

Effects of yoganidra on well-being of trainee teachers

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ABSTRACT:

INTRODUCTION:

Educational interventions aimed at enhancing well-being are the need of the hour. Yoganidra has potential to enhance well-being through creation of an experiential state of deep relaxation through an inner awareness with simultaneous detachment. The study was done to analyze the effects of Yoganidra on various dimensions of well-being amongst trainee teachers.

METHODOLOGY:

Trainee teachers participated in Yoganidra sessions over three months. Various aspects of well-being studied were 1) Perceived stress (using Visual Analogue Scale and Perceived Stress Scale), 2) Happiness (using Faces scale), 3) Overall quality of life (using Cantril's self-anchoring ladder) and 4) Psychological general well-being (using Psychological General Well Being Index-Short). An investigator designed tool was used additionally to capture certain deeper qualities of well-being hitherto not overtly measured in standard tools employed.

RESULTS:

Seventy-seven trainee teachers participated in the sessions over three months. There was significant reduction in perceived stress scale score ($p=0.005$), psychological well-being ($p=0.0003$), happiness ($p=0.0004$), quality of life ($p=0.039$) and significant perceived improvement in feeling of quietude ($p=0.0008$), mental stability ($p=0.004$), enthusiasm ($p=0.04$), feeling inspired ($p=0.03$), and happiness ($p=0.02$).

CONCLUSION:

Yoganidra practice brings about reduction in perceived stress, while enhancing emotional and cognitive dimensions of well-being such as feeling of quietude, mental stability, enthusiasm, feeling inspired, happiness and psychological well-being.

KEYWORDS:

Yoganidra, psychological general well-being, physical well-being, emotional well being, cognitive well-being, happiness, quietude

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INTRODUCTION:

The quest for identifying a man-making education and having a methodical approach for the same has never been as acute in the present times as

before. Need has arisen to teach self-management skills in schools considering high prevalence of depression among young people.^[1] Trainee teachers, the ambassadors for this paradigm shift in education, however have been shown to have high levels of stress.^[2] Psychotherapy and meditative practices are known to modulate the neuroplastic substrate and functioning of the brain.^[3] Yoga-nidra is an ancient technique used to train conscious development of a relaxed state, which is by design safe and shown to be effective self-management technique.^[3,4] There have, however, no studies investigating effects of yoga-nidra on teacher trainees. This study was designed to assess effects of Yoga-nidra on well-being amongst trainee teachers.

MATERIAL AND METHODS:

Setting: Study was done amongst trainee teachers (students of B.Ed. or Bachelor of Education) from a university in central Gujarat, India. The participants were graduates or post-graduates in humanities. They had earlier experience with Yoga (posture based) but no prior exposure to Yoga-nidra. Participants refrained from Yoga practice during study period. Intervention was carried out in group setting as earlier studies have demonstrated positive results for group-based mindfulness meditation.^[5] Approval of the Institutional ethics committee was taken vide letter no IEC/HMPCMCE/2017/17 dated 17th August, 2017.

Methodology: Seventy-seven students volunteered and gave written informed consent to participate. Those having any previous illness or developed any acute illness during the study were excluded. The intervention consisted of Yoga-nidra, which was carried out in sessions lasting 45 minutes once per week. The intervention includes sleeping in supine position and following verbal instructions as per established protocol.^[6] Interventions were done by study authors trained in Yoga-nidra. Due to exams the participants had a three week break during intervention, during which time that were provided audio recording of Yoga-nidra. In-person intervention was resumed after exams.

The study was designed to evaluate effects of yoga-nidra on various dimensions of well-being amongst teacher trainees. A mixed method study

was done to obtain its answer from broader perspectives; however, this article reports only the results of quantitative methods of assessment. Five validated tools for quantitative assessment of effects of yoga-nidra were used. Vernacular language study tools were developed using translation and back-translation protocol. The various tools used for the study included:

1. Visual Analogue Scale and Perceived Stress Scale (PSS10) to measure perceived stress^[7]
2. Faces scale to measure level of happiness^[3]
3. Cantril's self-anchoring ladder to measure quality of life (QOL)^[8]
4. Psychological General Well Being Index-Short (PGWBI-Short) to measure psychological well-being^[9]
5. Investigator designed tool to quantitatively assess qualities of wellbeing such as feelings of enthusiasm, happiness, being active, alert, and inspired, experiencing quietude, experiencing a state of self-awareness, stability and self-confidence, having clarity of thoughts, control over anger and developing a capacity of self-observation.

ANALYSIS:

Changes in the assessment tool scores before and after intervention were assessed using paired t-test. P-value less than 0.05 were considered as statistically significant. Data was analyzed using STATA 14.2.

RESULTS:

The study enrolled seventy-seven participants [56 females (72.73%) and 21 males (27.27%)] in their early twenties, (mean \pm SD: 22.44 years \pm 1.79). None of the participants dropped out after enrolment.

