

Compliance to Therapeutic Mind-Body Interventional Rajyoga Meditation

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Abstract

We evaluated compliance to learn Rajyoga meditation for improvement in cognitive abilities and behaviour of the children operated for congenital heart disease. Sixty patients with congenital heart disease in the age range of 8-18 years, admitted for cardiac surgery were taken as subjects to an intervention known as Rajyoga Meditation. Each patient along with their attendants was given 60-minute session of Rajyoga Meditation, thrice, in the peri-operative period, during their stay in the ward. The intervention in the form of Rajyoga training was initiated in the preoperative period in a specially designed meditation room and continued in the post operative period. The parameters used were intention-to-participate, social smile and feedback taken from all patients along with their attendants. The results showed acceptance by the children and their parents for the Rajyoga Meditation to reduce perioperative stress and psychological disturbances imposed due to complex cardiac surgeries. The results were highly encouraging as children and adolescents accepted the intervention.

Keywords: Rajyoga Meditation; Congenital Heart Disease; Mind-Body Intervention; Stress Management.

Introduction

The grown up children and adolescents undergoing heart surgeries have unknown fear and anxiety which can't be expressed in words. To understand their psychology, one needs to dig deeper into their conscious and sub-conscious minds. The understanding of children's behavioural patterns towards congenital heart disease (CHD) and their outlook towards life, pre- and post-operative period can be complex and often go un-noticed as they belong to an age group, where what they speak isn't much heard and given due importance.

Likewise, feeling of being withdrawn, perplexed and indifferent amongst peers, classmates or family gatherings might become a common phenomenon due to unguided, unattended early symptomatic characteristics of children undergoing CHD. Since,

the children are often unable to express their thoughts into words, the feeling of stress/burden of surgery, pain and other unspoken ailments might not find awareness unless properly addressed.

Rajyoga Meditation is a specific method of meditation involving art and science which encompasses inculcation of values in life, further development of practices involving life-skills which bring complete physical, mental & spiritual well-being. This mind-body interventional technique known as Rajyoga Meditation is a standard technique implied by medical wing of Rajyoga Education and Research foundation, a sister concern of Brahmakumaris.

Raj Yoga meditation involves focusing on the innerself in place of repeating single word or mantra chanting. By learning Raj Yoga, one can have feeling of well-being and control over emotions, as the mind starts to behave in a peaceful

and harmonious way. Raj Yoga Meditation has been recommended for stabilizing blood pressure, hypertension, and high cholesterol level since it is therapeutic mind-body interactional approach of practicing meditation [1].

Rajyoga Meditation is a practice which can create healing from inside but for that the active environment, as well as commitment of the person learning meditation is mandatory. Meditation can't be spoon fed like other medicines. The effect of this intervention is determined by the degree to which participation complies with treatment. Usually, for evaluation of any therapeutic methodology, or effect of intervention, one should first-know the compliance to the treatment. There are several ways to assess compliance which includes the following:

1. Attendance rates at various supervised treatment sessions.
2. Maintenance of personal diaries/ home diaries by the patients, which they can show at regular intervals, once they are oriented to Rajyoga Meditation.
3. Writing experiences and reporting of events.
4. Frequent communication via telecom exchange.

Various studies have been done previously showing effects of Rajyoga Meditation in patients undergoing heart surgery in adults [1,2,3]. However, till date, no such study has been ever conducted in children undergoing cardiac surgery to study the effect of Rajyoga Meditation or compliance to meditation.

Therefore, this study was initiated to evaluate the efficacy of Rajyoga meditation on behaviour of the children operated for CHD. This is a preliminary study and was carried out as a part of cognitive intervention and stress management in grown up children, who were under tremendous fear and anxiety before undergoing heart surgery. This is a part of research grant by Science and Technology of Yoga and Meditation (SATYAM), Department of Science and Technology, government of India.

Materials and Methods

A randomized non-blinded study was carried out on 60 patients undergoing surgery for CHD, between 8-18 years of age, being admitted in Cardiac-thoracic centre of All India institute of medical sciences, New Delhi, India. The patients, who confused spirituality with religion, or few patients who believed meditation to be a religious

activity, opted out of the study. Some patients, who became critical after surgery and couldn't perform meditation, were excluded as well. The rest of the patients were given sessions as in Table 1.

