Original Research Article

TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING ON KNOWLEDGE REGARDING MID-WIFE LED CONTINUITY OF CARE MODEL (MLCC) ON FINAL YEAR NURSING STUDENTS.

Comment [JSRDS1]: EVALUATION OF THE EFFECTIVENESS OF PLANNED TEACHING ON THE KNOWLEDGE OF NURSING STUDENTS ON THE CONTINUITY OF CARE MODEL LEADED BY A MIDDLEWARE

ABSTRACT

Background: In many parts of the world, midwives are the primary providers of care for childbearing women. There are considerable variations in the organisation of midwifery services and in the education and role of midwives. Childbearing women are often faced with different opinions as to which option might be best for them. The midwife-led continuity model of care is based on the premise that pregnancy and birth are normal life events. Pregnancy and birth are significant life events for women and their families and midwife supports a woman throughout pregnancy, birth, and the postnatal period. So, the demand for services that are family friendly, women focused, safe and accessible is increasing.[1] **Objectives:** 1) To assess the existing knowledge regarding mid-wife led continuity of care model on final year nursing students. 2) To evaluate the effectiveness of planned teaching on knowledge regarding mid-wife led continuity of care model (MLCC) on final year nursing students. 3) To find out the association between knowledge regarding mid-wife led continuity of care model (MLCC) with selected demographic variables. **Material and Methods:** **Research approach**-Evaluatory Research Approach. **Research Design**-One Group P re-test Post-test Research Design. **Setting of the study**- The study was conducted at a Selected Nursing College. **Population**- Final year nursing students. **Sampling Technique**-Non-Probability Convenient Sampling Technique. **Sample Size**- 120. **Result:** In this study the study of the findings shows that 10.83% had good level of knowledge score in pre-test. While in post-test, out of 120 subjects the majority of the subjects and 92.50% had good level of knowledge score. This statistically shows that there is profound level of improvement on knowledge. **Conclusion:** Hence, this implies that the planned teaching was effective. Also, the study shows that the knowledge scores of final year nursing students is associated with the age in year and course of study. Hence, this means that greater the number of age in years and the course, greater level of knowledge scores. However, gender was not found to be associated.

Comment [JSRDS2]: In the abstract there was a quote. Review by the journal's rules whether it can or not. I suggest making a summary without citation.

Comment [JSRDS3]: To assess the knowledge and effectiveness of planned teaching of nursing students on the midwife-led model of continuity of care.

Comment [JSRDS4]: I suggest reviewing the need to include the 3 specific objective.

Comment [JSRDS5]: Is it an educational intervention study? It is not clear in the summary method.

Keywords: Assess, Effectiveness, Planned teaching, Mid-wife led continuity of care model.

Comment [JSRDS6]: review the keywords.

INTRODUCTION

Comment [JSRDS7]: I missed the introduction of talking about nursing knowledge about the continuity of care model leaded by a middleman.

A midwife is a health professional who cares for mothers and new-borns around childbirth, a specialization known as midwifery.[2]

The education and training for a midwife concentrates extensively on the care of women throughout their lifespan; concentrating on being experts in what is normal and identifying conditions that need further evaluation. In most countries, midwives are recognized as skilled healthcare providers. Midwives are trained to recognize variations from the normal progress of labor and understand how to deal with deviations from normal. They may intervene in high risk situations such as breech births, twin births, and births where the baby is in a posterior position, using non-invasive techniques. For complications related to pregnancy and birth that are beyond the midwife's scope of practice, including surgical and instrumental deliveries, they refer their patients to physicians or surgeons. In many parts of the world, these professions work in tandem to provide care to childbearing women. In others, only the midwife is available to provide care, and in yet other countries, many women elect to utilize obstetricians primarily over midwives.[2]

Midwives are primary providers of care for childbearing women around the world. However, there is a lack of synthesised information to establish whether there are differences in morbidity and mortality, effectiveness and psychosocial outcomes between midwife-led continuity models and other models of care.[3]

