

STUDY TO ASSESS PHYSIOLOGICAL AND PSYCHOLOGICAL PROBLEM AMONG MENOPAUSAL WOMEN IN SELECTED RURAL AREA AT KARAD TALUKA

¹Mr. Ajay Jyotiram Kawar, ²Ms. Shwetanjali M. Palekar, ³Mrs. Sarika Pramod Satpute, ⁴Mrs. Ashwini Amol Patil, ⁵Ms. Rupali Santaram Watharkar

¹Assistant Professor, Dept. of Medical-Surgical Nursing, Hirai Institute of Nursing Education, Malwadi, Masur (Corresponding Author)

²Clinical Instructor, Hirai Institute of Nursing Education, Malwadi, Masur

³Assistant Professor, Hirai Institute of Nursing Education, Malwadi, Masur

⁴Assistant Professor, Hirai Institute of Nursing Education, Malwadi, Masur

⁵Clinical Instructor, Hirai Institute of Nursing Education, Malwadi, Masur

Abstract—title of the study: A study to assess the physiological and psychological problem among menopausal women living in selected rural area at Karad taluka. **OBJECTIVE:** > To assess the physiological and psychological problem of post – menopausal problem. > To find association of physiological and psychological problem of post – menopausal problem with their selected demographic variables. **METHODOLOGY:** The study based on non- experimental descriptive serve design. The population was menopausal women in selected rural area The subject consisted 100 menopausal women. The inclusive criteria were the women who have age 40-65 year, women who have stopped menstruation. The questionnaire was prepared to assess the physiological and psychological problem. The sampling technique used in study was random sampling technique The tool was structured questionnaire. **RESULT:** Socio-demographic variables like age, religion, education, occupation, monthly family income, type of family type of diet, BMI, marital status. Majority of 35% is form the age 56-65years and minority of 6% form age 40-45 years Majority of 98% is form Hindu religion and Minority of 2 % form Muslim. Majority of 39% form illiterate women and minority of 2% are diploma women. Majority of 52% women are house wife and Minority of 3% women has business. Majority of 74% women has < 10,001 and Minority of 1 % women 74,755-99,930. Majority of 56% women form nuclear family and 45 % of women form joint family Majority of women 50% having normal BMI. And Minority of 1% of women having extreme body mass. Majority of 99% of women are married and 1 % of women are unmarried. **CONCLUSION:** The study concluded that many women have physiological and psychological problem. Physiologically menopause involve hot flashes and night sweat which can impact overall health, psychologically women experience mood swings.

Index Terms—Women, menopause, menopausal problem.

I. Introduction

Menopause literally means the end of monthly cycles or the end of monthly periods or menstruation. The word ‘menopause’ is derived from a Greek word ‘pause’ which means ‘cessation’ and the root ‘men’ means the ‘month’. So the term menopause refers to a permanent stoppage of menstruation resulting from the loss of ovarian follicular activity. Menopause is recognized to have occurred after twelve consecutive months of amenorrhea this stage usually occurs between the age of 40 and 60 years associated with

