

ORIGINAL ARTICLE

Planned home compared with planned hospital births: mode of delivery and Safety measures and outcome

Nuzhat Parveen<sup>1</sup>, Fahmida Khatoon, <sup>2</sup>Wudian Mahmud<sup>2</sup>, Salamh Alwebar Alshammery<sup>3</sup>

<sup>1</sup>Department of Obstetrics & Gynaecology, University of Hail, KSA

Biochemistry Department, University of Hail, KSA

<sup>2-3</sup> College of Medicine, University of Hail, KSA

ABSTRACT

To compare the mode of delivery and Safety measures between planned home versus planned hospital delivery and to determine if differences in intervention rates and outcomes. At current, obstetric care in Saudi Arabia has a highly medicalized maternity care. Unfortunately, intervention rates are unacceptably high with a still rising rates for cesarean sections and a completely normal physiologic birth a rarity. Data was collected by a questionnaire about Intervention and safety. We enrolled only women expecting their first birth so that their previous birth experiences would not affect their preferences and outcomes. Recruitment in midwifery practices was carried out from March 2017 to February 2018 and in hospitals from March 2017 to December 2017. Besides adjustment for maternal and care factors, we included for additional casemix adjustment: presence of congenital anomaly, small for gestational age, preterm birth, or low Apgar score. The techniques used were nested multiple stepwise, and stratified analysis for separate risk groups. The women who previously have been delivered (inadvertently) at PHCs found it more comfortable and pleasant experience and wished (66.7%) to have next delivery in midwifery led centers. The women who gave birth to their babies in obstetrician led maternity hospitals were satisfied and opted (90%) the same for their next delivery. Women are feeling safe and comfortable to have a hospital delivery and having good neonatal care however few less than ten percent women like to have home deliver or midwife setting.

**Key Words:** Intervention, Mortality, Perinatal care

Received 26.11.2018

Revised 21.01.2019

Accepted 17.02.2019

How to cite this article:

N Parveen, F Khatoon, W Mahmud, S A Alshammery. Planned home compared with planned hospital births: mode of delivery and Safety measures and outcome. Adv. Biores. Vol 10 [2] March 2019: 149-155

INTRODUCTION

The time of child's birth is one of the most memorable time in a woman's life. Throughout the world giving birth in women who have uncomplicated pregnancy is considered as a normal physiological event. The women who are multi parous and in whom pregnancy is low risk do not experience any complications during childbirths and outcome is usually same in any safe setting.[1] women since ages are giving birth to their babies with or without assistance. this process of birth was cared by the experienced old women who learned their skill by observing many women of folk and mammals. These skill improved later on and the concept of separate profession (midwifery) emerged in which women had empowerment. With the advent of midwifery which started in 17<sup>th</sup> and 18<sup>th</sup> century men were introduced in this profession. Only in 20<sup>th</sup> century the midwifery changed to obstetrics and was taught in medical schools. With the help of surgical procedures and medical training institutes this responsibility has been transferred into the hand of physicians (male or females) who follow more interventional approaches to avoid adverse outcomes.[2]

In low risk multiparous women Outcomes of labor are the same regardless of the setting of birth and doesn't have untoward effects like intra partum or early neonatal deaths, meconium aspiration syndrome, birth injuries and neonatal encephalopathy.[3] For multiparous mothers, birth in a non-obstetric unit setting ( at home or midwifery led maternity care centers ) it's found to have significantly less intervention rates like reduced intrapartum caesarean section, instrumental delivery or

