

Chapter – 4

AIM AND OBJECTIVES OF THE STUDY



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4.1 AIM

To assess the impact of 1 year Yoga based lifestyle intervention on biochemical levels, thermal imaging parameters, electro photonic imaging parameters, anthropometric measurements, blood pressure levels, T2DM medication scores and psychological variables in patients suffering from Type 2 diabetes mellitus (T2DM)

4.2 OBJECTIVES

- 1) To assess the effect of 1 year Yoga based lifestyle intervention on biochemical levels in patients suffering from T2DM
- 2) To assess the effect of 1 year Yoga based lifestyle intervention on Electro-photonic Imaging parameters in patients suffering from T2DM
- 3) To assess the effect of 1 year Yoga based lifestyle intervention on Thermal Imaging parameters in patients suffering from T2DM
- 4) To assess the effect of 1 year Yoga based lifestyle intervention on anthropometric measurements, blood pressure levels and medication scores in patients suffering from T2DM
- 5) To assess the effect of 1 year Yoga based lifestyle intervention on psychological variables in patients suffering from T2DM
- 6) To see the correlation between HbA1c level and Thermal Imaging parameters in patients suffering from T2DM
- 7) To see the correlation between HbA1c level and Electro-photonic Imaging parameters in patients suffering from T2DM

4.3 JUSTIFICATION OF THE STUDY

- 1) Long term follow-up studies assessing impact of Yoga on T2DM are limited.
- 2) Very few RCTs (Nagarathna et al., 2012; Jyotsna et al., 2012; Gordon et al., 2008) seeing the long term effects (six months or more) of yogic practices on T2DM have been published in English language.
- 3) Most of the RCTs assessing impact of Yoga on T2DM are lacking robust methodologies like allocation concealment and single blinding.
- 4) No study has investigated the impact of 1 year Yoga intervention on biochemical levels along with thermal imaging and electro-photonic imaging parameters in T2DM.
- 5) Present study aimed to see the long term impact of a validated and compact integrated yoga module on biochemical levels, thermal imaging parameters and electro-photonic imaging parameters in T2DM using robust methodologies.
- 6) Present study was also planned to assess the mechanism of action of Yoga by correlating HbA1c with thermal imaging and electro-photonic imaging variables.

4.4 RESEARCH QUESTIONS

- 1) Whether 1 year Yoga based lifestyle intervention has an effect on biochemical levels in patients suffering from T2DM?
- 2) Whether 1 year Yoga based lifestyle intervention has an effect on thermal imaging parameters in patients suffering from T2DM?
- 3) Whether 1 year Yoga based lifestyle intervention has an effect on electro-photonic imaging parameters in patients suffering from T2DM?
- 4) Whether 1 year Yoga based lifestyle intervention has an effect on anthropometric measurements, blood pressure and T2DM medication score in patients suffering from T2DM?

- 5) Whether 1 year Yoga based lifestyle intervention has an effect on psychological variables in patients suffering from T2DM?
- 6) Is there any correlation between HbA1c level and Thermal Imaging parameters in patients suffering from T2DM?
- 7) Is there any correlation between HbA1c level and Electro-photonic Imaging parameters in patients suffering from T2DM?

4.5 HYPOTHESIS

4.5.1 Research Hypothesis

- 1) 1 year Yoga based lifestyle intervention has an effect on biochemical levels in patients suffering from T2DM.
- 2) 1 year Yoga based lifestyle intervention has an effect on Electro-photonic Imaging parameters in patients suffering from T2DM.
- 3) 1 year Yoga based lifestyle intervention has an effect on Thermal Imaging parameters in patients suffering from T2DM.
- 4) 1 year Yoga based lifestyle intervention has an effect on anthropometric measurements, blood pressure and T2DM medication scores in patients suffering from T2DM.
- 5) 1 year Yoga based lifestyle intervention has an effect on psychological variables in patients suffering from T2DM.
- 6) There is a correlation between HbA1c level and Thermal Imaging parameters in patients suffering from T2DM.
- 7) There is a correlation between HbA1c level and Electro-photonic Imaging parameters in patients suffering from T2DM.

4.5.2 Null Hypothesis

- 1) 1 year Yoga based lifestyle intervention does not have any effect on biochemical levels in patients suffering from T2DM.
- 2) 1 year Yoga based lifestyle intervention does not have any effect on Electro-photonic Imaging parameters in patients suffering from T2DM.
- 3) 1 year Yoga based lifestyle intervention does not have any effect on Thermal Imaging parameters in patients suffering from T2DM.
- 4) 1 year Yoga based lifestyle intervention does not have any effect on anthropometric measurements, blood pressure and T2DM medication score in patients suffering from T2DM.
- 5) 1 year Yoga based lifestyle intervention does not have any effect on psychological variables in patients suffering from T2DM.
- 6) There is not any correlation between HbA1c level and Thermal Imaging parameters in patients suffering from T2DM.
- 7) There is not any correlation between HbA1c level and Electro-photonic Imaging parameters in patients suffering from T2DM.