hormonal, physical, psychological changes. These changes can occur gradually or abruptly. It can start as early as the age of 30 and last until as late as the age of 60 years. Menopause is a gradual transition from reproductive to non-reproductive phase in women during which there is substantial fluctuation in oestrogen or oestrogen deficiency. Furthermore, women encounter various psychological, physical symptoms during this transition period. Timely diagnosis can result in appropriate interventions to reduce these symptoms and result in an uneventful transition period. Each woman has a different experience during her menopause. Some might undergo a smooth and even a liberating changeover from her reproductive to her non-reproductive stage, while some might experience fluctuations in her chemical and emotional states. [1] Alterations in menstrual bleeding manner indicate the near of menopause in mid-life women, and several women describe hot flashes, inadequate sleep, depressed mood, anxiety, and additional symptoms along with these menstrual variations. Menopause is not a disease but a natural transition in a woman's life that results from a decrease in the ovarian production of sex hormones such as oestrogen, progesterone and testosterone. By loss of reproductive potential and transition into later life she may become a victim of both physically and psychologically problems. Physical complaints in order of frequency are as follows: hot flashes, night sweats or chills, disrupted sleep, vaginal dryness, loss of libido, loss of energy, mood swings, increased irritability, loss of skin tone, and urinary leakage. Psychological symptoms frequently associated with menopause include fatigue, irritability anxiety. Some symptoms associated with changing hormone levels are directly linked with oestrogen depletion. Hot flashes, night sweats, and vaginal atrophy resulting in vaginal dryness are correlated with changing level of sex hormones. Other symptoms such as sleep disturbances, fatigue, anxiety and weight gain although common to the experience of menopause, are multi factorial in cause and occurs in non- postmenopausal women as well. Sleep disorders are the most common complaints during menopause transition and post menopause; these disorders include troubles falling asleep, waking up several times during night, waking up earlier than desired in the morning. Poor sleep quality and inadequate sleep duration are associated with negative health outcomes, such as obesity, cardiovascular disease, cancer-related mortality, diabetes, depression and poor quality of life. In some women, problems that were present like endometriosis or painful periods will improve after menopause. During early menopause transition. The menopause cycles remain regular but the interval cycles begin to fluctuate. Ovulation may not occur with each cycle Menopause is not necessarily a negative experience for every woman who is in this stage of her life. There are women going through menopause who do not have any negative symptoms. Nevertheless, approximately 25% of women who have significant symptoms require on-going treatment for extended periods of time (Northrop, 2015). There are also approximately 60% of women in menopause who visit their local physician because of the severity of their symptoms Menopausal status is categorized into three types: (1) Peri menopause: a time of one year before commencing the menopause in which physiological and clinical features of menopause appear. Women experience irregular menstruation for last 3 months in this period, (2) Pre-menopause: Regular menstruation within last year before commencement of menopause, (3) Post-menopause: Time period which begins from the last menopause up till death is called post menopause.

NEED FOR STUDY: Menopausal women experience a wide range of symptoms, including hot flashes, night sweats, sleep disturbances, mood swings, and cognitive changes. By studying these symptoms, we can better understand their prevalence and severity, which can vary greatly among individuals. Menopause can significantly affect a woman's quality of life. Physiological symptoms such as hot flashes and night sweats can lead to sleep disturbances, while psychological symptoms like anxiety and depression can affect daily functioning and social relationships. Assessing these impacts can help in developing interventions to improve quality of life. Menopause is associated with an increased risk of various health conditions, including osteoporosis, cardiovascular disease, and metabolic syndrome. Identifying and understanding these risks can lead to better prevention and management strategies. Menopause can trigger psychological issues such as depression, anxiety, and mood disorders. Understanding these psychological problems is essential for providing mental health support and developing effective coping strategies for menopausal

women. Women experience menopause differently due to genetic, lifestyle, and environmental factors. Studying these differences can lead to personalized healthcare approaches, ensuring that interventions are tailored to individual needs. [2]

Raising awareness about menopausal symptoms and their management can empower women to seek appropriate care and support. It also helps in reducing the stigma associated with menopause. Identifying gaps in current healthcare services for menopausal women can lead to improvements in care delivery. This includes better training for healthcare providers and the development of specialized Menopause is experienced differently across cultures. Understanding these cultural differences can help in creating culturally sensitive interventions and support systems and services for menopausal health. [3]

STATEMENT OF PROBLEM: “A Study to Assess the Physiological and Psychological Problems Among Menopausal Women Living In- Selected Rural Area at Karad Taluka.”

OBJECTIVE:

➤ To Assess The Physiological and Psychological Problems Of Post- Menopausal Women. ➤ To Find the Association Of Physiological And Psychological Problems Of Post Menopausal Women With Their Selected Demographic Variables.

OPERATIONAL DEFINITION:

➤ Women: Female subjects between 40-60 years who had permanent cessation of menstruation for more than 12 month and subject of any age group who underwent total hysterectomy. ➤ Menopause: The time of life when women’s ovaries stop producing hormones and menstrual periods stop. ➤ Menopausal symptoms: Subjective evidence of physical, psychological, and emotional disturbances experienced by women whose menstruation is ceased for more than 12 months. ➤ Knowledge: Responses’ given by subject regarding menopausal symptoms and its management as assessed with structured questionnaire.

ASSUMPTION 1. Most of the women may not have the physiological problem 2. Most of the women may not have the psychological problem.

