Effectiveness of an individual instructional planned teaching programme (IIPTP) on the behavioural outcome during labour among primigravida mothers in a selected hospital at Faridkot.

Dr Sharad chand Gupta

Principal, Dasmesh College of Nursing, Faridkot Punjab

Dr Gurjit kaur

Principal Baba farid College of Nursing, Kotkapura, Faridkot

"Take a step at a time towards your goal.
The journey of a thousand miles begins with one step."

– Lao-Tse

The experience of childbirth is beyond the physiological aspects. It has been said that it is more than just a usual day in a woman's life. This experience influences a woman's self-confidence, self-esteem, view of life, view of her relationships and view of her children. It can be one of the most influential experiences for a woman[1].

Although, labour is often thought of as one of the most painful event in human experience, it ranges widely from woman to woman and even from pregnancy to pregnancy.

Childbirth is a natural and universal phenomenon, yet the knowledge of it among women is rather haphazard, incomplete and distorted. A woman generally has a vague notion that childbirth is unbearable pain and danger[2].

Supportive care is a non-medical care that is intended to ease a woman's anxiety, discomfort, loneliness and exhaustion, which will help her draw on her own strength and ensure that her needs and wishes are known and respected. It includes physical comforting measures, emotional support, information and instruction, advocacy and support for the partner[3].

Natural childbirth is the safest way to have a baby. Women should be encouraged to trust their bodies in the birthing process. They should be equipped with knowledge to make informed decisions about their birth[1].

Background of the study

Childbirth education has been evolving for centuries. It has been a part of the experience of pregnancy and birth since the beginning of time, although it did not exist in the formal structure that exists today. Throughout these decades, the goals of childbirth education have changed and evolved. Until the 19th century, preparation for birth through formalised antenatal care did not exist. The advent of structured programme of childbirth education was not seen until 1930s, when Grantly Dick-Read published classic volume "Childbirth without fear" (1933). In a landmark report published by the public health service expert panel on the content of prenatal care, pregnancy and childbirth education were identified as being essential components that should be included as prenatal care for all women[4].

Expectant parents should be taught that although labour is painful, there are ways to deal with this pain both pharmacologically and non-pharmacologically, like deep and abdominal breathing during labour. Relaxation is a vital achievement. Additionally, there are pain relieving benefits of changing positions, frequent urination, walking and hydrotherapy[1].

Pregnancy and birth are stressful under the best of circumstances. Trained labour support (doulas) provides emotional, informational, and advocacy support during pregnancy, labour and birth. This one-to-one support by a female companion or doula during labour and birth has a positive effect on birth outcomes and maternal-infant bonding. The continuous presence of a support person reduces the likelihood of operative delivery and shortens the length of labour[5].

Providing guidance and encouragement to labouring mothers and families is the most visible and definable part that a doula does. Doulas often teach mothers breathing rhythms and coping methods to be used throughout the first stage of labour to minimise their pain and fear or uncertainty[6].

Obstetric patients expect a high degree of involvement from their nurses. Obstetric nurses show their confidence and willingness to spend more time in labour support activities. The helping and teaching-coaching functions are two of the most important domains of nursing practice[6].

The scope of educational offering for expectant parents has expanded to include preconception, early pregnancy, exercise, caesarean preparation, breastfeeding, newborn care, infant CPR, parenting classes, and the traditional classes for prepared childbirth. Many more options for non-pharmacological pain management during labour and birth are offered to parents who include relaxation, hydrotherapy, biofeedback, therapeutic touch, acupressure, imagery and music. Childbirth education, for the most part, has been accepted by the healthcare community and most childbirth classes have moved into the healthcare system[4].

Objectives of the study

1. To determine the behavioural outcome of primigravida mothers in the experimental group during labour assessed using a checklist.

2. To determine the behavioural outcome of primigravida mothers in the control group during labour assessed using a checklist.

3. To compare the behavioural outcome of primigravida mothers of experimental and control group.

Need for the study

Childbearing period is an important and precious stage in the life of a woman. Labour is much more than a purely psychological event; it involves the psychology and emotions of the woman. Women should have adequate information about labour to ensure proper understanding of changes that labour will bring. Study findings revealed that primigravida mothers had moderate knowledge regarding labour and its management, more than half of the mothers were not aware of the labour pain and pain relieving measures which could be used during labour[7].

