Research Article

CORRELATIONAL STUDY ON USAGE OF CAFFEINE AND MENOPAUSAL SYMPTOMS AMONG WOMEN IN A SELECTED RURAL AREA AT MANGALURU

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ABSTRACT

Caffeine is a bitter substances found in coffee, tea, soft drinks, chocolate, cola, nuts and certain medicine. It has many effects on the body metabolism, including stimulating the central nerve system. This can make you more alert and boost your energy. Menopause, also known as the climacteric, is the time in most women's lives when menstrual period stop permanently and they are no longer able to bare children. Menopause typically occurs between 49 and 52 years of age.

Objectives
1. To determine the usage of caffeine among women
2. To identify the menopausal symptoms among women
3. To find the relation between the caffeine usage and menopausal symptoms

Hypothesis
H1: There will be significant relation between caffeine usage and menopausal symptoms.

Methodology: A descriptive survey approach was used in the study among 100 menopausal women in a selected rural community at Mangaluru to assess the relation between usage of caffeine and menopausal symptoms.

Results: The data has been collected from 100 menopausal women from Boliyar community.

The present study revealed that, out of 100 participants 29 were belonging to the age group of 50-54 years. Majority of women (75) were belonging to Muslim religion, 62 of them belonged to the nuclear family, 50 of them had no formal education, 92 of them were married, and 67 participants had monthly income of rupees 5000-10000.

With regard to the amount of coffee powder, 65 participants were adding half teaspoon of powder in a cup of coffee,20 were adding one teaspoon powder for a cup of coffee whereas only 5 of them were using more than one teaspoon powder for a cup of coffee.

The occurrence and severity of menopausal symptoms were assessed by using rating scale. It showed that 60 of them always experienced increased body temperature after attaining menopause and 45 of them always experienced mood swings whereas 43 participants had forgetfulness, tiredness, numbness and joint stiffness during their menopausal period.

The findings of the study revealed that there was a positive relationship between amount of caffeine intake and menopausal symptoms (p=0.007).

Interpretation and Conclusion: The data collected were analyzed by using descriptive and inferential statistics. It showed a positive correlation between amount of caffeine intake and menopausal symptoms.

INTRODUCTION

Women play a great role in everyone's life without whom we cannot imagine the success of life. They are highly responsible for the successful continuation of the life on this planet. Women's life stages are based on the reproductive cycle, beginning with menstruation, and ends with menopause.

Menopause is the time in a women's life when her periods stops. It usually occurs naturally, most often after age 45. Menopause happens because the women's ovaries stop producing the hormone estrogen and progesterone. The deficiency of these hormones elicits various somatic, vasomotor, sexual and psychological symptoms that impair the overall quality of life of women.

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Caffeine is a central nervous system stimulant of methyl xanthine class. It has been scientifically proven that the consumption of caffeine increases the frequency and severity of hot flashes. It can also have negative impact symptoms like fatigue, muscle tremor, insomnia, etc… because energy levels and alertness increases and then suddenly plummet, which can affect your health and mental status.

Cutting caffeine from your diet is a recommended treatment for all menopausal symptoms. Caffeine consumption can have a negative impact on your body and make menopause more difficult to deal with. Avoiding coffee, tea, energy drinks may require self-discipline but your effort and persistence will be worthwhile. High consumption of caffeine can bring on menopause at an earlier age than normal. So caffeine usage may worsen menopausal symptoms.

When women attain menopause they will experience more health problems. A study was conducted at Mayo clinic between 25th July 2005 to 25th July 2011. Data from 1806 women collected and researchers found that caffeine usage increases the vasomotor symptoms in menopausal women.

From these observations the researchers found that there is a need to conduct a study on the relation between the caffeine usage and menopausal symptoms.

