Maternity Care Providers' Labour language & Communication Skills and Its Effects on Maternal Outcome: an intervention Study

Wafaa Mostafa Ahmed Gamel[1], Nahed Mousa Saber[2], Eman Elsayed Bauomey Mohamed[3], Naglaa Mohamed El sayed Ebrahim[4] & Ayat M., Omar[5]

[1.] Lecturer of Maternal Health Nursing and Newborn, Faculty of Nursing, Damietta University. Egypt

[2.] Assistant Professor of Maternal and Newborn Health Nursing, Faculty of Nursing, Beni-Suef University, Egypt

[3.] Lecturer of Psychiatric and Mental Health Nursing, Faculty of Nursing, Ain Shams University, Cairo, Egypt.

[4.] Lecturer of Nursing administration, Faculty of Nursing, Beni-Suef University, Egypt

[5.] Assistant Professor of Maternal and Neonatal Health Nursing, Faculty of Nursing, Fayoum University, Egypt

Abstract

Background: Effective communication is at the core of recent international and national guidance for improving maternal outcomes. **Aim:** Evaluate the effect of a training program for maternity care providers on their labour language, communication skills & maternal outcomes **Design:** A quasi-experimental design. **Setting:** This study conducted at labour unit at Mit Ghamr Hospital, Mansoura governorate, Egypt**. Sample:** A convenience sample of (50) maternity care providers and (500) parturient women were recruited .**Tools:** A five tools including WHO. effective communication guideline's observational checklist, a structured interviewing questionnaire, Visual analog scale to assess birth pain, birth pain coping scale, birth satisfaction scale, birth experience tool were used. **Results:** The maternity care providers language & communications skills improved significantly after program implementation, and correlates significantly with maternal child birth satisfaction, and positive experience (P.0.000). **Conclusion:** A significant improvement of maternity care provider's language and communication skills after implementation of the program was correlated significantly with the maternal outcomes including childbirth pain, & its coping, maternal childbirth satisfaction, and affects positively on childbirth experience that indicating the program's efficacy. R**ecommendations**: Establishment of ongoing training programs following the requirements for successful labor language and communication for all newly appointed maternity care professionals is crucial

Keywords: Communication, Labour language, Maternity care providers & Maternal outcomes

Introduction:

Childbirth is a significant event in a woman's life . This event is known to have deep mental, social, and emotional characteristics that stay in the mother's consciousness for the rest of her life; thus, unpleasant experiences during delivery can have a negative long-term mental influence. (**Katebi, et al., 2017)** In addition to clinical care, mothers require attention, empathy, guidance, and support during parturition. They understand the possible fragility of themselves and their baby during the process, as well as the inherent uncertainty about what might happen (**Vafaei, et al., 2013)** Moreover**;** Humanized support combined with competent and compassionate communication promotes the parturition process and the woman's sense of control, boosting her confidence in her own power and capacity to give birth. This enhances the labour experience for women The quality of the communication between women and care professionals, as well as the resources and environment of the local facility, all have an impact on women's experiences (**Downe, et al., 2018).** Recent worldwide and national guidelines for improving women's birth outcomes emphasizes the importance of effective communication.

The World Health Organization's (WHO) framework for enhancing the quality of care for mothers and babies in health facilities around the time of childbirth acknowledges two crucial aspects of care: the quality of care provided and the quality of care experienced by women and their families. One of the eight quality domains in the framework is communication, with the criteria that "communication with women and their families be effective and responds to their needs and preferences." **(WHO) a, 2018).**

Maternity care providers rely heavily on effective communication. It's "the vehicle through which all else is learned and connections are formed,". It includes everything from active listening and touch to body language and voice tone, it's all about words. The use of language is a crucial component and a major mode of communication in maternity services. (**Mobbs, et al., 2018)**

Good maternity care depends on effective communication during the birthing process, but changing deeply ingrained language and the thinking

it reflects is challenging. There's a careful line between using more respectful, inclusive, and less intimidating language for the mother and replacing ambiguous, verbose language that undermines the original message. Effective communication by maternity care providers can assist a woman in having a pleasant birth experience during labour and delivery. The World Health Organization recommends that maternity care providers and women in labour communicate effectively using simple and culturally acceptable ways **(WHO) b, 2019)**

According to reviews, women's sensation of control during labor is an important predictor of their happiness with the delivery experience, which is seen as an essential measure of the quality of maternity care services **(Hodnet, 2002).**Women's anxiety about giving birth has long been a subject of study, with researchers looking into personal reasons on one hand, and cultural beliefs and traditional customs on the other **Oladelpo, et al., 2018,** noted that the World Health Organization's effort highlighted the evolution of maternity care practices from mother and infant survival to the quality of the experience in terms of favourable expectations and fulfilment of the outcomes for both. Despite this focus, there is surprisingly little study on the influence of maternity staff communications with the woman during her stay at the maternity centre.

