Coping Behaviors of Young Men and Women with Different Health Levels

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Abstract

Introduction. This paper addresses health issues of the modern young generation and introduces new experimental designs to examine the relationship between health and the most preferred coping strategies of young people, which can enable a broader study of the issue of health protection through the development of conscious and rational behaviors, including in stressful situations. The paper presents an analysis of the concept of health from the interdisciplinary perspective. The focus is on the necessity of considering a single sociopsychological aspect of health, including its somatic, social, and personal levels. Stress affects human health and stress resistance helps maintain mental and physical health. Methods. The experimental study aimed to identify the characteristics of coping behaviors of young men and women with different health levels. The study sample comprised male and female students of Bunin Yelets State University (N = 540, mean age of 20 ± 2.3 years). The study used (a) the questionnaire to identify the level of health and (b) the Ways of Coping Questionnaire by R. Lazarus modified by T. L. Kryukova, E. V. Kuftyak, and M. S. Zamyshlyaeva. The statistical analysis of the results was carried out using descriptive statistics (frequency analysis, analysis of ingroup mean values and standard deviations), Pearson’s chi-square test, and non-parametric Mann-Whitney U test. Results. The results of the study indicated that young men and women with different health levels use different coping forms. Young women with health problems use productive coping more often than young men. The higher the level of health of young men, the more likely they are to use productive coping. Discussion. The study shows that the negative experiences of young women associated with the symptoms of chronic diseases enabled female respondents to adapt better to stressful situations associated with health losses. At the same time, health losses as stress factors affect the level of constructiveness in choosing models of behavior for young men and women.
Introduction

The reality of modern life no longer makes sense to prove the need to maintain and promote health. Two years of the pandemic (2020–2022), the abundance of stress factors and a low standard of living could not but affect the health of the Russian population. Some authors have pointed out that health in the country is one of the main indicators of social progress (Serikov & Serikov, 1999; Tokaeva, 2011; Kobzev, Gavrilova, & Sukhanova, 2015; Nikolaevskii & Sukhova, 2016; Vatopina & Prokhorova, 2018; El’nikova et al., 2022). All this demonstrates that, even in the presence of a wide range of studies on health preservation and health formation, the issue mentioned does not lose its importance and relevance.

Human health is a multidisciplinary issue, and its research and development are carried out equally by scholars in the humanities and natural sciences. At the same time, representatives of these scientific fields agree that health is, firstly, stability within the body and its harmony with natural and social environments (Anan’ev, 2000; Nikiforov, 2000; Vasil’eva & Filatov, 2001; Kulikov, 2013; Kihlström, 2005).


One of the most important conditions for health preservation is the need to maintain an appropriate lifestyle, while the key factors are sufficient employment and regular rest. The health of the human body can be restored by three stages of rest, treatment and recovery (Nazarova & Zhilov, 2013; Voronova, 2014; Leung et al., 2022).

At the same time, we cannot fail to note the factors most often taken into account in social studies. From a social perspective, health can be characterized as adapting to the social environment, i.e. as a unifying combination of positions and prestige in the social environment (Aknin, DeNeve & Dunn, 2022; Gagné, Schoon, McMunn & Sacker, 2022).
The following indicators refer to the level of health of certain social communities:

- Physical healthy;
- Mental healthy.

Therefore, it is appropriate to consider a single socio-psychological aspect of health. Assessment of health status should be based on a system of levels that include the somatic, social, and personal levels. The somatic level is related to the level of perfection of self-regulation processes in the body, physiological processes and the level of physiological adaptation to the environment. At the social level, the level of ability to work and social activity, as well as the manifestation of an active attitude towards the world are assessed. The personal level of health characterizes an individual strategy of life, as well as the level of an individual’s coping with life circumstances (Cohen, Janicki-Deverts & Doyle, 2015; Isaeva, 2016; Mcginty et al., 2020).

Therefore, health is currently considered to be a complex phenomenon with physiological, social, and psychological aspects.

Describing the concept of ‘health’ is impossible without analyzing the concept of ‘disease’, which is most demanded in the medical field of scientific knowledge. In modern medicine, two models for the occurrence and progression of diseases – biomedical and biosocial – are used as algorithms (Kulikov, 2013). The first model does not take into account the social aspect of the onset and progression of diseases, as well as their psychological or behavioral aspects.