Midwife-led continuity models of care vary but the defining feature is that a midwife, working with the woman, takes the lead in planning, organising, and delivering her care from her first antenatal booking to the postnatal period.[4]

Midwife-led care was associated with several important benefits for mothers and babies and had no more adverse effects than other models of care. Women who had midwife-led care were less likely to experience regional analgesia, instrumental vaginal birth, preterm birth less than 37 weeks and fetal loss before 24 weeks gestation. They were more likely to have a longer labour, spontaneous vaginal birth and be attended at birth by a known midwife. There was no difference between the groups for several other outcomes including caesarean birth or intact perineum.[4]

The midwife-led continuity model of care includes: continuity of care; monitoring the physical, psychological, spiritual and social wellbeing of the woman and family throughout the childbearing cycle; providing the woman with individualised education, counselling and antenatal care; continuous attendance during labour, birth and the immediate postpartum period; ongoing support during the postnatal period; minimising technological interventions; and identifying and referring women who require obstetric or other specialist attention.[4]

MATERIAL AND METHOD:

In present study, evaluatory research approach with one group pre-test post-test research design was used. 120 final year nursing students was selected by using non - probability convenient sampling technique from the selected nursing college. **Inclusion criteria** were final year nursing students who are willing to participate and final year nursing students who are available during data collection. The data gathering process began from **10th – 23rd August 2021**. The investigator visited to selected nursing college and obtained the necessary permission from the concerned authorities. She enquired their willingness of the final year nursing students to participate in the study and obtain consent from them. Assessed the knowledge about mid-wife led continuity of care model by pre-test first then implement planned teaching regarding mid-wife led continuity of care model and again assessed the knowledge by taking post-test after 7 days of planned teaching. Data collection was carried out within the stipulated period. After the cycle of data collection, each student was given feedback regarding vote of thanks due to their active participation and good cooperation during data collection. Data collection instruments consist of the following sections. Section-A: It consists of demographical data like age, gender and course of study. Section-B: Consist of knowledge questionnaire regarding mid-wife led continuity of care model (MLCC).

Comment [JSRDS8]: The method contains incomplete information. The author did not explain whether the instrument used is validated, as was the choice. It did not describe whether the study passed the ethics committee. There is no information on the statistical analysis and study design (eg whether it is an educational intervention study).

RESULTS

Comment [JSRDS9]: Review the formatting and limit of tables and graphs that the journal accepts. Please include the source if the case was created by the authors and be more objective when presenting the data.

I suggest that instead of presenting the graphics, describe the results in a descriptive way.

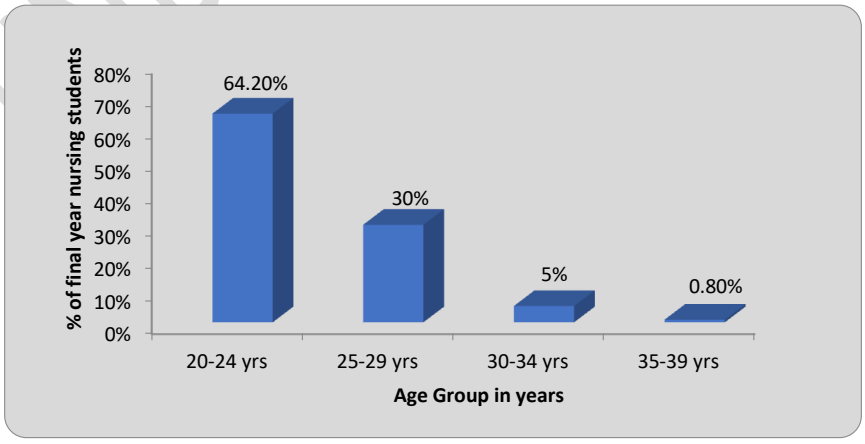
Table 1: Percentage wise distribution of final year nursing students according to their demographic characteristics.

