Chapter VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter presents a brief summary of the study, major findings, recommendations and conclusion drawn. It also gives the implications for nursing practice, nursing education, nursing administration and nursing research.

Menopause is an irreversible part of every woman, regardless of race, creed or colour. It’s a vital point in women’s life when women stops menstruating and is no longer fertile. Menopause induces major physiological, physical and psychological stress to midlife women. During menopausal transition women experience variety of symptoms, which force them remain inactive.

Statement of the Problem

A Study to Assess the Effectiveness of Multimodal Intervention (Phytoestrogen Diet Therapy, Exercise and Counseling) on Prevention and Management of Menopausal Problems among Midlife Women in Selected Areas, Chidambaran.

Objectives

Phase I

1. To identify the common menopausal problems among the midlife women.

2. To assess the intensity of menopausal problems among the midlife women.
3. To associate the menopausal problems with selected demographic and clinical variables.

**Phase II**

4. To determine the effectiveness of multimodal intervention on menopausal problems and coping ability among the midlife women in the group I.

5. To evaluate the effectiveness of EPCI on menopausal problems and coping ability among the midlife women in the group II.

6. To compare the effect of multimodal intervention and EPCI on menopausal problems and coping ability among the midlife women in control group, group I, and group II.

7. To compare the biophysiological parameters among the midlife women in the control group, group I and group II.

The study was conducted in two phases. The first phase was to study the prevalence of menopausal problems among the subjects. For the second phase, the true experimental factorial design was adopted to test the effectiveness of multimodal therapy to overcome the menopausal problems among the women selected for the study who belongs to C. Kothankudi Panchayath, Chidambaram.

In phase I, two hundred and seventy five midlife women who fulfilled the inclusion criteria were selected for the study. From the phase I, sample frame midlife women who fulfilled the phase II inclusion criteria were selected as the sample for phase II. Extensive review of literature; professional experience and expert guidance helped the researcher to design the methodology.
The tools, such as modified Lothar Heninmann Menopausal Rating Scale, modified C.S. Carver BRIEF Cope Questionnaire, were modified was used to estimate the menopausal problems and coping ability. The content validity was obtained from the experts and the reliability of the tool was calculated. The pilot study was conducted in Muthiah Nagar which comes under C.Kothangudi Panchayath for the period of 4 months. The results revealed that the tool was found to be reliable, feasible, and practicable. After the pilot study, the researcher proceeded to the main study. The data collection was done for a period of 18 months.

The study was conducted in community setting and the true experimental factorial design was used. And the consent was obtained from the participants followed by the principles stated in that design. The willingness of the subjects to participate in the intervention were assessed, further the groups were allocated in various wards of C. Kothangudi Panchayath. Then, the pretest was conducted and the interventions were administered on the subjects then the posttest was conducted.

The collected data were analyzed, and organized using descriptive and inferential statistics. The analysis was based on the objectives and the hypothesis was tested.

**Major findings of the study in phase I**

**Demographic variables of midlife women**

- Among 275 midlife women, 37% were in the age of 51-56 years. 65% were from hindu families, 66% of them had
primary education, 59% were general workers, 34% of them had income less than 5000, 96% were married, 54% of them have more than 2 children, 58% were from nuclear family and 43% were sedentary worker.

**Clinical variables**

- Regarding the clinical variables 38% of them were in the stage of perimenopause, 37% reached menopause, and 25% were in post menopause. All had the history of regular menstrual cycle, 94% of them had recent changes in their menstrual cycle, 55% of them gained weight recently, majority of them 75% not having the habit of performing exercise, 98% of the subjects had no history of allergy to the grains and food substances, 99% of them had no history of illness, 87% of them did not adopt any remedial measures and 97% of them not taking any hormones for menopausal problems.

- The mean age of menopause in the present study was 47.22 years.

- The midlife women experienced, an average minimum three and maximum nine menopausal problem.

**Common menopausal problems**

- The most common problems experienced by the midlife women in the present study, 209(76%) had mood swing, 181(66%) had joint pain, 178(65%) had lack of energy, 172(63%) had leg pain, 176(64%) had dribbling of urine, 170(62%) felt hot flashes, 168(61%) had difficulty in falling asleep and 165(60%) of them had vaginal dryness.

- The least common problems experienced by the midlife women include night sweats 148(54%), unusual feeling of tension with 139(51%), weight gain 133(48%), head ache with
129(47%), gas pain with 115(42%), forgetfulness with 114(42%), general decrease in performance of ADL with 117(43%), inner restlessness with 83(30%), decrease in concentration with 110(40%), low back pain with 104(38%), involuntary urination with 101(38%) and unusual sweats with 101(37%).

