CHAPTER – 5

5. DISCUSSION AND LIMITATIONS

The present study was carried out to evaluate the effectiveness of yoga on quality of life, physical and psychological symptoms among menopausal women. The study was conducted in selected areas at Kattankulathur Block. The sample size for the present study was 260 menopausal women. The study group consisted of 130 menopausal women and the control group consisted of 130 menopausal women.

The investigator has collected the required data regarding demographic, obstetrical and gynecological variables by using the structured questionnaire. The investigator has used Standardized WHO QOL –BREF scale for assessing the quality of life of menopausal women without any modifications. The investigator has also assessed the physical symptoms of menopausal women by 5 point rating scale, weight by ISO certified weighing scale, psychological symptoms by 5 point Rating scale and stress level by Perceived Stress Scale.

The conceptual framework used for the study was based on Imogene King’s goal attainment theory (1981). This theory represents an expansion of King’s original ideas to incorporate the concept of the nurse and the patient mutually communicating information, establishing goals and taking action to attain goals. The conceptual framework is based on the concepts of personal and interpersonal systems, including perception, communication, transaction, mutual goal setting, action, interaction and feedback. The investigator has adopted these concepts into this present study.

According to the conceptual framework used for the study, the investigator perceived that, the women undergo normal physiological changes during menopause and they experience more troublesome symptoms during menopause which has got impact on their quality of life. The investigator made a Judgement
that, yoga can be taught to manage menopausal symptoms and also to improve the quality of life of menopausal women. The investigator has set the mutual goals as reduction of physical and psychological symptoms and improvement in quality of life of menopausal women. The investigator has collected general information from the menopausal women in study and control group.

Table: 4.1.1 provides data about demographic variables of menopausal women in study group and control group. In study group, majority 44(34.4%) were in the age group of 48-50 years and only 6(4.7%) were in age group of 54-55 years. With respect to the education, maximum of menopausal women 62 (48.4%) obtained primary school certificate. Majority 87(68.0%) of them belonged to Hindu religion, maximum 60(46.9%) of them were earning between Rs.8010 – Rs.12019 and most of them 91(71.1%) were married. 80(62.5%) menopausal women belonged to nuclear family system and the relatives were the major support system for most 55(43.0%) of the menopausal women. Majority 98(76.6%) of them were non vegetarian.

In control group, majority 44(34.9%) were in the age group of 48-50 years, maximum of menopausal women 62 (49.2%) obtained primary school certificate, 80(63.5%) of them belonged to Hindu religion, 59(46.8%) of them were earning between Rs.8010 – Rs.12019. In accordance with marital status, most of them 88(69.8%) were married. Relatives were the major support system for 66(52.4%) menopausal women. Regarding the diet pattern, majority of them 95(75.4%) were non vegetarian and 31(24.6%) were vegetarian.

Table 4.1.2 reveals the data regarding obstetrical & gynecological variables of menopausal women in study group and control group. In the study group, maximum of the women 60 (46.9%) attained menarche at the age of 14-16 years, 68(53.1%) of them had irregular menstruation and most of the participants 62(48.4%) were multiparous women. With respect to the type of delivery, 52.3% of them had normal vaginal delivery, 50.8% of them had one child. In accordance with the duration of attainment of menopause, most of them 63(49.2%) were within 1-2 years after menopause and only 7(5.5%) were within 4-5 years after menopause.
In the control group, maximum of the women 69 (54.8%) attained menarche at the age of 14-16 years, most of the participants 64(50.8%) were primiparous women, 50.7% of them had normal vaginal delivery. About the number of children, 53.1% of them had one child and 50% of them were within 1-2 years after menopause.

There was no statistically significant difference found in the distribution of demographic variables of menopausal women who participated in the study between study and control group and the samples were found to be homogenous. Age, education and duration of attainment of menopause were matched with similar number of menopausal women in control group.

Based on King’s goal attainment theory, the investigator has performed pre test assessment of quality of life by Standardized WHO QOL –BREF scale, physical symptoms by 5 point Rating scale, weight by ISO certified weighing scale, psychological symptoms by 5 point Rating scale and stress level by Perceived Stress Scale for the menopausal women in study group and control group.

The findings are discussed in relation to objectives framed for the study.