episiotomy[4] Selection of women for appropriate setting. when carefully selected even women with previous cesarean section has more chances to deliver vaginally for non hospital centers as compared to hospital setting[5]Autonomous midwifery practice is non-existent and homebirth is illegal .[6] In Saudi Arabia there is already a well developed health care system with 22820 primary health centers(PHC) which provide maternal and child care on outpatient basis and referral services to approximately 274 public referral secondary care hospital. These secondary care maternity hospitals provide obstetrician led obstetric care to all the women giving births. That is why these centers are already overcrowded and women have to wait for periods to get obstetric care services especially those who live in remote areas. Trends of giving birth at home and midwifery led settings are dying now.[7] According to WHO Midwives who received standard training and work in proper health care system can provide 87% of essential care required by women in antenatal period intrapartum and post natal period and can provide immediate newborns care and breast feeding, midwifery led birthing culture need to be promoted.[8]women choice of a birthing suit depends on a lot of factors like previous experience, women's beliefs about safety, views of her family, friends and health care professionals[9]Understanding and responding to women's beliefs and attitudes during the childbearing period is an important focus of international maternity health policy. The terms 'woman centred care' and 'informed choice' reflect that in addition to the physiological aspects of pregnancy and birth, there are psychological, psychosexual, and psychosocial aspects unique to the individual life experiences of pregnant women. These must be considered in order to optimize a woman's birth outcomes and experience [10]. The psychosocial wellbeing of women is now viewed as equally important as her physical wellbeing [11]. Studies of place of birth have consistently shown lower rates of intervention in labor and birth for women with low-risk pregnancies who planned their birth at home [12-14]. Similarly, research confirms that when compared to other models of maternity care, midwife-led care reduces the rates of intervention in labor showed in their study that women using midwife care consistently reported attitudes supporting less frequent use of technology compared to women receiving care from obstetricians. It also is probable that midwives will be less likely to intervene due to their philosophical and physiological orientation toward childbirth [11]. On the other hand, some studies comparing home and hospital birth with the same midwives providing care in both settings found lower intervention rates in the home birth group, suggesting that the birth setting also has a significant effect on outcomes [2,5]. However, most women express a preference for a specific birth setting (model of care and place of birth) during pregnancy, long before labor begins [12]. Little is known about the influence of these early preferences on the course of pregnancy, labor, and childbirth.

#### **RATIONALE**

This study is designed to focusing in particular on birth outcomes in healthy women with straightforward pregnancies who are at 'low risk' of complications. Study will help future planners to redistribute obstetric care services in order to continue to improve women and children health.

we support midwifery model therefore if autonomous midwifery profession is introduced in this country like in most of European countries where midwives lead all the obstetric care services. that is through which women experience more natural childbirth, whether at home or in the hospital, where the doctors need only to play their part when it is medical indicated.

#### **MATERIAL AND METHODS**

We conducted a multicenter, prospective cohort study among low-risk nulliparous women who started their pregnancy in midwife-led care or in obstetrician-led care.

Data was collected using self report questionnaires as part of a larger study, investigating women's' experiences of pregnancy and birth. In the study reported here data is from 18 -20 weeks gestation and two months after birth. Participating midwifery practices and hospitals received 25 information packs including project information and an informed consent form and were asked to distribute these to pregnant women who met the inclusion criteria during the first consultation at 8-12 weeks pregnancy. Information on the project contained the background and purpose of the study, the procedures involved in the study, the possible risks and benefits of taking part in the study and the rights of the participants. Eligible women who received information from their caregiver were asked whether the researchers could contact them by telephone to give further information about the study. Women who agreed were called by the researchers, received more information if required, and were formally asked to participate. A signed informed consent form was required for all participants. Women with a first on-going pregnancy and without an obstetric or medical indication according to the List of Obstetric Indications were included. We enrolled only women expecting their first birth so that their previous birth experiences

would not affect their preferences and outcomes. Recruitment in midwifery practices was carried out from March 2017 to february 2018 and in hospitals from March 2017 to December 2017.