Objectives

1. To determine the usage of caffeine among women
2. To identify the menopausal symptoms among women
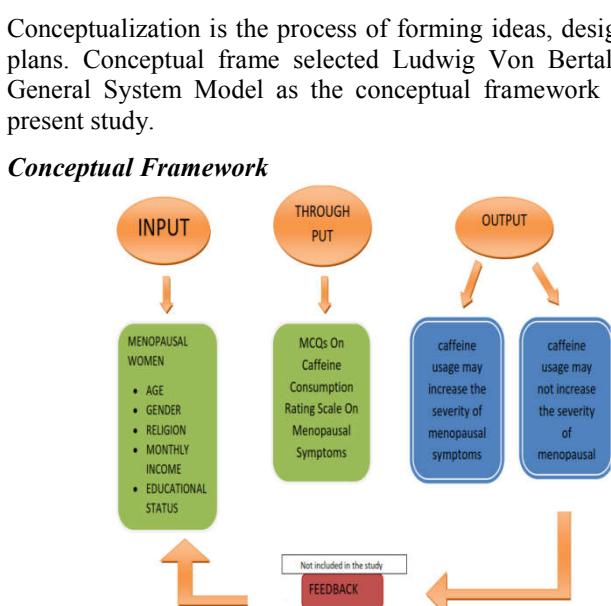3. To find the relation between caffeine usage and menopausal symptoms.

Assumption

This study assumes that:

Consumption of caffeine may have effect on the menopausal symptoms.

Hypothesis

H1: There will be significant relation between caffeine usage and menopausal symptoms.

Conceptual Framework

Conceptualization is the process of forming ideas, designs and plans. Conceptual frame selected Ludwig Von Bertalanffy's General System Model as the conceptual framework for the present study.

Conceptual Framework

Conceptual framework based on general system theory

Schematic Representation of Research Design

Setting of the Study

The study was conducted at Boliyar community area at Mangaluru.

Population

Population comprised of menopausal women between the age group of 45-70 years.

Sample Size

100 menopausal women aged 45-70 years in a selected rural area were included as sample.

Sampling Technique

Purposive sampling technique was used.

Data Collection Instruments

Tools were prepared on the basis of objectives of the study.

Tool 1: Demographic proforma.
Tool 2: Multiple choice questions on Caffeine usage.
Tool 3: Rating scale on menopausal symptoms.

There were 100% agreement on majority of items .Few items were suggested to modify and the modification was incorporated in the instrument.

Data Collection Process

To conduct research study in Boliyar rural area at Mangaluru, a formal written permission obtained from the concerned authorities prior to data collection. Confidentiality was assured to all the subjects to get their co operation .An informed consent was taken from the subject.

Demographic proforma was given to the participant who met the inclusion criteria and collected the baseline data and assessed the caffeine usage and menopausal symptoms by using structured questionnaire and rating scale. The data collected was compiled for analysis.

RESULTS

Organization of the Findings

The data has been tabulated and organized as follows

Section 1: demographic characteristics of the menopausal

Women

This section deals with demographic profile of the menopausal women in relation to their age, religion, type of family, educational status, monthly income, and marital status in frequency.

Section 2: Quantification of Caffeine Usage

This section deals with the multiple choice questions to quantify to caffeine usage in menopausal women.

Section 3: Rating Scale on Menopausal Symptoms

This deals with questions to assess the occurrence of menopausal symptoms.

Section 4: Correlation between Caffeine Usage and Menopausal

Symptoms

This includes assessing the correlation between caffeine usage and menopausal symptoms with spearman correlation.
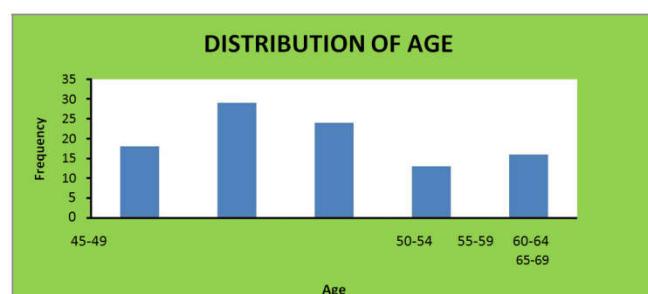
Section 1

Demographic Characterisrtics of Menopausal Women

n=100

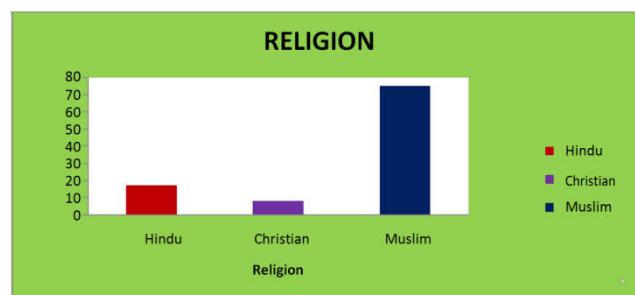| Variables	Frequency
Age group	
45-49	18
50-54	29
55-59	24
60-64	13
65-69	16
Religion	
Hindu	17
Christian	8
Muslim	75
Type of family	
Nuclear	62
Joint	37
Extended	1
Educational status	
No formal education	50
Primary education	38
High school	9
PUC and above	3
Marital status	
Married	92
Unmarried	5
Divorced	3
Monthly income	
<5000	7
5000-10000	67
>10000	26