An observational studies of communication between midwives and women during labour have shown misunderstandings that might occur when communication is inadequate and areas where communication could be enhanced, In addition to a resent systematic review, (2018), found only credible paper on staff training interventions concerning effective communications for the parturient women's welfare. Satisfaction was measured, but not clinical outcomes **(Chang et al., 2018)** concerns highlighted studies such as that of **Swordy, et al., 2020.**

Significance of the study:

Labour is a significant life-changing event, and women's birth experiences, satisfaction, control have been shown to have both long-term and short-term effects on their well-being **(Leap, & Hunter, 2016).** As a result, one of the primary responsibilities of the maternity care providers is to provide appropriate, respectful, and purposeful communication in order to assist the parturient mother

A comprehensive review using mixed approaches found a paucity of evidence on the influence of interventions on good communication between maternity care providers and mothers during labor and delivery. Further research is required, according to the findings **(Ghahramanian, et al., 2017).**

A recent study in Egypt showed that parturient mothers expressed a high level of dissatisfaction due to a lack of communication with care providers. It is suggested that measures be put in place to increase mother satisfaction. Mansoura is the capital, had a population of over 6.8m in 2020, and is about 30 per cent urbanised **(Egypt Data Portal, 2020).** Mit Ghamr is the governorate's second largest city, There were 152 000 births in the governorate in 2017, thus a relatively high birth rate for this largely rural jurisdiction, so Mit Ghamr Hospital is selected to conduct this study as it cares for all cases that come from the Governorate's rural and urban areas **(Egypt Data Portal, 2017).** As a result, Intra-partum care is primarily delivered in the overcrowded hospitals by medical and nursing professionals who have had insufficient training in communication and interpersonal skills. Furthermore, hospital protocol on most occasions restricts relative companionship with the parturient mother throughout the intra-partum period, and they only attended by the care provider. These unfavourable circumstances may have an impact on women's outcome. Therefore, this study conducted mainly to evaluate the effect of training maternity care providers, as the main providers of care in communication skills, labour language on parturient women's outcome based on WHO guideline of intra-partum effective communication. The secondary objective of this study was to evaluate the improvement in communicative behaviour of maternity care providers.

Aim of the study:

Evaluate the effect of a training program for maternity care providers on their labour language, communication skills & maternal outcomes.

Through the following specific objectives:

1. Determine the effect of a training program on the maternity care providers' labour language, and their communication skills.
2. Evaluate the effect of training maternity care providers in communication skills, and labour language on parturient women's intensity of pain childbirth & their ability to coping with it
3. Evaluate the effect of training maternity care providers in communication skills, and labour language on parturient women's   childbirth satisfaction & experience

Research hypothesis

- Maternity care providers who receiving the intervention program will exhibited good level of their labour language and communication skills.
- Labouring women who received care from maternity care providers who completed their training program had variable level of childbirth pain, with high coping and adaptation with labour pain,

- Labouring women who received care from maternity care providers who completed their training program will exhibits high satisfaction &better experience with their birth experience than those who received care from the same care providers before assuming such training program.

Operational definition

Labour language: using words that are more humanizing, respectful, simple and motivated as well as care providers using alternative language instead of using phrases that are anxiety provoking, over dramatic or violent

Labour communication: it concerned with a WHO recommendation on effective communication between maternity care providers and parturient women using simple and culturally acceptable methods

Maternal outcome :it includes intensity of childbirth pain, childbirth coping & adaptation, child birth satisfaction, and childbirth experience

Material and Methods

Research design

A quantitative quasi- experimental two-part research design was used to estimate the causal impact of an intervention program regarding effective communication skills on maternity care providers practises measuring its effect on parturient women outcome without random assignment.

