CHAPTER 8

8.0 APPRAISAL

8.1 SUMMARY OF FINDINGS

The diabetic condition has a definite impact on the EPI parameters. The impacted parameters have a logical link with corresponding organs and organ systems. Finally this experiment adds value in terms of its ability to relate bio-fields with the disease conditions. It provides a frame work for disease diagnosis using the EPI technique. This study has shown that refining the differences in intervention detection through the use of neural network is important to bring out differences that may not be obvious at a first glance.

A clear difference in the means and standard deviations of the variables not only makes the two populations separable but also correlates with the likelihood of these values being different as per tendencies in diabetic metabolism. As an example pancreas, cardiovascular tissues and hypothalamus should have different values for diabetic and non-diabetic. This has been established by this study (K Shiva Kumar, T.M Srinivasan, H.R Nagendra, & Marimuthu, 2016).

The other findings with respect to recognition of a yogic practice like meditation using neural network classification of pre and post data was consistent and accurate when trained with 83 parameters than with lower number of parameters. It is also observed that the training of the neural network with the right hand parameters showed good classification accuracy. The data captured with filter had more information related to meditation as it captures the psychological state.

EPI Image with filter carries information about autonomic control at the level of stable physiological processes. In other words, EPI images with filter reflect the level of physiological

energy that ensures the functioning of the body at a base and organic energy level. This level is very stable, it ensures long term body functioning and remains present throughout psycho-physiological. The right hand, when analyzing processes is linked to psychological particularities and conscious activity, carries information about the left half of the cortex of the cerebral hemispheres and says more about the person's physiological condition (Korotkov, 2014).

This study shows that the practice of anapanasati meditation for 5 days was effective enough to cause a definite change in the EPI parameters. Similarly the EPI device was also capable of capturing subtle changes in EPI parameters with mudra practice for a duration of 30 minutes.

8.2 CONCLUSIONS

The EPI in combination with neural network was consistent and successful in classifying pre-post population using a 5 day meditation called Anapanasati as intervention.

Adopting a mudra and sitting quietly with eyes closed for 5 minutes did not have a big difference in the EPI parameters. However Mudra practiced for a longer time showed significant change in the mean value of the EPI parameter average intensity. Mudra must be practiced for more than 20 minutes in one sitting for observing a detectable change in the EPI parameters.

The neural network is able to capture a pattern of EPI parameters corresponding to a diabetic condition which was distinct and different from a non-diabetic condition.

8.3 IMPLICATIONS OF THE STUDY

Machine learning techniques like neural network in combination with EPI could be a good diagnostic tool. This framework could be used for therapeutic purposes to understand the impact of intervention on a disease. This study implies that a record of changes in EPI parameters for each

of the yogic practices can be maintained and mapped to the corresponding changes in EPI parameters in disease conditions in comparison to healthy EPI measurements. Training the neural network with the statistically significant parameters will enable simultaneous diagnosis of multiple disorders with a single capture of EPI data.

8.4 APPLICATIONS OF THE STUDY

This study uses Artificial Neural Network analysis which is more successful than the conventional statistical techniques in predicting clinical outcomes when the relationship between variables that determine the prognosis is complex, multidimensional and non-linear. The relation between EPI parameters and clinical outcomes are usually non-linear and multidimensional and hence this technique is useful for any measurements with EPI.

8.5 STRENGTH OF THE STUDY

This is the first study of its kind using EPI and neural network both for disease diagnosis and intervention recognition. Based on this study it is proposed to automate the outcome of EPI with a machine learning software to make the interpretation of the parameter variation more qualitative and informative.

8.6 LIMITATIONS OF THE STUDY

The training of the neural network could be a challenge if a subject has multiple comorbidities along with each of the disorders. The data used in this study was not verified to check if the subjects have symptoms related to other disorders in addition to diabetes.