Age

Bar diagram showing the distribution of participants according to age

Out of 100 participants 29 were belonged to the age group of 50-54 years, 24 were in the age group of 55-59 years, 18 participants were in the age group of 45-49 years, 16 belonged to the age group of 65-69 years and only 13 belonged to the age group of 60-64 years.
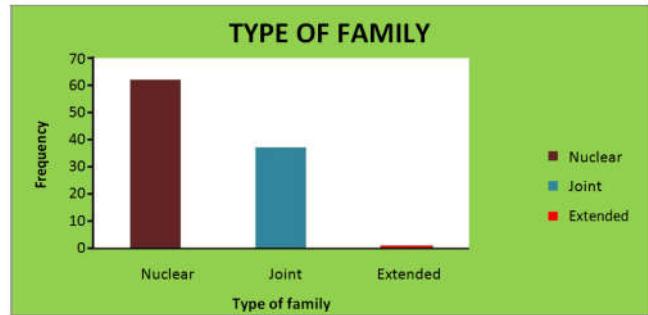
Religion

Bar diagram showing the distribution of participants according to religion

Among the 100 participants majority of women (75) were belonging to Muslim religion, 17 were Hindus and only 8 of them were Christians
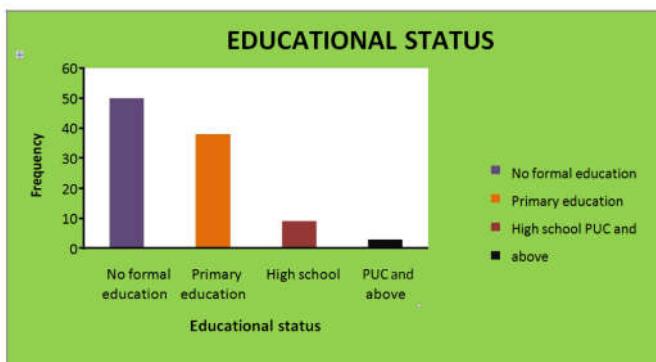
Type of Family

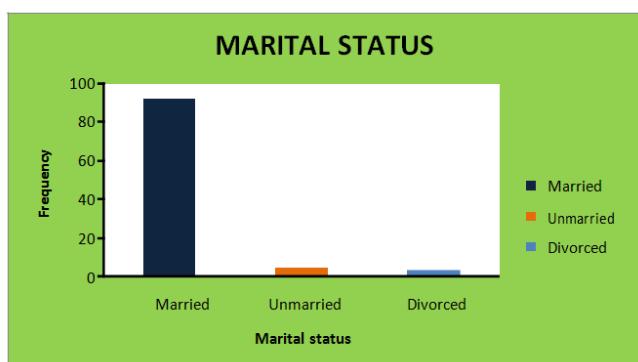*Bar diagram showing distribution of participants according to type of family*

Among the 100 participants 62 of them were belonging to the nuclear family, 37 participants were belonging to the joint family and only 1 in the extended family.

Educational Status

Bar diagram showing distribution of participants according to educational status Among the 100 participants (50%) had no formal education. There were 38 with primary education,9 with high school and 3 were PUC and above.

Marital Status

Bar diagram showing distribution of participants according marital status

Out of 100 participants majority (92) of them were married, 5 were unmarried and 3 of them divorced.

Monthly Income

Bar diagram showing distribution of participants according to monthly income

The figure 7 shows that 67 participants had monthly income of rupees 50000-10000, 26 of them had income of rupees >10000 and only 7 had rupees <5000.