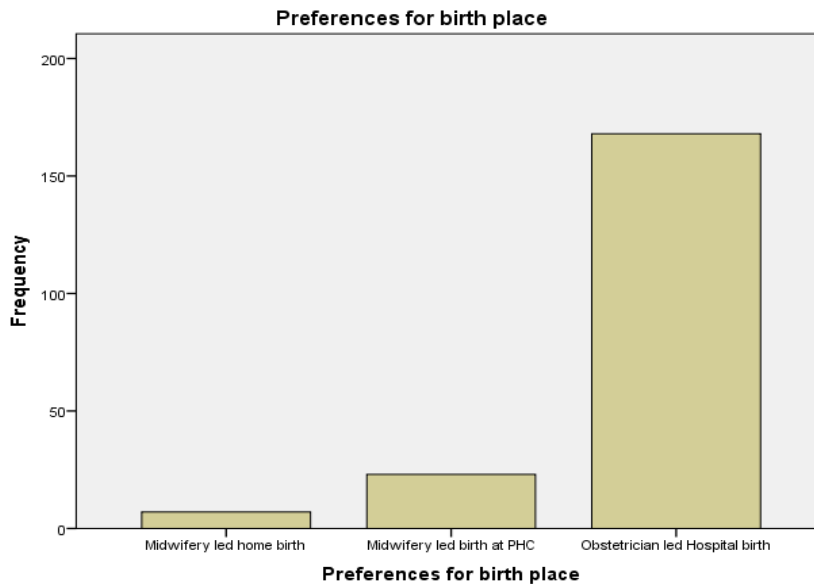
**RESULTS**

In this study we contacted 200 women living in hail region. women of 36-40 years age group made the highest percentage of 25 % of responses.

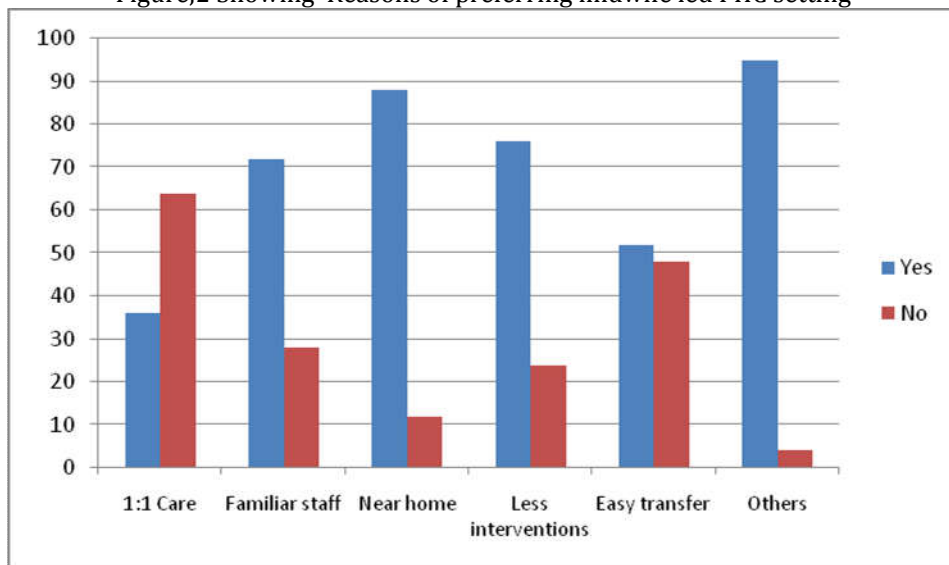
Table;1

Mode of previous deliveries	Delivery suit preferences		
	Midwifery led Home birth	Midwifery led maternity centre	Obstetrician led Hospital birth
Normal vaginal deliveries	06	12	132
Operative deliveries	0	02	06
Cesarean section/s	1	08	35
Pearson chi square value	24.38( 0.143)		6.84(0.145)

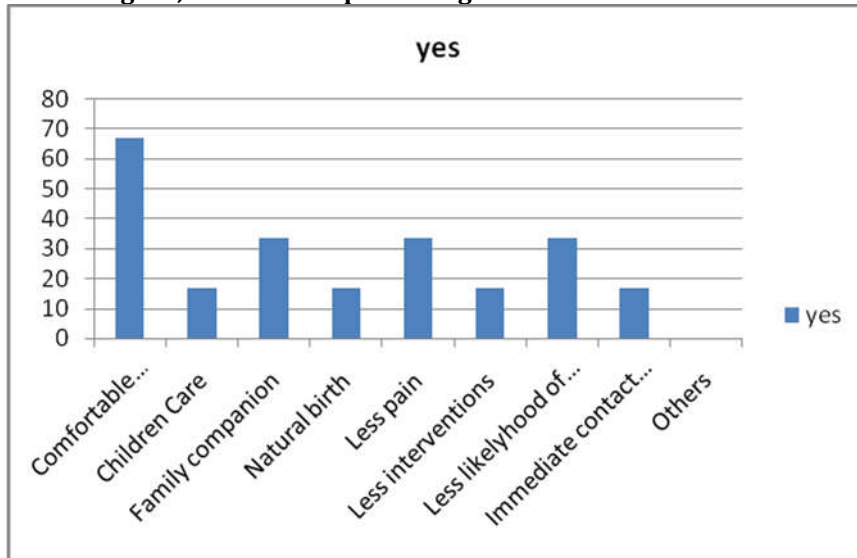
Figure ;1 Showing Reasons of preferring for birth place



Figure;2 Showing Reasons of preferring midwife led PHC setting



Figure;3 Reasons of preferring midwife led Home birth.