The first objective was to assess and compare the pre test level of quality of life, physical and psychological symptoms among menopausal women between study and control group.

The results from the table 4.2.1 to 4.2.12 showed that, there was no statistically significant difference found in the baseline values of quality of life, physical and psychological symptoms of menopausal women between study group and control group.

Findings related to assessment and comparison of pre test level of quality of life, physical and psychological symptoms of menopausal women between study and control group.
In the study group, maximum of menopausal women 56(44%) had very poor quality of life, 39(30%) of them had neither poor nor good quality of life, 28(22%) experienced poor quality of life and only 5(4%) of them had good quality of life. In the control group, most of the menopausal women 62 (49%) experienced very poor quality of life, 33(26%) of them felt neither poor nor good quality of life, 24(19%) poor quality of life and only 7(6%) of them had good quality of life. No statistically significant difference found in the pre test level of quality of life of menopausal women between study and control group. (Quality of life, Item no:1).

In the study group, maximum of menopausal women 59(46%) were very dissatisfied about their health status, 33(26%) were dissatisfied, 30(23%) were neither satisfied nor dissatisfied and only 6(5%) of them were satisfied about their health status. In the control group, maximum of menopausal women 59(47%) were very dissatisfied about their health status, 38(30%) of them were dissatisfied, 25(20%) were Neither satisfied nor dissatisfied and only 4(3%) of them were satisfied about their health status. No statistically significant difference found in the pre test level of satisfaction regarding health status of menopausal women between study and control group (Quality of life, Item no:2).

There was no statistically significant difference found in baseline values of all domains of quality of life of menopausal women between study group and control group.(p>0.05)

Regarding the physical symptoms of menopausal women, majority of menopausal women 88(68.8%) had severe physical symptoms, 24(18.7%) of them felt moderate physical symptoms and only 16(12.5) of them had very severe physical symptoms in study group where as in control group, majority 75(59.5%) of them had severe physical symptoms, 35(27.8%) of them felt moderate physical symptoms and only 16(12.7) of them had very severe physical symptoms. Among the physical symptoms, hot flushes and sweating were the common symptoms experienced by majority of the menopausal women in study group and control group.
The results showed that, there was no statistically significant difference found in physical symptoms of menopausal women between study group and control group. \( t=1.01, p=0.36 \)

There was no statistically significant difference observed in the mean weight of menopausal women between study group and control group. It was analyzed using independent t-test. \( t=0.11, p=0.91 \)

With respect to the psychological symptoms of menopausal women in study group, most of menopausal women 77(60.2\%) experienced severe psychological symptoms and 51(39.8\%) of them experienced moderate psychological symptoms. In control group, majority 72(57.1\%) of them experienced severe psychological symptoms and 54(42.9\%) of them experienced moderate psychological symptoms.

Lack of energy, forgetfulness, decrease in concentration and low self esteem were the common psychological symptoms experienced by menopausal women in both the groups.

Statistically no significant difference was found in psychological symptoms of menopausal women between study group and control group before the intervention. \( t=0.13 \ p=0.89 \)

About the stress level of menopausal women, 90(70.4\%) of menopausal women felt very high level of stress and 38(29.6\%) of them felt high level of stress in study group where as in the control group, most of menopausal women 80(63.5\%) felt very high level of stress and 46(36.5\%) of them felt high level of stress.

In the pre test, no statistical difference was found in stress level of menopausal women between study group and control group. \( t=0.58 \ p=0.55 \)

**Hence the RH1 stated that, “There is a significant difference in the pre test level of quality of life, physical and psychological symptoms among menopausal women between study and control group” was not accepted.**

As stated in the conceptual frame, the investigator has taken action to achieve the goal of reduction of physical and psychological symptoms of menopausal women and also improvement in their quality of life. The investigator demonstrated
about the selected yoga practice (selected yoga asanas, pranayama and om meditation) for the menopausal women in the study group and issued Instructional manual on steps of selected yoga practice for their self reference. Daily yoga practice diary was provided to them for confirmation of their yoga practice at home.

