



Research Article

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Effect of Yoga on Mental Health of Prisoners: A Pilot Study

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Abstract: Prisoners carry a much greater burden of illness than other members of the society; they harbor diseases that are determined both by the environment out of which they come and by the prison in which they live. Prisoners experience three times higher rates of mental health issues than the general population. The present study was conducted to assess the effect of a yoga intervention on prisoner's depression, stress, and anxiety levels. 20 prisoners were selected randomly from Gwalior central jail, Gwalior, MP. The age limit of the subjects was ranged from 18-40 years and the selected subjects were divided into two groups with 10 people in each group i.e., Experimental group and Control group. The first group was Experimental Group (EG) underwent 30 min yoga class for 2 weeks with 5 days a week and Group second served as the control group (CG). The Anxiety, Stress, and Depression was measured with the help of independent t-test with sig. level ($p < .05$). The data was extracted using ADSS (Anxiety Depression Stress Scale) scale (questionnaire) given by Pallavi Bhatnagar. Results showed a statistically significant decrease in reported scores for depression, stress, and anxiety in the experimental group in compared to control group. There was a significant effect of yoga over stress, anxiety and depression with ($p < .05$). The study demonstrated the potential benefits of implementing yoga intervention to support and improve mental health of prisoners

Keywords: Meditation, prisoners mental health, Yoga

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INTRODUCTION

Prison populations globally exceed 11.5 million as of December 2021, with men experiencing suicide rates three times higher, and women nine times higher than the general population. (Fazel et al., 2017). Daily mental stress is prevalent, as evidenced by high rates of psychiatric morbidity (Ayirolimeethal et al., 2014). Factors contributing to inmates' mental and physical health issues include overcrowding, prolonged pre-trial detention, poor living conditions, inadequate treatment programs and staff, and accusations of inhumane treatment (shubham kashyap, 2022). These kinds of factors mainly responsible for mental and physical related problems in the prisoners (Nurse et al., 2003),(Jordan, 2011). Common health issues among prisoners include depression and anxiety (Prost et al., 2022),(Muziki et al., 2022), Sleep disorder (Getachew et al., 2020),(Abdu & Hajure, 2020), Antisocial behaviour and aggression (Sen et al., 2014),(Staton-Tindall et al., 2015).

Many studies worldwide proved that Inmates from many different countries are often reported to have high levels of psychiatric illness (Fazel & Danesh, 2002) and there is a need of an alternative medicine to overcome these mental as well as physical health issues. So, the purpose of this study is to check if yoga as a method for managing and preventing overall mental health in prisoners.

Yoga is considered a promising low-risk intervention for trauma and mental health concerns. Systematic reviews report yoga shows promise as a helpful, low-risk intervention for trauma and related mental health concerns (Nguyen-Feng et al., 2019). By addressing social-emotional needs and teaching coping skills, it presents a viable approach to managing inmates' general health, especially for those who are not receiving mental health care through other channels. Without passing judgement, yoga entails focussing on one's breath, bodily sensations, and thoughts and feelings as they come up. Yoga fosters inmates' maturity by improving their ability to accept responsibility, feel more purposeful, and accept themselves. Additionally, it lessens inmates' hostility and antisocial behaviour (Willy-Gravley et al., 2021).

Thus, the study was conducted to check the effect of yoga intervention on mental health i.e. Anxiety, Stress and Depression.

Yogic Intervention

The Yogic intervention was a structured program lasting 30 minutes per session, conducted five days a week for two weeks. It included Surya Namaskar followed by Bhramari Pranayama. The researcher personally supervised and conducted the practice sessions. Each step was carefully explained and demonstrated before participants performed the exercises, with corrections made as needed. Additional

instructions were provided during the Bhramari Pranayama sessions to ensure proper practice.

Yogic Intervention	Time
Suryanamaskar	20 min
bhramari	10 min
Total	30 min

MATERIALS AND METHODS

The study involved 20 prisoners from the Central Jail of Gwalior, selected through a randomized control trial and divided into two groups of 10 subjects each, aged 18 to 40 years. All participants engaged in the routine Yogic intervention program. Variables were chosen based on relevant literature and the specific aim to assess Yoga's effect on concentration.