II. REVIEW OF LITERATURE

1. Non- experimental descriptive design, conducted by Nutan P1, Mahadeo S 2 “on A study to assess the psychological problems & coping strategies adopted by post -menopausal women in selected areas of Pune city.” result reveal that,1 shows that 41% (N=100) sample,. were between age group of 55-59, 67% were illiterate 82% were Unemployed/Housewife, 64% were married, 36% had achieved menopause 10-12years back, 92% were having no any disease condition before menopause, 85% were having no any disease condition after menopause, 93% were from Rs.1000 5000 income group and concluded that, Post menopausal women face psychological problems; they also adopt coping strategies to overcome these problems. [4]
2. 2 . experimental study conducted by Mital J 1,* Sirimavo N2 Epidemiological on Study to Assess the Menopausal Problems during Menopausal Transition in Middle Age Women of Vadodara, Gujarat, India result reveals that,.72 classification which revealed that , (N =1000) samples .Epidemiological 58.7% (587) had normal menstrual cycle pattern, 14.6% (146) were passing through per menopause phase and 26.7% had turned to their post-menopause phase. The mean age of the study population is 42 + 5.1; where mean age of premenopausal group was 40.07 3.79, peri menopausal group was 41+ 4.28 and postmenopausal group was 46.4 + 5.32 and concluded that, the time span between different menopausal transitions are very short and clashes with the time when a woman is already fraught with the highest degree of family responsibilities in her life. Therefore this

raises a call for measuring and improving health-related quality of life of women during transition stages. [5]

III. RESEARCH METHODOLOGY

This chapter unfolds the methodology applied to acquire information pertaining to research problem and evaluate the effectiveness of self-instructional module. It also deal with description of methodology and different step, which were undertaken for gathering and organizing data. [30] Methodology of research indicate the general pattern organizing to gather valid and reliable data for investigation. The present study has been conducted to assess the physiological and psychological problem among menopausal women. The chapter deals with research design, research approach, sample and sampling technique, sample size, research setting.

➤ MATERIAL AND METHODS:-

RESEARCH APPROACH: The research approach used in this study was quantitative research approach used to assess the physiological and psychological problem among menopausal women. **RESEARCH DESIGN:** The research design selected for study was non experimental descriptive survey design. **RESEARCH SETTING:** The study was conducted at rural sector (wing) at Karad. **POPULATION:** The study population was women aged 40 – 65 who experienced natural menopause and currently residing in wing.

TARGET POPULATION: Target population of study is menopausal women in selected rural area (wing).

ACCESSIBLE POPULATION: Accessible population of study comprised of menopausal women of selected rural area(wing) except women who had been treated by chemotherapy and women who is not willing to participate.

SAMPLE: Post – menopausal women.

SAMPLE SIZE: The sample size consisted of 100 posts – menopausal women in selected rural area. **SAMPLING TECHNIQUE:-** Simple random sampling technique **CRITERIA FOR SELECTION OF SAMPLE:** **INCLUSION CRITERIA:** • Women who have age 40- 65 years • Women who had stopped menstruation. **EXCLUSION CRITERIA:** • Menopausal women who are not willing to participate in study. • Women who had been treated by chemotherapy. **METHODS OF DEVELOPING OF THE TOOL:** Based on the objectives a questionnaire was prepared. **Section A: Demographic data** **Section B: Structured Questionnaires** **Section A:** It consisted of demographic data which include age, religion, education, occupation, income, diet, type of family, height, weight, marital status. **Section B:** It comprised structured questionnaires to assess physiological and psychological problem among menopausal women. **ETHICAL**

CONSIDERATION: • A community based study conducted in selected rural area of Karad taluka. • Permission taken form ethical committee of Krishna Vishwa Vidyapeeth (Deemed To Be University) Karad, • Then we taken permission of THO and sarpanch of wing, Dean / Principal.

PLAN FOR DATA ANALYSIS : 1 The investigator use descriptive statistics for data analysis. 2 The analyzed data presented in the form of table, diagram, and graph 3 standardized mean differences were calculated according to method guide.

