CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

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CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

7.1. Introduction

This chapter deals with the conclusions of the study and recommendations based on them. The present study was aimed at analyzing the role of lifestyle changes in the development and management of type 2 diabetes mellitus in Kerala through the Homoeopathic approach.

7.2. Conclusions

Based on the findings of this study the following conclusions were drawn:

1. Women are more \( (p < 0.001) \) vulnerable to type 2 diabetes mellitus than men.

2. Urban population is more \( (p < 0.001) \) prone to type 2 diabetes mellitus than rural.

3. From the age of 25yrs to 65yrs, age is not significant \( (p < 0.504) \) in the development of type 2 diabetes mellitus.

4. Dietary changes have a significant role in the development of type 2 diabetes mellitus.

5. Irregular diet \( (p < 0.001) \), fast food \( (p < 0.001) \), fatty food \( (p < 0.001) \), and overeating \( (p < 0.001) \) are significant in the development of type 2 diabetes mellitus.
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6. Lack of exercise has significant impact ($p < 0.001$) on the development of type 2 diabetes mellitus.

7. Domestic stress exerts significant influence ($p < 0.001$) in the development of type 2 diabetes mellitus.

8. Positive family history is relevant ($p < 0.001$) in the development of type 2 diabetes mellitus.

9. Obesity ($p < 0.001$), hypertension ($p < 0.001$), and hypercholesterolemia ($p < 0.001$) are significant in the development of type 2 diabetes mellitus.

10. Age is significant ($p < 0.001$) in the management of type 2 diabetes mellitus. Homoeopathic medicines and lifestyle changes as an adjunct to Homoeopathic medicines are more effective in the younger age groups (25-45yrs, $p < 0.001$).

11. Gender is not significant in the management of type 2 diabetes mellitus. Homoeopathic medicines ($t = 0.02, p < 0.984$) and lifestyle changes as an adjunct to Homoeopathic medicines ($t = 0.04, p < 0.967$) are equally effective in both men and women.

12. Geography (rural and urban) is not significant in the management of type 2 diabetes mellitus. Homoeopathic medicines ($t = -0.759, p < 0.450$) and lifestyle changes as an adjunct to Homoeopathic medicines ($t = -0.639, p < 0.524$) are equally effective among both urban and rural population.
13. Duration of the disease is important in the management of type 2 diabetes mellitus, especially FBS (p < 0.001) and PPBS (p < 0.001). Duration of the disease less than 5yrs has better prognosis (p < 0.001).

14. Homoeopathic medicines are significantly effective in the reduction of FBS (t = 16.309, p < 0.001), PPBS (t = 20.644, p < 0.001) and HbA1c (t = 10.49, p < 0.001). So Homoeopathic medicines are effective in the management of type 2 diabetes mellitus.

15. Lifestyle changes as an adjunct to Homoeopathic medicines are significantly effective in the reduction of FBS (t = 18.882, p < 0.001), PPBS (t = 29.978, p < 0.001) and HbA1c (t = 17.995, p < 0.001). So lifestyle changes have a significant role in the management of type 2 diabetes mellitus.

16. Lifestyle changes (including regular exercise and appropriate food habits) as an adjunct to Homoeopathic medicines are far more effective in the reduction of FBS (t = - 3.88, p < 0.001), PPBS (t = - 9.54, p < 0.001) and HbA1c (t = - 9.64, p < 0.001) than Homoeopathic medicines administered alone. So lifestyle changes as an adjunct to Homoeopathic medicines are significantly more effective in the management of type 2 diabetes mellitus.
Conclusions and Recommendations

7.2. Suggestions

The present study unraveled has many implications in the prevention and management of Type 2 Diabetes Mellitus in Kerala.

1. The Diabetes Control and Prevention Programme: Diabetes touches almost every part of life. Risks of Type 2 Diabetes Mellitus can be reduced by making changes in diet and increasing physical activity. Lifestyle changes as an adjunct to homoeopathic medicines help to prevent or delay the onset of Type 2 Diabetes Mellitus, especially in high risk population.

Since diabetes appears to be linked with sedentary lifestyle, over nutrition and obesity, correction of these adverse factors can reduce the risk of diabetes. Subjects at risk should avoid diabetogenic drugs. It is wise to reduce factors that promote atherosclerosis, smoking, high blood pressure, elevated cholesterol and high triglyceride levels. These programmes may most effectively be directed at target population groups.

So the government is most earnestly solicited to start the Diabetes control and prevention programme in Kerala immediately and to set up a Diabetic Cell under Kerala University for Health Sciences. The Diabetic Cell should include Homoeopathic Diabetic Research Programmes (epidemiological, preventive and treatment levels).
2. Treatment programmes: When diabetes is detected, it must be promptly and adequately treated. Good control of blood glucose protects against the development of complications. By proper administration of homoeopathic constitutional medicines along with lifestyle changes helps in preventing or delaying the complications of Diabetes. Homoeopathy is economic, safe, simple and non-toxic. So the Government should establish Homoeopathic Diabetic Units in all Homoeopathic Medical Colleges and District Hospitals.

Routine checking of blood sugar, of urine for proteins and ketones, of blood pressure, visual acuity and weight should be done periodically. The feet should be thoroughly examined for any defective blood circulation, loss of sensation and the health of the skin. There should be an estimation of glycated hemoglobin at half yearly intervals. This test provides a long term index of glucose control.