After randomization, subjects' levels were initially measured using the ADSS (Anxiety Depression Stress Scale) questionnaire by Pallavi Bhatnagar. They then underwent a two-week training schedule of five days per week, with each session lasting 30 minutes. Post-intervention data was collected using the ADSS questionnaire and analyzed by comparing the control and experimental groups' scores using an independent t-test in SPSS.

RESULTS

From a total of 20 prisoners out of which 10 attending Yoga classes are selected. All the prisoners filled out the questionnaires. Inferential tests showed that all the 20 prisoners attending in this study. The age of prisoners was ranged from 18-40 years. The mean score of stress of control group was 18.90 and of experimental was 25.30. The mean score of Anxiety of control group was 9.40 and of experimental was 14.60. The mean score of Depression of control group was 15.10 and of experimental was 18.80 after that independent *t* test showed a significant difference ($P < 0.05$). With regard to emotion focus, the mean score before intervention was 13.50, whereas it changed to 12.97 after intervention and the independent *t*- test showed a significant difference ($P = 0.014$). The mean scores for state-trait focus changed from 11.97 before intervention to 14.68 after and the independent *t* test showed a significant difference ($P < 0.05$). It can be concluded that 2-week Yoga intervention could significantly affect Stress, Anxiety, Depression coping strategies

To find out the significance difference between different pair means, independent *t*-test was used. The level of significance was set at 0.05.

		N	Mean	Std. Deviation	Level of sig.
STRESS	Control	10	18.9000	1.91195	95%
	Exp	10	25.3000	3.33500	
DEPRESSION	Control	10	15.1000	2.84605	95%
	Exp	10	18.8000	3.70585	
ANXIETY	Control	10	9.4000	1.50555	95%
	Exp	10	14.6000	2.45855	

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
STRESS	Equal variances assumed	1.250	.278	-5.265	18	.032	-6.40000	1.21564	-8.95396	-3.84604
	Equal variances not assumed			-5.265	14.339	.035	-6.40000	1.21564	-9.00151	-3.79849
DEPRESSION	Equal variances assumed	2.424	.137	-2.504	18	.022	-3.70000	1.47761	-6.80434	-.59566
	Equal variances not assumed			-2.504	16.876	.023	-3.70000	1.47761	-6.81922	-.58078
ANXIETY	Equal variances assumed	7.500	.013	-5.704	18	.028	-5.20000	.91165	-7.11531	-3.28469
	Equal variances not assumed			-5.704	14.918	.0301	-5.20000	.91165	-7.14408	-3.25592

DISCUSSION

The present study showed that 10 sessions of intervention as regular significantly reduced stress, anxiety, and depression in prisoners. In other studies, including (Harner, 2010), among incarcerated women, (Nanduri et al., 2021), among undertrial prisoners, (Bartels, 2019), in Australia prison, (Bilderbeck, 2015)

yoga in UK prison, these all were the studies which shows the significant positive effects of yoga in reducing stress, anxiety, and depression among prisoners. In the study of (Sfendla et al., 2018) it was found that greater improvement in mood and greater decreases in paranoid thoughts and psychological distress during 10 week of yoga intervention compared., the limitation of this study

is the small number of intervention sessions (10 sessions for 2 weeks only).

CONCLUSION

Based on the findings it can be concluded that prisoners have significant effect of yoga intervention on stress, anxiety and depression. Taking part in yoga session has helped to improve from stress, anxiety and depression levels in prisoners. Thus, yoga may support to enhance quality of life of prisoners by decreasing in stress, anxiety and depression level. Further studies will be needed to evaluate the impact of yoga session including large sample size with different age groups, genders and more time may help to create more stronger evidence in prisoners. Hence at this moment the researcher can recommend that yoga session could be included on regular bases to enhance mental health of prisoners.

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