Tumblin A, Simkin P. were conducted a study on pregnant women's perception of their nurse's role during labour and delivery in the USA. Nulliparous women in childbirth classes were asked on their expectations using a questionnaire. Fifty-seven completed surveys were collected; the women listed a total of 174 items. Twenty-nine percent of the nursing tasks listed by the women were related to providing emotional support and 24% were related to providing informational support. The study concluded that fulfilling women's expectations about childbirth can increase women's satisfaction with their birth experiences[8].

Ip WY, Chien WT, Chan CL. Were conducted A cross-sectional descriptive survey study to assess the childbirth expectations of Chinese first-time pregnant women in China. A convenience sample of 200 pregnant Chinese women participated in the study. The results showed that Chinese pregnant women, the majority of who had not attended childbirth education classes, had high expectations of support from their partners and midwives during labour and delivery. Expectations about their own ability to cope with pain were relatively low[9].

Schnider Z was conducted a quailtative study using grounded theory was done to describe women's experience and perception of their first pregnancy. Data was obtained from 13 women whose interviews were tape recorded and transcribed. The women's experiences were varied and diverse; most had difficulty coping with the physical and emotional symptoms of pregnancy. Need for support emerged as important and antenatal classes were favourably commented upon[10].

Evas S, Jeffery J,were conducted a descriptive survey with longitudinal time frame in two hospitals in a midsized Canadian city to determine if the learning needs of mothers are met by nurses during labour. Fifty-seven women in their last month of pregnancy participated in the study. The results of the study revealed that 80% (n = 32) of subjects expected that they would receive teaching in the labour unit. Subjects ranked the importance of topics that could be taught in labour which included: how to work with labour, how to obtain pain relief, and normal progress of labour. The helpfulness of teaching was that it reinforced coping skills and thus decreased the stress of labour, provided support and increased awareness of what was happening[11].

Waldenstrom U, Hildingsson I were conducted a prospective study using between-group comparison to investigate the prevalence of fear of childbirth in a nation-wide sample and its association with subsequent rates of caesarean section and overall experience of childbirth. A total of 2662 women participated in the study. The results indicated that at least 10% of the pregnant women in Sweden suffer from fear of childbirth and that increased the rates of elective caesarean section and had negative impact on subsequent experience of pregnancy[12].

Mackinnon K Mc Intyre M, Quaance M were conducted a hermeneutic enquiry exploratory study to identify what it means to a woman in labour for a nurse to be present during childbirth. Six women from an urban centre in Canada participated in the study. The result of the study suggests that women attribute multiple meanings to the care provided by labour and delivery nurses. The presence and support work of the nurse is highly valued[13].

Baker A, Ferguson SA, Roach GD., Dawson D were conducted a study on perception of labour pain by mothers and their attending midwives to examine the perception of pain by labouring women and their attending midwife from the onset of labour to delivery. The study findings indicated that midwives' score of the mothers' pain based on SF-MPQ were correlated and the midwives' relied both on verbal and non-verbal cues to assess the pain level[14].

Cohen JR were conducted a study of patient satisfaction with prenatal care provider and the risk of caesarean delivery were undertaken to assess the relationship between patient satisfaction with the prenatal care provided and a gravid woman's risk of caesarean delivery. Medical records of 586 consecutive deliveries in a single department were reviewed. The findings of the study indicated high patient satisfaction scores with a low caesarean delivery rate[15].

Bowers BB were conducted a study to review and synthesise qualitative research studies of women's perception of professional labour support. Seventeen studies were selected. Findings revealed that pregnant women expected that their nurse would support them during labour by making them as

comfortable as possible, keeping them calm, providing reassurance that everything would be alright and providing assistance with breathing and relaxation techniques, emotional support, etc[16].

Hodnet ED, KauFman K, O Brien L were conducted a randomised controlled trial to promote research-based nursing care on labour support. Twenty Ontario hospitals participated in the trial. The study findings revealed that following the intervention, episiotomy rates declined significantly and support during labour was beneficial[17].

Fimbogadottir H, S Valenius EC, Persson EK were conducted an inductive method study to describe first-time expectant fathers' experiences of pregnancy. Seven first-time expectant fathers living in a multi-cultural industrial town in southern Sweden with their partners in the 38th – 39th week of pregnancy were interviewed. All the fathers-to-be experienced some psychological, social and/or physical changes during pregnancy. The study concluded that the fathers-to-be need support and encouragement during pregnancy which is as important as those for mothers-to-be[18].

However, before any intervention can be recommended, more research is needed.

