

Effectiveness of a Comprehensive Yoga Program on Convicted Extremist Offenders

Abstract

Objective: The present study aimed to explore the effect of yoga techniques on well-being and behavior among those who have propagated and participated in extreme violence and aggression. The sample comprised 219 United Liberation Front of Assam militants selected immediately after surrender of arms in the year 2012 from all over northeast region of India. **Methodology:** The study design was a single group with pre- and posttest assessment. All participants attended a 40-day intensive Yoga workshop (Sudarshan Kriya Yoga, Pranayama, Physical postures or Hatha Yoga, Meditation) conducted at Art of Living International Centre, Bengaluru. The impact of spiritual practices was observed on peace, aggression, life satisfaction, and quality of life in individuals using the aggression Buss Perry questionnaire, WHOQOL-BREF, and Satisfaction with Life Scale. The questionnaires were administered at the beginning and at the end of the 40-day workshop. **Results:** Significant results using paired *t*-test clearly demonstrate that by following yoga techniques (Sudarshan Kriya, Yoga, and Meditation), a reduction in aggression, quality of life, and life satisfaction can be obtained. These practices can be useful for people who want to rehabilitate themselves after incarceration or experience of militancy. The purpose of these measures is to reduce the risk of future criminality by those already convicted of violent extremist offenses, thereby protecting public safety while also benefiting individuals and communities.

Keywords: Aggression, life satisfaction, quality of life, Sudarshan Kriya Yoga, yoga techniques

Introduction

In today's world, aggression and violence are ubiquitous in the society.^[1] The widespread presence of aggressive and violent behavior has made it a social problem worthy of attention worldwide.^[2] Globally, rehabilitation and community engagement is a new frontier in the fight against terrorism and insurgency.^[3] Since the last decade, rehabilitation of convicted extremist offenders is seen as the most rapidly developing area in the domain of countering violent extremism.^[4] A few countries, such as Saudi Arabia, Singapore, Malaysia, and Indonesia, have already implemented programs to promote re-socialization of the offenders after incarceration or experience of militancy.^[5] Probably, the best-known example is the rehabilitation program of the Kingdom of Saudi Arabia, which offers a broad range of therapies to persuade inmates from returning to extremist activities upon release.^[6]

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Nowadays, meditation techniques are increasingly being used to treat problematic anger and aggressive behavior. Many studies have been carried out on mindfulness meditation and aggression, which suggest that mindfulness may have implications for lowering hostility, anger, and aggressive behavior.^[1,7,8] While these studies have provided important initial evidence that mindfulness may contribute to decreased anger and hostility, the evidence base to support the effectiveness of these methods is limited.^[9]

Yoga, meditation, and breathing technique

Yoga is an ancient Indian technique defined as a union of individual self with divine. It is a holistic system of mind-body practices involving physical, mental, and spiritual practices. Since ancient days, yoga has been practiced as a healthy way to live life and has been included in alternative medicine as well.^[10] Yoga typically includes physical postures/exercises for bodily strength and flexibility, breathing exercises

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like pranayama to boost the respiratory functioning, deep relaxation techniques which cultivate the ability to physically and mentally release tension and stress, and meditation to enhance mind–body awareness and improve attention and emotional regulation skills.^[11] Through asanas, the spine, muscles, and joints become healthy and flexible. Breathing exercises are postulated to maintain the balance of the autonomic nervous system which influence psychological and stress-related disorders and thereby help in preventing the unwanted outcomes of stress.^[12] There are many breathing techniques, and Sudarshan Kriya Yoga (SKY) is one of them. It is a specific form of breathing exercise and has favorable effects on the mind–body system.^[10] This hallmark technique is taught by the Art of Living Foundation. It has positively impacted millions in 155 countries worldwide. Research shows that regular practice of SKY relieved depression in 67% and reduced anxiety in 71% of study participants.^[12] It decreased the release of the stress hormone cortisol.^[13-15] It improves deep sleep and well-being hormones. In the USA, the impact of SKY on youth was found to significantly reduce impulsive behavior and improve their mental well-being.^[16] There is mounting evidence suggesting that SKY can be a beneficial, low-risk, low-cost adjunct to the treatment of stress, anxiety, posttraumatic stress disorder, depression, stress-related medical illnesses, and thus, for rehabilitation of criminal offenders.^[10]

Efficacy of SKY has been demonstrated in several medical conditions and population subsets, and little is known about its effects on persons displaying aggression and violence. Therefore, the present study aimed to extend the current literature on the benefits of SKY and meditation on the well-being and behavior of those who have propagated and participated in extreme violence and aggression. The study specifically measured the influence of yoga techniques on aggression, life satisfaction, and quality of life of the United Liberation Front of Assam (ULFA) militants after they had surrendered their arms.

Methodology

Sample

The northeast region of India has a long history of autonomy movements on behalf of several ethnic groups.^[17] An anti-immigrant movement, started in Assam state in India, had generated several waves of violence and disorder. A 1985 settlement brought a student-led coalition of anti-immigrant activists – the ULFA – to power in Assam and has temporary dominance of many Assamese areas. It has also sponsored insurgents from other communities such as the Bodos in northwest Assam and the Rajbanshis on the Assam/West Bengal border. In the year 2012, 229 militants had surrendered their arms. A group of 219 ULFA militants from all over the northeast region of India participated in this study after they had surrendered their arms.