- The rare problems encountered by midlife women were increased need to urinate with 80(29%), vaginal bleeding 80(29%), burning in the vagina 80(29%), breast pain with 76(28%), difficulty in urination 64(23%), increased facial hair 58(21%), feeling bloated 57(21%), change in sexual desire 55(20%), feeling of fear 52(19%), palpitation 52(19%), low self esteem 45(16%), feeling sad 36(13%), feeling down 31(11%), and tightness of the chest with 10(4%).

**Intensity of menopausal problems**

- The intensity of physical symptoms. 94(55%) of the midlife women experienced hot flashes in sever level, 64(43%) had night sweats at severe sever level, 51(46%) experienced unusual sweats at moderate level, 48(42%) had gas pain at severe level, 81(45%) had joint pain at severe level, 46(35%) had head ache at sever level, 80(45%) had lack of energy at moderate level, 49(37%) gained weight at moderate level, 45(78%) had increased facial hair growth at mild level, 38(67%) had feeling bloated at severe level, 66(64%) had low back pain at severe level, and 80(47%) of them had severe leg pain.

- Intensity of psychological problems as 63(30%) of them had moderate level of mood swing, 58(68%) of them reported about decrease in their general performance of ADL at moderate level, 57(41%) of them felt moderately unusual tension often, 55(54%) of them being impatient with others moderately, 51(45%) of them experienced forgetfulness at
moderate level, 45(41%) of them felt their concentration level decreased moderately, 45(54%) of them had inner restlessness moderately, 45(39%) of them felt their accomplishing level less than their usual level mild level, 41(47%) of them experienced confrontation in moderate level, 30(58%) of them had feeling fear moderately, 24(53%) of them had moderately low self-esteem and 15(48%) of them felt feeling sad at moderate level.

- Intensity of sleep problems, 83(49%) of them had mild level of difficulty in falling into sleep, 51(55%) of them felt mild level, 40(36%) of them felt waking up early at mild level.

- Intensity of urinary problems of menopause, 22(33%) of them experienced moderate level of difficulty in urination, 41(51%) of them felt severe level of increased need to urinate, 51(50%) of them had severe level of involuntary urination, 83(47%) of them had dribbling of urine.

- Intensity of sexual problems of menopause, 25(45%) of them had mild level of change in sexual behaviour, 36(64%) of them felt sever level of vaginal dryness, 35(44%) of them had severe level of vaginal spotting and bleeding, 45(56%) of them had burning in the vagina in severe level, 43(57%) of them had severe level of breast pain.

- The intensity of cardiac problems of menopause 24(46%) of them felt mild level of palpitation, 4(40%) of them had severe level of chest tightness.

**Association of the selected demographic and clinical variables with common menopausal problems**

- There was a statistically significant association existing between the *hot flashes* with weight gain (p<0.001) and dietary habits (p<0.001).
The findings represent, statistically significant association existing between \textit{joint pain} with education (p<0.01) occupation (p<0.001), working pattern (p<0.001), weight gain (p<0.001) and dietary habits (p<0.001).

The findings signify, statistically significant association existing between \textit{lack of energy} with education (p<0.03) occupation (p<0.001), working pattern (p<0.001), weight gain (p<0.001) and dietary habits (p<0.01).

There was the statistically significant association between \textit{leg pain} with age (p<0.05) occupation (p<0.001), working pattern (p<0.03), weight gain (p<0.001) and dietary habit (p<0.03).

There was significant association between \textit{mood swing} with age (p<0.05), and working pattern (p<0.05).

The data reveals that statistically significant association, between \textit{difficulty in urination} with age (p<0.02).

A statistically significant association existing between \textit{dribbling of urine} with age (p<0.05), working pattern (p<0.05), occupation (p<0.007).

There was statistically significant association between \textit{vaginal dryness} with age (p<0.04).

\begin{itemize}
  \item \textbf{Phase II}
  \item \textbf{Demographic variables of midlife women}
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      \item Regarding the 26(52\%) of them aged between 51-55 years, 19(38\%) of them aged between 56-60 years, 5(10\%) of them aged between 45-50 years. In group I, 19(38\%), 16(32\%), 15(30\%) of them were at the age 56-60 years, 45-50 years and 51-55 years respectively. Whereas in group II 21(42.9\%) of
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them were at the age group 55-60 years, 16(32.7%) of them were at 51-55 years and 12 (24.5%) were at 45-50 years.

- Regarding the occupation, general worker were almost equally distributed in all three group that is 25(50%), 24(48%) and 15(30.6%) in control group, group I and group II respectively. A few were non professionals 3(6%), 8(16%) and 6(12.2%) respectively.