n=120

Demographic Variables	No. of nursing students	Percentage (%)

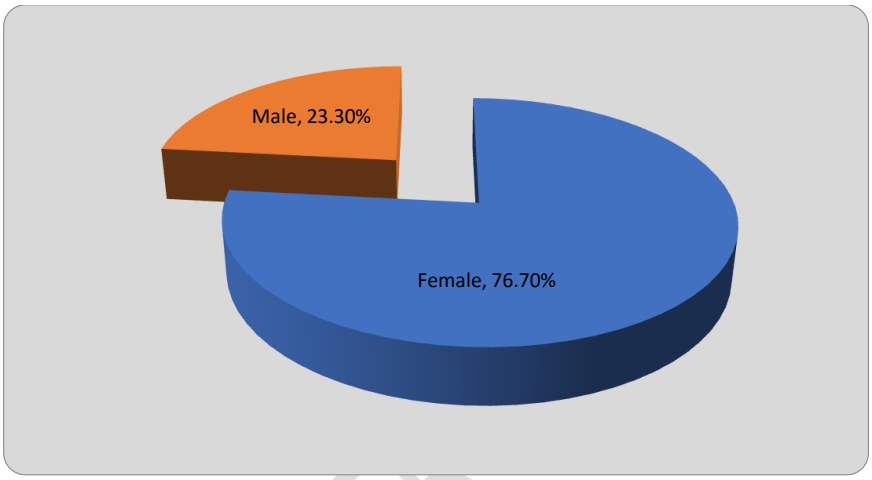
Age in years		
20-24 years	77	64.2
25-29 years	36	30.0
30-34 years	6	5.0
35-39 years	1	0.8
Gender		
Female	92	76.7
Male	28	23.3
Course of study		
G.N.M	26	21.7
B. Sc.	55	45.8
PB. B. Sc	30	25.0
M. Sc	9	7.5

Graph 1: Percentage wise distribution of final year nursing students according to their age in years.



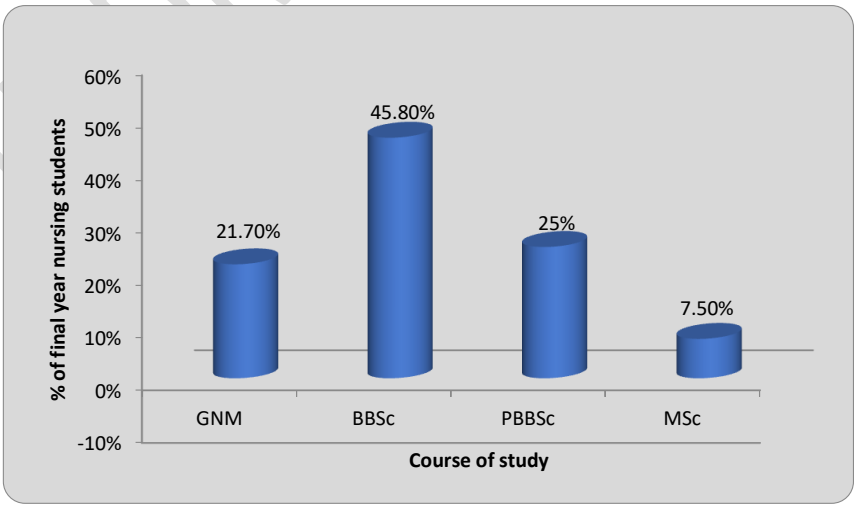
64.20% of final year nursing students were in the age group of 20-24 years, 30% were in the age group of 25-29 years, 5% were in the age group of 30-34 years and 0.80% of final year nursing students were in the age group of 35-39 years.

Graph 2: Percentage wise distribution of final year nursing students according to their gender



23.30% of final year nursing students were males and 76.70% of them were females.