The investigator herself has come across women in the labour room who were anxious, not able to cope with labour pain, and not able to follow the instructions of health professionals which led to delay in labour process, and many a times ending in caesarean section. Literature also stresses upon the need for education and support for labouring women. Hence, the investigator was interested in educating antenatal mothers regarding labour and coping methods to be used during labour.

Results

Behavioural outcome of experimental group

Table 2: Labour stage wise mean, mean percentage and Standard deviation of behavioural outcome of experimental group

N=20

Area		Mean	Mean Percentage	SD
I Stage: During contractions	3-6 cms	15.25	95.31	0.55
	6-10 cms	10.00	62.50	0.86
In between contractions	3-6 cms	21.60	98.18	0.50
	6-10 cms	12.90	58.64	1.83
II Stage:		10.45	87.08	0.51

Section III: Behavioural outcome of control group

Table 3: Labour stage wise mean, mean percentage and Standard deviation of behavioural outcome of control group

N=20

Area		Mean	Mean Percentage	SD
I Stage: During contractions	3-6 cms	11.15	69.69	1.35
	6-10 cms	1.05	6.56	0.69
In between contractions	3-6 cms	16.65	75.68	1.09
	6-10 cms	1.60	7.30	0.76
II Stage:		9.20	76.67	1.09

Section IV: Comparison of the behavioural outcome of experimental and control group

Table 4: Overall mean, mean percentage and standard deviation of behavioural outcome of experimental and control group

N=20+20

Group	Mean	Mean Percentage	SD
Experimental	70.40	80.00	2.28
Control	39.69	45.06	1.58

Data presented in Table 4 shows that there is difference in the mean behavioural outcome scores between the experimental and control group, which indicates that the IIPTP and the instructions during labour has helped in improving the behavioural outcome of primigravida mothers in experimental group.

Table 5: Grading of behavioural outcome scores in experimental and control group

N=20+20

Behavioural Outcome	Range	Range in %	Experimental Group			Control Group		
			f	%	Mean	f	%	Mean
Poor	0-29	0-33	-	-	-	-	-	-
Satisfactory	30-59	34-67	-	-	-	20	100	39.69
Good	60-88	68-100	20	100	70.40	-	-	-

Maximum score=88

Table 6: Frequency, Percentage, cumulative frequency of the behavioural outcome of experimental and control group

N = 20 + 20

Behavioural outcome scores	Experimental group			Control Group		
	Frequency	%	Cf	Frequency	%	cf
30 – 40	-	-	-	12	60	12
40 – 50	-	-	-	8	40	20
50 – 60	-	-	-	-	-	-
60 – 70	10	50	10	-	-	-
70 – 80	10	50	20	-	-	-
80 – 90	-	-	-	-	-	-

Data in Tables 5 and 6 reveals that behavioural outcome scores in the experimental group ranged from 60-80 which indicated that all (100%) had good behavioural outcome, and that of the control group ranged from 30-50 which shows that all had satisfactory behavioural outcome. The results

indicate that the IIPTP helped in improving the behavioural outcome of the primigravida mothers in the experimental group.

Section V: Evaluation of the effectiveness of IIPTP in terms of significance in the difference in the behavioural outcome of experimental and control group

$H_{0:}$ There will be no significant difference in the behavioural outcome scores of primigravida mothers in experimental and control group during labour.

Table 7: Mean, Mean difference, standard deviation, 't' value of the behavioural outcome score in the first stage during contraction in experimental and control group

N=20+20

	Experimental group		Control group		Mean difference	Unpaired 't' value
	Mean	SD	Mean	SD		
3-6 cms	15.25	0.55	11.15	1.35	4.10	12.42
6-10 cms	10.00	0.86	1.05	0.69	9.95	35.80

$t_{(38)}$=2.021, $p<0.05$; Maximum score=32

Data presented in table 7 shows that the mean behavioural outcome score in the I stage between 3-6 cms and 6-10 cms dilatation of cervix during contraction is lower in the control group (11.15 and 1.05) than in the experimental group(15.25 and 10.00).

The computed 't' value shows that there is significant difference between the behavioural outcome scores of experimental and control group during 3-6 cms and 6-10 cms dilatation of cervix during contraction ($t_{(38)}$ =12.42 and 35.8, $p<0.05$) at 0.05 level of significance. Hence, the null hypothesis (H_0) is rejected and research hypothesis is accepted.

This indicates that IIPTP was very effective in improving the behavioural outcome of mothers in the experimental group. So it can be inferred that IIPTP is highly effective in improving the behavioural outcome of primigravida mothers.

