

# Attempt to define characteristic patterns for coping with stress among students of the University of the Third Age

## Próba określenia charakterystycznego wzorca radzenia sobie ze stresem wśród słuchaczy Uniwersytetu Trzeciego Wieku

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**Cel badań.** Określenie preferowanego stylu radzenia sobie ze stresem wśród 250 słuchaczy UTW zlokalizowanego w dużym mieście Bydgoszczy na terenie Polski.

**Materiał i metoda.** Badania przeprowadzono w 2011 roku przy użyciu standaryzowanego narzędzia do pomiaru radzenia sobie ze stresem COPE i ankiety socjo-demograficznej. Objęto nimi 250 słuchaczy U3A w wieku powyżej 60 lat. Najwięcej respondentów miało średnie wykształcenie (60%), połowa pozostawała w związku małżeńskim, większość deklarowała zadowalającą sytuację materialną i subiektywnie cieszyła się dobrym zdrowiem.

**Wyniki.** Najwyższy wynik stwierdzono na strategii planowania i aktywnego radzenia sobie ze stresem a najniższy na strategii zażywania alkoholu i innych środków oraz poczucia humoru. Kobiety wykazywały istotnie niższe wyniki na strategii Planowanie. Na strategii Pozytywne przewartościowanie i Rozwój, mężczyźni uzyskali średni nieco wyższy wynik niż kobiety. Im osoby były starsze, tym bardziej cechowała je akceptacja. Przeważająca większość badanych była optymistycznie nastawiona do życia. Im bardziej optymistyczne nastawienie do życia wykazywała jednostka, tym zauważono wyższe wyniki na strategiach: Aktywne radzenie sobie, Planowanie, Pozytywne przewartościowanie i Rozwój, Powstrzymywanie się od działania, Odwracania uwagi, Poczucie humoru oraz tym niższe wyniki na strategii Zaprzestanie działań. Osoby pozostające w związku małżeńskim miały istotnie wyższy poziom nastawienia do życia (optymistyczny). Im respondent miał wyższe wykształcenie, tym występował niższy wynik na strategiach: Zwrot ku religii, Powstrzymywanie się od działania, Zaprzecanie, oraz Zaprzestanie działań. Liczba chorób okazała się istotnie wpływać na zwiększenie wyniku na Pozytywnym przewartościowaniu i Rozwoju oraz na strategii Akceptacja. Sytuacja materialna różnicowała jedynie strategię Akceptacja.

**Wnioski.** Wśród słuchaczy UTW dominowało planowanie i aktywne radzenie sobie ze stresem oraz optymizm życiowy.

**Słowa kluczowe:** styl radzenia sobie, Uniwersytet Trzeciego Wieku (UTW), czynniki socjo-demograficzne, nastawienie do życia, sytuacja zdrowotna

**Aim.** To determine ways of coping with stress among 250 students of the University of the Third Age (U3A), Bydgoszcz, Poland.

**Material & Method.** The study was performed in 2011 using a standardized tool COPE, and a socio-demographic questionnaire. Most participants had secondary education (60%), about a half were married, most declared a satisfactory financial standing and a subjective perception of good health.

**Results.** The highest results were observed for the Planning and Active Coping with Stress strategy, and the lowest for Alcohol/Drug Use and Sense of Humor. Women showed significantly lower results for the Planning strategy. In the Positive Reinterpretation and Growth strategy the average result for men was slightly higher than for women. Older people showed a greater acceptance of a difficult situation. The majority of participants had an optimistic approach to life, and the more optimistic approach, the better were the results for the Active Coping, Planning, Positive Reinterpretation and Growth, Restraint Coping, Mental Disengagement and Sense of Humor strategies, while poorer results were found for the Behavioral Disengagement strategy. Married people showed a significantly more optimistic approach to life. Better educated participants had lower scores for the Religion, Restraint Coping, Denial and Behavioral Disengagement strategies. The number of diseases significantly influenced the increased result for the Positive Reinterpretation and Growth strategy, and for the Acceptance strategy. The financial standing differentiated only the strategy of Acceptance.