- Regarding the working pattern, among the subjects, many of them were belong to sedentary workers, 23(46%) of them in control group 25(50%) of them from group I and 24(49%) of them from group II respectively.

**Clinical variables**

- Regarding stage of menopause, many of the subjects in all three groups were in the menopausal stage 24(48%), 26(52%) and 16(32.6%) in control group, group I and group II respectively.

- Regarding the recent weight gain of the subjects, 26(52%) of them did not gain weight control group, 28(56%) midlife women from group I, only 27(55.1%) from group II.

- In relation to the dietary habits most of the subjects, 37(74%) from the control group, 30(60%) of the subjects from group I and 34(69.4%) of them from group II were non-vegetarians.

**Comparison of menopausal problems of midlife women between pretest and posttest in group I**

- There was a highly significant difference (P < 0.001) found between the pretest and the posttest level on the physical problems of various domains such as somatic, aches and pains.
Regarding psychological problems of menopause, study findings which showed that there was a highly significant (p < 0.001) difference found between the pretest and the posttest on the psychological problem variables such as mental exhaustion, depression, irritability and sleep problems.

There was highly significant (P < 0.001) difference found between the pretest and the posttest score on the urogenital problems of various domains such as urinary and sexual problems of menopause.

There was a significant (p < 0.05) difference found between the pretest and the posttest score on the cardiac problems.

Further, it was concluded that the multimodal intervention was found to be more effective in minimizing the menopausal problems (physical, psychological, urogenital and cardiac) among the midlife women.

**Comparison of coping ability of midlife women between pretest and posttest in group I**

The findings revealed that there was highly statistical (at p<0.001) significant difference found between the pretest and posttest value of coping ability of various domains such as active denial, disengagement, seeking social support and planning coping ability in **group I**.

Hence, it is concluded that the multimodal intervention found to be more effective in reducing the menopausal problems among the midlife women. Thus it enhances the midlife women coping ability.
Comparison of menopausal problems of midlife women between pretest and posttest in group II

Psychological Problems

➢ The study findings showed that there was, statistically, a significant (p<0.001) difference found between the pretest and the posttest score of psychological problems of various domains such as mental exhaustion, depression, irritability and sleep problems.

➢ There was a significant (p < 0.001) difference found between the pretest and the posttest level on the urinary problems and the sexual problems was significant at p<0.05 level.

Further, it was concluded that the EPCI was found to be effective in minimizing the psychological and urogenital problems of menopause among the midlife women.

Coping Ability

➢ There was statistically a significant level of difference found between the pretest and the posttest coping ability after administering the EPCI. And it was found to be significant in active (p < 0.001), denial (p < 0.05), disengagement (p < 0.05) and planning (p <0.001) coping ability except, religions and seeking support coping.

Comparison of menopausal problems of midlife women between pretest and posttest in control group

➢ Significant reduction of irritability (p < 0.01) and sleep problem (p < 0.05) score was found in post.

Comparison of coping ability of midlife women between pretest and posttest in control group

➢ Statistically significant improvement in active (p < 0.001) denial (p < 0.001) coping ability was found in the posttest.
Comparison of menopausal problems of midlife women between pretest and posttest in group II

Comparison of physical problems of menopause among the three group

- Highly significant (p < 0.001) reduction of physical problems (somatic, aches and pains) in group I, shows that, the multimodal intervention found to be more effective than EPCI in decreasing the physical problems of menopause (LSD – C, GII < GI***).

- Highly significant (p < 0.001) reduction of mental exhaustion in group I and significant (p < 0.01) reduction of mental exhaustion in group II. Further it reveals multimodal and EPCI who found to be more effective in reduction of mental exhaustion (LSD – C < GII** < GI***).

- Regarding depression significant (p < 0.05) reduction was identified in group I and group II. It reveals multimodal intervention and EPCI was equally found to be effective in reduction of depression (LSD – C < GI* GII).

- Regarding irritability significant (p < 0.01) reduction was identified in group II and significant reduction was observed in control group. It reveals Group II and control group shows more reduction of irritability than the group I (LSD – GI < C* < GII***).

- Regarding sleep problem significant (p < 0.05) reduction was identified in group I and group II. It reveals multimodal intervention and EPCI found to be effective in reduction of sleep problems (LSD – C < GII, GII*).

Urogenital problem

- Regarding urinary problems significant (p < 0.001) reduction was identified in group I and group II. It reveals multimodal
intervention and EPCI found to be equally effective in reduction of urinary problems (LSD – C<GI,GII**).

➢ Regarding **sexual problems** significant (p < 0.001) reduction was identified in group I and group II. It reveals multimodal intervention and EPCI found to be effective in reduction of sexual problems (LSD – GIΙ<C*&<GIΙ**).

