

CHAPTER 4

AIM AND OBJECTIVES

Key Messages

- This study was aimed to measure the effect of yoga on physical and psychological health of children with visual impairment.
- Firstly, a special protocol comprising five different modes of teaching yoga practices was developed.
- The preferred mode of learning yoga by every student was evaluated.
- Secondly, a comprehensive yoga module was developed, validated and the feasibility was also evaluated.
- Thirdly, a 16 week long yoga intervention was provided to the participants.
- Physical and psychological parameters of the participants were assessed before and after the intervention.

4.0 AIM AND OBJECTIVES

4.1 AIM

The study aimed to evaluate the effect of a 16 week yoga program on the physical and psychological health of children with VI.

4.2 OBJECTIVES

1. To develop a special protocol for teaching yoga to children with severe VI
 - 1.1 To determine any method, by which such children prefer to learn yoga.
2. To establish a specific yoga module for children with VI.
 - 2.1 To develop a yoga module for children with VI.
 - 2.2 To validate the said yoga module.
 - 2.3 To assess the feasibility of the yoga module.
3. To evaluate the effect of the yoga module on physical health in children with VI.
 - 3.1 To study the effect of yoga on their muscle strength; hand grip strength, pinch strength, elbow and knee strength and minimum muscular fitness.
 - 3.2 To assess the effect of yoga on their muscle endurance.
 - 3.3 To measure the effect of yoga on their flexibility.
 - 3.4 To evaluate the effect of yoga on their coordination.
 - 3.5 To find out the effect of yoga on their motor speed.
 - 3.6 To assess the effect of yoga on their balance; static and dynamic.
 - 3.7 To study the effect of yoga on their peak expiratory flow rate.
4. To examine the effect of yoga on psychological health in children with VI.
 - 4.1. To evaluate the effect of yoga on state and trait anxiety
 - 4.2. To evaluate the effect of yoga on depression
 - 4.3. To examine the effect of yoga on self-esteem

- 4.4. To examine the effect of yoga on verbal memory
5. To examine the effect of yoga on general health of children with VI.

4.3 RESEARCH QUESTIONS

1. Can children with VI learn yoga easily using a specially developed yoga teaching module?
2. Can a validated yoga module help the children with VI to improve their health status effectively?
3. Can such a yoga intervention bring about positive changes in physical health in children with VI?
4. Can yoga training improve psychological factors in children with VI?

4.4 RESEARCH HYPOTHESES

H_a 1: A specially developed protocol may help visually challenged children to learn yoga in an effective and interesting way.

H_b 2: A validated yoga module would help visually impaired children efficiently improve their health status.

H_c 3: Such a yoga program will bring positive changes in the physical health of children with VI.

H_d 4: The yoga program intervention will improve the children's psychological health.

4.5 NULL HYPOTHESES

H_o 1: A specially developed protocol may not help the children with visually impairment to learn yoga in an effective and interesting way.

H_o2: The validated yoga module may not be feasible for the children with visual impairment.

H_o3a: There is no change on the muscle strength; hand grip strength, pinch strength, elbow and knee strength and minimum muscular fitness in yoga group.

H_o3b: There will be no change on muscle endurance in yoga group.

H₀3c: There will be no change on flexibility in yoga group.

H₀3d: There will be no change on coordination in yoga group.

H₀3e: There will be no change on motor speed in yoga group.

H₀3f: There will be no change on balance; static and dynamic in yoga group.

H₀3g: There will be no change on peak expiratory flow rate in yoga group.

H₀4a: There will be no change on state and trait anxiety score in yoga group.

H₀4b: There will be no change on depression score in yoga group.

H₀4c: There will be no change on self-esteem in yoga group.

H₀4d: There will be no change on verbal memory in yoga group.

H₀4e: There will be no change on general health in yoga group.

4.6 RATIONALE OF THE STUDY

Yoga's benefit on health status of sighted children is well established by previous studies. Only limited assessment of possible benefits of yoga practice has previously been attempted for children with VI. Yoga is a low risk practice not requiring any special equipment, which can be included among the regular activities of this population to solve their problems. To the best of our knowledge, no published studies have assessed effects of supervised regular practice of yoga on physical and psychological parameters in children with severe VI. On this basis, the present study was planned to assess these outcome parameters.