Perceived Stress, Happiness and Overall QOL

Perceived stress as measured using the VAS and PSS10. Pre-intervention scores for VAS was 5.63 (SD 2.45) and PSS10 was 21.92 (SD 4.03). There was significant reduction in VAS [3.32 (SD 1.19), $p < 0.001$] and PSS10 scores [19.17 (SD 5.46), $p = 0.005$] post intervention. (Lower scores means lesser stress). Happiness as measured using the

faces scale significantly improved from 3.01(SD 1.41) pre-intervention to 2.26 (SD 0.72), $p=0.0004$ post-intervention. (Lower score means higher happiness).

positive well-being [pre-intervention mean 3.04 (SD 1.09) to post-intervention mean 3.66 (SD 1.05), $p=0.0008$]. There was trend of improvement

Table 1: Pre and post intervention results of measures of Perceived Stress, Happiness, and Overall QOL

Attribute	Mean (SD)		t-score	p-value
	Before intervention	After intervention		
Perceived Stress Scale (PSS10) ^a	21.92(4.03)	19.17(5.46)	2.93	0.005
Perceived stress - VAS ^a	5.63(2.45)	3.32(1.91)	4.63	<0.001
Happiness ^b	3.0(1.41)	2.26(0.72)	3.74	0.0004
Overall QOL ^c	6.49(1.99)	6.74(1.89)	-0.85	0.039

a – Lower score means lesser stress, b – Lower score means higher happiness, c – Higher score means better QOL

Overall QOL improved from 6.49 (SD1.99) to 6.74 (SD1.89) post intervention, $p=0.039$. [Table 1]

in the depressed mood subscale but this was not statistically significant. [Table 2]

Psychological General Well Being

Experiential effects of yoga-nidra:

Overall PGWBI-Short score improved from pre-intervention mean of 18.6 (SD 4.05) to post -intervention mean of 21.4 (SD 4.19), $p=0.0003$. There was statistically significant and favourable improvement in subscales of Anxiety [pre-intervention mean 3.07 (SD 1.32) to

On the experiential effects study demonstrated significant improvement in various qualities e.g. enthusiasm [pre-intervention mean 3.48 (SD 1.08) to post-intervention mean 3.76 (SD 0.12), $p=0.04$], quietude [pre-intervention mean 3.11 (SD 1.21) to post-intervention mean 3.74 (SD 1.07), $p=0.0008$],

Table 2: Psychological General Well Being Index (PGWBI-short) before and after intervention

PGWBI-Short (Item No. From longer version of the scale)	Attribute	Mean (SD)		t-score	p-value
		Before intervention	After intervention		
5	Anxiety	3.07 (1.32)	3.55 (1.03)	-2.37	0.02
6	Vitality 1	3.23 (1.29)	3.55(0.92)	-2.07	0.04
7	Depressed mood	3.38 (0.99)	3.59 (0.97)	-1.56	0.12
18	Self-control	2.59 (1.27)	3.05 (1.41)	-2.32	0.02
21	Positive wellbeing	3.04(1.09)	3.66 (1.05)	-3.52	0.0008
	Vitality 2	3.00 (1.16)	3.52 (0.131)	-2.57	0.012
PGWBI (overall)		18.60(4.05)	21.40(4.19)	-3.52	0.0003

The scale has been designed in such a manner that increased score indicates a favorable outcome in that dimension. PGWBI=Psychological General Well Being Index, SD=Standard Deviation

post-intervention mean 3.55 (SD 1.03) $p=0.02$], Vitality1[pre-intervention mean 3.23 (SD 1.29) to post-intervention mean 3.55 (SD 0.92), $p=0.04$], Vitality2 [pre-intervention mean 3.00 (SD 1.16) to post-intervention mean 3.52 (SD 1.31), $p=0.012$], self-control [pre-intervention mean 2.59 (SD1.27) to post-intervention mean 3.05 (SD1.41), $p=0.02$ and

happiness [pre-intervention mean 3.60 (SD 1.11) to post-intervention mean 3.98 (SD 1.09), $p=0.02$], inspired and stability. Although statistically not significant, a definite positive trend was observed in the qualities 'feeling active, alert, self-aware, stable, self-confident, and self-observant.' [Table 3]. The results of qualitative analysis are congruent

**Table 3: 'Experiential effects of yoga-nidra' assessment tool scores before and after intervention
(Cronbach alpha Before: 0.72 After: 0.86)**