Table 1: Showing the techniques implied at various sessions

| Sessions | Technique implied |
|-----------|---|
| Session 1 | Realisation of who am I, awareness of self-being, self-improvement by positive thought stimulation |
| Session 2 | Connection to supreme power through meditation, which is, charging of the self, generating self-awareness and self-healing thoughts |
| Session 3 | Self-empowerment, positive outlook towards faster healing and negative emotions control, relaxation therapy with practice of meditation |

The Rajyoga meditation was given in a dim light room in the hospital specially designed and built for the purpose of meditation. The patients were given the sessions by certified trainers from Brahmakumaris Foundation for Spirituality in the presence of the doctors, physiotherapists, and counsellors. The therapeutic meditational technique given was as per standards of medical wing of Brahmakumaris World Spiritual University.

The subset of patients was those suffering from CHD and admitted for cardiac surgery. The Rajyoga Meditation as a relaxation therapy was started before heart surgery and continued in the post-operative period till the day of discharge. Usually the first session was given pre-operatively so as to boost the confidence and remove fear of surgery from patients. The rest of the sessions were given post-operatively, once they returned to ward from the intensive care unit (ICU).

These patients are generally admitted for 5-7 days including one day pre-operative, two days including day of surgery in ICU, followed by 3-5 days in the ward depending upon the recovery of the patient. The patients along with their attendants were given Rajyoga training and practice sessions at the time of admission to the hospital. At the same time, the caretakers of the patients were also asked to monitor and make the patient practice the same meditation at least 3-4 times a day.

The feedback of patients and attendants were taken after each session and recorded. Also, the patients were measured for compliance by their intention to participate, the interest shown during sessions, the improvement in the social smiles and positive response during and after meditation sessions.

Standard institutional protocol of premedication, anaesthesia management and postoperative critical care and pain management were followed.

The compliance of these patients to Rajyoga Meditation was assessed on the basis of self formulated scales which were based on intention to participate, social smile and feedback by patients.

Intention to Participate

The intention to participate represents the tendency and approach of patients, when introduced to Rajyoga, on how actively they wanted to participate and learn about it, patients who showed mild interest in the beginning were graded 1 to 3 points, whereas patients in the range 4-6 had moderate interest, and 7 and more, showed very good interest about learning of the Rajyoga Meditation, as shown in Fig. 1.

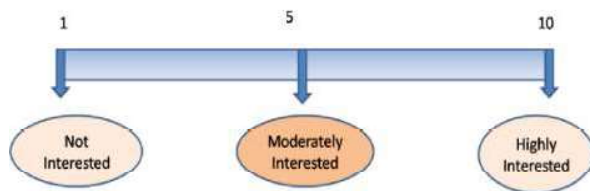


Fig. 1: Scale of Intention to participate ranging from 1 to 10, from not interested as 1 to highly interested as 10 respectively

Social Smile

The patients, who came to attend these sessions and had no social smiles and were depressed, were

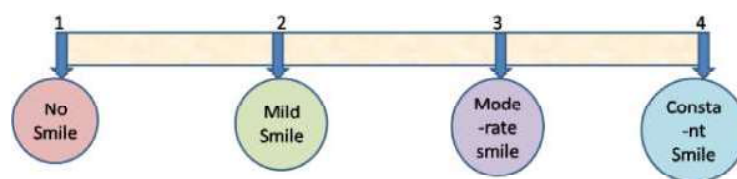


Fig. 2: Scale of Social smile ranging from 1 to 4, from 1 as No smile to 4 as constantly smiling respectively

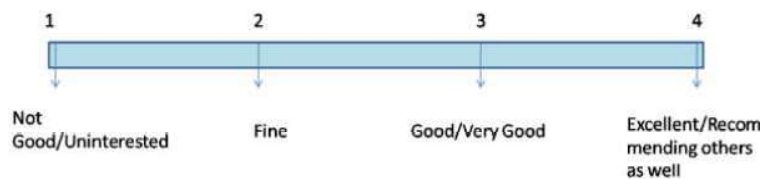


Fig. 3: Scale of feedback ranging from 1 to 4, where 1 denotes dislike/non-interest in the program whereas 4 showed excellent feedback.

awarded 1 point, whereas 2 points awarded for patients having milder smiles. 3 points were given to patients with moderate smiles and patients who smiled constantly were given 4 points, as shown in Fig. 2.