The second objective was to assess and compare the post test level of quality of life, physical and psychological symptoms among menopausal women between study group and control group

The data provided in the tables 4.3.1 to 4.3.19 showed the assessment and comparison of post test findings of quality of life, physical and psychological symptoms among menopausal women between study and control group. The findings were summarized as follows:

Findings related to assessment and comparison of post level of quality of life of menopausal women between study and control group

In the study group, majority of menopausal women 45(35%) had good quality of life and only 16(13%) of them had very poor quality of life in the post test I, but after 18 weeks of yoga practice, majority 68(53%) of them experienced good quality of life and no one experienced poor and also very poor quality of life. In the control group, most of the menopausal women 58(46%) in the post test I, 55(44%) in the post test II and 53(42%) in the post test III had very poor quality of life and no one had very good quality of life in post test I, post test II and post test III. The results showed that, there was statistically significant difference found in post test I, post test II and Post test III level of quality of life of menopausal women between study and control group at p=0.000 level. (Quality of life, Item no:1).

In the study group, maximum number of menopausal women 47(37%) were satisfied about their health status, 36(28%) of them were dissatisfied, 33(26%) were neither satisfied nor dissatisfied and only 12(9%) of them were very dissatisfied about their health status in the post test I. Majority of them 54(42%)
and 63(49%) were satisfied in post test II and III respectively. In the control group, majority of the menopausal women 55(44%) in post test I, 54(43%) in post test II and 50(40%) in post test III were dissatisfied about their health status. The results indicated that, there was statistically significant difference found in the post test I, post test II and post test III level of satisfaction regarding health status of menopausal women between study group and control group at p=0.000 level. (Quality of life, Item no:2)

There was very high statistically significant difference found in physical domain of quality of life in post test I (t=7.21), post test II (t=14.82) and post test III (t=19.17) after yoga practice at p=0.001 level between study group and control group.

Statistically very high significance was found in psychological domain of quality of life in post test I,post test II and post test III at p=0.001 level between study group and control group.

There was very high statistical significance found in the social domain of quality of life in post test I (t=4.49), post test II (t=11.06)and post test III (t=12.86) after yoga therapy at p=0.001 level between study group and control group.

There was high significance observed in environment domain of quality of life at p=0.01 in post test I and very high significance found in post test II and post test III after yoga therapy at p=0.001 level between study group and control group.

The results showed that, yoga was an effective intervention in improving the quality of life of menopausal women in study group than control group.

**Findings related to assessment and comparison of post test level of physical symptoms of menopausal women between study group and control group**

In study group, 53.1% of menopausal women felt moderate physical symptoms, 32.8% had mild symptoms and only 14.1% had severe symptoms in post test I. In post test II, 58.6% experienced mild symptoms and 41.4% felt moderate symptoms whereas in post test III, majority 72.7% of them had mild
physical symptoms. But in control group, no difference was found in post test I, post II and post III.

There was a statistically very high significance (p=0.001 level) found in physical symptoms of menopausal women between study group and control group in post test I, post test II and post test III. The ‘t’ value was 11.12 in post test I, 18.53 in post test II and 20.67 in post test III. The results revealed that, the physical symptoms of menopausal women were reduced to greater extent in study group after the practice of yoga for 18 weeks.

**Findings related to assessment and comparison of post test level of weight of menopausal women between study group and control group**

Comparison of post test mean and standard deviation of weight of menopausal women between study group and control group showed that, there was no significant difference seen in the post test I (6 weeks). In post test II, the ‘t’ value was 2.09 which was significant at p=0.05 level. There was high significance found at p=0.01 level between study group and control group in the post test III (after 18 weeks of yoga practice).

**Findings related to assessment and comparison of post test level of psychological symptoms of menopausal women between study group and control group**

In study group, 42.2% of menopausal women felt moderate psychological symptoms, 32.8% had mild symptoms, and 25.0% of menopausal women had severe symptoms in the post test I. In the post test II, 53.1% had moderate psychological symptoms, 37.5% had mild symptoms, and only 9.4% of menopausal women had severe symptoms whereas in post test III, majority 70.3% had mild symptoms and no one had severe symptoms. But in control group, majority of them had severe symptoms in post test I, post II, and post III.