Graph 3: Percentage wise distribution of final year nursing students according to course of study



21.70% of final year nursing students were GNM, 45.80% were B.Sc. nursing, 25% were PB.Bsc. nursing and 7.50% of final year nursing students were M.Sc. nursing.

Table 2: Assessment with level of pre-test knowledge

n=120

Level of pre-test knowledge	**Score Range**	**Level of Pre-test Knowledge Score**	
		No of final year nursing students	**Percentage**
Poor	1-5	50	41.67
Average	6-10	57	47.50
Good	11-15	13	10.83
Minimum score		1	
Maximum score		13	
Mean knowledge score		6.33 ± 3.25	
Mean % Knowledge Score		42.22 ± 21.71	

The above table shows that 41.67% of the final year nursing students had poor level of knowledge score, 47.50% had average and 10.83% had good level of knowledge score.

Minimum knowledge score in pre-test was 1 and maximum knowledge score in pre-test was 13.

Mean knowledge score in pre-test was 6.33±3.25 and mean percentage of knowledge score in pre-test was 42.22±21.71.

Graph 4: Assessment with pre-test knowledge score

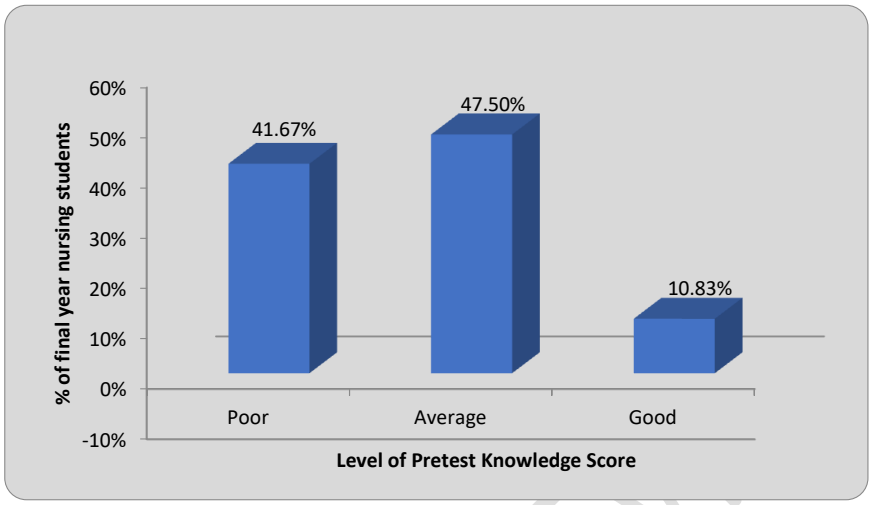


Table 3: Assessment with level of post-test knowledge

n=120

Level of post-test knowledge	Score Range	Level of Post-test Knowledge Score	
		No of final year nursing students	Percentage
Poor	1-5	1	0.83
Average	6-10	8	6.67
Good	11-15	111	92.50
Minimum score		5	
Maximum score		15	
Mean knowledge score		13.68 ± 2.07	
Mean % Knowledge Score		91.22 ± 13.82	

The above table shows that 0.83% of the final year nursing students had poor level of knowledge score, 6.67% had average and 92.50% had good level of knowledge score.

Minimum knowledge score in post-test was 5 and maximum knowledge score in post-test was 15.

Mean knowledge score in post-test was 13.68±2.07 and mean percentage of knowledge score in post-test was 91.22±13.82.