Feedback by Patients

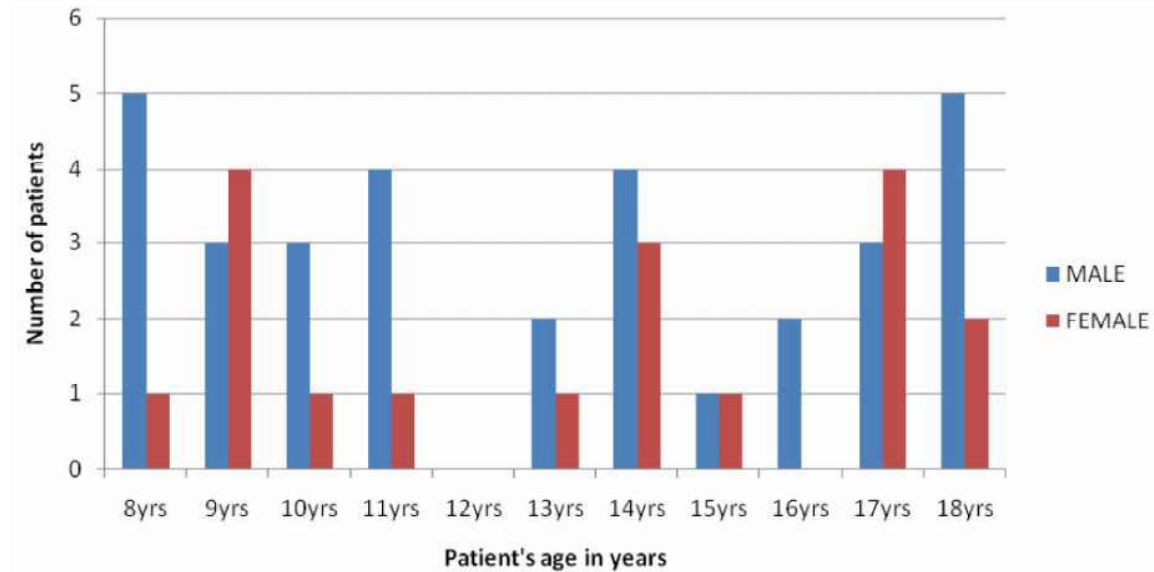
The feedback recorded were as per this scale (Fig. 3) which shows that 1 point being given for patients who were not interested for the program, 2 points for the patients who were fine with it, 3 points who liked the program and gave good feedback, and 4 points eventually for excellent feedback, in which the patients themselves encouraged and recommended the program to other patients to join and benefit from it.

Statistical Analysis

The data were entered and collected in Microsoft excel format (Microsoft, Edmond, RA, USA) (4) and statistical evaluation was further done.

Results

A total of 60 patients were enrolled and given introductory sessions. 52 out of 60 accepted to participate, parents of 7 children refused to give consent because of disbelief in spirituality or confusing spirituality with religion and 1 patient couldn't understand due to language barrier. Out of 52 patients who continued to participate, 2 patients had complications due to complex surgeries and