Comparison of post test mean and standard deviation of psychological symptoms of menopausal women between study group and control group showed that, there was very high statistical significance found at p= 0.001 level in post test I (t=8.37), post test II (t=12.38), and post test III (t=20.37). The menopausal women
in study group had greater reduction of psychological symptoms after the practice of yoga for 18 weeks.

**Findings related to assessment and comparison of post test level of stress score of menopausal women between study group and control group**

In study group, 53.1% of menopausal women felt high level of stress, 26.6% had average level of stress and 20.3% of them felt very high level of stress in post test I. In post test II, 51.6% had average level of stress, 26.5% had low level of stress and 21.9% of them experienced high level of stress. It was greatly reduced to low level of stress (50%) and average level of stress (50%) in post test III (18 weeks). In the control group, maximum of menopausal women, 61.9% in post test I, 54% in post test II and post test III had very high level of stress.

Statistically very high significance (p=0.001*** ) was found in stress level of menopausal women between study group and control group in post test I, post test II and post test III. The results represented that, yoga was an effective therapy in reducing the stress level of menopausal women in study group.

Hence RH2 stated that, “There is a significant difference in the post test level of quality of life, physical and psychological symptoms among menopausal women between study and control group” was accepted at p=0.001 level of significance.

The finding are consistent with the study done by Reed SD etal on efficacy of 3 non hormonal therapies on quality of life among women with vasomotor symptoms. Peri- and postmenopausal women, 40-62 years old, were assigned randomly to yoga (n = 107), exercise (n = 106), or usual activity (n = 142) and also assigned randomly to a double-blind comparison of omega-3 (n = 177) or placebo (n = 178) capsules. They performed the following interventions: (1) weekly 90-minute yoga classes with daily at-home practice, (2) individualized facility-based aerobic exercise training 3 times/week, and (3) 0.615 g omega-3 supplement, 3 times/day. MENQOL was used. Mean baseline vasomotor symptoms frequency was 7.6/day, and the mean baseline total MENQOL score was 3.8 (range, 1-8 from
better to worse) with no between-group differences. For yoga group, baseline to 12-week improvements were seen for MENQOL vasomotor symptom domain (P = .02), and sexuality domain (P = .03) scores. For women who underwent exercise and omega-3 therapy compared with control subjects, improvements in baseline to 12-week total MENQOL scores were not observed. They found that, among healthy sedentary menopausal women, yoga appears to improve menopausal quality of life.(134)

As mentioned in the conceptual framework, the investigator has performed post test assessment of quality of life, physical symptoms, weight, psychological symptoms and stress of menopausal women at 6 weeks, 12 weeks and 18 weeks by the same structured questionnaire. Reinforcement of steps of yoga was done by the investigator after each post tests for the menopausal women in study group.

The third objective was to determine the effectiveness of yoga on level of quality of life, physical and psychological symptoms among menopausal women in study group.

The results in the tables from 4.4.1 to 4.4.16 represented the effectiveness of yoga on level of quality of life, physical and psychological symptoms among menopausal women in study group. The findings were summarized as follows:

Findings related to effectiveness of yoga on quality of life of menopausal women in study group

The study group showed that, very high statistical significance was obtained for all the domains of quality of life in post test I, post test II, and post test III at p=0.001 level. In the control group, no significant difference was found.

In the study group, the mean gain score of physical domain was 11.91 in post test I, 20.6 in post test II and 30.06 in post test III with 95% of confidence interval. The mean gain score of psychological domain was 19.6 in post test I,
28.8 in post test II and 34.37 in post test III with 95\% of confidence interval. The mean gain score of social domain was 14.4 in post test I, 31.5 in post test II and 35.43 in post test III with 95\% of confidence interval. The mean gain score of environment domain was 10.3 in post test I, 24.4 in post test II and 26.49 in post test III with 95\% of confidence interval.

The mean gain score was high in all the domains of study group with 95\% of confidence interval. This showed that, yoga was effective in improving the quality of life of menopausal women in study group. In study group, the mean difference between pre test and post test level of quality of life was 31.58\% with 95\% confidence interval after intervention, whereas, the mean difference was only 1.61\% in control group.