Setting

This research was carried out in the labor unit of the obstetrics and gynecological department of Mit Ghamr Hospital, which is the largest Ministry of Health affiliated hospital in Mit Ghamr, nearly 7000 deliveries annually, Mansoura governorate in Egypt **(Hospital based statistics, 2017).** This hospital was chosen since it is a general tertiary hospital with a high patient turnover and serves all cases from Mit Ghamr's rural and urban districts, and it serves all pregnant and puerperal women, low or high risk, who delivered either normally or by Cesarean Section.

Sample

Whilst the study population comprised staff and parturient women, a cut-off point for data concerned not only time, but the number of collected participants. A convenient sample of n = 550 (250 parturient women × 2 time points) were determined and calculated based on Raosoft application program (2004) the margin error (a error rob. =0.05) and confidence level (CI)= 0.95). There fore considered adequate for data collection in addition to 50 maternity care providers including all (doctors, nursing supervisors, nurses, and assistant nurse) who were concerned with parturient women care only those not completed the training attendance were excluded and 500 parturient women recruited in this

study on two point of time 250 parturient women (125 primi-gravida &125 multigravida) recruited before the implementation of the program and 250 (125 primi-gravida & 125 multigravida) after program implementation their recruitment was based on the following:

Inclusion criteria:

Healthy parturient women free from any medical, psychological disorders, and any pregnancy related risks. After completion of 37 weeks of gestation, Either delivered normally or by cesarean section, and gave birth to a living baby.

Exclusion criteria:

Parturient women with medical, psychological disorders, high risk, gave birth to died baby or before completion of 37 weeks of gestation, and who refused to participate were excluded.

Data collection tools:

Data of the current study collected by using the following tools:

Tool (1):   The WHO effective communication skills observational checklist :

This tool adopted from (**WHO)a, 2018, & NICE, 2017),** this tool filled by the researchers on two occasions before the training implementation then after 3 months of training implementation, and it consists of two parts:

The 1st part: Maternity care provider's staff personal details: age, gender, qualifications, experience (years), and attendance of previous communications training.

The 2nd part: used to assess the maternity care providers staff performance concerning the effective communication skills. In the absence of a standardised definition of "effective communication", the Guideline Development Group agreed that effective communication between maternity care provider's staff and women during labour and should include the following, as a minimum.

1. Greet the woman personally and welcome her with a smile.
2. Introducing themselves to the woman and her companion and addressing the woman by her name.
3. Offering the woman and her family the information they need in a clear and concise manner choosing the words carefully as well as use emotive, appropriate labour language (in the language spoken by the woman and her family), avoiding medical jargon, Examples of poor language are shown in table 1, with suggested alternatives, and using pictorial and graphic materials when needed to communicate processes or procedures. **table (1)**
4. Respecting and responding to the woman's needs, preferences and questions with a positive attitude;

5. Supporting the woman's emotional needs with empathy and compassion, through encouragement, praise, reassurance and active listening

6. Supporting the woman to understand that she has a choice, and ensuring that her choices are supported.

7. Ensuring that procedures are explained to the woman, and that verbal and, when appropriate, written informed consent for pelvic examinations and other procedures is obtained from the woman.

8. Encouraging the woman to express her needs and preferences, and regularly updating her and her family about what is happening, and asking if they have any questions.

9. Ensuring that privacy and confidentiality is maintained at all times;

10. Ensuring that the woman is aware of available mechanisms for addressing complaints

11. Interacting with the woman's companion of choice to provide clear explanations on how the woman can be well supported during labour and childbirth.

Scoring system :

All 11 items it evaluated by a three point (0,1,2) likert system (0 = never, 1 = sometimes, 2 = always); then computed to obtain total mean and standard deviation then converted into precent score to categorized as poor (<50%), Fair (50-<75%),Good (≥75%) level of   effective communication skills performance .

