



RESEARCH ARTICLE

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COPING OF STRESS BY YOGA PERFORMERS AND NON YOGA PERFORMERS IN TRICITY CHANDIGARH

¹Sanjeev Dutt MPH, ²Naveen Krishan Goel, ³Manoj and ^{*4}Veenal Chadha

¹Centre for Public Health, Punjab University Chandigarh

²Professor and Head, Department of Community Medicine, GMCH 32 Chandigarh

³Assistant Professor, Centre for Public Health, Punjab University Chandigarh

⁴Demonstrator, Department of Community Medicine, GMCH 32 Chandigarh

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*Corresponding author: Veenal Chadha

ABSTRACT

Introduction: Yoga is the most ancient action-discipline system known in the world whose exercises help people to cope with stress. Coping has been defined as the process of managing demands (external or internal) that are appraised as taxing or exceeding the resources of the person. **Objectives:** To study the coping of stress among yoga performers and non yoga performer in Chandigarh tricity i.e. Panchkula, Chandigarh and Mohali. Result: Overall 168 out of 200 questionnaires distributed were completely filled without missing any item. Missing items were later scored by taking an average of the collected responses. Maximum numbers of participants 25 (29.76%) were in the age group of 20-29 years and minimum in the age group of 50-59 were 11 (13.03%). Males in yoga group are 27 (32.14%) and females are 57 (67.86%) and where as non yoga performers males are 37 (32.14%) and females are 47 (67.86%). **Discussion:** The present cross sectional study provides the overview of the coping of stress of residents of tricity i.e. Panchkula, Chandigarh and Mohali. This study was conducted with an objective to determine the coping of stress using coping inventory tool by Charles. S. Carver. Our study found that yoga performers were having moderate coping of stress as it shows there may be some other factors which influence coping of stress. **Conclusions:** Since no significant difference was observed in coping of stress among yoga performers and non yoga performers it is therefore recommended that larger study may be carried out by incorporating more number of study participants for a longer period of time.

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INTRODUCTION

Yoga is the most ancient action-discipline system known in the world whose exercises help people to cope with stress. Yoga as a word means union or collecting, which is interpreted as the unity and coordination between spirit, body, and the individual's soul as well as coordination between negative pressure and the ability of flexibility. It also enhances individuals' ability to cope with stress and promotes their focus and decision making in critical and stressful conditions (Tayebe Mehrabi, 2012). The literal meaning of the word Yoga in Sanskrit is integration. In this sense, yoga represents a process through which one can learn how to live in the most integrated way. It involves therefore the process of identification and then elimination of all that would contribute

to disintegration. It teaches one to integrate the body, mind and soul in oneself. It further goes on to teach integration of individual goals and objectives with the social and organizational goals. It is also a way of life that integrates the phenomenal with the transcendental, the individual soul with the Divine. When taken in this sense it becomes a continuous process, requiring constant vigilance and involving all the aspects of life (Sharma, 2012). It is evident that yoga is a self practiced, low cost, self efficacious as well as acceptable tool benefiting people in coping the stress. Stress arises when the combination of internal and external pressures exceeds the Individual's resources to cope with their situation (Devi, 2015). The term stress is derived from the Latin word Stringere, which means "to be drawn tight." It is a complex, dynamic process of interaction between a person and his or

her life. Stress can affect one's health, work performance, social life, and the relationship with family members. Stress can also be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury (Bali Yogitha, ?). There are three stages a person goes through while suffering from stress. First stage is Alarm stage. This stage experiences an over acting of the sympathetic nervous system wherein adrenaline and cortisol increase and blood flows away from the brain to the muscles. The whole body starts preparing itself to fight against the reason of stress. The fear, excitement or pressure is evident on the sufferer's face. The second is stage of resistance. In this stage, the body keeps making continuous efforts to cope with stress and therefore feels run down and the person starts feeling irritated, over reacts to minor situations and gets mentally and physically weak. Exhaustion stage is the final stage. If a student is preparing for his exam and despite every possible effort, he is not able to relate to his studies, he is bound to get stressed. The stress could reach a height where he/she may feel completely exhausted and helpless to the extent of committing suicide.

Various techniques are employed to control or lower stress, and to amend stress coping strategies and behavior (Tayebe Mehrabi, 2012). Coping has been defined as the process of managing demands (external or internal) that are appraised as taxing or exceeding the resources of the person. It is seen as a process involving at least two stages: primary appraisal (is this something to bother about?), and secondary appraisal (what can I do about it?). It is proposed to serve two distinct purposes: to do away with the problem (i.e. problem-focused coping), and to regulate emotional reactions (emotion-focused coping). The following observations are made: (1) there is a lack of correspondence between what people in general mean by coping and how the concept is used in research; (2) coping is most often measured by checklists with questionable validity; (3) the outcome of using different coping strategies is largely unexplored; and (4) what is regarded as coping in some circumstances (e.g. telling about your hearing impairment) can become a problem in another situation, or even the same situation (e.g. stigma) (Willebrand, 2003). They include Yoga, which has been studied and emphasized by scientists as a technique to relax the mental state and control stress through internal and external sources. These techniques are used as both preventive and recovery methods. It is with this intention that this study was undertaken among residents of tricity i.e. Panchkula, Chandigarh and Mohali to establish the fact that yoga performers can cope up with the stress in better way than non yoga performers.