Section 2

Table 2 Quantification of The Caffiene Usage

Multiple choice questions		Frequency
Since how many years are you drinking coffee?		
1)	Below one years	3
2)	1-5 years	11
3)	6-10 years	27
4)	More than 10 years	59
How many glasses of coffee you drink per day?		
1)	One	20
2)	Two	58
3)	Three	19
4)	More than three	3
How many times you drink coffee in a day?		
1)	One	22
2)	Two	55
3)	Three	13
How much coffee powder you add for a cup of coffee?		
1)	½ teaspoon	65
2)	3/4 teaspoon	10
3)	1 teaspoon	20
4)	>1 teaspoon	5

Among the 100 participants, 59 were consuming coffee for more than 10 years and 27 were taking coffee for 6-10 years, 58 of them were taking two glasses of coffee per day and 20 were taking one glass of coffee per day. Among all the subjects 55 were taking coffee more than two times in a day. As far as the amount of coffee powder is considered, 65 participants were adding half teaspoon of powder in a cup of coffee,20 were adding one teaspoon powder for a cup of coffee whereas only 5 of them were using more than one teaspoon powder for a cup of coffee.

Section 3

Table 3 Rating Scale on Menopausal Symptoms

	not at all frequency	sometimes frequency	Always Frequency
Do you have any physical discomfort after menopause?	28	53	19
Do you feel increased body temperature after attaining menopause?	26	58	60
Do you have night sweats?	22	48	30
Do you have numbness?	13	45	42
Do you have any sleeping disturbance?	12	53	35
Do you have hair fall or thinning of hair?	8	54	38
Do you have joint stiffness?	13	45	42
Do you have palpitation?	35	47	18
Do you have uncontrolled urination?	38	46	16
Do you have vaginal itching?	49	35	16
Do you have urinary tract infection?	40	47	13
Do you have headache?	15	46	39
Did you feel more tiredness than usual?	9	48	43
Do you have forgetfulness?	13	44	43
Do you have any mood swings?	9	46	45

Among the 100 participants, 60 were always experienced increased body temperature after attaining menopause and 45 of them always experienced mood swings. Whereas 43 participants had forgetfulness, tiredness, numbness and joint stiffness during their menopausal period. Out of 100 women, 54 often experienced hair fall and sleeping disturbances. More than 46 subjects had symptoms like urinary tract infection, uncontrolled urination and night sweats whereas more than 38

participants less experienced menopausal symptoms like vaginal itching and palpitation.

Section 4

Table 4 Correlation between Caffeine Usage and Menopausal Symptoms

	Spearman's ratio	P value
Since how many years are you drinking coffee?	0.107	0.291
How many glasses of coffee you drink per day?	0.036	0.723
How many times you drink coffee in a day?	0.006	0.955
How much coffee powder you add for a cup of coffee?	0.270	0.007

There was a positive relationship between amount of caffeine intake and menopausal symptoms (p=0.007). Since all other p values are > 0.05 there was no relationship between menopausal symptom and years of drinking coffee (p=0.291), number of glasses of coffee intake per day(p=0.723) and number of times coffee drink per day(p=0.955).

Analysis was done with spearman's correlation and findings proved that amount of caffeine intake have effect on severity of menopausal symptoms. All the objectives were achieved and the hypothesis H1 was accept

CONCLUSION

The finding of the study showed that there was a relationship between amount of caffeine intake and menopausal symptoms and the majority of women experienced increased body temperature after attaining menopause.

Nurses are the key players in motivating patient to adopt healthier life style by introducing measures to life style modification[16]. Nurses have a vital role to play in helping women to cope during and after the menopause .As a member of health care team nurses play an active role in the promotion of health and prevention of illness.

Patient education is a process assisting women to learn and incorporate health related behaviour into their everyday life. Educative counseling motivates menopausal women to modify the life style and adopt preventive and promoting measures. Thus it enhances the healthy life style[17]. Nurses should explain all aspects of the menopause to each woman and ensure that she is aware of all the available options.

Nurse administrators should take an initiative to create awareness and plan for arranging health talks ,seminar ,health education .This programs should be planned and organized according to the needs of the group. Nurses are an important part of health care system .They should take classes and conduct in-service education for the staff regarding menopause to update their knowledge and to learn skills in health care administration.

Nurses can help patients to handle the symptoms associated with menopause .Nursing person working in various health care setting should give health education to the woman regarding menopausal symptoms and to adapt healthy life style.

The nursing research has influences on current and future professional nursing practice .Thus it is an essential component of the educational process .This present study is to find the relationship between coffee usage and menopausal symptoms.