IV. FINDINGS AND DISCUSSION

Menopause, a natural biological process marking the end of a woman's reproductive years, typically occurs around the age of 40. During this transition, women experience significant physiological and psychological changes due to hormonal fluctuations, primarily the decline in oestrogen levels. These changes can manifest in various symptoms, ranging from hot flashes and night sweats to mood swings and cognitive difficulties. Menopause marks a significant transitional phase in a woman's life, typically occurring around the age of 40, characterized by the cessation of menstrual cycles. This natural biological process is often accompanied by a range of physiological and psychological changes that can impact a woman's quality of life. While menopause itself is a universal phenomenon, its manifestations and implications vary widely among individuals, influenced by genetic predispositions, lifestyle factors, and socio-cultural contexts. [33] Among the numerous challenges faced by menopausal women, both physiological and psychological problems deserve careful attention. Physiologically, hormonal fluctuations during menopause can lead to symptoms such as hot flashes, night sweats, and changes in bone density, which may increase the risk of osteoporosis. Psychologically, menopausal women frequently report mood swings, anxiety, and difficulty concentrating, affecting their overall mental well-being. The aim of present study to assess physiological and psychological problem among menopausal women living in selected rural area at Karad taluka. The researcher had selected 100 sample who were in selected rural area . simple random technique was used.

The first objective was to assess the physiological and psychological problem of post- menopausal women. Shikha A.(July 2021) , non – experimental exploratory descriptive study on a study to assess the physiological and psychological changes among menopausal women in selected rural area, Dehradun, Uttarakhand, in addition 150 women randomly assigned for this study .A demographic variable of participant and menopause rating scale was used .The study reveals that, The study revealed that majority of symptoms were dryness of vagina in 98%, Anxiety in 96.7%, Irritability in 96%, Depressive mood in 94%, Joint and muscular discomfort in 88.7%, Sexual problems in 87.3%, Sleep problems in 86.7%, Heart discomfort in 180%, Physical and mental exhaustion in 79.3%, Hot flushes in 52.7% and Bladder problems in 52%. Out of the total 98% samples who had severity of symptoms regarding urogenital (dryness of vagina). The mean, mean % and SD of menopausal rating scale. The mean percentage for somatic score was 43.96%, psychological score was 52.38% and urogenital score was 50.67%. Therefore overall mean scores of respondents were found to be 21.34, mean percentage 48.5% with standard deviation 5.67. Out of the eight demographic variables selected for the study only two is found to be significantly associated with the physiological and psychological change i.e, menopausal women. It was found that with severity of symptoms in age group (55-59) and occupation status (housewife), of menopausal women regarding menopause. Chi-square value for Education, Marital status, Type of family, menstrual status, parity and monthly income. The obtained p Value for these variables is more than 0.05 which indicates that is no significant association of physiological and psychological changes with the demographic variables. [34] similarly in this study, physiological and psychological problem are assessed and the majority of symptoms were dryness of vagina form age 51- 55 is 31%, the women form Hindu religion having the symptoms of vaginal dryness is 78%, majority of participant i.e illiterate women 30%, the maximum no of participant i.e 41 %house wife. Majority of participant i.e 60% are having monthly income < 10,001.the majority of participant form nucler family 44%,67% participant are taking mixed diet,majority of participant i.e 41 % women have normal BMI.79% women are married.

The second objective of study was to find the association of physiological and psychological problem of post-menopausal women with their selected demographic variables. Non- experimental descriptive design , conducted by Nutan P1 , Mahadeo S 2 “ on A study to assess the psychological problems & coping strategies adopted by post -menopausal women in selected areas of Pune city.” result reveal that,1 shows that 41% (N=100) samples,.were between age group of 55-59, 67% were illiterate 82%

were Unemployed/Housewife, 64% were married, 36% had achieved menopause 10-12years back, 92% were having no any disease condition before menopause, 85% were having no any disease condition after menopause, 93% were from Rs.1000 5000 income group and concluded that, post-menopausal women face psychological problems; they also adopt coping strategies to overcome these problems. [35] similarly in this study, physiological and psychological problem are assessed ,the number of participant are 100 where between the age group 40 -65,98%women from Hindu religion,39% women are in illiterate ,52% women are house wife,74% women having<_ 10,001 monthly income, 55% women are from joint family,83% women are taking mixed diet, 50% women having normal BMI, 99% women are married.

CONCLUSION : Menopause is a complex transition that involve significant physiological and psychological problem . The assessment of physiological and psychological problem among menopausal women reveals that this life stage is marked by significant challenges. physiological problem such as hot flashes, night sweats,and vaginal dryness are common and psychological problem like mood swings , depression ,anxiety,These symptoms can substantially impact the quality of life .