Table 8: Mean, Mean difference, standard deviation, 't' value of the behavioural outcome score during the first stage in between contraction in experimental and control group

N=20+20

	Experimental group		Control group		Mean difference	Unpaired 't' value
	Mean	SD	Mean	SD		
3-6 cms	21.60	0.50	16.65	1.09	4.95	18.33
6-10 cms	12.90	1.83	1.60	0.76	11.30	31.39

$t_{(38)}$=2.021, p<0.05 Max. Score=44

Data presented in Table 8 shows that the mean behavioural outcome score in the I stage between 3-6 cms and 6-10 cms dilatation of cervix in between contractions is lower in the control group (16.65 and 1.6) than in the experimental group(21.6 and 12.9).

The computed 't' value shows that there is significant difference between the behavioural outcome scores of experimental and control group during 3-6 cms and 6-10 cms dilatation of cervix in between contraction($t_{(38)}$ =18.33 and 31.39, p<0.05) at 0.05 level of significance. Hence, the null hypothesis (H_0) is rejected and research hypothesis is accepted.

This indicates that IIPTP was very effective in improving the behavioural outcome of mothers in the experimental group. So it can be inferred that IIPTP is highly effective in improving the behavioural outcome of primigravida mothers.

Table 9: Mean, Mean difference, standard deviation, 't' value of the behavioural outcome score during II stage in experimental and control group

N=20+20

	Experimental group		Control group		Mean difference	Unpaired 't' value
	Mean	SD	Mean	SD		
Stage II	10.45	0.50	9.20	1.09	1.25	4.81

$t_{(38)}$=2.021, p<0.05 Max. score=12

Data presented in Table 9 shows that the mean behavioural outcome score during the II stage is lower in the control group (9.2) than in the experimental group (10.45).

The computed 't' value shows that there is significant difference between the behavioural outcome scores of experimental and control group during the II stage ($t_{(38)}$=4.81, p≤0.05) at 0.05 level of significance. Hence, the null hypothesis (H_0) is rejected and research hypothesis is accepted.

This indicates that IIPTP was very effective in improving the behavioural outcome of mothers in the experimental group. So it can be inferred that IIPTP is highly effective in improving the behavioural outcome of primigravida mothers.

Table 10: Overall Mean, Mean difference, standard deviation, 't' value of the behavioural outcome score in experimental and control group

N=20+20

Group	Mean	Standard deviation	Mean difference	Unpaired 't' value
Experimental	70.40	2.28	40.71	49.5
Control	39.69	1.54		

$t_{(38)}$=2.021, p<0.05; Max. score = 88

Data presented in Table 10 shows that the mean behavioural outcome score in the control group (39.69) is lower than in the experimental group (70.4).

The computed 't' value shows that there is significant difference between the behavioural outcome scores of experimental and control group ($t_{(38)}$ =49.5, p<0.05) at 0.05 level of significance. Hence, the null hypothesis (H_0) is rejected and research hypothesis is accepted.

This indicates that IIPTP was very effective in improving the behavioural outcome of mothers in the experimental group. So it can be inferred that IIPTP is highly effective in improving the behavioural outcome of primigravida mothers.

Section VI: Other findings

Fisher's exact test was computed to find out the association between behavioural outcome and selected variables such as age, education.

H_0: There will be no association between behavioural outcome and selected variables at 0.05 level.

Table 11: Fisher's exact test for association between behavioural outcome and selected variables

N=20+20

	Variables		Experimental group			Control group		
			≤ Mean	> Mean	p	≤ Mean	> Mean	p
1.	Age							
	a.	≤ 25 years	7	8	0.17*	10	6	0.06*
	b.	> 25 years	3	2		0	4	
2.	Education							
	a.	≤ 10th std.	8	7	0.17*	8	8	0.30*
	b.	> 10th std.	2	3		1	3	

P < 0.05; * = Not significant

The findings in Table 11 show that there was no association between the behavioural outcome and the selected variables in both the groups at 0.05 level. Hence, the null hypothesis (H_0) was accepted.

This chapter dealt with the analysis ands interpretation of the data collected from 40 primigravida mothers who were in labour from selected settings in faridkot. Descriptive and inferential statistics were used for the analysis. It was found after the analysis that, the behavioural outcome scores in the experimental group ranged between 60-80 whereas the score in the control group ranged between 30-50. The mean observational outcome score of the control group (x=39.69) which was lower than the experimental group (x=70.4). The 't' value computed (t=49.5, p≤0.05) showed a significant difference suggesting that IIPTP was highly effective in improving the behavioural outcome of primigravida mothers.