	Example of poor language	Suggested alternative language
Avoiding phrases that are anxiety-provoking, over-dramatic, or violent.	"Fetal distress"	"Changes in the baby's heart rate pattern"
	"Trial of forceps"	"To see if we can help the baby out using forceps"
	"Labour ward"	"Birthing suite"
	"Rupture the membranes"	"Release the waters"
	"Bloody show"	"A show with some blood in it"
	"Big baby"	"healthy baby"
Respecting women as autonomous adults	"My woman" (for the woman giving birth)	Use her name, or say "the woman I am caring for"
	"Girls" (For staff, midwives)	"Midwives"
	"Good girl" (during labour)	"You're doing really well".
Respecting women as individuals (rather than simply a container and mechanism for producing a baby)	"Delivered"	"Gave birth"
	"The primigravida in room 12"	Use her name (best) or say: "The woman in room 12"
	"I'll go and consent her"	"I'll go and ask if she's happy with that and ask her to sign a consent form" / "discuss informed consent"
	"She" (when present in the room)	Use her name and be careful of speaking about her rather than to her
	"she's 7cm"	"[Woman's name's] cervix is 7cm dilated"
Respecting the woman's autonomy as a decision-maker	"You must have/need/require a caesarean section" (or any other action)" ["you're not allowed to…"]	"I would recommend / suggest / advise caesarean birth because…" (give benefits, risks and alternatives for any recommendation, of course)
	"Patient refused"	"She declined"

Table 1. Cited by (WHO) a, 2018 & (NICE)., 2017

Tool (2): A structured interview questionnaire:
It designed by the researcher after reviewing related literature. It used to collect data from participant parturient women, including two parts:

1ˢᵗ part: Parturient women socio- demographic data: includes questions asking for woman's age, residence, level of education, and occupation.

2ⁿᵈ part: Obstetric profile data: includes questions asking for woman's' number of gravidity, parity, abortion, and weeks of gestation.

Tool (3):   The visual analogue scale to assess childbirth pain :
It is a standardized linear scale developed by **Wong, & Bake, (1988)** and adopted by the researcher as a measurement scale that attempts to quantify the level of childbirth pain that a parturient woman experiences on a scale ranging from none to extreme. In the labor situation, analogue pain ratings (visual analogue scales [VAS] 0–10 mm and numerical rating and contains a pointed line that ranges from 0 to 10 mm.

Scoring system: The scale points are categorized in the following way: (0) represents no pain. (1-3) indicates a mild pain, (4-7) means a moderate pain while (8-10) reflected the worst imagined pain. The answer were computed then converted into percentage.
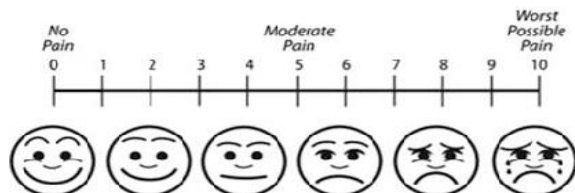
Tool (4) : The Coping scale, an adaptation of the pain intensity
It is a modified version of the Pain Intensity Scale It developed by **Simkin, (2011),** and adopted by researchers to evaluate parturient woman coping and adaptation to childbirth pain. A woman is not suffering if she ranks her pain at an 8 (very high) and her coping at an 8 (extremely high). If her pain is at an 8 and her coping is at a 2, she is clearly in pain and requires immediate care, aid, and, most likely, pain medication. When it comes to measuring a woman's coping skills, it's done differently than when it comes to assessing her discomfort. Rather than asking her to rate her ability to cope on a scale of 10 (easiest to cope) to 0 (complete inability to cope), the supporter observes her behavior for what I call "the 3 Rs of coping with labor and birth": relaxation (between, if not during, contractions); rhythm (in movements, breathing moaning, and mental activity—counting breaths, song); and ritual (repeating the same rhythmic activity for many contractions in a row). She may suffer and feel traumatized by her labor if she does not follow the 3 Rs.
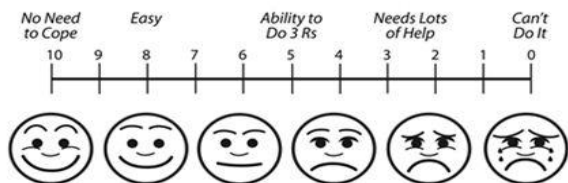
Tool(5): Birth-Satisfaction-Scale-Revised(10-item-BSS-R)post-sychometric:
This tool developed by **Hollins, & Martin, (2014).** And adopted by the researchers for evaluating women's birth satisfaction**.** Is a 10-item valid and reliable self-report measure that the International Consortium for Health Outcomes Measurement (ICHOM) recommends as the "method of choice" for evaluating women's "birth satisfaction ." Include three subscales:

I- Quality of care provision (4-items) (Q3, 5, 6, 10)
(3) The delivery room staff encouraged me to make decisions about how I wanted my birth to progress.
(5) I felt well supported by staff during my labour and birth.
(6) The staff communicated well with me during labour.
(10) The delivery room was clean and hygienic.