It has always been a challenge for clinicians and researchers to understand the health issues associated with the menopausal. Nurses should take initiative to conduct research to identify effects of coffee on menopausal symptoms so a teaching Programme can be conducted to reduce the menopausal symptoms associated with coffee usage.

Nursing research is a growing field in which individuals with in the profession can contribute and variety of skills and experiences to the sciences of nursing care.

References

1. https://en.m.wikipedia.org/wiki/caffeine
2. Stephanie S. Faubion, MD; RichaSood,MD;Jacqueline M. Thielen, MD; Lynne T. Caffeine and menopausal symptoms. 2015;22(2):155-158. Available at: www.medscape.com>viewarticle/840023
3. Faubion, Sephanie S. MD, Sood, Richa MD, Thielen, Jacqueline M.MD. The effect of caffeine during menopause. The journel of the north American menopause society.2015. 22(2);155-158. Available at: www.34-menopause-symptoms.com/articles/the-effect-of-caffeine-during- menopause.htm
4. Eunice Kennedy, S. H. R. I. V. E. R. Menopause review national institute of child health and human development (accessed 18 January 2016)
5. Chinthamani. Medical surgical nursing .South Asia; 2011 page no 1360
6. Faubion SS, Sood R, Thielen JM, Shuster LT. Caffeine and menopausal symptoms. Available at: https://www.ncbi.nlm.nih.gov/pubmed/25051286
7. Nivin Todd. Menopause. Webmed medical reference July 26, 2016 Available at: http://www.m.webmd.com/a-to-z-guides/menopause-symptoms-types (accessed 19 January 2016)
8. Akanksha Sing, ShirshirkumarPradhan. Menopausal symptoms of post menopausal women in rural community of Delhi,India:A cross-sectional study. 2014 June;5(2)6267. Available at: www.nvbi.nlm.nih.gov/pmc/articles/PMC4071646/
9. www.sciencedaily.com/releases/2014/07/140723105945.htm
10. Olga Y, S.U.C.H.S.H.I.N.S.K.A.Y.A. Cardinal Scholar http:/liblink.bsu.edu/uhtbin/catkey/1671224 (Accessed16 January 2016)
11. Mhernandezavila,Coldlitz,G.A,Stampfer,M.j,Rosner,B,F espizer,W.C..W.I.L.L.E.T.Caffein e, moderate alcohol intake, and risk fracture of hip and fore arm in middle aged women. Journal of American society.1991; 54(157-163) :.(Accessed 16 January 2016)
12. AM. J ClinNutr. Dietary caffeine intake and bone status of postmenopausal women. June 1997. Vol.65 no.6 1826-1830. Available at: http://m.ajcn.nutrition.org/content/65/6/1826.short
13. Sagar.A.Bnoker, P.P Venugopal . Study of menopausal symptoms, and perceptions about menopause among women at a rural community in kerala. 1997 June.volume65. no.6 182 Available at: https://www.ncbi.nim.nih.gov/pmc/articles/PMC3952411/

14. Laurie Barclay, MD. Caffeine may worsen vasomotor symptoms of menopause-medscape – july21, 2014. Available at : www.medscape.com/viewarticle/829114
15. PankajDeshai, NarendraMalhotra,DuruShah.Principles and practice of obstetrics and gynecology for postgraduats.3 rd edition.volume-2.Jaypee brothers medical publishers (P)Ltd.p.1111
16. Joanna Speedle, Diana Mansour. Managing women's heath during the menopause. July 3
    2014. Available at: .www.nursingin practice.com/ article/managing-womens-health-during-menopause
17. Lesley woodward, RGN. The menopause: How nurses can help. 19 October 2000. Vol.96. page no.11. Available at: https://www.nursingtimes.net/the-menopause-how-nurses-can-help/205140.article
18. HodaAbedel, Azim Mohammed, Sahar Mansour Lamdar. Journal of nursing education and practice. Available at: www.sciedu.ca
19. LisaAstalosChism, DNP. Guiding your patients through menopause.2014 January. Vol;9. Available at: https://www.americannursetoday.com
20. Denise F. Polit PhD FAAN. Nursing research: Generating and assessing evidence for nursing practice. 10th Edition. Available at: mobile journals/ www.com>articleviewer

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