Graph 5: Assessment with post-test knowledge score

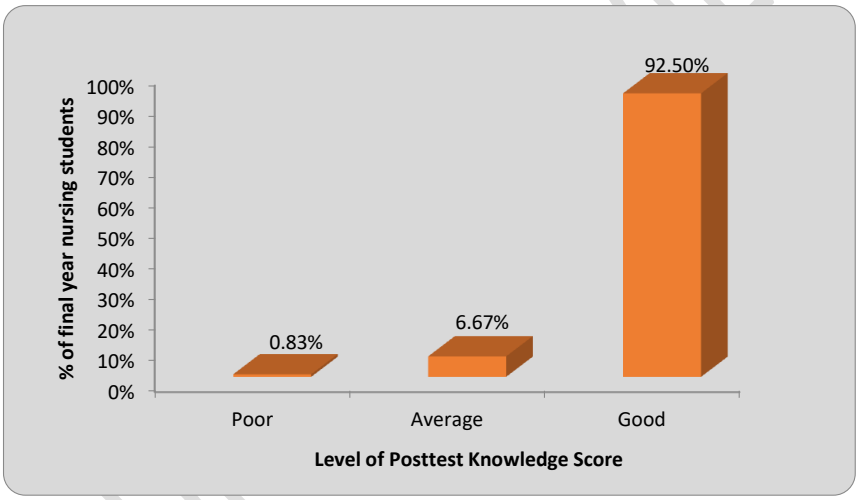


Table 4: Significance of difference between knowledge score in post and post-test of final year Nursing Students

n=120

Overall	Mean	SD	Mean Difference	t-value	p-value
Pre-test	6.33	3.25	7.35±4.29	18.72	0.0001 S,p<0.05
Post-test	13.68	2.07			

This table shows the comparison of pre-test and post-test knowledge scores of final years nursing students regarding mid-wife led continuity of care model. Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=120-1 i.e., 119 degrees of freedom was 1.98. The calculated 't' value i.e., 18.72 are much higher than the tabulated value at 5% level of significance for overall knowledge score of final year Nursing Students which is statistically acceptable level of significance. Hence it is statistically interpreted that the Planned Teaching Programme on overall knowledge regarding mid-wife led continuity of care model among final year Nursing Students was effective.

Graph 6: Significance of difference between knowledge score in post and post-test of Final Year Nursing Students

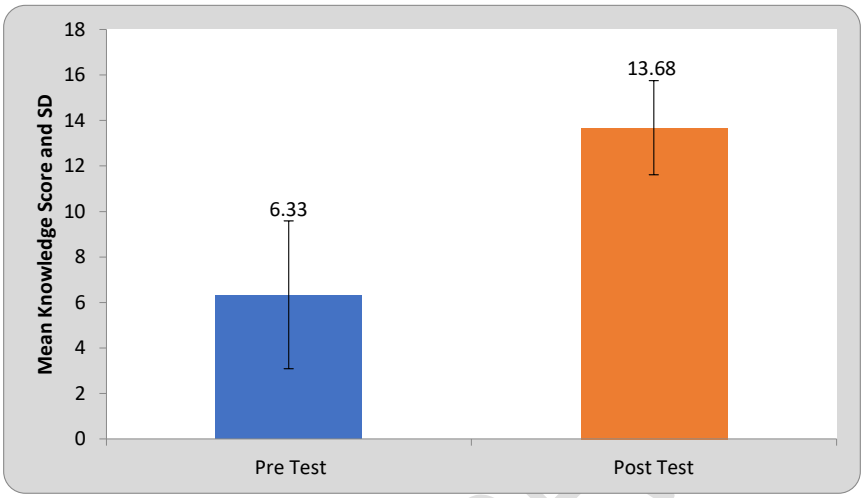


Table 5: Association of post-test knowledge score regarding mid-wife led continuity of care model among final year nursing students in relation to age in years.

n=120

Age in years	No. of final year Nursing students	Mean post-test knowledge score	F-value	p-value
20-24 years	77	13.22±2.38	3.99	0.009 S,p<0.05
25-29 years	36	14.41±0.93		
30-34 years	6	15±0		
35-39 years	1	15±0		

This table shows the association of knowledge score with age in years of final year nursing students regarding mid-wife led continuity of care model. The tabulated 'F' values were 2.68(df=3,116) which is much less than the calculated 'F' i.e., 3.99 at 5% level of significance. Also, the calculated 'p'=0.009 which was much less than the acceptable level of

significance i.e., 'p'=0.05. Hence it is interpreted that age in years of final years nursing students is statistically associated with their post-test knowledge score.