Procedure

After consenting to taking part in the study, all the 219 participants were assessed on the instruments/scales. This baseline assessment was conducted by two researchers. All instructions and questionnaire items were read to participants by one of the researchers. Postintervention assessments took place after completion of the 40-day workshop at which point participants were assessed using the same measures.

Comprehensive yoga workshop

The 40-day intensive workshop was conducted by trained teachers at the Art of Living International Centre, Bengaluru, India. The sessions were held the whole day from 06:00 A.M. to 10:00 P.M. (morning hatha yoga session, seva/service sessions after breakfast, meditation sessions, seva/service after lunch, meditation sessions, nature walk to connect with nature, satsang/singing songs together, and knowledge sessions after dinner). All participants learnt the SKY in the Art of Living Happiness Program followed by an advanced level program of deep meditation, personal transformation, and empowerment. This specialized program was provided to empower the participants to become community leaders, and hence that they can become agents of transformation once they reach their communities. During the 40-day, all participants practiced SKY and meditation daily and attended evening “satsangs.”

Assessments

Information was collected on sociodemographic, including gender, age, level of education, ethnicity, and marital status. Participants completed the following questionnaires and scales which were given at pre- and post-40-day workshop for assessing the impact of yoga techniques.

- Buss–Perry Aggression Questionnaire – A 29-item measure which assesses four different aspects of aggression, namely physical aggression (9 items), verbal aggression (5 items), anger (8 items), and hostility (8 items)^[18]
- Satisfaction with Life Scale – A 5-item, 7-point scale designed to measure cognitive judgment of one’s life satisfaction^[19]
- WHOQOL-BREF – A 26-item questionnaire measures the quality of life in four domains-physical health (7 items), social relationships (3 items), environment (8 items), psychological health (6 items) besides overall QOL.^[20]

Results

Table 1 shows a significant decline in overall level of aggression ($P < 0.0001$) and in all four domains of aggression. A significant decrease was obtained for physical aggression ($P < 0.0001$), verbal aggression ($P < 0.05$), anger ($P < 0.05$), and hostile behavior ($P < 0.0001$).

Table 2 shows a significant improvement in how satisfied the participants felt with their lives after 40 days ($P < 0.0001$). Results revealed increase in the satisfaction level of the study population. Before intervention, only 5.02% of participants felt extreme satisfaction and 12.33% of participants felt satisfied with their life, whereas after intervention, 20.55% of the study population felt extremely satisfied and 37.44% felt satisfied with their life. However, the percentage of the study population who felt slightly satisfied with their life was almost similar in pre- (29.22%) and postconditions (28.77%). Furthermore, there was a decline in the percentage of the study population in neutral (pre = 10.05%; post = 2.74%), slightly dissatisfied (pre = 27.40%; post = 9.13%), dissatisfied (pre = 14.16%; post = 1.37%), and extremely dissatisfied (pre = 1.83%; post = 0%) categories.

Table 3 gives the WHOQOL BREF scores on the four domains. A significant improvement was observed in overall quality of life ($P < 0.0001$) and on physical domain ($P < 0.0001$), psychological domain ($P < 0.0001$), and the environmental domain ($P < 0.0001$), while no significant changes in the social domain were obtained ($P = NS$).

Discussion

The results of this study are the first evidence for the benefits of a comprehensive yoga program in a large sample of male, convicted extremist's population. The study results highlight the impact of the program on aggression, quality of life, and life satisfaction on a sample of ULFA militants following their surrender of arms from the northeast region of India. The subjects were assessed using a pre-post design following their participation in a 40-day training in the Art of Living campus in Bangalore, India.

A significant decline in the overall level of aggression following intervention with SKY in all four domains was obtained. Physical aggression includes lack of restraint to hit others, tendencies to threaten, get into fights, break things in anger, and respond to provocation with violence. The participants reported a significant decrease in all these attributes after practicing SKY and meditation ($P < 0.0001$). Furthermore, they also reported an improved restraint in tendency toward violence. However, when asked if they will resort to violence to protect their rights, many affirmative responses were obtained even after 40 days. This may be because most militancy in northeast region of India stems from a deeply ingrained feeling of lack of civil rights. However, it is encouraging to note that all the other aspects typically associated with violence and physical aggression showed a significant decrease in a short duration of 40 days among participants who had been actively engaged in militancy. Verbal aggression is characterized by tendency to have frequent disagreements, arguments, inability to have a calm discussion, getting annoyed, and saying hurtful things. All these tendencies showed a significant decrease

Table 1: Buss-Perry Aggression Questionnaire scores (pre-post intervention)