According to the biomedical model, the resulting disorder, i.e. the disease, depends on somatic factors. Therefore, the progression of disease and its treatment depend entirely on the professionalism of medical staff, not on the patient, which is not always true. However, this model has been followed for many years and is often still being followed. In the early 20th century, Selye’s theory of the general adaptation syndrome appeared and this model was revised. Selye’s theory suggests that an intense adaptive reaction of the body indicates an inappropriate treatment.

It should also be noted that deviations from the norm may be the body’s reaction to adaptation. The adaptation response model applied to mental deviations during disease is regarded as maladaptive or a kind of addiction, whereas it is not compared with the functional characteristics of the person and with the circumstances that have led to these psychological disorders (Aich, Potter & Griebel, 2009a).

The second model (biopsychosocial) of disease progression is based on theories that assume that any disease is a part of an integral hierarchy. At the same time, each component has similar characteristics, is linked to the individual and takes into account his/her experiences and behavior characteristics. We should note that, in this model, the progression of the disease and the result of recovery do not depend on the competence of medical professionals. The result depends entirely on the patient and his/her body resistance (Aich, Potter & Griebel, 2009b). The structure of this model is a diathesis–stress framework, where diathesis is the biological predisposition of the body to a particular
disease. At the same time, stress is an external factor influencing the development of
disease states. Disease is a reaction of the relationship between diathesis and stress.

The biopsychosocial model, when defining the state of health, takes into account
mainly psychological factors. Health is therefore dependent on optimism, physical and
psychological balance, and the ability to build constructive behavioral models.

In other words, the biopsychosocial model shows that the disease is a body imbalance
that causes disturbances of the activity of the organism or a lack of normal interaction
between individuals in the environment and society.

Therefore, in addition to the main clinical factors, the causes of the disease are
supplemented by mental and/or behavioral factors.

Therefore, since any disease implies an inability to meet a person's social needs,
a special status of a patient and some restrictions on his/her role (social behavior) are
automatically assigned to him/her.

Life in modern society is associated with an abundance of short-term and systemic
stress situations. Stress affects the state of human health in everyday life. The ability to
withstand stress events is defined as stress resistance. Living under stress can be expressed
in various types of mental reactions and affect a person's physical health. Stress resistance
is a quality that allows people to deal with emotional, intellectual, or voluntary stress in the
psyche. Thus, stress resistance not only ensures the achievement of goals and individual
success, but also helps to maintain mental and physical health.

Coping strategies or coping behavior strategies are described as mechanisms for
coping with stress. N. V. Dvoryanchikov, S. V. Bulykin, D. N. Efremova, R. R. Nabiullina, G.
Kraig, R. Lazarus, R. Moos, and S. Volkman considered coping behavior as the subject
of psychological research. However, the analysis of the existing studies on the above-
mentioned issues has pointed out the absence of comprehensive studies on the
relationship between personal health and preferred coping strategies. Understanding and
describing this relationship will enable a broader understanding of the problem of health
maintenance through the development of conscious and rational forms of behavior,
including in stressful situations (Holahan & Moos, 1987; Nakano, 1991; Lazarus, 1993;
Skinner, 1995; Folkman & Lazarus, 1998; Amirkhan, 1999; Rexrode, Petersen & O'Toole,
2008; Belinskaya, 2009; Rasskazova & Gordeeva, 2011; Khachaturova, 2013; Alhawatmeh
et al., 2021).

We assume that coping with disease (as one of the strongest stress factors) is a
complex process determined by a combination of subjective and situational factors. In
the use of specific forms of coping, individual attitudes to diseases and assessments of
internal and external stress are of the highest importance. In general, people with diseases
use several coping strategies simultaneously or alternately (Folkman, Lazarus, Gruen &
DeLongis, 1986; Schwarzer, 1996; Kryukova, 2014). These or other coping strategies are
not always constructive. The use of non-constructive strategies can lead to deterioration
of physical status and/or new symptoms of the disease. This experimental study aims to
investigate the characteristics of coping behavior of modern young people with different health levels.