The present study findings are consistent with the study conducted by Mastrangelo, et al on effectiveness of Iyengar Yoga for menopausal symptoms. Six case studies of women ranged in age from 44 to 62 were taken, all six were taking non-prescription supplements for symptom reduction and one was on hormone replacement therapy. The women participated in a 70-minute Iyengar Yoga class, taught by a registered Yoga teacher, twice a week for eight weeks. The women were also encouraged to practice at home, and were given guidelines for several shorter practices. All six women attended all classes and five women reported practicing at home. The Menopausal Specific Quality of Life (MSQOL) survey measured vasomotor, psychosocial, physical, and sexual functioning, and the sit-and-reach test assessed hamstring flexibility. Five participants reported a decrease in menopausal symptoms and an increase in quality of life following the eight week program. (139)

**Findings related to effectiveness of yoga on physical symptoms of menopausal women in study group**

The comparison of pre test and post test level of physical symptoms of menopausal women in study group showed that, the F value was 237.13 which was very high significance at p=0.001 level. This was analyzed by using one way repeated measures ANOVA. But in control group, no significant difference was noted.
The menopausal women in study group had 24.4% reduction of physical symptoms in post test I (6 weeks), 33.6% reduction in post test II, and 37.4% reduction of physical symptoms in post test III. But in control group, the physical symptoms were slightly increased to 0.2% in post test I, 1.3% in post test II and 1.9% in post test III. In study group after intervention, the physical symptoms were reduced to 37.4% from the base line where as in the control group, it was slightly increased to 1.9% from the baseline.

As shown in table 4.4.9, the menopausal women in study group had mean weight reduction of 1.07 kg in post test I, 2.36 kg in post test II and 3.58 kg in post test III after the practice of yoga, where as in control group, there was no statistically significant difference found. There was very high statistical significance noted in the weight of menopausal women at \( p=0.001 \) level between pre test and post test III in study group. The weight reduction was 5.5% from the base line weight in study group after the practice of yoga for 18 weeks, where as in control group, it was only 0.23% from the base line weight of menopausal women.

The findings are consistent with the study done by Cohen BE, etal on determining the feasibility and acceptability of a restorative yoga intervention for the treatment of hot flushes in postmenopausal women. A pilot trial in 14 postmenopausal women experiencing > or =4 moderate to severe hot flushes per day or > or =30 moderate to severe hot flushes per week. The intervention consisted of eight restorative yoga poses taught in a 3-h introductory session and 8 weekly 90-min sessions. Acceptability was assessed by subject interview and questionnaires. Efficacy measures included change in frequency and severity of hot flushes as recorded on a 7-day diary. Mean number of hot flushes per week decreased by 30.8% and mean hot flush score decreased 34.2% from baseline to week 8. This pilot trial demonstrates that it is feasible to teach restorative yoga to middle-aged women without prior yoga experience. (147)

**Findings related to effectiveness of yoga on psychological symptoms of menopausal women in study group**

The comparison of pre test and post test level of psychological symptoms of menopausal women between study group and control group showed that, the
F value was 99.07 in study group which was very high significance at p= 0.001 level where as in control group, F value was 1.62 which was not statistically significant.

The menopausal women in study group had 15.0% reduction of psychological symptoms in post test I (6 weeks), 19.8% reduction in post test II, and 28.1% reduction of psychological symptoms in post test III where as in control group, the psychological symptoms were slightly increased to 0.13% in post test I, 0.3% in post test II and 0.7% in post test III. In study group, after intervention, psychological symptoms of menopausal women were reduced to 28.1% from the base line where as in control group it was slightly increased to 0.7% from the base line.

Data projected in the table 4.4.14 showed the comparison of pre test and post test level of stress score of menopausal women in study group. The results revealed that, the F value was 186.07 which was very high significance at p= 0.001 level in study group. No statistical difference was found in control group.

In study group, the menopausal women had 13.6% reduction of stress score in post test I (6 week), 24.5% reduction in post test II, and 29.3% reduction of stress score in post test III where as in control group, the stress scores were slightly decreased to 0.2% in post test I, 1.8% in post test II and 2.2% in post test III. In study group, the level of stress was reduced to 29.3% in the post test III from the base line after intervention, where as in control group it was reduced to only 2.2% from the base line.

Hence RH3 stated that, “There is a significant difference in the pre test and post test level of quality of life, physical and psychological symptoms of menopausal women in study group” was accepted at p=0.001 level of significance.

