can be also due to the fact that Russians are more energetic and active than the Chinese. The results "propensity to develop stress" indicate that Chinese students are more likely to develop stress than Russian students. The Chinese, in spite of the high standard of living, the developed economy of the country and a well-organized health care system, are still more exposed to stress.

The data obtained on "organizational stress" indicate a predominance of organizational stress among Chinese students. For them, life in a new culture is often painted in gloomy colors. According to results for the cognition scale, Chinese students have a higher ability to mentally absorb and process external information than Russian students. Chinese have very well developed visual memory, which may be due to the fact that they have remember a huge number of hieroglyphs - a great work. Further analysis using the Kruskal-Wallis H-test shows statistically significant differences with gender and ethnicity. This is presented in the following table.

Table 02. Significant differences in the characteristics of stress-resistance and temporal prospects of Chinese and Russian students

| Name of the scale | Average rank by the scale for Chinese men (M _{men+China}) | Average rank by the scale for Chinese women (M _{women+China}) | Average rank by the scale for Russian men (M _{men+Russia}) | Average rank by the scale for Russian women (M _{women+Russia}) | Pearson's X ² | Significance level (p<0.05) |
|------------------------------|---|---|--|--|--------------------------|-----------------------------|
| Present hedonistic | 40.95 | 58.92 | 70.83 | 71.30 | 15.102 | 0.002 |
| Calmness - Anxiety | 54.50 | 73.07 | 49.93 | 64.50 | 8.019 | 0.046 |
| Propensity to develop stress | 90.18 | 68.67 | 41.98 | 41.17 | 41.574 | 0.001 |
| Organizational stress | 57.70 | 83.70 | 45.28 | 55.32 | 20.069 | 0.001 |
| Cognition | 62.85 | 74.02 | 51.75 | 53.38 | 8.002 | 0.046 |

Based on the data presented in Table 2, it can be seen that the factor of the "Present hedonistic" prevails among Russian female students. This is due to the fact that the Chinese are very hardworking, so they probably spend a lot of time working and studying, and they do not have time for entertainment. Russians, however, are characterized by a more hedonistic and risky attitude toward time and life. The results show that Russian students are focused on enjoyment, pleasure, excitement and thrill in the present and the absence of concern about the consequences in the future. The results of the "Calmness - Anxiety" scale show that anxiety prevails among Chinese female students. This is due to the fact that in women the propensity to anxiety is much greater than for men. In addition, Chinese students face more difficulties, as they study in a foreign country. In this regard, Chinese women are more anxious than others.

According to the data on the scale of "Propensity to develop stress", Chinese male students are more likely than others to develop stress. This is explained by the fact that Chinese men are pragmatic and conservative, they have great responsibilities and serious demands on them since childhood. In this regard, they are more likely to develop stress. The obtained results of organizational stress indicate the severity of

organizational stress among Chinese female students. This is due to the fact that women are more likely to experience and remember the emotional experiences and in addition, they face more difficulties in Russia. In this regard, they are more prone to stress than others. Data collected on the “Cognition” scale, suggest that Chinese female students have a higher ability to mentally absorb and process external information than others. This is due to the fact that the Chinese are characterized by the development of thinking, good memory and concrete perception. In addition, women are more attentive, they are inclined to simultaneously solve several problems at once.

The further implementation on the factor analysis using Varimax made it possible to distinguish four factors in each of the subgroups of students. During the factor analysis in the sample of Russian students, the following factors were identified: The first factor, conditionally named "A factor of discomfort with the negativity of the past and the Present-Fatalistic", included the following variables: negative past (0.893); the positive past (- 0.776); the present- fatalistic (0.718); well-being physical: comfortable - uncomfortable (0.663). The second factor is called "factor of flexible behavior and deactivation under stress", which included variables: flexibility of conduct (0.800); propensity to develop stress (-0.744); organizational stress (0.709); activation - deactivation (0.572). The third factor is called the "activity factor with high excitation and low tonus, and included the following variables: emotional excitement: low - high (0.933); tone: high - low (0.629); activity (0.618). The fourth factor, called the "cognitive factor and the breadth of interests in hedonistic relation to the present" is represented by the following variables: present hedonistic (0.758); cognition (0.712); depth of interests (-0.615).

During the factor analysis of the sample of Chinese students, the following factors were identified: The first factor, called "factor of activity, flexibility of behavior and depth of interests in experiencing stress and anxiety", contains the following variables: organizational stress (0.784); flexibility of behavior (0.763); breadth of interests (0.744); activity (0.695); calmness - anxiety (0.602). The second factor, "the factor of the present-fatalities with the negativity of the past," is indicated by the following variables: the present-fatalistic (0.805); positive past (-0.753); the negative past (0.669); present hedonistic (-0.573). The third factor, conventionally called "discomfort and deactivation factor with high excitation and low tone", consists of variables: physical well-being: comfortable - uncomfortable (0.786); emotional excitation: low - high (0.762); tone: high - low (0.622); activation - deactivation (0.570). The fourth factor, called the "factor of cognition and acceptance of the values of others", includes the following variables: acceptance others values (0.763); cognition (0.726).

Table 03. Factors of stress-resistance and temporal perspectives among Chinese and Russian students

| Factors dominant among Russian students | Factors dominant among Chinese students |
|--|---|
| Factor of stress-resistance and temporal perspectives among Russian students | Activity, flexibility of behavior and breadth of interests in experiencing stress and anxiety |
| Discomfort with negativity of the past and present-fatality | The present fatalities with the negativity of the past |
| Flexibility and deactivation behavior under stress | Discomfort and deactivation under high excitation and low tonus |
| Activities under high excitation and low tonus | Cognition and acceptance of others values |

The results of the first factor suggest that Russian students expressed an elevated level of present-fatalism, negative past and uncomfortable physical well-being. This factor reflects the absence of a focused time perspective. The present is seen by the subjects as originally predetermined and independent of their will. Respondents experience a pessimistic and negative attitude towards the past. Such an attitude can be caused by real traumatic and unpleasant events, or a negative reconstruction of positive events, or both. Negative experiences in the past and present are the cause of discomfort in the subjects.

