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Influence of Yoga Practices on Stress Coping Strategies

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Abstract

Stress coping strategies are used every day. By choosing a different coping style, people seek solution to a complicated task or situation. One of the reliable forms of motor activity, which influences favorably the development of valuable psychic and physical qualities, is yoga. The aim of the research is to determine the positive effect of yoga practices on stress coping strategies. The research was done among 76 women - 42 of them practice yoga in different clubs of the Bulgarian Yoga Federation and yoga students at NSA "Vassil Levski" – experimental group; and control group consisting of 34 women not engaged in any kind of sport or motor activity. The stress coping strategies were evaluated with the questionnaire COPE-1, (Carver, C, & Scheier, M. 1985), adapted for Bulgarian conditions by A. Rusinova-Hristova and G. Karastoyanov (2000). Results show that the first seven stress coping strategies have approximately equal values with the control group. The passive strategies, related to emotion-focused coping with the problem, are dominant. In this case, the structure of the stress coping strategies with the women not engaged in sport is more imperfect than the one with the women practicing yoga. The arrangement of the leading stress coping strategies, as well as the reliable differences with six of the strategies (43% of all 14 strategies) in favor of the EG is indicative of more harmonious and more perfect structure of the preferred stress coping strategies with women practicing yoga. Conclusion: The leading stress coping strategies with women not engaged in sport are passive. They experience greater difficulty in solving their problems in stressful situations. The leading strategies with women practicing yoga are active. The researched individuals react immediately in stressful situations, concentrate on the problem and actively cope with it.

Keywords: Stress coping strategies, yoga, motor activity.

1. Introduction

In the last few decades the turbulent changes in the society have contributed to the emergence of a number of unfavorable factors in people's lives. This calls for a more active adaptation to the new requirements of the environment. Very often, people nowadays have difficulty in adapting to the changes and are subjected to a continuous stress. While the low levels of stress have a positive influence, the higher ones affect negatively the functioning of all organs and systems in the organism and are the cause of various diseases.

In his theory H. Selye (1982) explains the reaction to stress where a person reacts to the outer factors of the influence of the environment. The presented by the author “general adaptation syndrome” is a universal model of reaction related to the organism’s perseverance after the influence of the stress factors – stressors. A stressor is every factor or traumatic event which disturbs the balance between the organism and the outer and inner environment. Stressors are most often viewed as strong, acute and chronic. Strong factors are connected with important life experiences which can have both positive and negative influence. Acute stress factors are very strong and have a predominantly negative effect; they usually cause certain crises. Chronic stressors are characterized with repeated influence on the daily routine [Compas, B. 1987].

In its nature stress is a protective reaction of the organism, a natural instinctive response to the unfavorable influences of the environment (Koolhaas et al, 1999.). Stress is defined as a perceived dynamic state about something important. Previous research from the medical and health sciences are used along with that from organizational sciences to develop the integrative transactional process model (Shuler, 1982) Vaux (1990) presents stress as “a dynamic transactional process” which is manifested in the following way: The basic is specific evaluation of the stressful situation and one’s own resources for reaction (control, subdue, adapt) (Sarasson, 1984), On the base of the evaluation, the stress experiences are taken into account depending on the results of the comparison. This phase is followed by adaptive reactions, known as coping (adaptation). This term is also used when we talk about controlling and overcoming of stress situations and stress experiences. Coping is a process used every day. By choosing a different coping style, people seek solution to a complicated task or situation. There are three coping styles: problem-focused, emotion-focused, and avoidance-focused (Billings, Moos, 2011). The different stress situations have people to make a choice – whether to perceive the situation as dangerous for their psychic and physical wellbeing or as an opportunity to develop new personality traits, favorable for their social adaptation (Sammarco, 2001; Velikova-Tzonkova, 2012). Two components are included in the coping process – evaluation of the stressor and coping with it. In this relation, Lazarus (1999) outlines two ways of evaluating the stressors – primary and secondary evaluation. Primary evaluation is aimed at determining the beneficial effect of the factors of influence. The main objectives are arranged according the strength of the stimulating emotions. Secondary evaluation is determined by the real possibilities of a person to cope with particular stress. The primary and secondary evaluation of the factors of influence plays a major role in building different stress coping strategies.