**Conclusions.** In difficult situations the U3A students choose the strategies of Planning and Active Coping with Stress.

**Key words:** coping style, University of the Third Age (U3A), socio-demographic factors, approach to life, health state

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## Abbreviation

U3A/UTW – University of the Third Age /Uniwersytet Trzeciego Wieku

## Introduction

At present people are under great impact from various stressors and coping with them is not always effective. Effective, if we assume that there are better and worse strategies [1]. Senility is a period featuring numerous losses, and one of the losses experienced especially painfully, not only by the elderly, is the death of a loved one. Late adulthood is related to the vision of the unavoidability of one's own death. Each type of a difficult situation may lead to a psychological crisis manifested with anxiety, tension and mental discomfort [2]. The author lists various sources of crises, such as: life-threatening disease, death of a loved one, aggression towards certain people, and autoaggression. Various forms of psychological crises, including identity or suicidal crisis, may occur in this period. An elderly person must sometimes rebuild their identity, an activity also related to stress. In view of the numerous difficult situations at this stage of life, there is a risk of suicide, while a longer-lasting crisis may lead to bodily exhaustion. A source of stress for an elderly person may be widowhood or the retirement process and this is often related to a deterioration in financial standing. Values such as health, vitality and looks deteriorate. The inevitable progression of senile involution certainly does not help. Thus, self-acceptance requires the perception of one's strengths and weaknesses, and it shapes personal satisfaction with achievements that otherwise may relate to a personal failure, resulting in the experience of stress [3].

As many reports indicate, the general opinion of the image of senility is increasingly being defined by the body image and physical appearance, and less by wisdom, experience and the autobiographic competences of a person [4]. At this stage of life a serious source of stress for many people may be a feeling of inaptitude, loneliness or a lack of goals. Thus, we know that stress is inevitable, a part of our lives; however, it is worth developing strategies of effective coping. The literature on the subject defines positive and negative stress: positive stress is a stimulus for growth and personal development, and in this sense it is virtually indispensable [5].

Stress is an active response of the body to its requirements and various types of threats – stressors [6]. Coping with stress is an activity which aims to handle traumatic events, and it is important that the strategy undertaken by a person proves effective [1]. Personal resources, such as a feeling of coherence, self value, optimism or self effectiveness, play an extremely important role here. Thus, coping with stress is a result of the specific, subjective traits of a person and a given stressful situation. Therefore, any tool used should

differentiate between dispositional and situational coping. The style of coping with stress should be perceived through the individual characteristics of an individual and their personality traits [7]. In the process of coping with stress, the importance lies not only with the characteristics of a person but also the situational context. A prerequisite for the process is special mobilization of the effort made by the person whom the stressful situation concerns. Coping efforts are directed towards changing an unfavorable situation and towards minimizing unpleasant emotions [8].

Coping with the stress related to future challenges and seizing opportunities is proactive coping. It is important to recognize potential threats, accumulate reserves, initiate their evaluation, as well as to undertake coping efforts and to obtain feedback on a favorable outcome [1]. The literature presents numerous classifications of strategies for coping with stress. For the purpose of our studies we used the approach suggested by Charles Carver and associates, who relied on the Lazarus theory and the self-regulation model of behavior [1].

The objective was to specify characteristic methods of coping with stress among students of the University of the Third Age (U3A), including socio-demographic data, approach to life (optimistic or pessimistic) and the subjective assessment of health.

It was hypothesized that planning and active coping with stress are styles preferred by the U3A students.