The patient should carry an identification card showing his name, address, telephone number and the details of treatment he/she is receiving. In short, the patient must have a working knowledge of diabetes. All these point to need for educating the patients and their families so as to optimize the effectiveness of primary healthcare services.
3. Diabetes Awareness Programmes: Diabetes is the major cause of blindness, kidney failure, coronary thrombosis and gangrene of lower extremities. Diabetes Awareness Programmes should be introduced in all schools. Instruction in physical exercise and yoga should start at the school level itself. Chapters dealing with lifestyle diseases and importance of healthy lifestyles should be included in the syllabus. Educate the women through Kudumbasree Programmes about the importance of the prevention of this epidemic.

The Chennai Urban Rural Epidemiology Study (CURES) reported that nearly 25% of the population was unaware of a condition called Diabetes. Only around 40% of the participants felt that the prevalence of diabetes was increasing and only 22.2% of the population 41% of known diabetic subjects felt that diabetes could be prevented.

Methods of Creating Awareness (Regular Ongoing Program):

- Camps- Screening and Education
- Awareness Campaigns / Programs
- Exhibitions / Fair
- Rallies / Walks
- Folk Arts
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Channels:

- Distribution of pamphlets, manuals, cards.
- Advertisements in magazines, newspapers and other commonly read books.
- Television, Radio and Media.
- Health education curriculum in Schools and Workplaces.
- Lectures in various places like, Public meetings and religious gatherings.
- Awareness programs by lecture and counseling in Schools, Colleges, Offices and Women’s Organizations.

4. Screening Programmes: Screening of high risk individuals is urgent in Kerala. The annual health examinations are meant for the early detection of hidden disease. Today screening is considered a preventive care function and it is a logical extension of health care. Widespread use of Fasting Plasma Glucose as a screening test for type 2 Diabetes is recommended.
Conclusions and Recommendations

Figure 16
Symbol of Diabetes Mellitus- The Universal blue circle

Figure 17
Diabetes Mellitus – Human Logo
7.4. Recommendations

The researcher has had in her life numerous occasions to witness, close at hand, the trials and tribulations, inflicted by the affliction of diabetes, not only upon its victims but also on quite many others near and dear to them. The growing propensity to undermine the seriousness of this malady, branding it as the by-product of advancing civilizations, is adding fuel to fire. The researcher is committed to bring to the limelight the truth and the whole truth about it, hoping that her efforts would serve to ease the condition a little, partly by means of the fruitful outcome of this painstaking research study and partly by initiating never-ending strain of awareness of the need for a drastic change in the way we live let our children live.

The impact of type 2 Diabetes Mellitus is considerable; as a lifelong disease, it increases morbidity and mortality, decreases the quality of life and causes a heavy economic burden to themselves, their families and the society as a whole. Appropriate interventions should be attempted in those who are genetically predisposed to Diabetes in order to tackle the explosion of, and thereby reduce the burden due to Diabetes within the Kerala state. Lifestyle changes as an adjunct to Homoeopathic medicines are significantly effective in the management of Type 2 Diabetes Mellitus.
Conclusions and Recommendations

Based on the findings of the study, the researcher proposes the following recommendations.

1. Government should start a Diabetes Cell under Kerala University for Health Sciences (KUHS) and the aim of the cell should be the control and prevention of Diabetes Mellitus in Kerala.

2. The Diabetes Cell should include a Homoeopathic Diabetic Research Wing. Epidemiological studies and preventive and treatment programmes to be conducted and monitored through this Cell.

3. Establish Homoeopathic Diabetic Research Units in all Homoeopathic Medical Colleges and District Hospitals.

4. Diabetic Awareness Programmes should be conducted in all the Panchayats with due bias to educational institutions at regular intervals through medical camps, exhibitions, seminars, rallies and by using the effective implements of folk arts to the message among the masses. The State of Tamil Nadu has received accolades in this regard.

5. Create awareness through public education, media campaigns, general practitioner training and screening camps arranged by the State Government at frequent intervals covering the entire State of Kerala.

6. Educate the women through women’s organizations like the Kudumbasree Programme. Health clubs for women should be promoted in the State.
Conclusions and Recommendations

7. Introduce compulsory physical exercise including Yoga in all educational institutions.

8. Introduce health education curriculum in schools and work places. Distribute pamphlets and advertise in magazines and news papers about lifestyle diseases, importance of healthy lifestyles, nutritious food habits and the efficacy of Homoeopathic medicines.

9. Screening of high risk individuals is urgent. It should be started at the school level itself. To facilitate this, State level administrative machinery is an imperative necessity.

10. Registries of Diabetes should be established in Kerala at all levels.

7.5. Summary

The study was aimed at analyzing the role of lifestyle changes in the development and management of Type 2 Diabetes Mellitus in Kerala through the Homoeopathic approach. It has been found that lifestyle changes as an adjunct to Homoeopathic medicines are significantly effective in the management of Type 2 Diabetes Mellitus. The researcher strongly believes that the study has many implications in the prevention and management of Type 2 Diabetes Mellitus in Kerala. The investigator hopes that the Government and the Medical fraternity in the State would consider the recommendations and initiate remedial measures with all the seriousness due to the problem under review.