The fourth objective was to correlate the quality of life with physical and psychological symptoms among menopausal women in study group and in control group

Table 4.5.1 shows that, there was fair negative correlation found between quality of life with physical symptoms, psychological symptoms and weight in the
pre test. It shows that, when the physical and psychological symptoms were more, fair quality of life was experienced by menopausal women. There was fair positive correlation found between physical symptoms with weight, stress and psychological symptoms.

Table 4.5.2 reveals that, In the pre test, there was fair negative correlation found between quality of life with physical symptoms and weight, moderate negative correlation found between quality of life with psychological symptoms. Menopausal women had poor quality of life due to the presence of physical and psychological symptoms.

Table 4.5.3 represents that, there was moderate negative correlation found between quality of life with physical symptoms, substantial negative correlation between QOL and psychological symptoms and stress. Fair negative correlation found between quality of life with weight. It showed that, the menopausal women had good quality of life when there was reduction of physical and psychological symptoms.

Table 4.5.4 illustrates that, there was fair negative correlation found between quality of life with physical symptoms, psychological symptoms, weight and stress. There was poor positive correlation found between physical symptoms with psychological symptoms, weight and stress. There was fair positive correlation found between psychological symptoms with weight and stress.

**Hence the RH4 stated that, “There is a significant correlation of quality of life with physical and psychological symptoms among menopausal women in study and control group” was accepted at p = 0.01 level.**

The fifth objective was to associate the mean difference score of quality of life, physical and psychological symptoms of menopausal women in study group and control group with their demographic, obstetrical & gynecological variables
Association of mean difference score of quality of life of menopausal women in study group with demographic, obstetrical & gynecological variables

The younger menopausal women between the age of 45-47 years (F=3.02, p=0.03*), who were married (F=4.89, p=0.01**) and who had regular menstruation (t=2.09, p=0.03*) were found to have significant improvement in the physical domain of quality of life.

The younger menopausal women between the age of 45-47 years (F=2.92, p=0.04*), women who attained menarche at the age of 11-13 yrs (F=3.85, p=0.02*) and women who had regular menstruation (t=2.10, p=0.04*) had significant improvement in psychological domain score of quality of life.

The younger menopausal women between the age of 45-47 years (F=2.89, p=0.04*), who had regular menstruation (t=2.11, p=0.04*) and menopausal women who had less duration 1-2 years after attainment of menopause (F=2.88, p=0.04*) had significant improvement in social domain of quality of life.

The younger menopausal women between the age of 45-47 (F=3.16, p=0.03*), who were married (F=2.99, p=0.03*) and women who attained menarche at the age of 11-13 yrs (F=2.78, p=0.05*) had significant improvement in the environment domain of quality of life.

Hence the RHS stated that, “There is a significant association of mean difference score of quality of life, physical and psychological symptoms among menopausal women in study group and control group with their demographic, obstetrical & gynecological variables” was accepted at p 0.05 level for age, frequency of menstruation, age of menarche, duration of attainment of menopause and p 0.01 level for marital status.

Table 4.6.5 represents the multiple regression analysis of quality of life score with demographic, obstetrical & gynecological variables of menopausal women in study group. The combined influence of demographic, obstetrics & gynecological variables caused 32.9% of variance (R² value 0.329, F value 3.559, t value 15.071). P value shows a significant association with family monthly income.
at p<0.01 level of significance, availability of support system at p<0.001 level, age at menarche p=0.01 level, parity at p<0.05 level, and number of living children at p<0.01 level where as other variables were not associated with quality of life of menopausal women.

Association of mean difference score of physical symptoms of menopausal women in study group with demographic, obstetrical & gynecological variables

The younger menopausal women between the age of 45-47 years (F=3.16, p=0.03*), menopausal women who were married (F=2.99, p=0.03*) and women who attained menarche at the age of 11-13 years (F=2.78, p=0.05*) were found to have significant reduction of the physical symptoms.

Table 4.6.7 reveals the multiple regression analysis of physical symptoms score with demographic, obstetrical & gynecological variables of menopausal women in study group. The combined influence of demographic, obstetrical & gynecological variables caused 23.9% of variance (R² value 0.239, F value 2.283, t value 0.007). P value shows a significant association with education at p=0.05 level, where as other variables were not associated with physical symptoms of menopausal women.

