

CHAPTER 8

APPRAISAL

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8.1. SUMMARY OF THE FINDINGS

One-month comprehensive Integrated Yoga and Physiotherapy program is more effective than physiotherapy intervention alone, in the management of individuals with paraplegia.

8.2. CONCLUSION

The study's promising results indicated by reduction in pain, infection, and inflammation, improving gait, functional independence, spasticity, QoL, and distress in paraplegic patients, implies the value of using yoga in programs of neurological rehabilitation as an adjunct to conventional care.

Contribution of this thesis:

This is the first randomized control trial of yoga in SCI, and it was aimed to compare the effect of IYP to PT in the management of SCI patients on ASIA score, functional independence, distress, an inflammatory marker, quality of life and body mass index.

This study enumerated various beneficial inputs of yoga therapy in neurological impairment, such as deep relaxation leading to improved cardiac autonomic function modulation resulting in improved homeostatic control. Another important finding of this study is the beneficial impact of add-on of yoga on spasticity in SCI patients.

This study also reveals the promising results of yoga therapy in improving chronic inflammation and boosting metabolism in neurologically impaired patients. The unique finding of this study adds significantly to the existing literature available on SCI and yoga intervention. It will motivate policymakers in the health care system to improvise health care aids being provided to the SCI population. Lastly, the huge improvement in almost all psychological parameters and overall well-being paves the way for this unconventional therapy to become a vital part of the rehabilitation protocol of neurological disorders.

8.3. IMPLICATIONS OF THE STUDY

- The significant improvements observed in almost all the primary and secondary outcome measures encourage the acceptability of Yoga Therapy intervention for spinal cord injury patients.
- Yogic practices improve quality of life and reduce emotional distress, which in turn helps in improving coping skills and fostering a better sense of wellbeing to achieve a near-normal life.
- Yogic intervention could be cost-effective compared to the high costs of conventional medical management of neurological disorders, thus reducing the economic burden of treating this condition.
- Improved well-being is a welcomed social benefit of Yoga Therapy that adds to building a healthy society.

8.4. APPLICATIONS OF THE STUDY

Yoga therapy as add-on can be used as one of the best unconventional therapy along with first line of treatment for effective management of neuro-psychiatric illnesses.

8.5. STRENGTH OF THE STUDY

- To the best of our knowledge, this is the first randomized controlled study of yoga for spinal cord injured patients with ASIA score C and D (paraplegics).
- It used yoga therapy as an add-on, and its reasonable sample size offers good evidence for the benefits of yoga-based rehabilitation.
- Including objective assessments like CRP and ESR, as biomarkers of inflammation and infection.
- This study had an active control group.

8.6.LIMITATIONS OF THE STUDY

- The main limitation of the study was that it was conducted on paraplegia patients belonging to one rehabilitation center, and the results were not able to rule out the effect of other rehabilitation activities such as vocational training and occupational therapy.
- We did not investigate radiological findings, such as MRI, CT-scan, or X-rays, which would have detailed clearly the clinical outcomes, providing a fuller picture of subject's anatomy and physiology.
- Due to the nature of the intervention, blinding of the subjects was not possible.
- With the availability of adequate funds, we could have measures pro-inflammatory and anti-inflammatory cytokines, which in turn would have provided fuller picture of underlying pathology at subtle level.

8.7. SUGGESTIONS FOR FUTURE STUDIES

- More rigorously designed, larger scale research with longer follow-up should be conducted, particularly as that would also expand yoga's evidence base.
- Having additional subgroups stratified as motor and sensory complete and incomplete would have made the study more vigorous.
- Similarly, assessments of neurological biomarkers (e.g., neuroproteomics) in body fluids would throw light on mechanisms.
- Objective measurement of bio-energy fields of patients with GDV or BIOWELL would also explore the positive changes in energy state and mood. Multi-centric studies are also the need of the hour.
- More multi-centric trials are needed.