Limited motor activity is one of the main factors causing stress. According to V. Tzolova (2017) the deprivation of an organism of the necessary physical exercises leads to great tension which affects negatively people’s health. It has been repeatedly proven that the involvement in a certain kind of motor activity restrains the negative influence of stress. The psychic qualities are developed together with the physical qualities. Their interaction is strengthened which determines the greater adaptation possibilities of the organism in response to the influence of different stressors of the environment. Some reliable stress coping strategies are built and their structure is improved. Crocker, P. R (1992) did research among 237 athletes (aged 16-32 yrs) with 68-item modification of S. Folkman and R. Lazarus's Coping Checklist. The strategies used by the athletes were different but could be classified into 8 dimensions: active-coping, problem-focused, seeking social support, positive reappraisal, self-control, self-denial, detachment, and self-blame.

One of the reliable forms of motor activity, which influences favorably the development of valuable psychic and physical qualities, is yoga. Yoga is said to be a science for the proper way of life. It’s a means of achieving balance and harmony in the body, spirit and mind through the practice of asana (yoga postures), pranayama (breathing techniques), shatkarma (purifying practices), mudra (energy gestures with the whole body or part of it), bandhi (energy keys), and meditation. Thus, yoga enables reaching a perfect coordination between the

different functions and processes in the organism, which in their determination benefit the body (Saraswati, S., 2013; Shivananda Yoga Center, 2009). T. Marinov et al. (2016) define yoga as “a special kind of static motor activity which has a complex influence on motor, functional and psychic processes in human organism”. The results from the research of Granath, J. et al. (2006) of groups practicing yoga show that both cognitive behavior therapy and yoga are promising techniques for stress management. Riley, K., Park, C. (2015), through electronic database of 926 abstracts, chose 5 for final systematic survey. The authors found out that the mechanisms through which yoga influenced stress, remained understudied. Also, future research ought to include more rigorous methodology, including sufficient power, study randomisation and appropriate control groups.

On the base of the scarce literature data we had found, we were provoked to check the following work hypothesis: Yoga practices have a favorable influence on structuring the preferred stress coping strategies.

2. Methods

2.1 Aim of the research

The aim of the research is to determine the positive effect of yoga practices on stress coping strategies.

In order to reach the aim and to confirm the work hypothesis, the following tasks were fulfilled:

1. To reveal the theoretical base of the researched issue.
2. To determine the stress coping strategies with women practicing yoga and with women not engaged in any kind of sport.
3. To analyze the results from the research and to confirm or reject the work hypothesis.

2.2. Participants

The research was done among 76 women – 42 of them practice yoga in different clubs of the Bulgarian Yoga Federation and yoga students at NSA “Vassil Levski” – experimental group; and control group consisting of 34 women not engaged in any kind of sport or motor activity.

2.3. Subscales determining stress coping strategies

The research includes complex methods of surveying the literature sources, observation, and interview. The stress coping strategies were evaluated with the questionnaire COPE-1, (Carver, C, & Scheier, M. 1985), adapted for Bulgarian conditions by A. Rusinova-Hristova and G. Karastoyanov (2000). The test includes 53 items, divided into 14 subscales determining stress coping strategies. The subscales include: active coping (S1), planning (S2), suppression of competing activities (S3), restraint coping (S4), seeking social support for instrumental reasons (S5), seeking social support for emotional reasons (S6), positive reinterpretation and growth (S7), acceptance (S8), turning to religion (S9), focusing on and venting of emotions (S10), denial (S11), behavioral disengagement (S12), mental disengagement (S13), alcohol-drug disengagement (S14).

The obtained results were processed with variation analysis and hypotheses check (t-criterion of Student with probability guarantee $P \geq 95.0\%$).

3. Results

After the conduction of the research, we determined the following arrangement of the preferred stress coping strategies with the control and the experimental groups – Table 1.