Association of mean difference score of weight of menopausal women in study group with demographic, obstetrical & gynecological variables

Menopausal women who had regular menstruation were found to have significant reduction of weight (t=2.04, p=0.04*)

Table 4.6.9 represents the multiple regression analysis of mean weight score with demographic, obstetrical & gynecological variables of menopausal women in study group. The combined influence of demographic, obstetrical & gynecological variables caused 12.2% of variance (R² value 0.122, F value 1.009, t value 8.653). P value shows a significant association with number of living children at p=0.01 level where as other variables were not associated with weight of menopausal women.
Hence the RHS stated that, “There is a significant association of mean difference score of quality of life, physical and psychological symptoms among menopausal women in study group and control group with their demographic, obstetrical & gynecological variables” was accepted at \( p < 0.05 \) for age, marital status, age of menarche and frequency of menstruation.

**Association of mean difference score of psychological symptoms of menopausal women in study group with demographic, obstetrical & gynecological variables**

Menopausal women with higher education (graduate and above) (\( F=6.81, p=0.001^{***} \)), menopausal women who had regular menstruation (\( t=2.01, p=0.04^{*} \)) and menopausal women with one child (\( F=5.02, p=0.01^{**} \)) were found to have significant reduction of psychological symptoms.

Table 4.6.11 represents the multiple regression analysis of psychological symptoms score with demographic, obstetrical & gynecological variables of menopausal women in study group. The combined influence of demographic, obstetrical & gynecological variables caused 29.5 % of variance (\( R^2 \) value .295, \( F \) value 3.044, \( t \) value 3.858). \( P \) value shows a significant association with family monthly income at \( p < 0.001 \) level, type of family at \( p < 0.05 \) level, availability of support system \( p = 0.001 \) level and age at menarche at \( p < 0.05 \) level, where as other variables were not associated with psychological symptoms of menopausal women.

**Association of mean difference score of stress of menopausal women in study group with demographic, obstetrical & gynecological variables**

The younger menopausal women between the age of 45-47 years (\( F=4.01, p=0.01^{**} \)), menopausal women with self help group as a support system (\( F=3.68, p=0.04^{*} \)) and menopausal women who had normal menstrual flow (\( F=7.88, p=0.001^{***} \)) were found to have significant reduction of the stress score.

Table 4.6.13 represents the multiple regression analysis of stress score with demographic, obstetrical & gynecological variables of menopausal women in
study group. The combined influence of demographic, obstetrical & gynecological variables caused 23.2 % of variance (R² value .232, F value 2.194, t value 1.144). P value shows a significant association with family monthly income at p<0.01 level where as other variables were not associated with stress level of menopausal women.

Hence the RH5 stated that, “There is a significant association of mean difference score of quality of life, physical and psychological symptoms among menopausal women in study group and control group with their demographic, obstetrical & gynecological variables” was accepted at p = 0.001 level for education and type of menstrual flow, p 0.05 for availability of support system and frequency of menstruation, p = 0.01 for age and number of living children.

This hypothesis was supported by the above stated findings of the present study. It was inferred that, age, marital status, and frequency of menstruation, age of menarche, duration of attainment of menopause, education, number of living children, availability of support system and type of menstrual flow have significant association with quality of life, physical and psychological symptoms of menopausal women in study group.

Association of quality of life, physical and psychological symptoms of menopausal women in control group with demographic, obstetrical & gynecological variables

None of the demographic, obstetrical & gynecological variables were significantly associated with mean difference score of physical domain, psychological domain, social domain, and environment domain of quality of life of menopausal women in control group.

In the control group, multiple regression analysis of quality of life with demographic, obstetrical & gynecological variables of menopausal women showed that, the combined influence of demographic, obstetrical & gynecological variables caused 27.7% of variance (R² value .277, F value 2.789,
t value 2.557). P value shows a significant association with age p<0.05 level, frequency of menstruation at p<0.05 level and number of living children at p=0.001 level where as other variables were not associated with quality of life of menopausal women.