A detailed study of the above-mentioned aspects of health preservation will enable the process of treating diseases of any nosology to be redesigned. As mentioned above, therapeutic measures are currently being developed taking into account the biomedical model. In other words, doctors treat the human body as a kind of ‘biological mechanism’ and generally treat the organs that are sick (not the entire organism), which does not always lead to recovery. Taking into account a person’s psychological state, in particular his/her coping strategies (or coping behavior strategies), we can understand what ‘interferes’ with recovery and/or what leads to health loss.

**Methods**

To diagnose coping behavior in young men and women with different health levels, we used a questionnaire to identify the level of health, medical records of respondents (the analysis was carried out after the written consent of the study participants), and the Ways of Coping Questionnaire by R. Lazarus modified by T. L. Kryukova, E. V. Kuftyak, and M. S. Zamyslyayeva (Folkman & Lazarus, 1980; Lazarus & Folkman, 1984; Kryukova & Kuftyak, 2007; Wasserman, 2009; Kryukova, 2010).

The questionnaire to identify the level of health is a series of questions to determine whether the person has chronic and current diseases (during the year), moderate abuse (frequency of smoking and alcohol consumption), adherence to a healthy lifestyle (sports, etc.), and general physical development. Each manifestation level has 5 grades (except chronic diseases: only 3 levels). At the same time, the respondent theoretically can achieve the health level of 1 to 20 points in the first four items. In the absence of chronic diseases, the sum accumulated is saved; in the absence of one disease, three points are deducted from the sum; in the absence of two or more diseases, six points are deducted from the sum. In addition, we assigned the statistical label of ‘1’ to respondents with a low level of health or physical well-being, the statistical label of ‘2’ to respondents with an average level of health or physical well-being (who scored 10-15 points), and the statistical label of ‘3’ to respondents with a high level of health (who scored 16 or more points).

The analysis of medical records presenting the results of the annual medical examination was used as an auxiliary method to confirm the respondents’ health levels.

In the Ways of Coping Questionnaire by Lazarus, participants were asked to evaluate each of the fifty statements by occurrence; each answer received a corresponding score (from ‘never’ - 0 points to ‘often’ - 3 points). The analysis was performed for eight types of coping by scoring for each type. Forms of coping were divided into productive and non-productive. In this regard, the productivity / unproductivity of each person’s coping was evaluated.

The sample comprised 540 individual participants. Representatives of three major health groups were selected as respondents (health groups were assigned based on
medical records analysis). The respondents were male and female students of Bunin Yelets State University (mean age of 20 ± 2.3 years). The main criterion for sampling was the presence of a particular health group. In addition, in the analysis of the results, gender was taken into account, as gender could influence the choice of behavioral strategies. The statistical reliability of the results was ensured by the following statistical analysis procedures: descriptive statistics (frequency analysis, analysis of intragroup means and standard deviations), Pearson’s chi-square test, and Mann-Whitney U test. Quantitative and qualitative data processing is carried out using the IBM SPSS Version 21 software.

Results

The results of the health assessment survey showed that 12.1% of male respondents had a low level of health; 36.4% of male respondents had an average level of health; 51.5% of male respondents had a high level of health. The generalized data obtained during the survey were compared with the results in medical records. We found no discrepancies in the data.

In the female sample, we found that there were more respondents with a low level of health compared to the male sample, i.e. 23.8%; 42.9% of female respondents had an average level of health and 33.3% had a high level of health. The generalized data obtained during the survey were compared with the results in medical records. We found no discrepancies in the data.

As shown above, there are more males with a high level of health than females and fewer males with serious health problems compared to females. However, the Pearson’s chi-square test calculations and statistical significance for statistical events of ‘gender’ and ‘health level’ (χ² = 2.146 p = 0.342) showed that the static distribution of individuals by health levels was not directly related to gender.

Thus, in the first phase of the study, on the basis of questionnaire analysis to determine the level of health and analysis of the patient’s medical records, we identified the following three main groups: (a) young men and women with a high level of health (the majority in the sample); (b) young men and women with an average level of health, i.e. young people with certain minor health problems that are not chronic; and (c) young men and women with a low level of health, i.e. young people with serious health problems that are chronic.

These groups enabled us to describe the characteristics of coping behavior for healthy young men and women, as well as for young people with chronic diseases (without taking into account the nosology of the disease).