**Coping ability**

➢ Statistically significant (P < 0.001) findings of coping ability reveals that multimodal intervention found to be effective in improving selective coping ability of the midlife women at various levels. (Active coping LSD – C<GIΙ,GΙ*, Disengagement LSD – C,GΙΙ<GI*, Seeking support LSD – C<GIΙ*<GIII** and planning LSD – C,GΙΙ<GIΙ***).

**To assess and compare the biophysiological parameters among control, group I and group II.**

➢ Comparison of FSH level between pretest and posttest showing highly significant reduction of FSH level was found in group I (p < 0.05).

➢ Comparison of HDL level between pretest and posttest showing the significant improvement of HDL level was found in group I (p < 0.02).

➢ Comparison of LDL level between pretest and posttest showing the significant reduction of LDL level was found in group I and group II (p < 0.001).

➢ Comparison of estradeol level between pretest and posttest showing the significant changes in the mean value. Further analysis shows the non-significant ‘P’ value.
Conclusion

Today’s health care system requires nurses to pose a wide range of skills to deliver the highest possible quality of nursing care. Nurses are expected to incorporate current knowledge in their daily practice in all health care settings either in the community or hospital background. Increasing consumer expectations and financial constraints in health care challenge the nurses to need to devise cost-effective nursing care strategies without allowing compromise in the quality of care. Best practices have to be determined based on evidence generated through high-quality research.

The present study was helpful in identifying the menopausal problems of midlife women. The study findings revealed that multimodal intervention was more effective in reduction of menopausal problems and increasing the coping ability than the EPCI and control group. Further the findings showed the fact EPCI found to be effective in selected variables of menopausal problems and coping ability than the control group. The study findings have opened several implications for nursing profession in the reproductive health.

Nursing Implications

Implications for Nursing Practice

The study findings have unwrapped several implications for nursing practice in the end stage of reproductive health.
Nurses should take initiative to arrange awareness regarding sources of beneficial health effects of phytoestrogens.

This research demonstrated the fact that the multimodal intervention should become a routine component of the care during menopausal transition.

Nurses must undergo special training and update their knowledge regarding alternative therapies for managing menopausal problems.

Multimodal intervention should be used as an independent nursing intervention for menopausal problems during the menopausal transition. This research is important in providing information for nursing practice either in the hospital and community setting.

Nurses should take initiative to arrange awareness campaigns to update the knowledge of the midlife women about the problems and various coping strategies to be used during the menopausal transition.

**Implications for Nursing Education**

The nursing curriculum should be updated with the statistics on midlife women population, besides using evidence based nursing research on menopause and benefits of using multimodal intervention as management of menopausal problems.

The curriculum content needs to be revised where importance is to be given about the phytoestrogen diet therapy for prevention and management of menopausal problems.

The counseling skill and stress reduction strategies is also required to be incorporated.
Nurse educator should organize periodical seminar, workshop and conference regarding the prevalence of menopausal problems, its impact on health and the effective use of alternative therapies to overcome the menopausal problems.

Nursing students should be educated regarding the benefits and methods of using multimodal intervention.

**Implications for Nursing Administration**

- Nurse administrators need to facilitate the utilization of research based nursing intervention such as multimodal interventions for management of menopausal problems.

- Nurse administrators should encourage the clinical nurse and nursing students to practice multimodal intervention while providing care to the midlife population.

- Nurse administrator should arrange seminar and workshop for communicating with the research findings.

- Nurse administrator should provide facility to practice the research findings

- Nurse administrator should motivate the staff nurse in the gynecological ward to encourage the midlife women to practice multimodal intervention.

**Implications for Nursing Research**

- There is only little data available regarding midlife population statistics. Always scant attention have been given to this population. Governmental, nongovernmental, and voluntary organizations should provide adequate supply of resources to perform researches in menopause and its consequences.
Further research in the area of menopausal problems of midlife women required to identify specific intervention that would be useful in reducing menopausal problems.

The intervention which would improve quality of life and coping ability need to be developed and tested for practice.

**Recommendations**

- A study can be conducted to compare the menopausal problems among the urban and rural population of midlife women.

- A similar comparative study can be conducted to test the effectiveness of multimodal intervention with other alternative therapy like yoga, meditation, guided imaginary etc.

- A similar study can be conducted to assess the long-term effect of multimodal intervention on menopausal problems and quality of life among the midlife women during menopausal transition.

- The same study can be conducted on a large population for a more valid generalization.

- Menopause clinics need to be initiated in every hospital and community to enable availability and accessibility of these services to common people.

- Public health care systems should mobilize resources and take the measures to improve midlife women’s awareness and knowledge about the menopause-related changes through educational training and guidance to maintain active, healthy lives.