References

- [1] Alaniz, A. M., ab Salwa, A. T., & Habibac, F. A. (2013). Assessment of symptoms of menopause and their severity among Saudi women in Riyadh. *Annals of Saudi Medicine*, 33(1), 63.
- [2] Nisar, N., & Soho, N. A. (2010). Severity of Menopausal symptoms and the quality of life at different status of Menopause: A community-based survey from rural Sindh, Pakistan. *International Journal of Collaborative Research on Internal Medicine & Public Health*, 2(5), 118.
- [3] Avis, N. E., Brambilla, D., McKinlay, S. M., & Vass, K. (1994). A longitudinal analysis of the association between menopause and depression. Results from the Massachusetts Women's Health Study. *Annals of Epidemiology*, 4, 214–220.
- [4] Avis, N. E., Stellato, R., Crawford, S., Bromberger, J., Ganz, P., Cain, V., et al. (2001). Is there a menopausal syndrome? Menopausal status and symptoms across racial/ethnic groups. *Social Science & Medicine*, 52, 345–356.
- [5] Cheng MH, Wang SJ, Wang PH, Fuh JL. Attitudes toward menopause among middle-aged women: A community survey in an island of Taiwan. *Maturitas*. 2005;52(3-4):348-55.
- [6] Ebri N. Attitudes towards menopause and depression, body image of women during menopause. *Alexandria Journal of Medicine* (2017) available @ <http://dx.doi.org/10.1016/j.ajme.2017.05.012>. 7]. Vanlalnunkimi I. Assessing the Effectiveness of Planned Teaching Programme on Remedial Measures of Bio-psychosocial Problems of Postmenopausal Women. *International Journal of Nursing Education*, 2017; 9(1):85-90.
- [7] Moilanen J, Aalto AM, Hemminki E, et al. Prevalence of menopause symptoms and their association with lifestyle among Finnish middle-aged women. *Maturitas* 2010; 67:368–74.
- [8] Lee MS, Kim JH, ParkMS, Yang J,KoYH Ko SK, Joe SK. Factors Influencing the Severity of Menopause Symptoms in Korean Post-menopausal Women. *J Korean Med Sci* 2010; 25: 758 65.
- [9] Elsabagh E.E, Abd Allah ES. Menopausal symptoms and the quality of life among pre/post-menopausal women from rural area in Zagazig city. *Life Science J.*, 2012, 9, 283.
- [10] Rahman SA, Zainudin SR, Mun VL. Assessment of menopausal symptoms using modified Menopause Rating Scale (MRS) among middle age women in Kuching, Sarawak, Malaysia. *Asia Pac Fam Med*. 2010;9:5.
- [11] Rahman S, Salehin F, Iqbal A. Menopausal symptoms assessment among middle age women in Kushtia, Bangladesh. *BMC Res Notes*. 2011;4:188