The physical symptoms mean difference score was not significantly associated with none of the demographic, obstetrical & gynecological variables of menopausal women.

Multiple regression analysis of physical symptoms represented that, the combined influence of demographic, obstetrical & gynecological variables caused 27.6% of variance (R² value .276, F value 2.775, t value 2.306). P value shows a significant association with age (p<0.01), education (p<0.05 level), diet pattern (p<0.05), age of menarche (p<0.05) and duration of attainment of menopause (p=0.001) where as other variables were not associated with physical symptoms of menopausal women.

Table 4.6.21 shows that, weight mean difference score was not significantly associated with none of the demographic, obstetrical & gynecological variables of menopausal women.

Multiple regression analysis of weight with demographic, obstetrical & gynecological variables of menopausal women showed a significant association with diet pattern at p<0.05 level where as other variables were not associated with weight of menopausal women.

The psychological symptoms mean difference score was not significantly associated with none of the demographic, obstetrical & gynecological variables of menopausal women in control group.

Multiple regression analysis of psychological symptoms showed a significant association with age at p<0.05 level and number of living children at p<0.01 level.

None of the demographic, obstetrical & gynecological variables were significantly associated with stress mean difference score of menopausal women in control group.
Multiple regression analysis of stress score showed a significant association with religion at $p=0.01$ level, marital status at $p=0.01$ level and number of living children at $p<0.01$ level.

Hence the RH5 stated that, “There is a significant association of mean difference score of quality of life, physical and psychological symptoms among menopausal women in study group and control group with their demographic, obstetrical & gynecological variables” was not accepted.

The secondary objective was to assess the level of satisfaction on yoga among menopausal women in study group.

Table 4.7.1 shows the frequency and percentage distribution of level of satisfaction on yoga among menopausal women in study group. After 6 weeks of yoga practice, maximum of them 100(78%) were very satisfied, 22(17%) of them were satisfied and 6(5%) of them were neither satisfied nor dissatisfied. After 12 weeks, majority 115(90%) of them were very satisfied and only 13(10%) of them were satisfied. After 18 weeks of yoga practice, 120(94%) of them were very satisfied and only 8(6%) of them were satisfied and none of them were dissatisfied and very dissatisfied.

Yoga performance checklist was used to assess the correct practice of steps of yoga by the menopausal women. The frequency and percentage distribution of level of practice on yoga by menopausal women in study group showed that, 74 (57.8%) menopausal women had adequate practice of yoga, 42 (32.8%) had moderately adequate practice of yoga and 12(9.4%) had inadequate practice of yoga after 5 days intensive training. At the end of 6 weeks, majority 94(73.4%) of them had adequate practice of yoga and 34(26.6%) had moderately adequate practice of yoga . At the end of 12 weeks, most of them 108(84.4%) had adequate practice of yoga and 20(15.6%) had moderately adequate practice of yoga . At the end of 18 weeks, maximum of the women 119(93%) had adequate practice of yoga and only 9(7%) had moderately adequate practice of yoga and no one had inadequate practice of yoga.
Hence the conceptual framework King’s Goal attainment theory supported the findings of the present study by acting as a blueprint and basement which supports the body by proving that, reduction of physical and psychological symptoms of menopause has improved the quality of life of menopausal women which ultimately maintained the optimum health of the women.

The above discussed study findings clearly represents that, there has been high statistical significant impact of yoga on quality of life, physical and psychological symptoms of menopausal women. This draws the conclusion for the study that, yoga is an effective intervention in reducing the physical and psychological symptoms of menopausal women and it improved the quality of life of menopausal women.

5.1 LIMITATIONS

It was difficult for the investigator to arrange venue for group yoga practice for 5 days session and also for weekly classes, since the procedure of obtaining permission to utilize the self help hall, Balwadi and schools took long process.

Menopausal women felt that, teaching yoga at their door step would be convenient.

It was a challenging job for the investigator to gather menopausal women in a common place at the same time period due to television programmes, household activities and family functions.

The investigator could not able to control the extraneous variables such diet and mass media.

Few women ignored their problems and were not willing to discuss their menopausal symptoms freely.

Chapterization

Chapter V : It dealt with discussion and limitations

Chapter VI : It deals with summary, conclusion, nursing implications and recommendations