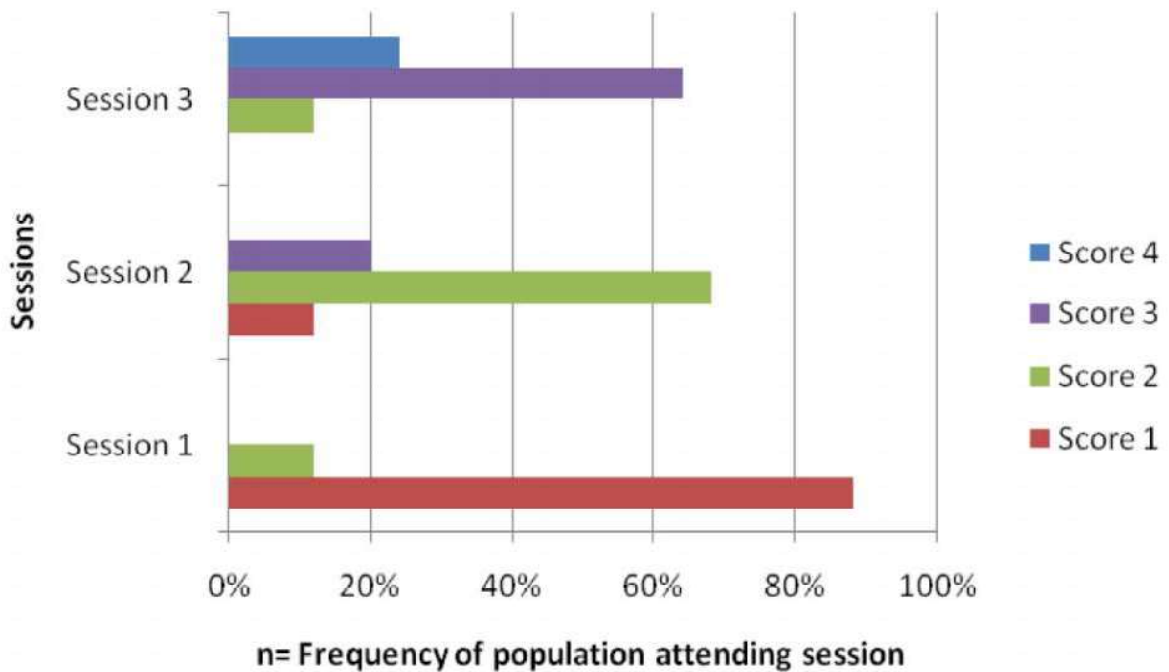


Graph 1: Graph representing the different number of patients taken for each group, from 8-18yrs of age

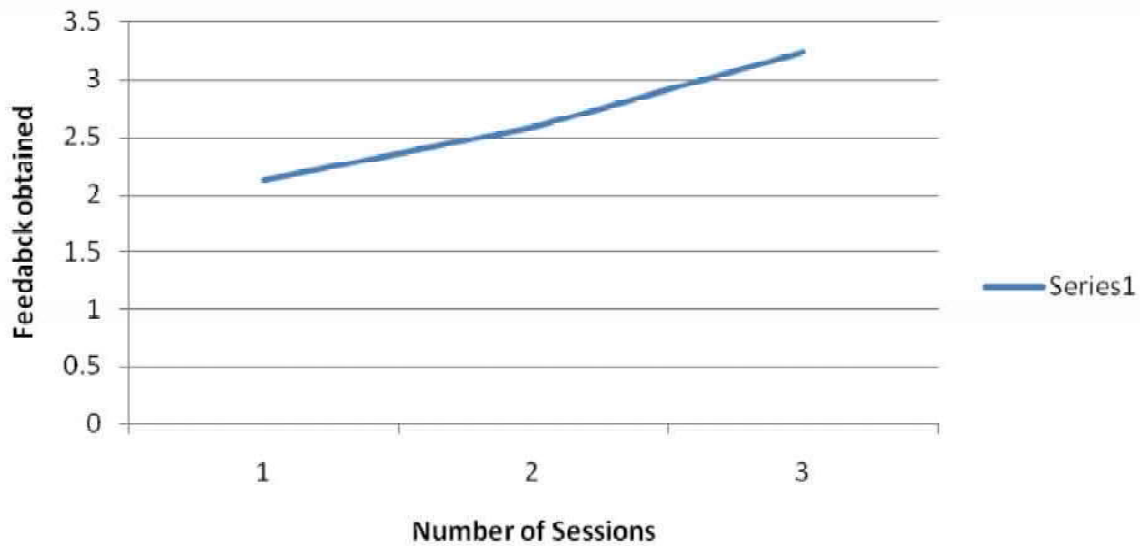
Table 2: Paired t-test was used to note significant changes in mean value score (p <0.001) session-wise in 50 patients for each session

| Attribute | Session 1 | Session 2 | Session 3 |
|-----------|-----------|-----------|-----------|
| Mean | 4.04 | 5.76 | 7.22 |
| SD | 1.124 | 1.152 | 1.016 |

remained critical in ICU for a long time, thereby, could not participate in further sessions. So, for the statistical purpose, data of 50 patients was analyzed. Amongst these, there were 32 male patients and 18 female patients analysed for the study, as shown in Graph 1.



Graph 2: Distribution of social smile during 1st, 2nd and 3rd sessions
 Red color (1 point)- No smiles; Green color (2 point)- Mild Smile; Violet color (3 points)- Moderate smile; Blue color (4 points)- Constant smiles.



Graph 3: Feedback from subjects during various sessions

The intention to participate in the Rajyoga Meditation increased over the subsequent sessions. The acceptance trend increased, as more number of patients were interested for attending second and third session of the guided meditational therapeutic as compared to the first session (Table 2).