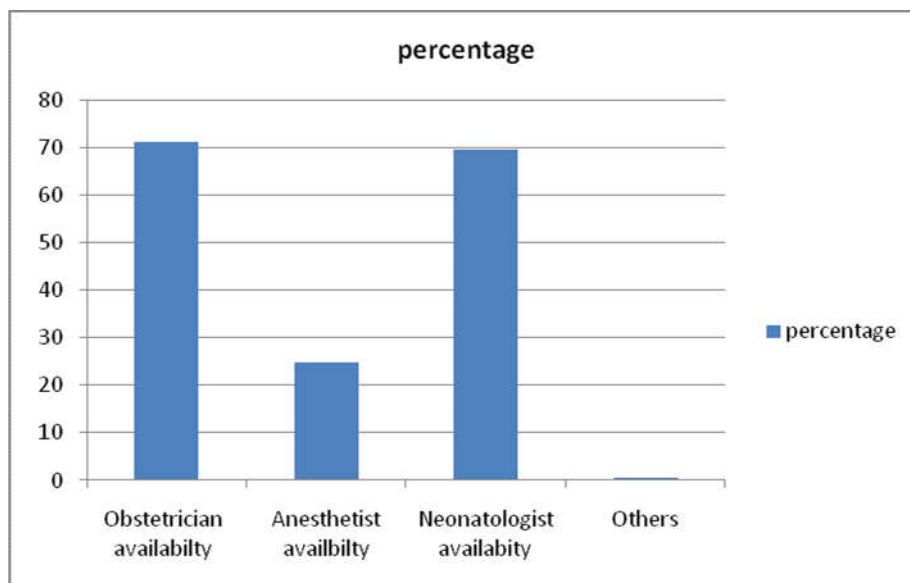


Place of previous births \* Preferences for birth place Cross tabulation

Place of previous births		Preferences for birth place			Total
		Midwifery led home birth	Midwifery led birth at PHC	Obstetrician led Hospital birth	
Home	Count	0	0	1	1
	% within Place of previous births	0.0%	0.0%	100.0%	100.0%
PHC	Count	0	12	6	18
	% within Place of previous births	0.0%	66.7%	33.3%	100.0%
Hospital	Count	7	9	148	164
	% within Place of previous births	4.3%	5.5%	90.2%	100.0%
Total		7	21	155	183
% within Place of previous births		3.8%	11.5%	84.7%	100.0%

Parity \* Preferences for birth place Cross tabulation

Parity		Preferences for birth place			Total
		Midwifery led home birth	Midwifery led birth at PHC	Obstetrician led Hospital birth	
para 1		1	5	13	19
para2-4		5	13	83	101
para5-8		1	3	55	59
more than para 8		0	0	5	5
Total		7	21	156	184



## DISCUSSION

Giving birth to the baby is the time in every mother's life which is the most shared story. They forget the pain of birth however they still remember each and every aspect of behaviors or support provided during the process.

Although the obstetrician led hospital care was the most selected entity by women of any reproductive age. Of the women who selected midwifery led PHC centers, young women of 21-35 years (the age of maximum fertility) were the responses that showed maximum interest. The women who are aware of the safe settings, who have more access to literature and information (social media, internet) about the child birth, its management and complications. Late reproductive age women had more inclination towards hospital births.

The women who previously have been delivered (inadvertently) at PHCs found it more comfortable and pleasant experience and wished (66.7%) to have next delivery in midwifery led centers. The women who gave birth to their babies in obstetrician led maternity hospitals were satisfied and opted (90%) the same for their next delivery. However 10% of those considered midwifery led setting or home birth can be more satisfying and comfortable as their experience of maternity hospital was not gratifying.