BIBLIOGRAPHY

1. Cappa. Cappa position paper evidence-based practice in CBE. 2002.

2. Murray SS, McKiney ES. Foundation of maternal-newborn nursing. 4th ed. USA: Saunders; 2006.

3. Simkin P. Supportive care during labour: a guide for busy nurses. JOGNN 2002 Nov-Dec;31(6):731-2.

4. Zwelling E. Childbirth education in 1990s and beyond. JOGNN 1996 Jun;25(5):425-32.

5. Schroeder C, Bell J. Doula birth support for incarcerated pregnant women. PHN 2005 Jan-Feb;22(1):53-8.

6. Gilliand AL. Beyond holding hands: The modern role of a professional doula. JOGNN 2002 Nov-Dec;31(6):762-9.

7. Munichandrika D, Swarna S. Knowledge of primigravida mothers regarding labour and its management. Nightingale Nursing Times 2006 Jun;12-3.

8. Tumblin A, Simkin P. Pregnant women's perception of their nurse's role during labour and delivery. Birth 2001 Mar;28(1):52-6.

9. Ip WY, Chien WT, Chan CL. Childbirth expectations of Chinese first-time pregnant women. JAN 2003;42(2):151-8.

10. Schneider Z. An Australian study of women's experiences of their first pregnancy. Midwifery 2002 Sep;18(3):238-49.

11. Evans S, Jeffrey J. Maternal learning needs during labour and delivery. JOGNN 1995 Mar-Apr;24(3):235-40.

12. Waldenstrom U, Hildingsson I, Ryding EL. Antenatal fear of childbirth and its association and subsequent caesarean section and experience of childbirth. BJOG 2006;113:638-46.

13. Mackinnon K, McIntyre M, Quaance M. The meaning of the nurse's presence during childbirth. JOGNN 2005 Jan-Feb;34(1):28-36.

14. Baker A, Ferguson SA, Roach GD, Dawson D. Perception of labour pain by mothers and their attending midwives. JAN 2001;35(2):171-9.

15. Cohen JR. Patient satisfaction with prenatal care provider and the risk of caesarean delivery. AJOG 2005;192:2029-34.

16. Bowers BB. Mothers' experience of labour support: exploration of qualitative research. JOGNN 2002 Nov-Dec;31(6):742-52.

17. Hodnet ED, Kaufman K, O'Brien L, Chipman M, MacDonnell JW, Hunsburger W. A strategy to promote research-based nursing care: effects on childbirth outcomes. Research in Nursing and Health 1996;19:13-20.

18. Finnbogadottir H, Svalenius EC, Persson EK. Expectant first-time fathers' experiences of pregnancy. [Online]. Available from: URL:http://www.sciencedirect.com/science?_ob.

19. Steadman's Medical Dictionary. Philadelphia: Lippincott Williams and Wilkins; 2006. Effectiveness.

20. Sweet BR. Maye's midwifery. 12th ed. London: Bailliere Tindall; 1997.

21. Tiran D. Bailliere's midwives' dictionary. 9th ed. Toronto: Bailliere Tindall. Labour.

22. Myles MF. Textbook for midwives. 9th ed. Edinburgh: Churchill Livingstone; 1982.

23. Basavanthappa BT. Nursing research. 1st edition. New Delhi: Jaypee Brothers Medical Publishers Pvt. Ltd.; 2003.

24. Polit DF, Hungler BP. Nursing research: Principles and methods. 6th ed. Philadelphia: J. B. Lippincott Company; 1999.

25. Ho I, Holdroyd E. Chinese women's perceptions of the effectiveness of antenatal education in the preparation of motherhood. JAN 2019;38(1):74-85.

26. Fabian HM, Radestad IJ, Waldenstrom U. Childbirth parenthood education classes in Sweden. Women's opinion and possible outcomes. Acta Obstret Gynecologica Scandinavica 2018;84:436-43.

27. Hodnett E, Lauzon L. Antenatal education for self-diagnosis of the onset of active labour at term. Cochrane Library 2017;3.

28. Masterpasqua F. The effectiveness of childbirth education as an early intervention programme. Hospital and community psychiatry 2017Jan;33(3):56-8.

29. Spiby H, Henderson B, Slade P, Escott D, Fraser RB. Strategies for coping with labour: Does antenatal education translate into practice? Jan 2017;29(2):388-94.