Objectives

To study the coping of stress among yoga performers and non yoga performer in Chandigarh tricity i.e. Panchkula, Chandigarh and Mohali.

Study area: Chandigarh Tricity (Panchkula, Chandigarh, and Mohali) was taken as study area.

Study Design and Setting: Community based comparative study was done among the residents of Tricity using predesigned and pretested questionnaire on stress and coping strategies. The study was undertaken among equal number of yoga performers and non yoga performers. The pretested and predesigned questionnaire was used to collect data. After

explaining the purpose of the study, written consent was taken from all those who were willing to participate. They were asked to fill up socio demographic data and self-administered questionnaire keeping in mind their availability, free time, convenience, and feasibility.

Sample Size: 84 Yoga performers and 84 Non yoga performers were included in study and a convenient sampling technique was used.

Study period: The study was carried out during the month of January 2018 to May 2018 and data collection was done from January 2018 to March 2018.

RESULTS

Overall 168 out of 200 questionnaires distributed were completely filled without missing any item. Missing items were later scored by taking an average of the collected responses.

Table 1. Distribution of the participants according to Age among Yoga performers Group (n=84)

Age group	Female (%)	Male (%)
20-29	15(26.31)	10(37.03)
30 and above	13(22.80)	05(18.51)
40and above	16(28.07)	00(00)
50 and above	08(14.03)	03(11.11)
60 and above	05(8.77)	09(33.33)
Total	57(100)	27(100)

Table 1 shows that maximum numbers of participants 25 (29.76%) were in the age group of 20-29 years and minimum in the age group of 50-59 were 11 (13.03%).

Table 2. Distributions of participants according to Gender among yoga performers and non yoga performers (n=84)

	Yoga		Non-Yoga	
	Number	Percentage (%)	Number	Percentage (%)
Male	27	32.14%	37	32.14%
Female	57	67.86%	47	67.86%
Total	84	100%	84	100%

As shown in the table 2 males in yoga group are 27 (32.14%) and females are 57 (67.86%) and where as non yoga performers males are 37 (32.14%) and females are 47 (67.86%).

Table 3. Distribution of participants according to overall coping score (n=168)

Coping	Yoga Number (%)	Non Yoga Number (%)
Mild	04 (4.76)	06 (7.14)
Moderate	75 (89)	73 (86.90)
Maximum	05 (5.95)	05 (4.76)
Total	84(100)	84(100)

Table 4 and 5 shows distribution of participants according to COPE scale i.e.

(A) Positive interpretation and growth - Majority of participants among yoga performers i.e 49 (58.3%) were able to cope maximally while majority of non yoga performers i.e 42(50%) belongs to moderate category of coping.

Table 4. Distribution of participants according to COPE scale

Positive reinterpretation and growth	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	GrandTotal number
Yoga Performers	-	9 (10.71)	26 (30.95)	49 (58.33)	84
Non Yoga Performers	1 (1.19)	17 (20.23)	42 (50)	24 (28.57)	84
Mental Disengagement:	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	GrandTotal number
Yoga Performers	-	32 (38.09)	39 (46.42)	13 (15.47)	84
Non Yoga Performers	1 (1.19)	21 (25)	51 (60.71)	11 (13.09)	84
Focus on and venting of emotions:	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	GrandTotal number
Yoga Performers	-	21 (25)	41 (48.80)	22 (26.19)	84
Non Yoga Performers	2 (2.38)	17 (20.23)	46 (54.76)	19 (22.61)	84
Use of instrumental social support	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	01 (1.19)	11 (13.09)	53 (63.09)	19 (22.61)	84
Non Yoga Performers	02 (2.38)	20 (23.80)	41 (48.80)	21 (25)	84
Active coping	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	-	11 (13.09)	44 (52.38)	29 (34.52)	84
Non Yoga Performers	3 (3.57)	14 (16.66)	50 (59.52)	17 (20.23)	84
Denial	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	8 (9.52)	26 (30.95)	42 (50)	8 (9.52)	84
Non Yoga Performers	15 (17.85)	28 (33.33)	31 (36.90)	10 (11.90)	84