## Material and Method

### *Characteristics of participants*

The study included 250 students of the U3A, all aged over 60 years, with the majority of women (90.2%). Most women were 60-64 years old (47%), whereas men were 65-69 (42%). Almost a half of the participants (47.2%) were married. Other significant groups were the widowed (34.8%), the divorced (12.4%), and the single (5.6%). Education of the participants varied, with the predominance of secondary education (60%). The second largest group included people with higher education (32.8%) and the smallest groups of participants had vocational (4%) or primary education (3.2%). Most participants (94%) lived in the large city where the U3A is located (Bydgoszcz). Most also declared a satisfactory financial standing (81.2%). More than three quarters of the participants (79.4%) had a subjective feeling of good health. Other people reported various individual conditions characteristic for their age. A dominant disease was hypertension (19.4%). Kind and number of disorders is shown in the 'Results' section. All participants showed good fitness and independence in moving around in their living environment.

## Methods and research tools

The study was performed using a diagnostic survey based on a standardized Multidimensional Inventory for the Measurement of Coping with Stress – COPE, by: Charles S. Carver, Michael F. Scheier and Jagdish K. Weintraub, as adapted by Zygfryd Juczyński and Nina Ogińska-Bulik [1]. The tool is used to define typical methods of coping with stress. The COPE inventory has 60 statements in 15 strategies, 4 statements per strategy. It is intended for the evaluation of self-esteem in stressful situations, and it is most often used for dispositional measurement of coping with stress. Completion of the test takes a participant an average of 15 minutes. Another tool used was a survey containing the basic data of a participant: age range, gender, marital status, place of residence, education, financial status, health self-assessment, and approach to life.

The study was performed at the U3A in Northern Poland between October and November 2011.

First universities of the third age in Poland opened in 1975. They are a popular form of education for the elderly. U3A was initiated in 1972, in France by prof. Pierre`a Vellas [9] and soon became popular in other countries in Europe and around the World. U3A offers a wide array of programs to meet intellectual, mental and physical needs of the elderly thus improving the quality of their life.

## Procedure for ethical conduct

The study was performed according to the Declaration of Helsinki. The research was approved by the Committee of Bioethics at the Collegium Medicum, Nicolaus Copernicus University in Torun, Poland. The main criteria for the selection of participants were their age (at least 60 years) and participation in the U3A classes. The study was random, voluntary and anonymous.

## Statistical analysis

IBM SPSS Statistics 20.01 was used for the analysis purposes, being based on descriptive statistics: average values as measures of a central tendency and standard deviations as measurements of the result dispersion for quantitative variables and percentage fractions for nominal variables. The significance of differences was assessed on the basis of chi-square test results. The Student t test or ANOVA univariate variance analysis were used to assess the significance of differences between the results of groups divided according to nominal variables. The significance of relationships between variables was estimated with the Pearson correlation coefficient. The significance level accepted as critical was  $\alpha=0.05$ . For non-parametric assessment the U Mann-Whitney test was used.

## Results

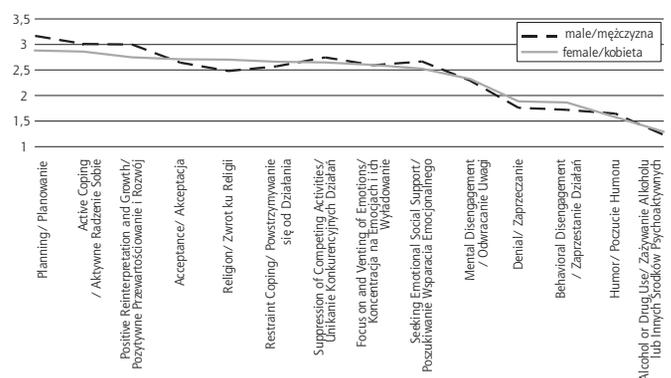
The first step was to analyze thoroughly the demographic data. Despite the small percentage of men, which is fairly common among U3A students in Poland, a significant difference in the distribution of age was observed ( $\chi^2(4)=12.95$ ;  $p=0.012$ ). Most women were aged 60-64 (47%), whereas men were aged 65-69 (42%). No significant difference in the distribution of the marital status frequency for either gender was observed ( $\chi^2(3)=6.20$ ;  $p=0.102$ ).