II- Women's personal attributes (2-items) (Q4, 8)
(4) I felt very anxious during my labour and birth.
(8) I felt out of control during my birth experience.

III- Stress experienced during labour (4-items) (Q1, 2, 7, 9)
(1) I came through childbirth virtually unscathed.
(2) I thought my labour was excessively long.
(7) I found giving birth a distressing experience.
(9) I was not distressed at all during labour.

Scoring system: Participants respond on a 5-point likert scale based on level of strongly agree (5), agree (4), neither agree or disagree (3), disagree (2), and strongly disagree (1), with a possible range of scores between10-50. A score of 10 represents 'low birth satisfaction' and 50 'high birth satisfaction'.

Tool (6): Childbirth experience assessment tool:
It adopted from **Aasheim et al., (2013)** it used to assess woman's childbirth experience that measured after child birth by asking them question: 'Did the birth go as you had expected?'

Scoring system: The response alternatives were trichotomized into; 1) better ('No, it was better'), 2) worse ('No, it was worse'), and 3) as expected/mixed feelings ('Yes, as expected' + 'Neither better nor worse'). The answer were computed then converted into percentage.

Tools validity and reliability:
A panel of four experts in maternity & obstetric and psychiatric nursing examined the data collection instruments for content validity, readability, comprehension, and comprehensiveness. The

correlation coefficient Alpha Cronbach was used to account for reliability, and it showed a high coefficient value between 0.90 and 0.95, for all used tools indicating very high tools reliability.

Pilot study

A pilot study conducted on a sample of 10% of the subject, 5 maternity staff and 25 parturient women, to refine tools clarity and applicability, no modifications were necessary

Ethical considerations

An official permission to conduct this study was obtained from the Mit Ghamr Hospital's directors; as well as, ethical approval was obtained. Anonymity and data confidentiality were also assured, also; personal preferences to withdraw from the study were also allowed; informed consent was obtained from study participants; maternity staff, and parturient women.

Field work

This study took place in the labour unit of Mit Ghamr general hospital during the period from January to May 2019. As the the researchers attended the previously mentioned hospital 3 days per week. **This study implemented through the following phases:**

Preparatory phase :

It was put into action after receiving permission from the director and department's head of the previously mentioned sitting to collect study data for the study. In addition; the agreement of the ethical committee. The goal of the study and the major process were outlined in the letter. The training program package, materials, teaching methods, tools, was created following a thorough examination of the relevant literature.

Assessment phase:

It conducted on two parts

Part1:assessment of participant's parturient women

It was conducted on two groups of participants, parturient women who were recruited in pre-intervention group and those who recruited in post-intervention groups (two separate groups).

Pre intervention group:

In which the researchers interviewed the participant's women who admitted to the labour unit in the previous mentioned sitting and cared by the maternity care provider prior receiving training program. Clarifying the study nature and goals and obtaining their verbal consent. Then the researchers collect the required data such as demographic & obstetrical profile data using tool 2, and then assessing their childbirth pain severity by tool 3. Also participant ability to cope and adapt with childbirth pain were evaluated by using study tools 4, meanwhile their satisfaction and childbirth experience were evaluated by using tool 5, and 6, after childbirth immediately.

Post intervention group:

Those parturient women who were recruited after their maternity care providers finished the intervention program. This group was examined in the same manner as the pre-intervention group, with the same tools and sequence.

Part 2: Assessment of maternity care providers:

- In which the researchers attended the previously mentioned hospital 3 days per week, conducted interviews with maternity care providers who agreed to participate in the study using tool 1 part 1, to get their personal information, such as age, residence, years of experience, and the educational qualifications.

- Following the completion of the personal data for the maternity care providers, the researchers assessed the maternity care providers behaviours according the effective communication performance skills observational checklist (tool 1 part 2) during their work shifts, this part used and assessed on two occasions, one prior to the training and the other three months after the training.

Intervention phase

This phase focused on the training program implementation (intervention **program**) including all of the following program details:

Program time: Based on the participants' shifts a timetable was constructed. Because the total number of participants was divided into 10 groups of 5 participants each, the program was intended to last two-hour / session each day for each group in addition to 1 hour for open discussion session.