Sr. No.	Attribute	Mean (SD)		t-score	p-value
		Before intervention	After intervention		
1	Enthusiasm	3.48(1.08)	3.76(0.12)	-2.014	0.04
2	Quietude	3.11 (1.21)	3.74 (1.07)	-3.50	0.0008
3	Happy	3.60(1.11)	3.98(1.09)	-2.28	0.02
4	Inspired	3.39 (1.06)	3.71 (0.94)	-2.12	0.03
5	Active	4.0 (1.08)	4.10 (0.99)	-0.61	0.54
6	Alertness	3.77 (1.07)	4.04 (1.01)	-1.51	0.13
7	Self-awareness	3.73 (1.00)	3.84 (0.98)	-0.68	0.49
8	Stability	3.84 (1.02)	4.27 (0.92)	-2.92	0.004
9	Self-confidence	4.07 (1.16)	4.19(1.07)	-0.72	0.47
10	Clarity of thoughts	3.86 (1.02)	3.89 (1.02)	-0.19	0.84
11	Control over anger	3.55 (1.18)	3.35 (1.12)	1.03	0.30
12	Self-observation	3.57 (1.13)	3.67 (1.15)	-0.54	0.58

with these findings; however, they are being reported elsewhere in view of enormity of data and thematic profoundness of each arm of the study.

DISCUSSION:

Teachers must be educators who focus on academics as well as on self-development of students. To achieve this, they must be trained in the skills for managing well-being, as well as in teaching same to others.

However, previous studies amongst university students, particularly studies amongst trainee teachers have found stress levels ranging from 39-44%.^[10,11] Across continents and countries, teaching has consistently been ranked as a stressful occupation,^[12-14] The stress has been reported to be arising from various factors in the teaching profession.^[15]

Salient finding of the study is significant reduction in perceived stress scale score and improvement in psychological well-being, happiness, quality of life due to Yoganidra intervention. Qualities of enthusiasm, feeling of quietude, mental stability, happiness and feeling inspired also improved significantly. Mindfulness based therapy has been shown to improve psychological and physiological aspects of well-being.^[16] Yoga is a recognized

methods to enhance well-being. Kishida et al, have summarised that yoga holds a promise to improve intrapersonal and interpersonal relationships, which may potentially lead to enhanced health and well-being outcomes.^[17]

Study demonstrated significant improvement in stress, happiness and QOL. In a web-based survey administered to yoga practitioners, months of yoga practice was positively associated with mindfulness and self-compassion and negatively associated with depression and anxiety.^[18] We have earlier demonstrated similar benefits in school going children using similar methods.^[4] Ferreira-Vorkapic et al have demonstrated greater effectiveness of the Yoganidra intervention as compared to meditation amongst college professors.^[19] In another intervention study, using validated tools, Livingston et al have found that an eight-week program showed was effective in promoting mindfulness levels amongst health care workers.^[20] Yoga-nidra interventions have been found to be effective in improving mindfulness scores and reducing stress and depression amongst college students.^[21]

Study demonstrated significant improvement in all areas of psychological well-being (except the depressed mood). Experiential effects of

yoga-nidra' scale also demonstrated significant improvement in the various qualities. Both these findings combined suggest that yoga-nidra has effect on positive and negative dimensions of well-being. Hedonic dimensions include positive experiences, satisfaction in life, social involvement, and lack of negative emotions; Eudemonic dimensions include synchrony between individual's goals, values and life experiences.^[22,23] Indian psychology, refers to well-being as a conscious awareness of a transcendental state.^[24] In spiritual texts Yoga is considered as the process to attain spiritual consciousness.^[25]

From a physiological view point, numerous studies have sought to explain psychological and neurophysiological basis of yoga-nidra. Yoga-nidra produces alpha dominance in both hemispheres, with relaxation response through stimulation of the parasympathetic nervous system.^[26,27] Reduced sympathetic activity leads to enhanced physical and mental relaxation.

Evaluation of Yoga-nidra from an Indian psychological view point suggests that the stage of lying down (shavasana) leads to relaxation whereas self-determination is enhanced during the subsequent stage. In spiritual terms it can be thought that it brings about 'balance in the being and release of stress on all planes of one's being'.^[28]

There are several unique aspects of study which pertain to its methodology, results and perspectives. Most of the studies have employed fewer assessment tools and have assessed fewer dimensions of well-being. The study assessed effects of yoga-nidra on various measures of well-being, using validated tools. We selected students of faculty of education for studying our intervention. They are the future teachers.

To conclude, this study provides evidence that regular yoga-nidra sessions in trainee teachers minimizes their stress and anxiety levels, increases happiness, clarity and stability of thought, enthusiasm and alertness, and bring about an experience of quietude.

Limitations of the study were lack of control arm; hence confounding effect of group interaction cannot be ruled out. Longitudinal research on this intervention needs to be carried out in larger

sample size along with control arms.

Conventional classroom teaching is cognitive and subject centric; it helps in learning to become; the practice of yoga-nidra is one of the meta-cognitive and learner centric approaches which helps in leaning to be. The first may be necessary to obtain subject knowledge and livelihood, the second is essential to enhance well-being and enrich life. Shaping a better future demands an integral synthesis of both the approaches. Introducing such a practice for the teachers in making may well have snowballing effects in transforming the state of future education.

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CONFLICT OF INTEREST: NIL

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