Table 1

Preferred stress coping strategies with the women from the control and the experimental groups

№	Indexes	CG		EG		d	P %
	Strategies	\bar{X}_1	S1	\bar{X}_2	S2		
1	S1	10,65	1,89	11,90	1,81	1,26	99,6
2	S2	10,79	1,92	12,67	1,60	1,87	99,9
3	S3	10,24	1,72	10,95	1,72	0,72	92,4
4	S4	11,00	1,98	10,10	1,86	0,90	95,6
5	S5	10,71	2,61	10,64	1,79	0,06	9,10
6	S6	10,29	2,76	9,98	2,16	0,32	42,5
7	S7	10,91	2,18	11,55	1,68	0,64	84,4
8	S8	9,21	2,40	9,64	2,56	0,44	55,1
9	S9	8,50	3,13	7,74	2,67	0,76	74,4
10	S10	8,50	2,26	8,98	2,09	0,48	65,6
11	S11	8,53	1,67	6,81	1,49	1,72	99,9
12	S12	6,38	1,97	5,67	1,30	0,72	93,9
13	S13	9,24	2,73	8,12	1,58	1,12	97,1
14	S14	1,18	0,39	1,00	0,00	0,18	99,6

It is notable that the first seven stress coping strategies have approximately equal values with the control group. The passive strategies, related to emotion-focused coping with the problem, are dominant. In this case, the structure of the stress coping strategies with the women not engaged in sport is more imperfect than the one with the women practicing yoga.

The researched individuals from the CG give utmost priority to strategy S4 „restraint coping“ – rating 11.00. In a particular stress situation the subjects do not have an immediate reaction, restrain from hasty actions and wait for a more appropriate moment to act. The second place is for strategy S7 „positive reinterpretation and growth“ – rating 10.91. The women from the CG think over the course of their actions and seek a positive outcome of the stressful situation; they strive for personal improvement. Before acting they emphasize on the positive, review the stressful situation so that they can see the favorable outcome of it. The strategy S2 „planning“ is on the third place with rating 10.79. The restraint from ill-judged actions in a particular stress situation with the women not engaged in sport is related to seeking possibilities for drawing up a plan for the necessary course of action. The fourth place is for strategy S5 „seeking social support for instrumental reasons“ – rating 10.71. In order to find the best way to cope with stress, the subjects from the CG need certain assistance. The lack of knowledge and experience leads to a certain insecurity and impedes the quick decision taking for active actions in stress situations.

The strategy S1 „active coping“ is only placed fifth with rating 10.65. This strategy is among the leading ones when acting in stress situations. Here, coping is determined as an activity a person undertakes in order to overcome the influence of different stressors. Active coping is due to knowledge related to the ways one perceives one's relation with the outer world. Strategies S6 „seeking social support for emotional reasons“ and S3 „suppression of competing activities“ have received similar rating (rating 10.29 and rating 10.24 respectively).

In this case, in stress situations the women from the CG direct their attention to the actual stressor which makes them upset and they try to express it. For the time being, they refrain from active actions, try to concentrate and liberate from all kinds of distractive thoughts. The other seven strategies (from S8 to S14) add to the overall structure of the stress coping strategies with the researched women from the CG.

The structure of the preferred stress coping strategies with the women practicing yoga is much more different and more harmonious (Table 1 and Fig. 1). The problem-focused active coping strategies are predominant; they are aimed at solving problems in stress situations. The women from the EG, on the base of yoga practices and mostly because of the complex influence of the different asana on their psychic and physical development, focus on stress, neutralize its influence and in this way – change the situation.

