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The Impact of Short-term Integrated Yoga practice on Psychological wellbeing in special educators of individual with special needs

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ABSTRACT

Background: Special educators face unprecedented work conditions and expectations that affect their psychological wellbeing and professional outcome as well. This study examines the growing evidence that even a short-term Integrated yoga practice enhance psychological wellbeing among special educators by reducing their stress, anxiety and depression levels. **Materials and Methods:** Special educators were recruited based on inclusion and exclusion criteria (n=20) age ranging between 25-50 years (Mean 35±6.3) for a single group interventional pre-post study design: Integrated yoga module (included postures, breathing practices, relaxation and mediation) was given for a period of 8 weeks. The subjects were assessed on day 1 pre and post intervention on day 60 on perceived stress scale (PSS), Beck's depression inventory (BDI-II) and Beck's Anxiety Inventory (BAI). **Results:** After 8 weeks of Integrated yoga practice there was a significant reduction in anxiety scores ($P < 0.000$), depression scores ($P < 0.000$) and perceived stress levels ($P < 0.000$) respectively compared to baseline by wilcoxon signed rank test. **Conclusions:** The results of this study suggest that even a short-term integrated yoga intervention that can enhance psychological wellbeing of the special educators.

Key words: Integrated yoga, BAI, BDI-II, PSS, Special educators.

INTRODUCTION

Special educators face unprecedented work conditions and expectations for assuring the wellbeing and educational success of the individual with special needs.^[1] Special educators are chronically faced with the relentless task of teaching challenging individuals in the context of demanding working

environments. This is especially true for special educators of individual with emotional or behaviour disorders.^[2] Findings from the earlier studies suggests that the task of educating children with special needs poses significant professional and emotional concerns for special educators.^[3] Special educators are under the fears of physical and verbal abuse.^[4] And they also face challenges in teaching individuals with multiple disabilities, educators considered their job stressful because of the special needs of children, such as their progress, safety and social development^[5] and student misbehaviour is a major stressor.^[6] Stress also affects the psychological, social and physiological health of educators.^[7] Frequent and prolonged stress contributes to burnout and undermines educator's commitment to remain in the profession.^[2] Evidence suggests that Special educators generally have higher rates of occupational stress, job-related distress, and attrition than educators who are in a regular

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education.^[5] Findings suggests that constant exposure to stressors that may accompany educating an individual with special needs lead to elevated rates of burnout, anxiety and depressive symptoms and reduced psychological wellbeing in educators. Previous studies consistently reported that even short-term *Yoga* practices could lower stress levels, depression and anxiety levels along with elevating the wellbeing among various groups.^[8] The health and wellbeing of special educators are important considerations for workforce retention and quality care. The mental health conditions such as stress, anxiety and depression have received little attention. Less attention has been given to enhance the psychological wellbeing of the special educators. Hence, the purpose of this study was to evaluate the effect of an eight weeks of the Integrated Yoga in modifying depression, anxiety and perceived stress that influences mental health status of the special educators, we hypothesize that it would enhance the psychological wellbeing by reducing stress, depression and anxiety symptoms. Integrated Yoga is a combination of physical postures (*Asana*), breathing practices (*Pranayama*), relaxation techniques, meditation (*Dhyana*).^[9] Given the magnitude of the psychological burden, it is surprising that very few remedial measures are in practice. The cost associated with those composite psychosocial interventions in the community is one of many reasons for the lack of translation into community practice. Our study suggests a low-cost integrated *Yoga* intervention that can enhance psychological wellbeing of the special educators.

Subject and methods

A total of 20 secondary care givers of special need children were recruited for the study using purposive sampling. The study was conducted in Bangalore's two Special needs education centres - Ishanya Foundation and Aruna Chethana, the approval from Institutional Ethics Committee of Swami Vivekananda Yoga Anusandhana Samasthana (SVYASA) was obtained. All the subjects who were willing to participate and who fulfilled the inclusion and exclusion criteria were selected to participate in the

study. The researcher followed this procedure of recruitment till a sample size of 20 was reached. Written informed consent was taken from all the 20 subjects. A Single group pre-post design was used for the study. Subjects who were healthy, age between 25-50 years (Mean 35±6.3) and willing to participate were included. Those having neurological and psychiatric disorders (based on case history), those who have practiced Yoga for the last 3 months were excluded from the study.

Outcome measures

Perceived Stress Scale (PSS)

The Cohen PSS is 10 item scale, each item is rated on a five-point scale ranging from never (0) to almost always (4). For measuring the perception of stress PSS is a widely used psychological instrument. The Cohen PSS is 10 item scale, each item is rated on a five-point scale ranging from never (0) to almost always (4). Positively worded items are reverse scored and the ratings are summed, with higher scores indicating more perceived stress. Scores around 13 are considered average. Scores of 20 or higher are considered high stress.^[10]

Beck's Anxiety Inventory (BAI)

This scale is a Self-report measure of anxiety, including 21 items. Internal consistency for the BAI = (cronbach's $\alpha=0.92$). test re-test reliability (1 week) for the BAI = 0.75 (Beck, Epstein, Brown & Steer; 1988). The BAI was moderately correlated with the revised Hamilton Anxiety Rating Scale (0.51) and mildly correlated with the Hamilton Depression Rating scale (0.25).^[11]