As regard the previous mode of delivery, 18 out of 150 (13.6%) respondents who gave births by normal vaginal deliveries don't want hospital deliveries any more. Rather they considered midwifery led small centers or home births are more appropriate for normal births. Those who had an operative delivery or caesarean section before were 11/52 (21.15%)

the women who opted for midwifery led home births did it for the reason of comfort (%), presence of family companion, less feeling of pain and less likely of operative interventions.

Common reasons for selecting the midwifery led maternity services were near to home, less interventions, presence of familiar staff at the time of delivery and easy transfer to hospitals in case of need.

majority of the women selected obstetrician led maternity hospitals due to the presence of obstetrician, and neonatologist at the time of delivery.

In a community where obstetric services are 100% medicalized where home births are a rare occurrence, having a proportion of women still wishing to deliver with more natural way with familiar environment /staff is unusual and demands the health policy makers to

they should have an option of choice to deliver comfortable environment with family or companion support and acquitted staff. satisfaction is the right of every laboring women.

it has been seen that the women who were given the choice of birthing suit and they deliver at home or midwifery led maternity centers have more smooth and swift course of labor when compared with the women who opted for hospital deliveries.[13]

## RECOMMENDATIONS

There is therefore a need to expand these facilities with appropriate midwifery staffing to improve women's choices. Provision of delivery services by these centers will reduce the load on secondary/tertiary care MCH hospitals which are very crowded.

Family centered support, care and education for the mother, her newborn and the family unit.

