

Study on the Effect of Yoga Practice on Regulation of Emotions

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Abstract

Objective: To investigate the effect of yoga on regulation of emotions by the practitioners.

Methodology: The study was carried out among 90 respondents practicing yoga at Patanjali Yoga Research Centre, Kozhikode, Kerala, India using a questionnaire containing an emotion regulation scale and the characteristics of respondents such as sex, age, education etc. The emotion regulation score of each respondent was worked out as the sum of scores of cognitive reappraisal items and expressive suppression items in the scale. The data was analysed as scores, percentage and through statistical test.

Results: 66.7 % of the respondents have obtained high emotion regulation score through yoga practice in the range of 80 to 90 % of the maximum possible score under the study. 86.6 % of yoga practitioners have obtained total score for cognitive reappraisal items related to emotion regulation in the range of 82.1 to 96.4 % of the maximum possible total score for the items. 90 % of yoga practitioners have obtained total score for expressive suppression items related to emotion regulation in the range of 81 to 95.2 % of the maximum possible total score for the items. Statistical significance was observed between the emotion regulation scores of males and females, married and unmarried yoga practitioners, people who have practiced and not practiced yoga before joining the yoga training programme, as well as people who had psychological problems before the start of yoga practice and those who did not have the problem. Comparatively higher emotion regulation scores were observed for males than females, for unmarried people than married people, for people who have practiced yoga before joining the yoga training programme compared to those who have not practiced it before, and for those who did not have psychological problems before the start of yoga practice, when compared to those who had such problems.

Conclusion: Yoga contributes to the regulation of emotions, with its influence on both cognitive reappraisal and expressive suppression items related to emotion regulation. Practicing it can be expected to result in a mentally healthier population, since yoga can also positively influence other psychological parameters such as anxiety, depression, wellbeing etc

Keywords: Yoga, Emotion Regulation, Cognitive Reappraisal, Expressive Suppression

Introduction

Emotion regulation is the term used to describe a person's ability to effectively manage and respond to an emotional experience. People unconsciously use emotion regulation strategies to cope with difficult situations. Emotion regulation can help people to cope with stress, manage anxiety, develop better social skills / ability to understand and empathize with the emotions of others, and help in resolving conflicts in more constructive ways. All these can contribute to better mental health.

Cognitive reappraisal is a widely utilized emotion regulation strategy, which involves altering the personal meaning of an emotional event to enhance attention to emotional responses. An anger prone person may frequently interpret ambiguous situations in a hostile way. But, he or she can engage in reappraisal by trying not to take provocations personally and consider alternative interpretations. For example, interpreting that the boss got mad at him / her due to worry about his sick daughter.

Expressive suppression is an emotion regulation strategy, which consists of top-down, conscious control of reflexive behavioural expression of emotions. For example, stifling laughter or crying, or maintaining a neutral facial expression to hide emotions.

Practice of yoga has been reported to increase emotion regulation [1]. Yoga is explicitly aimed at increasing mindful awareness, self-compassion and body awareness, and it is possible that these may serve as mediators for emotional wellbeing [2, 3].

Methodology

The study was carried out by the first author of the paper at Patanjali Yoga Research Centre, Kozhikode, Kerala, India. Data was collected from a sample of 90 respondents practicing yoga under a training programme at the yoga centre using a questionnaire containing the scale to quantify emotion regulation [4] and the characteristics of respondents such as sex, age, education, marital status, whether they had psychological problems before the start of yoga practice, months of yoga practice, and whether they did yoga before joining the yoga training programme. The emotion regulation score of each respondent was worked out as the sum of scores of cognitive reappraisal items and expressive suppression items in the scale. The data was analysed as scores, percentage and through statistical test.

Results

Emotion Regulation Score

66.7 % of yoga practitioners have emotion regulation score (sum of scores of cognitive reappraisal items and expressive suppression items) in the range of 80 to 90 % of the maximum possible score under the study. 26.6 % have total score in the range of 91.4 to 94.3 % of the maximum possible score. Only 6.7 % of yoga practitioners have a comparatively low emotion regulation score in the range of 70 to 72.8 % of the maximum possible score.

53.3 % of yoga practitioners have total score for cognitive reappraisal items in the range of 82.1 to 89.3 % of the maximum possible total score for the items, while 33.3 % have a score in the range of 92.8 to 96.4 % of the maximum possible score. 3.4 % have score equivalent to the maximum possible total score. Only 10 % of yoga practitioners have a comparatively low total score for cognitive reappraisal items in the range of 71.4 to 78.6 % of the maximum possible score.

Cognitive Reappraisal Score

40 % of yoga practitioners have total score for expressive suppression items in the range of 81 to 88.1 % of the maximum possible score for the items. 50 % have a score in the range of 90.5 to 95.2 % of the maximum possible score. Similar to the score for cognitive reappraisal emotion items, only 10 % of yoga practitioners have a comparatively low total score for expressive suppression items in the range of 69 to 78.6 % of the maximum possible score.

Expressive Suppression Score

Table 1 shows the sex wise difference in emotion regulation score of the yoga practitioners. Males have a higher mean score (62.4) than females (54.4), with statistically significant difference in their scores.

Table 1: Statistical significance of sex wise difference in emotion regulation score of the yoga practitioners

| Details | Sex of the yoga practitioners | |
|---------------------------------------------------------|-------------------------------|--------|
| | Male | Female |
| Mean emotion regulation score of the yoga practitioners | 62.4 | 54.4 |

t stat = - 5.97; Significant p < 0.01

Marital status wise difference in emotion regulation score of the yoga practitioners is shown in Table 2. Unmarried respondents have comparatively higher mean score of 61.7 than married people (score of 57). There exists statistically significant difference in the mean scores of the two categories (Table 2).