Table 5. Distribution of participants according to COPE scale

Religious Coping	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	1 (1.19)	13 (15.47)	31 (36.90)	39 (46.42)	84
Non Yoga Performers	2 (2.38)	13 (15.47)	29 (34.52)	40 (47.61)	84
Human Factor	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	3 (3.57)	40 (47.61)	32 (38.09)	9 (10.71)	84
Non Yoga Performers	12 (14.28)	23 (27.38)	38 (45.23)	11 (13.09)	84
Behavioral disengagement	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	9 (10.71)	32 (38.09)	35 (41.66)	8 (9.52)	84
Non Yoga Performers	4 (4.76)	43 (51.19)	28 (33.33)	9 (10.71)	84
Restraint	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	-	13 (15.14)	47 (55.95)	24 (28.57)	84
Non Yoga Performers	-	26 (30.95)	45 (53.57)	13 (15.47)	84
Use of Emotional social support	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	2 (2.38)	24 (28.57)	47 (55.95)	11 (13.09)	84
Non Yoga Performers	4 (4.76)	25 (29.76)	41 (48.80)	14 (16.66)	84
Substance Use	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	50 (59.52)	17 (20.23)	14 (16.66)	3 (3.57)	84
Non Yoga Performers	40 (47.61)	26 (30.95)	15 (17.85)	3 (3.57)	84
Acceptance	Not at all number (%)	Minimum number (%)	Moderate number (%)	Maximum number (%)	Grand Total number
Yoga Performers	-	16 (19.04)	48 (57.14)	20 (23.80)	84
Non Yoga Performers	1 (1.19)	19 (22.61)	43 (51.19)	21 (25)	84

- (B) Mental disengagement - majority of participants were able to cope moderately i.e. 39 (46.42%) of yoga performers and 51(60.71%) of non yoga performers were also in this category.
- (C) Focus on and venting of emotions- almost half of participants in the category of yoga performers and non yoga performers were able to cope moderately.
- (D) Use of instrumental social support,- maximum number of yoga performers who were able to cope moderately while nearly half of non yoga performers were able to do maximal coping.
- (E) For Active coping -44(52.38 %) of yoga performers were able to do moderate level of coping and 50(59.52 %) non yoga performers were at the same level.
- (F) Denial-42(50 %) of the yoga performers are able to cope with denial moderately while only 31(36.90 %) of non yoga performers were able to cope with denial.
- (G) Religious coping- almost same number of yoga performers 39(46.42 %) and non yoga performers 29(34.52%) were able to cope stress by religious coping moderately.
- (H) Human factor - better coping scale was observed in non yoga performers than yoga performers i.e. 45.23 % and 38.09 % respectively.
- (I) Behavioral disengagement,- Similarly in behavioural disengagement better coping was observed moderately in yoga performers than non yoga performers.
- (J) Restraint- slightly more coping was observed among yoga performers than non yoga performers.

- (K) Use of emotional social support- slightly more coping was observed among yoga performers than non yoga performers.
- (L) Substance use- was slightly more among non yoga performers than the yoga performers.
- (M) Coping of stress i.e. acceptance is better in yoga performers as compared to non yoga performers.
- (N) Suppression of competing activities are well managed by yoga performers as compared to non yoga performers at moderate level of coping.
- (O) Planning was better among non yoga performers than the yoga performers.

DISCUSSION

The present cross sectional study provides the overview of the coping of stress of residents of tricity i.e. Panchkula, Chandigarh and Mohali. This study was conducted with an objective to determine the coping of stress using coping inventory tool by Charles. S. Carver. Traditionally, coping has been viewed as a response to a negative situation. Coping strategies, therefore, are those efforts initiated by an individual to try to master, tolerate, reduce, or endure stressful events. Such efforts may be purely behavioral (unplugging a child's loud stereo), purely psychological (crying), or a combination of behavioral and psychological responses (Lazarus and Folkman Lazarus, 1984). Researchers have identified two major categories of coping skills: problem-focused coping skills, responses that directly alter or resolve the stressful

situation; and emotion-focused coping skills, efforts to manage and regulate one's emotional reactions to the stressor. Assessing coping strategies in 1989 by Charles S Carver examined the relation between subject's general coping styles and the situation-specific. He examined coping responses that they make to particular stressful event. First, the mental disengagement items had higher loadings. It was found that positive reinterpretation and growth Sreerama reddy CT in 2007 did study in Nepal and found that most benefit of coping strategies were in the form of positive reframing planning, self distraction and emotional support where in the present study these are the least used coping skills except active coping which is found to be in yoga performers is 52.38% and where as in non yoga performers it is found to slightly on higher side at 89.52%, being used by the participants (Sreeramareddy, 2007). In present study it was found that highest factor for coping was reinterpretation and growth followed by religious coping and active coping. The reasons were in contrast to study by Zvauya R 2017 in UK concluded that undergraduates and graduates medical students were more likely to use active coping and positive reframing and use of substance. Other factors such as substance use are least likely followed by Mathew N 2015 who found frequently used coping strategies by adolescents were positive reframing, planning, active coping and instrumental support, however in the present study planning was the least used coping strategy. Muller L and Spitz E 2003 on French population stated that functional coping strategies like active coping is used the most to reduce stress which is quite similar to the present study except there general population was studied where in present study general population is also the subjects (Zvauya, 2017).