- [12] Williams RE, et al. Menopause-specific questionnaire assessment in US population-based study shows negative impact on health-related quality of life. *Maturitas*. 2009;62(2):153–9.
- [13] Heidelberg DA, et al. Do diabetes and depressed mood affect associations between obesity and quality of life in postmenopause? Results of the KORA-F3 Augsburg population study. *Health Qual Life Outcomes*. 2011;9:97.
- [14] Rahman SA, Zainudin SR, Mun VL. Assessment of menopausal symptoms using modified Menopause Rating Scale (MRS) among middle age women in Kuching, Sarawak, Malaysia *Asia Pac Fam Med*. 2010;9:5
- [15] Fuh JL, Wang SJ, Lee SJ, Lu SR, Juang KD. Quality of life and menopausal transition for middle-aged women on Kinmen island *Qual Life Res*. 2003;12:53–61
- [16] Night sweats, sleep disturbance, and depression associated with diminished libido in late menopausal transition and early postmenopause: baseline data from the Herbal Alternatives for Menopause Trial (HALT)
- [17] J.T. Bromberger et al. Depressive symptoms during the menopausal transition: the Study of Women's Health Across the Nation (SWAN) *J Affect Disord*(2007).
- [18] P. Chedraui et al. Quality of life among postmenopausal Ecuadorian women participating in a metabolic syndrome screening program *Maturitas*(2007).
- [19] World Health Organization. Research on the Menopause in the 1990s. Report of a WHO Scientific Group; Technical Report Series; WHO: Geneva, Switzerland, 1996; Volume 866, pp. 1–107. [Google Scholar]
- [20] Mc Kinlay, S.M.; Brambilla, D.J.; Posner, J.G. The normal menopause transition. *Am. J. Hum. Biol.* 1992, 4, 37–46. [Google Scholar] [CrossRef] [PubMed]
- [21] AlQuaiz, A. M., ab Salwa, A. T., & Habibac, F. A. (2013). Assessment of symptoms of menopause and their severity among Saudi women in Riyadh. *Annals of Saudi Medicine*, 33(1), 63.
- [22] Arbab, K. B., Aqeel, M., & Wasif, M., & Ahmed, A. (2018). Linking menopausal status, climacteric and psychological symptoms: Evidence from middle aged Pakistani women. *Foundation University Journal of Psychology*, 3(1), 107-132.
- [23] Avis, N. E., Crawford, S., Stellato, R., & Longcope, C. (2001). Longitudinal study of hormone levels and depression among women transitioning through menopause. *Climacteric*, 4(3), 243-249.
- [25] Baig, L. A., & Karim, S. A. (2006). Age at menopause, and knowledge of and attitudes to menopause, of women in Karachi, Pakistan. *British Menopause Society Journal*, 12(2), 71-74.
- [24] Bromberger, J. T., Meyer, P. M., Kravitz, H. M., Sommer, B., Cordal, A., Powell, L., ... & Sutton-Tyrrell, K. (2001). Psychologic distress and natural menopause: a multiethnic community study. *American Journal of Public Health*, 91(9), 1435-1442.
- [25] Physical activity and mental health outcomes during menopause: A randomized controlled trial. *Annals of Behavioral Medicine*, 33(2), 132-142.
- [26] 518 AQEEL, ARBAB, AND AKHTAR Elsborg, P., Andersen, V., & Stelter, R. (2018). The effects on mental health of group coaching following a physical activity intervention for women undergoing menopause. *Health Education and Behavior*, 16(1), 10-15.
- [27] Greenblum, C. A., Rowe, M. A., Neff, D. F., & Greenblum, J. S. (2013). Midlife women: Symptoms associated with menopausal transition and early postmenopause and quality of life. *Menopause*, 20(1), 22-27..

- [28] Hunter, M., & Rendall, M. (2007). Bio-psycho-socio-cultural perspectives on menopause. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 21(2), 261-274.
- [29] Hunter, M. S., & O'Dea, I. (1997). Bodily changes and multiple meanings. In J. M. Usshar (Ed.), *Body talk: The material and discursive regulation of sexuality, madness, and reproduction*, (pp. 199-222).
- [30] London: Routledge. Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scale* (2nd ed.). Sydney, Australia: Psychology Foundation of Australia. Maartens, L. W. F., Knottnerus, J. A., & Pop, V. J. (2002).
- [31] Menopausal transition and increased depressive symptomatology: A community based prospective study. *Maturitas*, 42(3), 195-200.
- [32] Mishra, G., & Kuh, D. (2006). Sexual functioning throughout menopause: The perceptions of women in a British cohort. *Menopause*, 13(6), 880- 890.
- [33] M S Lee J H Kim M S Park J Yang Y H Ko S D Ko Factors influencing the severity of menopause symptoms in Korean post-menopausal women *J Korean Med Sci* 2010;25(5):758-765. doi:10.3346/jkms.2010.25.5.758
- [34] R R Freeman Pathophysiology and treatment of menopausal hot flashes *Semin Reprod Med* 2005;13(11):725-731. doi:10.1055/s-2005-869479
- [35] Landgren BM, Collins A, Csemicky G, et al. Menopause transition: Annual changes in serum hormonal patterns over the menstrual cycle in women during a nine-year period prior to menopause. *J Clin Endocrinol Metab*, 2004, 89 (6): 2763-2769.
- [36] Ahsan M, Mallick AK, Singh R, Prasad RR. Assessment of menopausal symptoms during perimenopause and postmenopause in Tertiary Care hospital. *Journal of Basic and Clinical Reproductive Sciences*, 2015, 4 (1), 14-19.