Table 2: Marital status wise difference in emotion regulation score of the yoga practitioners

| Details | Marital status of the yoga practitioners | |
|---------------------------------------------------------|------------------------------------------|-----------|
| | Married | Unmarried |
| Mean emotion regulation score of the yoga practitioners | 57.0 | 61.7 |

t stat = 1.99; Significant p < 0.10

It can be seen from Table 3 that statistically significant difference is there between the mean emotion regulation score of respondents who had done yoga earlier (before joining the present yoga training programme) and those who had not done it earlier. The former category gets a score of 62.7, while the latter category has a score of 60.8.

Table 3: Difference in emotion regulation score of respondents who had done yoga earlier and those who had not done it earlier

| Details | Whether practiced yoga earlier | |
|---------------------------------------------------------|--------------------------------|------|
| | Yes | No |
| Mean emotion regulation score of the yoga practitioners | 62.7 | 60.8 |

t stat = - 1.7; Significant p < 0.10

Table 4 gives details of the emotion regulation score of respondents who had psychological problems before the start of yoga practice, and those who did not have the problem. It can be made out from the table that those who report psychological problems

before the start of yoga practice are having a lower score of 58.8, when compared to 63.5 for those who did not have psychological problems before yoga practice. Statistically significant difference is also observed between their mean scores (Table 4).

Table 4: Difference in emotion regulation score of respondents who had psychological problems before yoga practice and those who did not have it

| Details | Had psychological problems before the start of yoga practice | |
|---------------------------------------------------------|--------------------------------------------------------------|------|
| | Yes | No |
| Mean emotion regulation score of the yoga practitioners | 58.8 | 63.5 |

t stat = - 4.1; Significant p < 0.01

The results reveal that even though respondents having 7 to 12 months of yoga practice have a higher emotion regulation score of 62.8, when compared to those who have done yoga for 4 to 6 months (score of 60.4) and those with up to 3 months of yoga practice (score of 60.2), statistically significant difference is not observed between the scores for these durations of yoga practice.

Discussion

Practice of yoga has helped the respondents significantly in regulating their emotions, since 93.3 % of them get a high emotion regulation score in the range of 80 to 94.3 % of the maximum possible score under the study. It may be noted that this is the effect of yoga on emotion regulation, even when, out of 70 % of the respondents in the study who reported that they have done yoga for a period of 3 to 12 months, 57 % have done it for a period ranging from 3 to 7 months only. This indicates that longer period of yoga practice was not necessary to achieve emotion regulation for many of the practitioners. Practice of yoga, even in the short term, has been reported to enhance wellbeing and counteract psychopathology through modification of emotion reactivity [5].

The yoga practitioners have achieved favourable effect on cognitive reappraisal items related to emotion regulation, since 86.6 % of them scored in the range of 82.1 to 96.4 % of the maximum possible score for these items in the study. Similarly, due to yoga practice, majority of the respondents have benefited much with regard to expressive suppression items related to emotion regulation also because 90 % of them have a score in the range of 81 to 95.2 % of the maximum possible score for these items.

The results show that male respondents have achieved better effect on emotion regulation through yoga, since they get a higher score than females, with statistically significant difference in the scores. A study has reported that men scored higher than women on cognitive-related emotion items and on emotional regulation [6]. The findings of another study confirm predictions of the female negativity bias hypothesis, and suggest that women have greater up-regulation of emotional responses to negative stimuli [7].

Unmarried yoga practitioners under this study have better effect on emotion regulation than married people. The score of the former category is more than that of the latter, with statistically significant difference between them. Respondents who had already practiced yoga before joining the yoga training programme at the yoga centre experienced comparatively more emotion regulation than those who had not done it earlier. This may be because their earlier experience in yoga could have contributed to

doing it in a better manner at the yoga centre. The difference in their scores is also statistically significant.

Those who reported psychological problems before the start of yoga practice could not achieve that much of emotion regulation through yoga practice (emotion regulation score of 58.8), when compared to those who had no psychological problems before starting yoga (score of 63.5). Statistically significant difference observed in their scores confirms the influence of existing psychological problems on comparatively less regulation of emotions through yoga practice. Yoga practiced by a person with neurotic problems may have less positive outcomes only, and hence, personality is an important factor to be taken into consideration to understand the effect of yoga on one's psychology and wellbeing [8].

Period of yoga practice of the respondents (in months) under the yoga training programme was not found to influence the level of emotion regulation. Age and education also did not have statistically significant influence on emotion regulation of the yoga practitioners.

Conclusion

Practice of yoga has helped the respondents significantly in regulating their emotions. The results show that longer period of yoga practice is not necessary to achieve emotion regulation for the respondents. Yoga has contributed to a favourable effect on cognitive reappraisal items as well as emotion suppression items related to emotion regulation, which were considered in the study. Male respondents achieved better effect on emotion regulation through yoga than females. Unmarried yoga practitioners got more effect on emotion regulation than married people. Respondents who had done already done yoga before joining the yoga training programme experienced comparatively more emotion regulation than those who had not done it earlier. People having psychological problems before the start of yoga practice could not achieve that much of emotion regulation through yoga practice, compared to those who had no psychological problems before starting yoga. The characteristics of the respondents such as age, education, and months of yoga practice under the yoga training programme did not influence emotion regulation.

In short, yoga contributes to the regulation of emotions, with its influence on both cognitive reappraisal and expressive suppression items related to emotion regulation. Practicing it can be expected to result in a mentally healthier population, since yoga can also positively influence other psychological parameters such as anxiety, depression, wellbeing etc.

Conflict of Interest

The authors of this article declare that there is no conflict of interest in this article now or in the future.

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