The patients had no social smiles at the beginning of program. However, in course of program, by the end of third session, most of the patients were having moderate smile, almost 12 patients had constant smiles despite having pain from cardiac surgeries performed on them (Graph 2). By the end of third guided session, 32 patients had moderate smiles, 12 patients had constant smiles and 6 patients had mild smiles.

All subjects along with their attendants who participated in the study showed an increased likeness of the programme over subsequent sessions (Graph 3).

Discussion

In this study, Rajyoga Meditation is being introduced as a tool for stress management in the patients with congenital heart disease of age group 8-18 years and tried to evaluate whether the patients registered with us for Rajyoga Meditation before and after heart surgery, showed their compliance to learning meditation. We couldn't find any such study done previously done for compliance of children with respect to Rajyoga Meditation. This is first of its kind research on children about studying their initial compliance towards this meditational therapeutic approach.

It has been found in other related studies that Meditators, who were practicing Rajyoga meditation for more than 5 years, showed significant lower levels of serum Total Cholesterol, changes in very Low density Lipoprotein and fasting blood sugar, Low density Lipoprotein, and triglycerides and found to have higher level of high density lipoproteins as compared to non-meditators [3].

The eventual aspiration of all the yoga techniques or mind/body intervention is channelizing all the energies into spiritual empowerment and thereby rejuvenating both the brain and body [5].

Stress is a major concern in patients undergoing cardiac surgery. Anxiety, depression, fear of surgery and other psychological disturbances are the issues which need to be treated. Mind body interventions have been well documented for creating relaxation response [6]. Most of the studies on mind body intervention are done in adults. Rajyoga practical training technique is already being used by author in cardiac surgeries and has shown significant results [7].

Rajyoga meditation is an easy technique not requiring any postural positions and even a person can practice in sitting or lying down position, however, in children born with CHD, it can be easily done since movement of limbs is not required. It has been noticed that parents of such children have tremendous fear and anxiety which is reflected upon children, affecting their behaviour. Before carrying out randomized control study for the same, this was a preliminary part done to check compliance to Rajyoga, a new chapter in its own field.

Unexpectedly the study proves to be highly receptive and accepted. The patients used to eagerly wait for subsequent sessions. The strength of the study was confirmed by the feedback given by the parents and relatives of the patients confirming changes in the patient's attitude towards pain and stress handling as well as themselves, feeling much more confident and positive in their interpersonal outlook and other spheres of life, bringing positive results. More number of participants became more enthusiastic towards attending such kind of programs, if available, in future. Introduction of such kind of program at the hospital premises brought them joy and happiness, as they got a platform to share their pain, stress and learn ways to handle them overtime.

Preoperative anxiety is a complex response shown by patient's temperament, lack of understanding about the disease, coping mechanism, the proposed line of treatment and process of surgery [8].

The patient unknowingly takes lot of stress about the disease influencing their improvement in health and ability to cope up. The globalisation and increasing demands of daily life itself leads to gain of cumulative stress and anxiety disorders. Yoga helps in delivering a healthier approach towards dealing stress and thus balancing calmness in life. It relaxes and unwinds the brain, as *Bhagwadgita* says "Yogah Karmasu Kaushalam" meaning "Yoga is a special skill of relaxation" [9].

Conclusions

The study concludes good acceptance of mind-body interventions through Rajyoga Meditation among patients and their attendants, showing that such kind of activities can be adjunct in association with modern medicine, and can prove beneficial. Even in the long run, after many months and years post surgery, one can try and maintain good heart health, stress free life, and better management of anxiety issues pertaining to everyday life. The pattern of smiles of individual patients has shown improvement over subsequent sessions, bringing changes in their social interactions, pain handling, and stress management.

There is need of more such studies to bring a parallel medium to bring about enlightening of masses, for spreading awareness and benefiting humankind in general along with the patients

involved. This brief mind/body interventional training was found to be useful as a preventive therapeutic measure for patients, according to the authors/practitioners, who called for further research to determine whether the observed treatment effect can be sustained over a longer period of time, in the different health perspectives. The biggest achievement of the program was that there were no drop-outs once they started to attend the meditation program. That clearly shows the need being driven in the societies and the masses that such kind of spiritual awakening and guidance is so much needed and required at every stage of life.

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