Chinese students also experience a negative attitude towards the past and a present-fatalistic, helpless and hopeless attitude toward the future and life. In the second factor, a tendency to develop stress among Russian students is not observed, they show deactivation and flexibility of behavior, but experience organizational stress. The results of the third factor indicate that Russian students are emotionally energized and active, but in low "tonus". Chinese students are also emotionally aroused, in low "tonus", but unlike Russian students in this regard, they experience discomfort, and show de-activity. The results of the fourth factor show that Russian students who enjoy the present have an increased level of cognition and breadth of interests. Chinese students also expressed the level of cognition and the level of acceptance.

7. Conclusion

Based on the research carried out, the hypothesis was confirmed that there are differences in the characteristics of stress-resistance and temporal perspectives among Chinese and Russian students. Comparative analysis revealed that Russian students with negative coloring of the past are characterized by experiencing difficulties in the present, a tendency to develop stress and an inability to accept the values of other people. The Chinese students were characterized by with a negative assessment of the past, anxiety, a tendency to develop stress, activity, a fatalistic attitude toward the present and good physical well-being. For Russian students with a hedonistic attitude towards the present, there is a lack of interest in the current process of life and the future. For Chinese students with a hedonistic attitude toward the present there, a positive assessment of the past and resistance to stress develop. Chinese students' hedonistic attitude toward the present is characterized by a positive assessment of the past and resistance to stress. For Russian students with an orientation toward the future, low emotional excitement is characteristic. For Chinese students, with future orientations, a positive assessment of the past is characteristic. Russian students with a positive attitude toward the past are characterized by the absence of a negative attitude towards the present, the acceptance of the values of others, the breadth of interests, the flexibility of behavior, as well as anxiety and low physical well-being. For Chinese students with a positive assessment of the past is characterized by future orientation and the absence of a fatalistic attitude toward the present. For students with present-fatalistic tendencies, negative experiences in the past, a propensity to develop stress, activity, non-acceptance of the values of others, calm and good physical well-being are characteristic. For Chinese students with a present-fatalistic attitude, a negative experience of the past and activity is characteristic.

Factor analysis shows the common factors among Chinese and Russian students which are: the present-fatalistic factors with a negative past, the factor of flexibility of behavior when experiencing stress, the factor of high excitement with low tonus; and specifically, the manifestation of high emotional excitement and propensity to develop stress among Chinese students, and in the high tonus and perception of the hedonic present among Russian students. The data obtained can be used by psychology educators

with the purpose of psychologically diagnosing students, in searching for the reasons of their underachievement, and also to develop and correct psychological and pedagogical support programs for students. We believe that different methods and techniques should be used that are aimed at developing stress resistance, increasing adaptation, training in self-help skills and stimulating the integration of the individual.

Acknowledgments

The study has been supported by The Russian Foundation for Basic Research, the project № 17-06-00834 «Intellectual base of emotion recognition by the representatives of different culture».

References

- Berry, J.W. (1999). *Cultures in contact: Acculturation and change*. Allahabad: Pant Social Science Institute.
- Bolotova, K.A., & Hachaturova, R.M. (2013). The role of time perspective in coping behaviour. *Psychology in Russia: State of the Art*, 6(3), 120–131. doi: 10.11621/pir.2013.0311.
- Boniwell, I., Osin, E., Linley, P.A., & Ivanchenko, G.V. (2010). A question of balance: time perspective and well-being in British and Russian samples. *Journal of Positive Psychology*, 5(1), 24–40. doi: 10.1080/17439760903271181.
- Chai, P. P., Krägeloh, C. U., Shepherd, D., & Billington, R. (2012). Stress and quality of life in international and domestic university students: Cultural differences in the use of religious coping. *Mental Health, Religion & Culture*, 15(3), 265-277. doi:10.1080/13674676.2011.571665
- Cuccioletta, D. (2002). Multiculturalism or Transculturalism: Towards a Cosmopolitan Citizenship. *London Journal of Canadian Studies*, 17, 1-11.
- Hofstede, G. J., Hofstede, G., & Pedersen, P.B. (2012). *Exploring culture: Exercises, stories and synthetic cultures*. Boston: Intercultural Press.
- Morselli, D. (2013). The olive tree effect: Future time perspective when the future is uncertain. *Culture & Psychology*, 19(3), 305-322. doi:10.1177/1354067x13489319
- Papastamatelou, J., Unger, A., Giotakos, O., & Athanasiadou, F. (2015). Is Time Perspective a Predictor of Anxiety and Perceived Stress? Some Preliminary Results from Greece. *Psychological Studies*, 60(4), 468-477. doi:10.1007/s12646-015-0342-6
- Sam, D.L. & Berry, J.W. (Eds) (2006). *Cambridge handbook of acculturation psychology*. Cambridge: Cambridge University Press.
- Shafaei, A., M. Nejati & N. Abd Razak (2018) A model of psychological well-being among international students. *Educational Psychology*, 38, 17-37.
- Vodopiyanova, N. E. (2009). *Psychodiagnostics of stress*. SPb: Piter. [in Russian]
- Zimbardo P. & Boyd J. (1999). Time perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77, 1271-1288.
- Zimbardo, P., & Boyd, J. (2010). *The time paradox: Using the new psychology of time to your advantage*. London: Rider.