We then analyzed the characteristics of coping responses of students with different levels of health. We compared male samples with different levels of health (low and average, low and high, average and high) and female samples as well as. We also compared male and female samples with similar levels of health in relation to the Ways of Coping Questionnaire by Lazarus. For comparison, a nonparametric Mann–Whitney U test was used.
The results of the diagnosis of young men and women with a low level of health showed:

- Significant differences in ‘accepting responsibility’ \( (U = 1.500 \text{ at } p = 0.032) \); for females \( (M = 86.8 \text{ for } \sigma = 12.6) \) this measure was significantly higher than for males \( (M = 62.5 \text{ for } \sigma = 10.8) \);

- Differences in mean values for positive coping scales \( (U = 0.000 \text{ at } p = 0.016) \); the ingroup mean values in the subsample of young women with a low level of health \( (M = 71.8 \text{ at } \sigma = 5.8) \) were significantly higher than in the subsample of young men with a similar level of health \( (M = 56.5 \text{ with } \sigma = 12.3 \text{ with high outliers in the male sample}) \) (that is, young women with a low level of health use positive forms of coping more frequently than young men with a low level health);

- The trend of significant differences in ‘self-control’ \( (U = 2.000 \text{ at } p = 0.063) \); for females \( (M = 71.2 \text{ at } \sigma = 5.8) \) this measure was also significantly higher than for males \( (M = 56.0 \text{ at } \sigma = 15.5) \);

- The trend of significant differences in ‘planful problem-solving’ \( (U = 3.000 \text{ at } p = 0.111) \); for females \( (M = 67.6 \text{ for } \sigma = 20.7) \) this measure was also significantly higher than for males \( (M = 47.3 \text{ at } \sigma = 5.5) \).

Thus, compared to young men, young women with low health levels had distinctive features of positive coping strategies, including ‘self-control’, ‘accepting responsibility’, and ‘planful problem-solving’. In general, positive coping in young women with a low level of health was higher than in young men with the same level of health. In other words, young women with a low level of health (who suffer from chronic diseases) were better adapted to stressful situations such as health loss; they can control their behavior, make constructive decisions and plan the result, which is difficult to say about young men.

In the compared samples of young men and women with an average level of health, there were significant, however slight differences in ‘seeking social support’ \( (U = 24,000 \text{ at } p = 0.034) \). Here the scores of young women \( (M = 79.6 \text{ at } \sigma = 15.7) \) were higher than the scores of young men \( (M = 63.3 \text{ at } \sigma = 16.7) \). There was a trend of slight differences in ‘positive reappraisal’ \( (U = 31.500 \text{ at } p = 0.111) \). In this case, the scores of young women \( (M = 72.6 \text{ at } \sigma = 13.0) \) were higher than the scores of young men \( (M = 60.3 \text{ at } \sigma = 20.8) \), but in all cases the standard deviation is very high, indicating not pronounced differences with significantly different ingroup mean values.

Compared to young men with an average level of health, young women with an average level of health had higher scores in ‘seeking social support’ and ‘positive reappraisal’ (both positive). In other words, young women with certain non-chronic health problems were more likely to seek social support, which is more constructive. Young men were less likely to seek social support, leading to depression and resulting in deteriorating health status.

In the compared samples of young men and women with high levels of health, there were significant differences in ‘seeking social support’ \( (U = 19,000 \text{ at } p = 0.009) \) and
`confrontive coping` (U = 18,000 at p = 0.007), the differences in the mean values for negative coping scales (U = 20,000 at p = 0.011), as well as the trend of differences in mean values for positive coping scales (U = 34,500 at p = 0.114). In this case young men had significantly higher scores of `seeking social support` (M = 74.8 at σ = 16.6) and `confrontive coping` (for boys M = 62.2 with σ = 15.1; for girls M = 42.1 with σ = 12.6) compared to girls (M = 55.6 with σ = 14.4). The average means for positive coping scales were higher in the male sample (M = 69.2 with σ = 10.0) than in the female sample (M = 60.9 with σ = 10.2).

Young men with a high level of health, compared to young women with a high level of health, had higher scores in positive coping of `seeking social support` and negative `confrontive coping`, as well as higher average means for positive coping scales. In other words, as can be seen from the results obtained, the situation in healthy young men and women is completely different. Young men are more motivated than women to receive social support and to confront.

