In addition to the predominance of the parasympathetic state, yoga may also promote effective extraction of oxygen by peripheral tissues. When a muscle is stretched, the oxygen consumption increases (Limonta, Cè, & Esposito, 2012). An 8-week health effects of yoga training showed increased muscle strength (31%), muscular endurance (57%), flexibility (88%), oxygen uptake (7%) and reduced cardiovascular risk in healthy adults (Hari Krishna et al., 2014; Tran, Holly, Lashbrook, 2001).

# 8.0 APPRAISAL

#### 8.1 SUMMARY OF THE FINDINGS

A comprehensive review of available research evidence in the field of cardiovascular health through a bibliometric analysis was performed. Compilation and an expert validation of a yoga module for the current RCT was performed. The post-MI patients who satisfied the selection criteria were randomly assigned to two groups, namely, Group 1- yoga and Group 2- control. The yoga group received one hour supervised yoga module, which was previously validated. The patients were encouraged to practice the same one hour yoga, as per the module, at home during the other days of the week. The control group received standard care that included pharmacological treatment and the instructions of the cardiologist. There was no statistically significant difference in LVEF between the two groups. However, the yoga-practicing group showed significant reduction in depression, anxiety, and a significant increase in quality of life scores at 3 months compared to control. Control and yoga practicing groups did not differ significantly in the lipid levels.

# 8.2 CONCLUSION

This study indicated that integration of yoga practice in cardiac rehabilitation program is feasible. Yoga therapy used as an adjuvant to conventional pharmacological management has no additional benefits in improving cardiac function (LVEF) when compared to standard care. However, it may assist in reducing depression and anxiety as well as improve overall quality of life in post MI patients. The study also establishes the utility of CDS, HAM-A and DASI questionnaires on Indian cardiac patients. Future studies with larger sample sizes utilizing more diverse population and longer duration of yoga practice are recommended.

## 8.3 IMPLICATIONS OF THESTUDY

The IAYT module that was standardized as part of this study would be beneficial for the community. Yoga practices may be implicated into the main stream cardiac patient care. Alternative models of cardiac rehabilitation may be appreciated as a safe and feasible alternative by the patients as well as the health care professionals.

### 8.4 APPLICATIONS OF THESTUDY

The concept of cardiac rehabilitation is less known in the eastern part of the world, including India. The concept of yoga-based cardiac rehabilitation would have a profound improvement in the recruitment and participation of cardiac patients in the rehabilitation programs.

### 8.5 STRENGTH OF THESTUDY

The strengths of the current study lie in the fact that this is the preliminary randomized control trial assessing the effectiveness of IAYT in post-MI patients with left ventricular dysfunction in India. This study uses CDS, HAM-A, and DASI questionnaires in Indian cardiac patients. Supervised yoga intervention, high patient retention and blinded raters for LVEF are additional strengths worth mentioning.

#### 8.6 LIMITATIONS OF THE STUDY

Our study had several limitations such as a small sample, gender-biased to males, absence information on confounding factors such as diet, absence of an active control group and an absence of a plan to compare with any other form of exercise. There was no method used to assess the adherence of either the patients or caregivers to the intervention. Additionally, the contribution of medication in the improvement of LVEF was also not documented. The low physical demand of the intervention, estimated at around 3.3 METs, not sufficient enough to effectively target the cardiovascular system may not be ruled out.

### 8.7 SUGGESTIONS FOR FUTURE STUDIES

Future studies may be designed with larger sample size, equal male to female participants of a conventional cardiac rehabilitation program as a control group, more sophisticated methods of LVEF measurement including stress echocardiogram, assessment of the extent of the viability of the myocardium through myocardial perfusion studies/ thallium scans and inclusion of a longer duration of the supervised IAYT practice.