Table 6: Association of post-test knowledge score regarding mid-wife led continuity of care model among final year nursing students in relation to gender.

n=120

Gender	No. of final year Nursing students	Mean post-test knowledge score	t-value	p-value
Female	92	13.72±1.92	0.42	0.66 NS,p>0.05
Male	28	13.53±2.54		

This table shows the association of knowledge score with gender of final year nursing students regarding mid-wife led continuity of care model. The tabulated 't' values were 1.98(df=118) which is much higher than the calculated 't' i.e., 0.42 at 5% level of significance. Also, the calculated 'p'=0.66 which was much higher than the acceptable level of significance i.e., 'p'=0.05. Hence it is interpreted that gender of final years nursing students is statistically not associated with their post-test knowledge score.

Table 7: Association of post-test knowledge score regarding mid-wife led continuity of care model among final year nursing students in relation to course of study.

n=120

Course of study	No. of final year Nursing students	Mean post-test knowledge score	F-value	p-value
GNM	26	14.65±0.56	4.12	0.008 S,p<0.05
BSc	55	13.18±2.41		

PB. BSc	30	14.03±1.84		
MSc	9	12.77±2.22		

This table shows the association of knowledge score with course of study of final year nursing students regarding mid-wife led continuity of care model. The tabulated 'F' values were 2.68(df=3,116) which is much less than the calculated 'F' i.e., 4.12 at 5% level of significance. Also, the calculated 'p'=0.008 which was much less than the acceptable level of significance i.e., 'p'=0.05. Hence it is interpreted that course of study of final years nursing students is statistically associated with their post-test knowledge score.

DISCUSSION

To assess the effectiveness of planned teaching on knowledge regarding mid-wife led continuity of care model (MLCC) on final year nursing students.

Previous Knowledge on Mid-Wife Led Continuity of Care Model (MLCC)

Present study shows that the study population does not have good level of knowledge on Mid-Wife Led Continuity of Care Model (MLCC) as the majority of the subjects 41.67% had poor level of knowledge score, 47.50% had average and 10.83% had good level of knowledge score. Minimum knowledge score in pre-test was 1 and maximum knowledge score in pre-test was 13. Mean knowledge score in pre-test was 6.33±3.25 and mean percentage of knowledge score in pre-test was 42.22±21.71.

Planned Teaching on Mid-Wife Led Continuity of Care Model (MLCC)

In the pre-test, the samples score proved that they did not have good knowledge on Mid-Wife Led Continuity of Care Model. However, in post-test, out of 120 subjects the majority of the subjects 0.83% of the final year nursing students had poor level of knowledge score, 6.67% had average and 92.50% had good level of knowledge score. Minimum knowledge score in post-test was 5 and maximum knowledge score in post-test was 15. Mean knowledge score in post-test was 13.68±2.07 and mean percentage of knowledge score in post-test was 91.22±13.82.

Comment [JSRDS10]: The discussion at the beginning looks like the information should be included in the results and not in the discussion. I suggest reviewing whether the journal's norms can gather results and discussion.

I missed the discussion of bringing studies that talk about the knowledge of students about MLCC, as the object of study is the students. It is important to further support the discussion by bringing other studies.

Comment [JSRDS11]: I suggest removing the subtitles in the discussion.

Comment [JSRDS12]: I suggest removing the subtitles in the discussion.

Association of knowledge with demographic variables

Comment [JSRDS13]: I suggest removing the subtitles in the discussion.

This study shows that the knowledge scores of final year nursing students is associated with the Age in year. The tabulated 'F' values were 2.68(df=3,116) which is much less than the calculated 'F' i.e., 3.99 at 5% level of significance. Also, the calculated 'p'=0.009 which was much less than the acceptable level of significance i.e., 'p'=0.05. Hence it is interpreted that age in years of final years nursing students is statistically associated with their post-test knowledge score.