Program objectives: The intervention executed by exposing the participant's maternity care providers to a training program regarding effective communication skills covering the following objectives: recognize the impact of effective communication on parturient women's outcomes in the form of her labour pain severity, coping, satisfaction, and experience, and to improve their interactions, labour language with parturient women during labor in particular. to enhance and reinforce maternity care providers' interpersonal communication skills

Program materials: The content of the program covering the following topics: characteristics and principles of effective communication; the effective communication between maternity care provider's staff and women during labour according WHO guidelines. Good and poor labour language of maternity care providers. Effects of poor / good labour language of maternity care providers on the maternal and labour outcome. Using an active methods to encourage participant interaction; role play data show, case scenario, checklist, role play.

Evaluation phase:
A three-month post-training evaluation was conducted to assess the communication, labour language skills of maternity care workers using tool (1):The WHO effective communication skills observational checklist

Statistical analysis
Data from the written surveys (for staff prior and after training intervention, and for parturient women' surveys) were coded and entered into a 2020 subscription version of IBM's statistical package of social sciences (SPSS), whereupon data were tested for error. Descriptive analyses were then undertaken as frequencies and percentages of the samples, and central tendencies (mean [x] and standard deviation [σ]). As well as, Kolmogorov-Smirnov nonparametric tests. Spearman's correlation (r) was performed to measure the strength of relationship between key study variables. Other tests conducted to establish the variables' independency and validity (p-value 0.05) were Pearson's chi-square (χ^2).

Results:

Table (1): Distribution of personal data of the studied maternity care providers (N=50).

Items		No=50	
		No.	%
Age	<20ys	2	4
	20-	5	10
	30-	22	44
	40-	16	32
	≥50ys	5	10
	Mean ± SD	**36.86±8.52**	
Gender	Male	15	30
	Female	35	70
Educational qualification	Bachelor of medicine	3	6
	Master of medicine	25	50
	Medical doctorate	1	2
	Nursing diploma	20	40
	Bachelor degree of nursing sciences	1	2
Previous attendance of workshops about communication	Yes	10	20
	No	40	80
If yes, how many workshops? (N.20)	Once	8	80
	Twice	2	20
	Mean ± SD	1.47±0.79	

Table (2): Comparison of the observed mean of maternity care providers' communication with parturient women before and after the program implementation (N=50)

Items	Pre-program implementation			Post-program implementation			Test of significance (Wilcoxon signed rank test)	
	□	SD	Median	□	SD	Median	Z	p-value
1.Greet the woman personally and welcome her with a smile.	1.10	0.67	1.00	1.74	0.66	2.00	5.32	0.000*
2.Introducing themselves to the woman and her companion and addressing the woman by her name.	0.72	0.64	1.00	1.50	0.83	2.00	5.51	0.000*
3.Offering the woman and her family the information they need in a clear and concise manner choosing the words carefully as well as use emotive, appropriate labour language.	0.96	0.75	1.00	1.42	0.83	2.00	4.00	0.000*
4.Respecting and responding to the woman's needs, preferences and questions with a positive attitude.	0.82	0.56	1.00	1.74	0.59	2.00	6.23	0.000*
5.Supporting the woman's emotional needs with empathy and compassion, through encouragement, praise, reassurance and active listening	0.84	0.58	1.00	1.72	0.64	2.00	6.07	0.000*

Items	Pre-program implementation			Post-program implementation			Test of significance (Wilcoxon signed rank test)	
	☐	SD	Median	☐	SD	Median	Z	p-value
6.Supporting the woman to understand that she has a choice, and ensuring that her choices are supported	0.80	0.53	1.00	1.76	0.59	2.00	6.25	0.000*
7.Ensuring that procedures are explained to the woman, and that verbal and, when appropriate, written informed consent for pelvic examinations and other procedures is obtained from the woman.	0.86	0.70	1.00	1.64	0.72	2.00	5.51	0.000*
8.Encouraging the woman to express her needs and preferences, and regularly updating her and her family about what is happening, and asking if they have any questions	0.80	0.67	1.00	1.42	0.85	2.00	5.56	0.000*
9.Ensuring that privacy and confidentiality is maintained at all times;	0.76	0.55	1.00	1.32	0.91	2.00	4.66	0.000*
10. Ensuring that the woman is aware of available mechanisms for addressing complaints	0.76	0.55	1.00	1.50	0.81	2.00	6.08	0.000*
11. Interacting with the woman's companion of choice to provide clear explanations on how the woman can be well supported during labour and childbirth.	0.78	0.70	1.00	1.40	0.85	2.00	5.39	0.000*