An important psychological variable in the studies was the individual's approach to life. The variable was measured on an estimated scale assuming one of four values: definitely optimistic, rather optimistic, rather pessimistic, or definitely pessimistic. The largest percentage of participants selected the categories 'rather optimistic' (62.7%) and 'definitely optimistic' (31.7%). A 'rather pessimistic' approach to life was declared by 4.0% of the participants, while the 'definitely pessimistic' approach was the least popular (1.6%). The percentage of pessimistic people (rather pessimistic and definitely pessimistic) for both genders was approx. 5%. There were 10% more men than women in a group that chose the 'definitely positive' category, however the difference in optimism between men and women was not statistically significant ( $U=2367$ ;  $z=1.06$ ,  $p=0.291$ ).

The participants were analyzed with regard to their health. The majority of them (79.4%) had a subjective feeling of health, despite the fact that 52.8% of the U3A students declared no medical conditions. The most often declared disease was hypertension (19.4%), followed by: osteoarthritis and spondylarthritis (9.9%), osteoporosis (2.1%), a neoplastic disease (1.3%) and other individual conditions. The smallest number of participants (5.2%) reported four concurrent medical conditions, 6.8% declared three, 18.0% two, and 17.2% declared one condition.

A thorough analysis was then performed with regard to the results of the COPE Inventory. Fig. 1 depicts strategies of coping with problems obtained from the COPE scale.

The highest result was observed for the strategy of Planning and Active Coping with Stress and the lowest for the strategy of Alcohol/Drug Use and Hu-



mor. Despite the significant difference in the number of women (221) and men (24), the differences were analyzed. Lower results for the strategy of Planning were observed in women; the average for men was 3.167, for women 2.882, and that variation proved statistically significant ( $p=0.02$ ). Gender diversification for the strategy of Positive Reinterpretation and Growth proved close to the significance level. The average result for men was 3.000, and for women 2.750 ( $p=0.052$ ). For other strategies the differences were not statistically significant.

The analysis of the influence of age on the coping style indicated significant but weak (3.4% of mutual variance) linear correlation ( $r=0.185$ ,  $p=0.03$ ). The older the person, the greater the acceptance.

The correlation between the approach to life (optimistic or pessimistic) and the results for individual strategies proved significant for several of them. The more optimistic approach a person had, the greater were the results for the following strategies: Active Coping ( $r=0.248$ ;  $p<0.001$ ), Planning ( $r=0.164$ ;  $p<0.01$ ), Positive Reinterpretation and Growth ( $r=0.249$ ;  $p<0.001$ ), Restraint Coping ( $r=0.140$ ;  $p<0.001$ ), Mental Disengagement ( $r=0.138$ ;  $p<0.05$ ), Humor ( $r=0.158$ ;  $p<0.13$ ), while the lower results were obtained for the strategy of Behavioral Disengagement ( $r=-0.140$ ;  $p<0.05$ ).

No significant differences were observed between people having different marital status and demonstrated strategies of coping with stress on the COPE scale.

On the other hand, the same variable, the marital status, proved to differentiate the level of approach to life. The Kruskal-Wallis test for independent samples showed a significant difference ( $\chi^2(3)=13.98$ ;  $p=0.003$ ) between the groups. An analysis of pair comparisons determined that the difference applied mostly to married people rather than the divorced. People in a marital relationship had a significantly higher ( $p=0.002$ ) level of approach to life: they were more optimistic.

Another demographic variable, education, proved to have a significant impact on four variables. The higher the education of a participant, the lower the result for the following strategies: Religion ( $r=-0.163$ ;  $p=0.010$ ), Restraint Coping ( $r=-0.136$ ;  $p=0.033$ ), Denial ( $r=-0.132$ ;  $p=0.037$ ) and Behavioral Disengagement ( $r=-0.122$ ;  $p=0.041$ ).

Next, the variable concerning the place of residence was analyzed. No difference between people living in cities and those living in villages was observed for any of the psychological variables on the COPE scale.

