CHAPTER IX

APPRAISAL

9.1 Summary

The effect of a short-term intensive inpatient yoga program was compared with physical exercise (control) on pain, spinal flexibility, anxiety, depression and quality of life in subjects with Chronic Low Back Pain (CLBP). It was a crossover randomized control study in an inpatient Integrated Health Centre in Bangalore, South India. Eighty subjects (females, n = 37) with CLBP, who consented were randomly assigned to receive yoga or physical exercise if they satisfied the selection criteria. The intervention consisted of a one week intensive inpatient yoga program comprising of āsanas (physical postures) designed for back pain, prāṇāyāma (breathing practices), meditation apart from didactic and interactive sessions on philosophical concepts of yoga. The control group practiced physical exercises under a trained physiatrist and also had didactic and interactive sessions on lifestyle change. In the group which started with yoga in the 1st week and went on to control in the 2nd week (YC) there was significant improvement in the 1st week followed further by a reasonable improvement in most of the variables in the 2nd week. In the group which started with control intervention and went on to yoga in the 2nd week (CY) there was an improvement in the 1st week followed by a significant improvement in the 2nd week. The overall change at the end of 2 weeks within groups was significant in most variables in the yoga group but did not differ between groups indicating the spillover effect of yoga.

Uniqueness of the study: This is a first comprehensive intensive residential study which showed better results than long term outpatient studies like Iyengar yoga and Vini yoga. The previous studies had lower sample size compared to current study. Most of them had
supervised practices twice a week and were asked to practice at home on other days of the week. Duration of yoga practices in the present study was 8 hours per day for seven days, whereas it was of 1.5 hour class per week with 30 minutes of practice at home for 5 days for 16 weeks in Iyengars’ module and a 75 minute class with a 3 hours of practice at home per week for 12 weeks in viniyoga module apart from the follow up period. The integrated yoga module used in this study included mind management techniques like OM meditation, cyclic meditation, deep relaxation technique, mind sound resonance technique, yogic hymns, yogic counseling and devotional sessions in addition to the practices which were common between the earlier studies.

9.2 Conclusions

This RCT has shown reduction in pain, functional disability with improved spinal mobility after a short-term intensive integrated yoga program in patients with CLBP along with improvement in anxiety and depression. It has also shown that patients with CLBP had high stress levels. There was negative correlation between stress and QOL. The QOL improved to reach normal levels within one week of residential intensive yoga practices better than conventional lifestyle change program for back pain.

9.3 Strength of this study

(i) The randomized control design with the control group also receiving supervised hour to hour matched intervention in a residential set up, and (ii) Significant results seen in objective measures (spinal flexibility) apart from pain and disability along with improvement in anxiety, depression, and quality of life within 7 days. This encourages acceptability of the program in the present day fast life. (iii) Acceptability (iv) The number of subjects (80). We are following up these subjects who continue to do the yoga practices. We hope to report this follow up as a different publication. We are happy to
inform you at a personal level that the improvements are steady in those who are practicing yoga and the results are encouraging although we have not yet completed the follow up and done the statistical analysis.

9.4 Limitations

Limitations of the study were:

(i) Possibility of some interaction and exchange of ideas could not be ruled out as both groups were in the same campus although special care was taken to keep the groups engaged independently in the campus for the practice sessions.

(ii) There was no washout period to prevent possible spillover effects, so these can not be ruled out.

(iii) Interventions were short-term. Short-term follow-up of only one week may be considered a major limitation. A follow-up of these patients who were asked to continue the practices daily (one hour) with the help of a video and audio presentation with instructions has been planned.

9.5 Implications

(a) Significant results seen in objective measures (spinal flexibility) apart from pain and disability along with improvement in anxiety, depression, and quality of life within 7 days in CLBP patients. This encourages acceptability of the program in the present day fast life where patients have to get back to normal day to day activities as soon as possible. (b) The treatment is cost effective compared to high costs of conventional medical management thus reducing the economical burden related to CLBP. (c) Yogic intervention does not just heal back pain but also takes care of the psychological components like anxiety and depression which contribute to better attitude and
functioning of the patients. (d) Yogic intervention improves quality of life which helps in coping skills and fostering a better sense of wellbeing which again helps patients to get back to normal life.

9.6 Suggestions for future work: (i) It will be useful to include measures for assessment of anxiety, depression and stress. (ii) A long-term follow-up and measures of cognitive changes may be studied. (iii) Longer duration of follow up with continued home practice for about six months. (iv) More objective measures such as X-rays, MRI of the spine, EMG studies before and after can be planned. (v) Generalisability of this program in different cultures to be assessed by studies in different ethnic groups. (vi) Studies that combine this intervention to physiotherapy may show synergistic effects.