This study shows that the knowledge scores of final year nursing students is associated with the course of study. The tabulated 'F' values were 2.68(df=3,116) which is much less than the calculated 'F' i.e., 4.12 at 5% level of significance. Also, the calculated 'p'=0.008 which was much less than the acceptable level of significance i.e., 'p'=0.05. Hence it is interpreted that course of study of final years nursing students is statistically associated with their post-test knowledge score.

In comparison of the current study with other study

Comment [JSRDS14]: I suggest removing the subtitles in the discussion.

Currently, up to my knowledge, there is no such study that had been conducted in relation with the comparison of knowledge and Mid-Wife Led Continuity Care Model. However, there had been certain research study that shows the effectiveness of this model on the mothers and babies; the perception and satisfaction of this model by the mothers, caregivers and nursing students.

Comment [JSRDS15]: I suggest writing the text always in the third person singular.

The study was done on the views of Chinese women and health professionals about midwife-led care in China at university teaching hospital in a major city in eastern China with the aims to explore Chinese women's and health professionals' views of the first midwife-led normal birth unit in China to facilitate normal birth and enhance midwifery practice. The main outcome measures participants' satisfaction, continuity of care/carers, choice and control. It concluded that women appreciated the midwife-led service, which provides an environment where they are more likely to aim to give birth without intervention. This model of care is good for its association with increased satisfaction in a context of extraordinarily high caesarean rates.[5]

A study was done on women and healthcare providers' perceptions of a midwife-led unit in a Swiss university hospital: a qualitative study. In which a descriptive research study using qualitative methods was conducted among pregnant women and new mothers in a Swiss

maternity unit, including also midwives and medical staff. This concluded that alternative models to provide maternity care for low-risk women have been developed and evaluated widely in several countries outside Switzerland. This study showed that women and healthcare providers were favourable towards the development of a new care model, while taking into account the specific expectations and barriers raised by participants.[6]

A study on the experiences of new graduate midwives working in midwifery continuity of care models was done in Australia. With the aims to explore the experiences of the new graduate midwives who have worked in midwifery continuity of care, in particular, the support they received; and, to establish the facilitators and barriers to the expansion of new graduate positions in midwifery continuity of care models. The study concluded that this is the first study to demonstrate that new graduate midwives value working in midwifery continuity of care - they felt well prepared to work in this way from their degree and were supported by midwives they worked alongside. The participants reported having more confidence to practice when they have a relationship with the woman, as occurs in these models.[7]

A study was done on the future in their hands: Graduating student midwives' plans, job satisfaction and the desire to work in midwifery continuity of care. The aim of this study is to explore the immediate and aspirational employment plans and workforce choices, reasons for staying in midwifery and perceptions around factors likely to influence job satisfaction of midwives about to graduate from one Australian university during the years 2012-2016. This study concluded that aligning early graduate work experiences with continuity of care models may have a positive impact on the confidence and professional development of graduate midwives, which in turn may lead to greater satisfaction and retention among a workforce already committed to supporting the maternity healthcare reform agenda.[8]

CONCLUSION

From the results of the study, it is concluded that there is improvement in knowledge of study subjects. The levels of knowledge during the pre-test and post-test are compared to prove the effectiveness of planned teaching. Hence, it is statistically interpreted that planned teaching on knowledge regarding mid-wife led continuity of care model (MLCC) was effective.

Comment [JSRDS16]: I suggest that you respond to the objectives brought up in the studies; bring the main limitations and suggest further studies.

REFERENCES

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5. Cheung NF, Mander R, Wang X, Fu W, Zhou H, Zhang L. Views of Chinese women and health professionals about midwife-led care in China. Midwifery. 2011 Dec;27(6):842–7.
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