Discussion

The findings reported above indicate that the concept of `health` determines individuals` ability to perform the fundamental functions, taking into account the fact that they are living integral systems, based on physical and spiritual, natural and social, and hereditary and acquired principles (Anan’ev, 2000; Nikiforov, 2000; Vasil’eva & Filatov, 2001; Kulikov, 2013; Kihlstrom, 2005). At the same time, while acknowledging the importance of health preservation and pointing out that disease can be a stress factor, the authors do not consider coping to be a behavioral model contributing to health.

According to E. N. Nazarova, one of the most important, but not the only condition for maintaining health, is a good lifestyle. At the same time, when describing the `good lifestyle`, researchers (Nazarova & Zhilov, 2013; Voronova, 2014; Leung et al., 2022) do not consider coping behavior to be an element of this lifestyle.

Meanwhile, coping behavior is the individual’s activity to maintain or preserve a balance between the requirements of the environment and resources that meet the requirements.

Coping is a conscious action aimed at eliminating a stressful situation. The importance of coping is to adapt individuals more effectively to the needs of the situation and to enable them to take control of them, avoid or adapt to the needs of the social environment, or eliminate the stress effects of the situation. This will certainly help keep the individual healthy.

Coping with the disease is a complex process, determined by the combination of two factors – subjective and situational. When choosing specific forms of coping, individual
attitudes and assessments of internal and external stress are of primary importance.

The experimental study enables us to draw the following conclusions:

− In the compared samples of young men and women with low levels of health, young women had higher scores of ‘self-control’, ‘accepting responsibility’, and ‘planful problem solving’. At the same time, young women had higher general positive coping scores compared to young men. This indicates that young women with health problems have a higher level of concentration than young men, enabling them to use more productive forms of coping.

− Compared to young men with similar levels of health, young women with average levels of health had higher scores of productive coping, including ‘seeking social support’ and ‘positive reappraisal’.

− Compared to young women with similar levels of health, young men with high levels of health, had higher scores in productive coping of ‘seeking social support’, negative ‘confrontive coping’, as well as higher mean values for positive coping scales.

− Young women with high levels of health tend to overestimate their ‘life force’ and show excessive self-confidence in solving life problems, while young women with low levels of health, with excessive self-responsibility in certain areas, can show learned helplessness.

Consequently, based on the analysis of the results obtained in this study, we can conclude that the negative experience gained by young women during the systematic experience of chronic disease symptoms led to their better adjustment to such stressful situations as health losses. At the same time, the loss of health as a stress factor certainly affects the constructive level of the choice of behavioral models for young men and women. This is demonstrated by the results of a comparative analysis of the young men and women’s scores and levels of health, i.e. in groups with high, average, and low levels.

Taking into account the ability to withstand strong stress factors such as loss of health and the choice, despite constant stress, of constructive behavioral models will provide more productive results in the treatment of chronic and episodic diseases. Unfortunately, the modern healthcare system builds treatment processes without taking into account the psychological state of patients, which has a negative impact on national health. We should also note that the psychological state of individuals with certain health problems is usually associated with disease nosology. However, the results presented in the paper indicate that there is a general tendency to choose a model of behavior based not only on gender but also on the health levels. We can therefore conclude that it is necessary to take
GENERAL PSYCHOLOGY, PERSONALITY PSYCHOLOGY

into account the trends identified in the study both in providing psychological support to individuals with different levels of health and in organizing therapeutic measures.

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Author Contribution

Oksana Evgen’evna El’nikova made a theoretical analysis of the scientific literature on the research problem, wrote the overview section of the article, planned and conducted the study, wrote the conclusion section of the paper, and revised the manuscript.

Irina Valer’evna Faustova conducted the experiment, interpreted and described the obtained quantitative and qualitative results, wrote the abstract and conclusions, and revised the manuscript.

Lyubov’ Yur’evna Komlik conducted the experiment, carried out quantitative and qualitative processing of the obtained data using the IBM SPSS Version 21 software, interpreted and described the obtained quantitative and qualitative results, and presented the results in figures and tables.

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Conflict of Interest Information

The authors have no conflicts of interest to declare.