Beck's Depression Inventory - II (BDI-II)

The Beck Depression Inventory (BDI-II), created by Dr.Aaron T. Beck, is a 21-question multiple-choice self-report inventory, one of the most widely used instruments for measuring the severity of depression. BDI-II contains 21 questions, each answer being scored on a scale value of 0 to 3. The cut offs used differ from the original : 0-13: minimal depression; 14-19: mild depression; 20-28: moderate depression; and 29-63: severe depression. Higher total scores indicate

more severe depressive symptoms. The test was also shown to have a high one-week test–retest reliability (Pearson $r=0.93$), suggesting that it was not overly sensitive to daily variations in mood. The test also has high internal consistency ($\alpha=.91$).^[12]

Data Analysis

Statistical analysis was done using 'SPSS, 10' software. Normality was checked using Kolmogorov Smirnov test. As the dataset was not normally distributed, Wilcoxon's test was used to compare the pre-and post-values.

RESULTS

Following 8 weeks of *Yoga* intervention, there was a significant reduction in anxiety scores (47%), depression scores (46.68%) and perceived stress levels (61%) respectively, comparing the values at the end of the intervention with the values at the beginning showed statistically significant reduction in all the variables measured ($p<0.000$). The groups mean values \pm S.D. are given in Table 1.

Table 1: Variables recorded at the beginning (Initial) and end (Final) of the 8 weeks Yoga intervention are provided. Values (group mean \pm S.D.) for the psychological variables.

Yoga intervention	Anxiety		Depression		Perceived stress scale	
	BY	AY	BY	AY	BY	AY
Mean	38.3	23.3	21.89	11.67	29.33	11.44
Standard deviation	7.02	4.24	6.09	5.89	9.17	6.82
Standard error	2.34	1.41	2.03	1.96	3.06	2.27
% change	47%		46.68%		61%	
p-value	***0.000		***0.000		***0.000	
BY - Before Yoga, AY - After Yoga, *significant at $P<0.05$, ** significant at $P<0.01$, ***significant at $P<0.00$ (Wilcoxon Signed Ranks Test)						

DISCUSSION

The descriptive of perceived stress, depression and anxiety showed 61%, 46.68% and 47% reduction, respectively, after Yoga practice. Since the special educator's job is highly demanding in nature, they tend to be stressed, anxious and depressed. The beneficial effect of the integrated Yoga in uncoiling the distress and reducing anxiety, depression levels in special educators that too within a short period of time may be considered as an important contribution of this study. Many studies have shown the stress reducing effect of Yoga,^[13] which supports the observations of our study. Relaxation techniques may have contributed in enhancing the autonomic balance by increasing parasympathetic drive while simultaneously reducing sympatho-adrenal over activity. The resultant calming effect on the stress response system could bring down the levels of anxiety and relieve depression as seen in earlier reports.^[14] Thus relaxation response after Yoga may offer the ability to face the situations in a relaxed state of mind and perform with utter ease and effortlessness. Breathing practices down-regulate arousal and increase awareness of the interaction between the body and the mind,^[15] may also activate the hippocampus, hypothalamus, amygdala and stria terminalis, which may subsequently improve autonomic function through coordinated conditioning of inhibitory feedback mechanisms associated with neuroendocrine release, emotional processing, and social bonding.^[16] Yoga practices helps to reduce the efferent vagal reactivity and homeostatic regulation of hypothalamic-pituitary-adrenal axis and sympathetic nervous system,^[17] that intern helps to combat psychological hyper-reactivity and emotional instability.^[18] Even a short-term yoga intervention has shown improvement in acute mood states of depression, trait anxiety, negative mood and fatigue.^[19] Findings from earlier studies shows Yoga practices for rapid stress reduction and anxiolysis among distressed women,^[20] and reduction in symptoms of depression,^[19] are reported. Thus, the psychophysiological stability that is achieved by the components of postures, breathing practices,

relaxation techniques, meditation practices incorporated in the integrated Yoga program could be the major factors explaining observed benefits. This pilot study is the first of its kind to conclude that integrated Yoga can act as an essential feasible, cost effective therapy for psychological wellbeing in special educators. A major constraint of the study is the small sample size and lack of an active control group. It would have been valuable to include psychophysiological variables to throw light on the mechanisms. Despite of the limitations, significant results were manifested in a short time suggesting integrated Yoga could be a safe, non-pharmacological and low-cost alternative for the management of stress, anxiety and depression levels in special educators. In addition, the findings of this study may also provide an evidence supporting the incorporation of Yoga into standardized caregiver's wellness programs as a practical adjunct to improve the overall quality of life.

CONCLUSION

In conclusion, the findings of this study provide preliminary evidence for the benefits of integrated Yoga practices in reducing stress, depression and anxiety in special educators of individuals with unique emotional, cognitive and behavioural needs. This study is the first pilot study to show that integrated Yoga intervention with this population is feasible and efficacious over time. Our findings lay the groundwork for future research to replicate and extend these findings with measures. Positive outcomes from this line of research would have significant implications for a new generation of integrated wellness programs to enhance the wellbeing of parents and educators of special needs individuals.

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