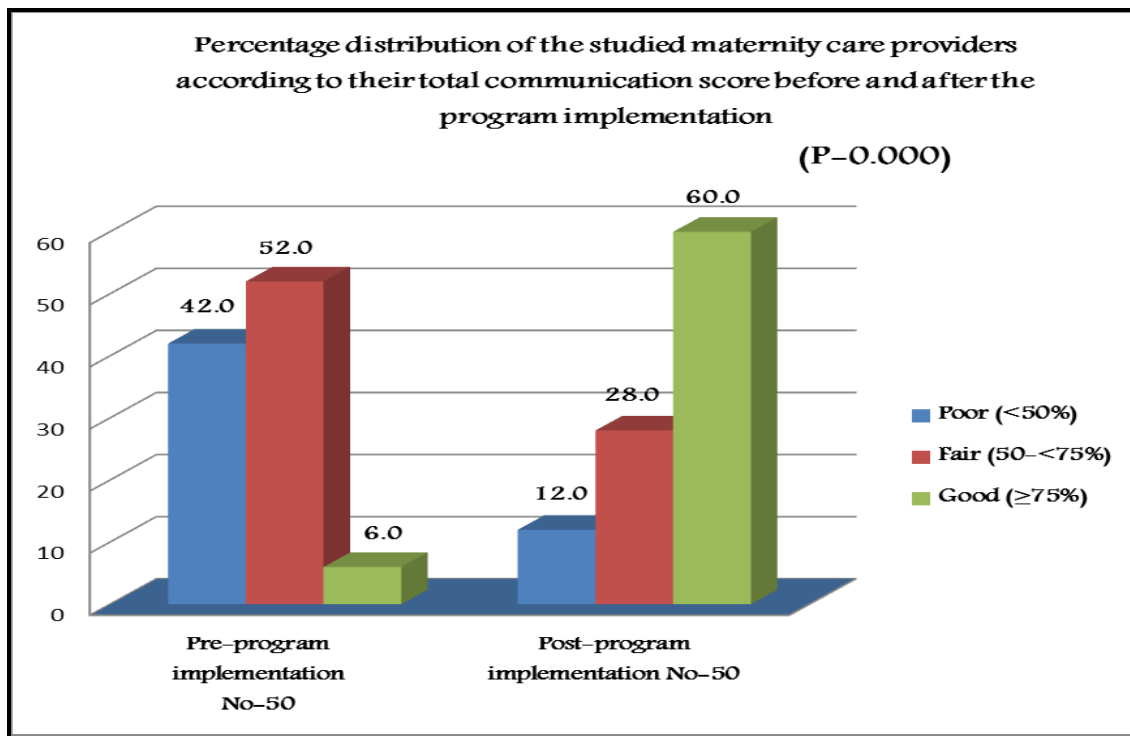*Statistically significant at p ≤0.05*

Figure (1): Percentage distribution of maternity care providers   according to their total score of communication before & after program implementation.

Table (3): Distribution of socio-demographic characteristics of the studied parturient women

Socio-demographic characteristics		Pre intervention group No=250		Post intervention group No= 250		Test of significance
		No.	%	No .	%	
Age / year	<20ys	47	18.8	46	18.4	p= 0.347 X² = 5.421
	20-	73	29.2	72	28.8	
	30-	126	50.4	127	50.8	
	40	4	1.6	5	2.0	
	Mean ± SD	**33.40±6.09**		**34.01±5.09**		*p*= **0.262 t=1.889**
Educational level	Illiterate	46	18.4	44	17.6	p= 0.500 X² = 0.075
	Read and write	65	26.0	64	25.6	
	Preparatory school	31	12.4	32	12.8	
	Secondary school	60	24	62	24.8	
	University	48	19.2	48	19.2	
Occupation	Housewife	187	74.8	179	71.6	*p*= 0.600 X² = 0.065
	Employee	63	25.2	71	28.4	
Residence	Rural	171	68.4	169	67.6	*p*= 0.398 X² = 0.271
	Urban	79	31.6	81	32.4	