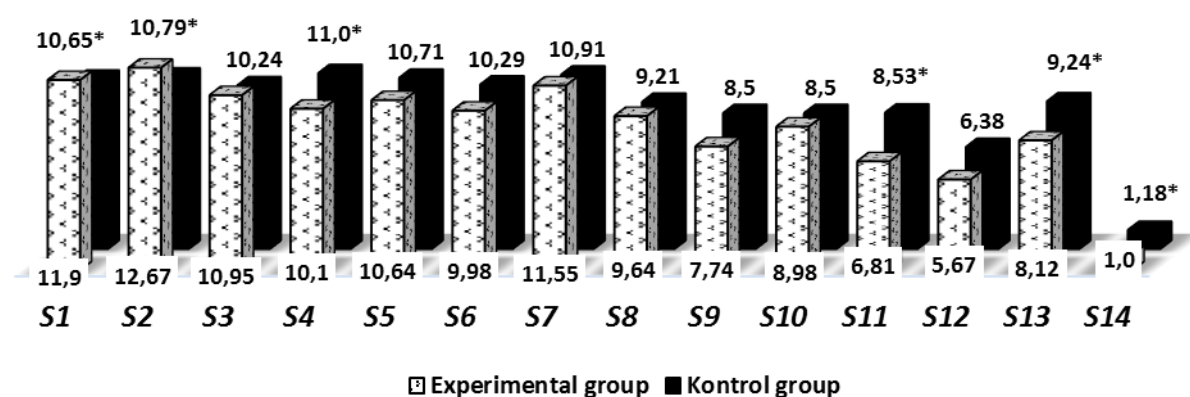


Figure 1. Preferred stress coping strategies for control group and experimental group (* – $P > 95,0\%$)

The leading strategy for the women practicing yoga is strategy S2 „planning“ – rating 12.62. This rating is 1.87 higher than the rating of the CG ($P=99.9\%$). In stress situations, the women from the EG are ready to react. They direct easily their attention to the problem, come up with an action strategy, think over the course of their actions and draw up a plan for action. The choice of this leading strategy totally corresponds to yoga philosophy which teaches people to be able to remain balanced in different situations and to overcome stressful situations successfully retaining their self-command. The second place is logically taken by strategy S1 „active coping“. The average rating with the EG is 11.9, and it is 1.26 higher than that of the CG – rating 10.79. The difference is reliable ($P = 99.6\%$). The preliminarily outlined plan turns into real actions for neutralizing the stressors in the situation. Women practicing yoga are determined, sensible and consistent in their actions. In most cases they seek additional ways to cope with problems. This fact is supported by the third chosen strategy S7 „positive reinterpretation and growth“. The attained harmony through yoga practices is conveyed into the women's actions in overcoming stressful situations. Regardless the course of the events, each of their actions is built on the base of the positive thinking which is crucial for countering the negative influence of the stressors in the situation. Things are viewed on their bright side and the desire is to benefit from the useful side of the event which leads to gaining experience and improving one's own personality.

The fourth place is for strategy S3 „suppression of competing activities“ – rating 10.95. This strategy aims at concentration of one's strengths for solving a particular problem. The less powerful and less significant stressors are rejected and the attention is drawn to the leading stressor. This approach is the right one and enables people to cope with stress. The breathing techniques and mediation are vital for the efficiency of this strategy. The fifth

preferred strategy is strategy S5 „seeking social support for instrumental reasons“ – rating 10.64. The choice of this strategy reveals the subjects' need of particular knowledge related to the ways of reaction in certain situations influenced by different stressors. The sixth and seventh places are for strategy S4 „restraint coping“ – rating 10.10 and S6 „seeking social support for emotional reasons“ – rating 9.98. These two are passive strategies. They show that in certain situations the subjects put up with the circumstances and try to draw the others' attention, sympathy and support. The reliable difference of 9.90 lower rating in favor of the EG ($P = 95,6\%$) is notable. The results of the EG with the passive strategies are better than those of the CG – S11 „denial“ ($P = 99,9\%$), S13 „mental disengagement“ ($P = 97,1\%$) and S14 „alcohol-drug disengagement“ ($P = 99,6\%$). The arrangement of the leading stress coping strategies, as well as the reliable differences with six of the strategies (43% of all 14 strategies) in favor of the EG is indicative of more harmonious and more perfect structure of the preferred stress coping strategies with women practicing yoga.

4. Conclusion

On the base of the analysis made and the inferences drawn in our research, we can conclude that the regular yoga practices have a positive influence on the improvement of the structure of stress coping strategies, which proves the work hypothesis.

The leading stress coping strategies with women not engaged in sport are passive. They experience greater difficulty in solving their problems in stressful situations. The leading strategies with women practicing yoga are active. The researched individuals react immediately in stressful situations, concentrate on the problem and actively cope with it. It would be interesting to compare stress coping strategies with active athletes and people who practice yoga regularly, which will be subject of our future research.

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