In our study Carver has described apart from substance use all other measures are emotional measures for coping of stress which were used in Deane Alban study (Alban Deane). As Deane Alban in there study has described fifteen stress management techniques that work well and fast. You can't avoid stress, nor would you want to. A little stress is good. According to Deane various techniques are Diaphragmatic breathing, Meditation, Mindfulness meditation, Yoga, Guided imagery, Self-hypnosis, Autogenic training, Personal biofeed back, Progressive muscle relaxation, Emotional freedom technique, Aromatherapy, Enjoyable pastimes, nature Gratitude, and Green tea. Deane has described various physical and emotional techniques to cope stress. In our study Carver has also given importance to emotional measures whereas in study of Lazarus and Folkman in 1984 *Stress appraisal and coping* view coping as a process that could be categorized into two broad types of coping, problem-focused (e.g. task-oriented coping) and emotion-focused (e.g. emotional coping and avoidance coping). Within emotion-focused coping, we found two types of emotional behaviours: one being active emotional (e.g. venting) and the other being avoidant emotional (e.g. denial). Research tends to suggest that problem-focused or task-oriented coping leads to adaptive outcomes, but emotion-focused (including avoidance) coping also leads to adaptive outcomes in certain circumstances, particularly when the person has little or no control over the stressor (Lazarus and Folkman Lazarus, 1984). Hampel Pin in 2006 conducted study in Australia in which it was found that females had a higher perceived interpersonal stress and used more social support. Additionally, females scored higher on coping for emotional distress. These finding are similar to the present study where high interpersonal stress and more use of social and emotional support was found in females than the males. M 2012 found

coping styles characterized by negotiating, seeking support, and emotional outlet were used more by adolescents from the Western region than those from the Eastern/ Asian or Southern regions. Females in all regions had higher rates in the use of negotiating and seeking support than males did. Overall, adolescents from all regions of the world demonstrated an impressive level of coping competencies, as only about one fifth of all coping responses involved the use of withdrawal and denial similar findings were observed in our study except denial factor in tricity residents. These differences might be due to different setup and study area (Hampel, 2006). Similar to the study of Vedeniapin and Cortese on emotion regulations our study too focussed on emotional behavior for coping of stress. Findings of this study suggest that mindfulness practices can have benefits in terms of sleep hygiene or quality of sleep. Adequate sleep is essential for good mental and physical health, and there is a bidirectional relationship between poor sleep and anxiety. Study findings suggest that regular practice of mindfulness has self-regulatory benefits in terms of emotion regulation (e.g. feeling calm, composed and relaxed) and executive functions (e.g. sustained attention and mental alertness) (Uhde, 2009).

In our study too we found that yoga performers were having moderate coping of stress as it shows there may be some other factors which influence coping of stress. A study done by Deekshitulu also shows effects of yoga on coping of stress. Actually yoga combines several techniques to combat stress. Yoga provides a combination of benefits such as breathing exercises, stretching exercises, fitness program, and meditation practice and guided meditations all in one technique (Deekshitulu Balaji, 2018). In our study we too focus on yoga to determine how it helps in overcoming the stress. In study conducted by Pestonjee on Stress & Coping –The Indian Experience coping refers to ways of dealing with stress or the effort to master conditions of harm, threat a challenge when a routine or automatic response it's not readily available. Coping efforts are primarily problem-centered or self-focused or combination of the two. The profiles of coping strategies adopted by wide cross section of subject's professional women, male and female's technocrats, managerial personal, supervisors and students are also discovered. To alleviate stress, Prof. Pestonjee has highlighted several techniques to counteract stress like yoga, meditation, job characteristics and stress audit (Pestonjee, 1993). Overall we infer that from the studies that stress and coping are the key elements for health and quality of life but almost every individual at some point of life feel stressed. The following coping strategies such as active coping, use of emotional and social support, religious coping etc. can act as the stress buster and helping the person for effective controlling of stressors. Lazarus had rightly said stress is a mental or physical phenomenon formed through one's cognitive appraisal of the stimulation and is a result of one's interaction with the environment. The existence of stress depends on the existence of the stressor's. So once stressor is controlled stress is eventually controlled (Lazarus and Folkman Lazarus, 1984).

Conclusions

Since no significant difference was observed in coping of stress among yoga performers and non yoga performers it is therefore recommended that larger study may be carried out by incorporating more number of study participants for a longer period of time.

Limitations

Due to constraint of time we could not study for longer period of time with more number of participants.

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