	Mean		<i>t</i>
	Preintervention scores (<i>n</i> =219)	Postintervention scores (<i>n</i> =219)	
Overall	84.09 (221.42)	76.71 (253.63)	1.97***
Physical aggression	24.27 (46.93)	20.68 (44.58)	1.97***
Verbal aggression	15.30 (11.70)	14.66 (13.41)	1.97**
Anger	19.83 (22.77)	18.91 (23.58)	1.97**
Hostile behavior	24.68 (29.57)	22.44 (33.25)	1.97***

** $P < 0.05$, *** $P < 0.0001$

Table 2: Satisfaction with life scale scores (pre-post intervention)

	Mean		<i>t</i>
	Preintervention scores (<i>n</i> =219)	Postintervention scores (<i>n</i> =219)	
Overall	20.43 (30.27)	26.14 (25.23)	1.97***

*** $P < 0.0001$

Table 3: WHOQOL-BREF scores (pre-post intervention)

	Mean		<i>t</i>
	Preintervention Scores	Postintervention scores	
Overall	88.28 (108.002)	101.21 (159.82)	1.97***
Physical	24.92 (15.98)	28.36 (14.36)	1.97***
Psychological	22.21 (8.70)	24.50 (13.003)	1.97***
Environmental	23.02 (20.25)	28.00 (20.75)	1.97***
Social	11.63 (5.37)	11.92 (4.57)	NS

*** $P < 0.0001$. NS=Not significant

in the study population ($P < 0.05$). In the current scenario of our society, families, and workplaces, verbal aggression is easier to exhibit and is a widespread problem. The study demonstrates that the practice of yoga can reduce verbal aggression effectively. Anger is a trait all humans have to some degree or other. Inability to control temper, losing temper frequently and for small reasons, getting frustrated, showing irritation, are some of the ways the scale on aggression measures anger. The study population showed a significant decrease in all these attributes ($P < 0.05$). Furthermore, a significant decrease in hostile behavior and hostility after regular practice of yoga techniques was also obtained ($P < 0.0001$). Samuelson *et al.* have reported that meditation significantly reduces the level of self-reported hostility.^[21] One of the root causes of militancy is the feeling of social injustice and a lack of a feeling of belongingness to the country and the community.^[22] The comprehensive yoga program helped overcome trust issues, suspicion, and hostility and created a sense of belonging with awareness, thus reducing hostility. A community where people feel happy and satisfied with their lives have less chances of experiencing violent agitation. Researches have shown that regular practice of meditation can reduce negativity and anger.^[1,8,23,24]

For insurgency and militancy to rise its ugly head in a community, a group of people must experience a deep feeling of dissatisfaction with their lives which may be due to struggles caused by grinding poverty, exploitation, and inequality that have prevailed in rural areas for centuries.^[22] Life satisfaction is determined by how happy we feel with our life situations and whether we like our living conditions. The fulfillment of needs and positive experiences with one's community contributes toward life satisfaction. The study population experienced a significant improvement in how satisfied they felt with their lives after 40 days ($P < 0.0001$).

Significant improvements in overall quality of life and all domains were observed. The study population reported significant improvement in overall quality of life ($P < 0.0001$), physical domain ($P < 0.0001$), psychological domain ($P < 0.0001$), and environmental domain ($P < 0.0001$). The participants reported improvement in sleep pattern and decrease in pain. They felt more energetic and reported better physical health as well. Participants experienced positive emotions, happiness, positive relationships with others, a feeling of purpose and meaning in life, self-acceptance, and personal growth and development. They recognized the improvement in their behavior and self over time. Significant results for environmental domain ($P < 0.0001$) show the positive effect of yoga and ambiance of Ashram/Retreat. Researches have shown that practicing meditation improves the well-being and quality of life.^[7,25] Being in an environment of peace and happiness – both internal and external created by SKY and the community/ambiance at the art of living international center – allows one to move from the complaining and grumbling mind to a grateful and satisfied one.

Conclusion

The present study demonstrates that within a short period, a comprehensive package of yoga (including SKY and meditation) can transform an individual by lowering aggression and improving quality of life and life satisfaction. All these are essential ingredients for peace and harmony. A calm mind has greater ability to respond and address life situations in a productive manner. SKY and meditation techniques make an individual less aggressive, calmer, and happy. They then have more awareness and can take better decisions about navigating their path through difficult situations. It provides a powerful tool for improvement in mental and physical well-being and may be useful in providing a rehabilitation measure for those who want to re-integrate in society.

The findings also have implications for policy-making. Thus far, research and policy surrounding mental health interventions in prisons have largely focused on psychological and psychosocial treatments. Yoga-based interventions, such as SKY and meditation, offer an effective option and are worth exploring further.

Limitations

There are some limitations to this study. During the 40-day stay at the Art of Living International Centre, participants besides practicing SKY and meditation daily attended evening satsangs (singing and knowledge) and a structured routine in a calm environment. These variables are likely to have also contributed to the changes observed in the participants. Hence, it is difficult to comment about which components of the intervention helped bring about the change. Second, there was no control group in the study, although it may be difficult to carry out such a study with a control group due to feasibility challenges. Third, the lack of follow-up of these surrendered militants would throw light on whether really the Yoga program helped to rehabilitate them back into the community.

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Conflicts of interest

There are no conflicts of interest.

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