30. Hicks C, Spurgeon P, Barwell F. Changing childbirth: a pilot project. JAN 2016;42(6):617-28.

31. Diemer GA. Expectant fathers: influence of perinatal education on stress, coping and spousal relations Research in nursing and health 2016;281-93.

32. Escott D, Slade P, Spiby H, Fraser RB. Preliminary evaluation of a coping strategy enhancement method of preparation for labour. Midwifery 2015 Sep;21(3):278-91.

33. Gagnon AJ, Waghorn K. One-to-one nurse labour support of nulliparous women stimulated with oxygocin. JOGNN 2015 Jul-Aug;28(4):371-6.

34. Jirojwon GS, Dunt D, Goldsworthy D. Social support and antenatal clinic attendance among Thai pregnant women in Htyai, a city in Southern Thailand. JAN 2015;29(2):395-406.

35. Miltner RS. Identifying labour support actions of intrapartum nurses. JOGNN 2014 Sep-Oct;29(5):491-9.

36. Langer A, Campero L, Gracia C, Reynoso S. Effects of psychosocial support during labour and childbirth on breastfeeding, medical interventions, and mothers' wellbeing in a Mexican public hospital: A randomised clinical trial. BJOG 2014 Oct;105(10):1056-63.

37. Hodnett ED. Continuity of care during pregnancy and childbirth (Cochrane review). Cochrane Library.2013.

38. Miltner RS. More than support: Nursing interventions provided to women in labour. JOGNN 31(6):2013 Nov-Dec;31(6):753-60.

39. Manogin TW, Bechtel GA, Rami JS. Caring behaviour by nurses: Women's perceptions during childbirth. JOGNN 2000 Mar-Apr;29, 2013 (2):153-7.

40. Schaffer MA, Lia-Hoalberg B. Effects of social support on prenatal care and health behaviours of low income women. JOGNN 2013 Jul-Aug;433-9.

41. Bullock LFC, Browning C, Geden E. Telephone social support for low income pregnant women. JOGNN Nov-Dec;31, 2013(6):658-63.

42. McCrea BH, Wright ME. Satisfaction in childbirth and perceptions of personal control in pain relief during labour. JAN 2013;29(4):877-84.

43. Escott D, Spiby H, Slade P, Fraser BP. The range of coping strategies women use to manage pain and anxiety prior to and during first experience of labour. Midwifery 2012 Jun;20(2):144-56.

44. Escott D, Spiby H, Slade P, Fraser BP, Henderson B. Selected coping strategies in labour: an investigation of women's experience. Birth 2012 Sep;30(3):189-94.

45. Brathwaite AC, Williams CC. Childbirth experiences of professional Chinese Canadian women. JOGNN 2012 Nov-Dec;33(6):748-55.

46. Anthony S, Buitedijk SE, Offerhaus PM, Van Dommelen P, Pal-De Broin KM. Maternal factors and the probability of a planned home birth. BJOG 2011 Jun;112:748-53.

47. Gagnon AJ. Individual or group antenatal education for childbirth/parenthood. Cochrane Library 2017;4.

48. Pratima C. A study to assess the effectiveness of planned teaching programme on the knowledge of GNM students regarding breast cancer and breast self-examination (BSE). NJI 2016 Apr.

49. Sreelekha C. A study to assess the effectiveness of structured teaching programme on minor disorders of pregnancy and its management among antenatal mothers in a selected area of Raichur. Nightingale Nursing Times 2015 Jan;27-6.

50. Adhyapak SU. Study to assess the effect of structured teaching related to knowledge of menopause among the working women from selected institutions of Pune city. Nightingale Nursing Times 20 Feb 2015;21-2.

51. Rajeshwari C. A study to assess the effectiveness of structured teaching programme on knowledge regarding prevention of postnatal and neonatal infections among primipara mothers at RSRM lying in hospital, Chennai. Nightingale Nursing Times 2015 Feb;36-9.

52. Itti JG. A study to evaluate the effectiveness of planned teaching programme on selected aspects of reproductive health among rural adolescent girls. Nightingale Nursing Times 2014 Feb;48-9.

53. Amudha. An experimental study on the effect of structured teaching programme regarding antenatal exercises on knowledge and skill of pregnant women in selected maternity centres of Madurai Corporation. Nightingale Nursing Times 2013 Mar;55.

54. Abdellah FG. Better patient care through nursing research. New York: The Macmillan Company; 1986.

55. Best JW, Kahn J. Research in education. 7th edition, New Delhi: prentice Hall of India Pvt Limited, 1995.