For the variable concerning the assessment of financial situation, all variables from the COPE scale proved not to vary, apart from one: Acceptance ( $t(244)=2.671$ ;  $p=0.008$ ). 202 participants who declared a satisfactory financial situation obtained

an average result on the strategy of Acceptance ( $M=2.746 \pm 0.5052$ ). The other 44 people of unsatisfactory financial standing obtained an average result of  $M=2.511 \pm 0.6263$  for this strategy.

The subjective assessment of the participants' health had no impact on the strategies of coping with problems. No result for any of the strategies diversified significantly. Only the number of diseases proved to contribute significantly to an increased result for the Positive Reinterpretation and Growth ( $r(248)=0.147$ ;  $p<0.05$ ) and for the Strategy of Acceptance ( $r(247)=0.136$ ;  $p<0.05$ ), although the impact was minor, approx. 2%.

## Discussion

The results of our study ( $n=250$ ) may be considered optimistic. They prove that the U3A students, as an active and well-educated group, in the majority of cases undertake the strategies of Planning and Active Coping with encountered stressors. The study proved that the strategy of Planning was characteristic for men significantly more often than for women. Reports by other authors concerning the utilized strategies of coping with stress demonstrate a lack of significant differences with regard to gender [10, 11]. Our study argued that the older the person, and the more conditions they suffered from, the greater was their inclination to accept a difficult situation. Other researchers of this issue report a lack of significant differences in the presented strategy of coping with post-traumatic stress in various age groups [12].

The use of active strategies by the U3A students shows a strong correlation with a frequent optimistic approach to life, as demonstrated in our study. Our study also proves that a person's optimistic approach to life contributes to active coping with stress, assuming that the undertaken activity is effective. It matches the reports of Poprawa as well as Juczyński and Ogińska-Bulik, highlighting the significant impact of personal resources on effective coping with encountered stressors [1, 13]. According to Brzezińska, active coping strategies are dominant among optimists, whereas flight strategies are characteristic for pessimists [14]. According to this author, people with an optimistic approach to life show greater susceptibility to the use of strategies oriented towards solving problem and seeking social support than pessimists [14]. Optimists are better liked than pessimists, and they experience more social support in everyday life. According to Brzezińska, optimism strongly correlates with a greater network of friends [14]. That is why optimism is perceived as a significant moderator of stress and an extraordinarily important factor shaping the mental and social wellbeing of a person [13, 14]. It may be an important incentive to participate in lifelong education in late adulthood through such institutions. Pessimists, on the other hand, have a greater tendency to use flight strategies [13].

Some researchers observe the impact of temperament on the preferred style of coping with stress [15]. The studies performed in 2008 by these authors on a group of 44 Polish glider pilots indicated that the temperamental traits of junior glider pilots demonstrate a correlation with the tendency for them to display risky behavior as compared to senior pilots.

The studies by Kachaniuk et al., show the sense of coherence as another important personality resource of a person, which manifests as a small impact ( $p < 0.05$ ) on the coping style in the difficult situations encountered by caretakers of the elderly [16].

Our study proved that elderly students in lifelong education at U3A are least likely to use alcohol and drugs to relieve negative emotions, which is surely an optimistic result. Such use always attests to a self-destructive strategy of coping with a difficult situation and forms grounds for various pathological behaviors [8]. Other studies performed in Poland among young people ( $n=815$ ), 17.67 years old on the average, show for example that using alcohol applies mostly to individuals coping in an avoidance style and such a tendency is observed significantly more often in men than women [17]. Moreover, the avoidance strategies are preferred by women with a tendency for compulsive buying [18]. In studies by Kurpas et al., the avoidance style was a dominant style of coping with stress also for neurological patients [19]. Reports by other authors show that women have a greater tendency to use social support in coping with stress [14, 20]. According to Brzezińska there are no unambiguous reports concerning any correlation between gender and the observed methods of coping with stressors [14].

Studies on styles of coping with stress with the use of the Jalowiec Coping Scale, performed on a Swedish population ( $n=1200$ ) of 18-80-year-olds, indicate certain differences with regard to gender [21]. Young and middle-aged women more often used the following styles: optimistic, avoidance, emotional and supporting as compared to older women, and the choice of emotional styles in these studies depended mostly on the ethnic group [21].