## REFERENCES

1. Kooy J, Birnie E, Denktas S, Steegers EAP, Bonsel GJ. (2017). Planned home compared with planned hospital births: mode of delivery and Perinatal mortality rates, an observational study. *BMC Pregnancy Childbirth*. Jun 8;17(1):177.
2. Barnawi N, Richter S, Habib F. (2013). Midwifery and Midwives: A Historical Analysis. *Journal of Research in Nursing and Midwifery (JRNM)*. December, Vol. 2(8) pp. 114-121
3. Hollowell J, Li Y, Bunch K, Brocklehurst P. (2017). A comparison of intrapartum interventions and adverse outcomes by parity in planned freestanding midwifery unit and alongside midwifery unit births: secondary analysis of 'low risk' births in the birthplace in England cohort. *BMC Pregnancy Childbirth*. Mar 21;17(1):95.
4. P Brocklehurst. Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the Birthplace in England national prospective cohort study. *BMJ* 2011;343:d7400
5. (Rowe R, Li Y, Knight M, Brocklehurst P, Hollowell J. Maternal and perinatal outcomes in women planning vaginal birth after caesarean (VBAC) at home in England: secondary analysis of the Birthplace national prospective cohort study. *BJOG*. 2016 Jun;123(7):1123-32.)
6. Al-Kadri HM, Al-Anazi SA, Tamim HM. (2015). Increased cesarean section rate in Central Saudi Arabia: a change in practice or different maternal characteristics. *Int J Women's Health*. 7: 685-692.  
(<http://www.moh.gov.sa/en/Ministry/Statistics/book/Documents/StatisticalBook-1436.pdf>).
7. Day-Stirk F, McConville F, Campbell J, Laski L, Guerra-Arias M, Hoope-Bender P et al. (2014). Delivering the evidence to improve the health of women and newborns: State of the World's Midwifery, report. *Reproductive Health* 2014;11:89
8. Coxon K, Chisholm A, Malouf R, Rowe R, Hollowell J. (2017). What influences birth place preferences, choices and decision-making amongst healthy women with straightforward pregnancies in the UK? A qualitative evidence synthesis using a 'best fit' framework approach. *BMC Pregnancy Childbirth*. 31;17(1):103
9. Banta D. (2003). What is the efficacy/effectiveness of antenatal care and the financial and organizational implications? Regional Office for Europe (Health Evidence Network Report) WHO, Copenhagen; 2003. <http://www.euro.who.int/Document/E82996.pdf>, accessed [December 1 2011]
10. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. Perinatal Anxiety and Depression (C-Gen 18) College Statement C-Gen 18: Royal Australian and New Zealand College of Obstetricians and Gynaecologists. 2012.
11. Birthplace in England Collaborative group Perinatal and maternal outcomes by planned place of birth for health women with low risk pregnancies: the Birthplace in England national prospective cohort study. *BMJ*. 2011;343:d7400. doi: 10.1136/bmj.d7400. [PMC free article] [PubMed] [Cross Ref]
12. Davis D, Baddock S, Pairman S, Hunter M, Benn C, Wilson D, Dixon L, Herbison P. (2011). Planned place of birth in New Zealand: does it affect mode of birth and intervention rates among low-risk women? *Birth*. 38:111-119. doi: 10.1111/j.1523-536X.2010.00458.x. [PubMed] [Cross Ref]
13. Hutton EK, Reitsma AH, Kaufman K. (2009). Outcomes associated with planned home and planned hospital births in low-risk women attended by midwives in Ontario, Canada, 2003-2006: a retrospective cohort study. *Birth*. 2009;36:180-189. doi: 10.1111/j.1523-536X.2009.00322.x. [PubMed] [Cross Ref]
14. Hulst LA, Teijlingen ER, Bonsel GJ, Eskes M, Bleker OP. (2004). Does a pregnant woman's intended place of birth influence her attitudes toward and occurrence of obstetric interventions? *Birth*. Mar;31(1):28-33
15. Janssen PA, Lee SK, Ryan EM, Etches DJ, Farquharson DF, Peacock D, Klein MC. (2002). Outcomes of planned home births versus planned hospital births after regulation of midwifery in British Columbia. *Can Med Assoc J*. 166:315-323. [PMC free article] [PubMed]
16. Janssen PA, Saxell L, Page LA, Klein MC, Liston RM, Lee SK. (2009). Outcomes of planned home birth with registered midwife versus planned hospital birth with midwife or physician. *Can Med Assoc J*. 181:377-383. doi: 10.1503/cmaj.081869. [PMC free article] [PubMed] [Cross Ref]
17. Miller S, Skinner J. (2012). Are first-time mothers who plan home birth more likely to receive evidence-based care? A comparative study of home and hospital care provided by the same midwives. *Birth*. 39:135-144. doi: 10.1111/j.1523-536X.2012.00534.x. [PubMed] [Cross Ref]
18. Van Der Hulst LA, van Teijlingen ER, Bonsel GJ, Eskes M, Bleker OP. (2004). Does a pregnant woman's intended place of birth influence her attitudes toward and occurrence of obstetric interventions? *Birth*.;31:28-33. doi: 10.1111/j.0730-7659.2004.0271.x. [PubMed] [Cross Ref]
19. Janssen PA, Ryan EM, Etches DJ, Klein MC, Reime B. (2007). Outcomes of planned hospital birth attended by midwives compared with physicians in British Columbia. *Birth*. 34:140-147. doi: 10.1111/j.1523-536X.2007.00160.x. [PubMed] [Cross Ref]
20. Sandall J, Soltani H, Gates S, Shennan A, Devane D. (2018). Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database Syst Rev*. ;8:CD004667. [PubMed]

22. Klein MC, Kaczorowski J, Hearps SJ, Tomkinson J, Baradaran N, Hall WA, McNiven P, Brant R, Grant J, Dore S, et al. (2011). Birth technology and maternal roles in birth: knowledge and attitudes of canadian women approaching childbirth for the first time. *J ObstetGynaecol Can.* 33:598–608. [PubMed]
23. Rosenblatt RA, Dobie SA, Hart LG, Schneeweiss R, Gould D, Raine TR, Benedetti TJ, Pirani MJ, Perrin EB. (1997). Interspecialty differences in the obstetric care of low-risk women. *Am J Public Health.* 87:344–351. doi: 10.2105/AJPH.87.3.344. [PMC free article] [PubMed] [Cross Ref]
24. Hendrix M, Van Horck M, Moreta D, Nieman F, Nieuwenhuijze M, Severens J, Nijhuis J. (2009). Why women do not accept randomisation for place of birth: feasibility of a RCT in The Netherlands. *BJOG.* 116:537–542. doi: 10.1111/j.1471-0528.2008.02103.x. [PubMed] [Cross Ref]

**Copyright:** © 2019 Society of Education. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.