## **CHAPTER 5**

## CONCLUSION AND RECOMMENDATIONS

## Conclusion of the Study

A quasi-experimental research, one group pre-post test design was conducted at two residential care facilities for the elderly in Chumphon province and Phuket province, during January and May 2002. It aimed to explore the effects of TCQ on sleep. Sixty-three subjects aged 61-88 years old engaged in the study, after meeting the inclusion criteria, which were; 1) 60 years or older, 2) well orientated and able to communicate, 3) able to follow TCQ exercise program, 4) having a sleep problem, 5) had stayed in the residential care at least 2 weeks, and 6) willingly participated in this study. Sleep questionnaires and the Thai HADS were used to assess the subjects sleep, anxiety and depression at the focus periods; previous 2 weeks before participating in the exercise program, and every 2 weeks during the exercise program. RANOVA and paired t-test with Bonforroni's correction were used to test the differences in sleep latency, number of wakings after sleep onset, periods of waking after sleep onset, total sleep time, quality of sleep, and anxiety and depression scores of these focus periods.

The results of RANOVA presented significant differences in sleep latency and sleep quality scores between the 4 periods, but not in the other sleep variables, or anxiety and depression scores.

Paired t-test showed that sleep latency during the third through the fourth week and the fifth through the sixth week of the TCQ program were significantly shorter than sleep latency of the previous two weeks before TCQ exercise. Also, sleep quality scores of the three periods while the subjects participated in the exercise program were significantly higher than in the previous two weeks before TCQ exercise.

## Recommendations

This is the first scientific report on the effects of TCQ on sleep. The results present a significant impact of TCQ on sleep latency reduction and improved sleep quality. Though this impact seemed small, the other sleep variables, total sleep time, number of wakings after sleep onset also had a trend towards improvement as the exercise program progressed. With all the limitations and weak points of the study already mentioned a repeated study with a longer period of exercise and with a control group is recommended. The study period should be at least 6 months for the learning period and another 3 months for monitoring the benefits. This is congruent with Li (2002). Validity subjective reports with available objective assessment in certain cases would strengthen the study. Despite the need for a more convincing outcome of the affect of TCQ on sleep, it could still be useful to suggest TCQ as an additional intervention for those with sleep difficulties as it is quite safe.