A review of reports proves that people using social support more often are characterized by a greater coping activity [20]. Thus, the role of social support for the maintenance of the mental wellbeing of a person and their proper functioning is enormous. Some authors recommend considering an individual's resources for coping, including the scope of received support and self-sufficiency, while studying the process of coping with stress [22]. Studies by these authors on a sample of 194 people aged at least 65 years show that individuals with greater self-sufficiency chose the task-oriented style more often than the emotional one. Thus, these authors promote the validity of teaching people coping styles and supporting them in collecting personal resources, so important in this regard.

Our study showed that out of the socio-demographic variables the level of education most significantly differentiated the strategies of coping with stress chosen by the U3A students. Our results proved that in contact with stressors the elderly with higher education were less likely to turn to religion, they did not refrain from undertaking actions, did not deny the existence of a stressful situation and they did not disengage from action. The more passive strategic patterns are characteristic for less educated people. In this regard the results of our study match the reports from studies by Brzezińska conducted in Poland, also on a sample of 250 elderly people [14]. Studies by Brzezińska (2011) show that in terms of avoidance strategies the highest result was obtained by people with the lowest education, which clearly corresponds with the results of our study [14].

In the perspective of personal development it is recommended for an individual to undertake active strategies. According to Brzezińska an active coping style based on initiative, independent setting of life goals, self-fulfillment and growth, optimistic approach to life and responsibility for oneself, results in proactive coping [14]. Proactive coping, as mentioned by this author prepares an individual to stand up to the numerous challenges of the modern world [14]. Thus, the massive role of upbringing and self-upbringing of an individual for the development of successful senility and standing up to numerous challenges occurring at this stage of human life is deservedly highlighted [23].

The studies by Brzezińska reveal that the elderly and people in an unfavorable financial situation, unfortunately, are less likely to manifest proactive coping strategies [14]. In our study, people more satisfied with their financial situation showed a higher result on the Acceptance scale. Other studies on a group of 40 patients with degenerative lesions show that praying was the most often manifested strategy [10]. Praying was one of the most often manifested styles of coping with stress in residents of assisted-living facilities, as proved by the studies ( $n=32$ ) of Hunter and Gillen [24].

In the elderly, regularly performed and supervised physical activity plus various recreational activities had a favorable impact on strategies of coping with stress. This has been confirmed in other results by some authors [24, 25], and is also demonstrated by our study. Most participants of our study, as a group of active elderly people, showed active strategies of coping with stress, i.e. strategies which are more desirable in the aspects of personal development and mental wellbeing of a person. However, as some authors claim, it is impossible to unambiguously assess one style as being better than another [26]. In studies performed in Brazil on 41 healthy elderly people, the intensity of stress was not related to the choice of style, since it is more important that a problem-solving activity proves effective [26].

The development of demanded strategies of coping with stress in the elderly is supported by psychogerontology and geragogy as important branches of social gerontology. Optimum solutions for overcoming developmental crises are suggested, while senility is perceived as a challenge and another important stage in human development [23, 27]. For the elderly, solving problems is evidentiary of constructive living. It is important to acquire competences necessary to combat various types of developmental crises [26].

## Conclusions

In difficult situations the U3A students prefer the strategies of Planning and Active Coping with Stress and do not tend to use the strategies of Alcohol/Drug Use

and Humor. More than 90% of participants were characterized by optimism, which was significantly higher in married people. An optimistic approach to life contributed to a higher result for the strategy of Active Coping with Stress, Planning, Positive Reinterpretation, Growth, Restraint Coping and Mental Disengagement.

When faced with stressors, the more educated elderly people significantly less often turned to Religion, Restraint Coping, Denial and Behavioral Disengagement. A satisfactory financial situation of the U3A students and their older age contributed to the greater acceptance of a difficult situation. The results of our study clearly indicate that optimism, significantly related to having a life partner, is highly significant in the aspect of active coping with stress.

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