Table (4): Distribution of obstetrical history of the studied parturient woman

| Obstetrical history		Pre-intervention group No=250		Post-intervention group No=250		p. value
		No.	%	No.	%	
No of Gravidity	1	125	50.0%	125	50.%	0.236
	2	32	12.8	34	13.6	
	3	39	15.6	36	14.4	
	4	31	12.4	29	11.6	
	5	23	9.2	26	10.4	
No of Parity	0	136	54.4	130	52.0%	0.236
	1	32	12.8	34	13.6	
	2	34	13.6	36	14.4	
	3	31	12.4	29	11.6	
	4	17	6.8	21	8.4	
No of Abortion	0	239	95.6	245	98.0%	0.132
	1	5	2.0	2	0.8	
	2	6	2.4	3	1.2	
Gestational weeks	37 week	16	6.4	12	4.8	0.280
	38 week	77	30.8	84	33.6	
	39 week	109	43.6	104	41.6	
	40 week	48	19.2	50	20.0	
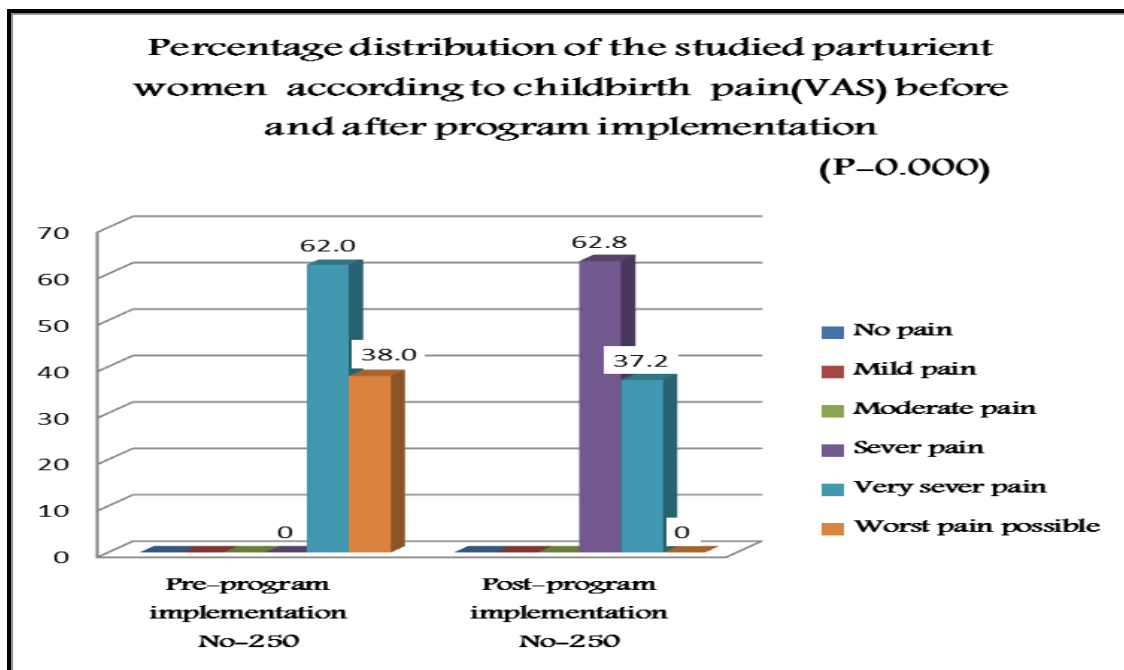
Figure (2): Percentage distribution childbirth pain (VAS) among both parturient women groups

Table (5): Distribution of the childbirth pain coping scale among both parturient women groups

Pain coping scale items	Pre-program implementation group No=250		Post-program implementation group No=250	
	No.	%	No.	%
No need to cope	-----	-----	48	19.2
Easy	48	19.2	-----	-----
Ability to do 3Rs	-----	-----	187	74.8
Needs lots of help	187	74.8	15	6
Can't do it	15	6	-----	-----
Mean ± SD	2.32±0.85		5.32.±0.85	
Test of significance	t=249.0 P-value=0.000*			

(*) Statistically significant at p ≤0.05
***t:** paired t test*

Table (6): Distribution of the childbirth satisfaction scale among both parturient women groups

Items	Pre-program implementation group No=250		Post-program implementation group No=250		Test of significance	
	$\Box$	SD	$\Box$	SD	t	p-value
Quality of care provision (4-items) (Q3, 5, 6, 10)	6.54	2.60	11.63	3.56	43.85	0.000*
Women's personal attributes (2-items) (Q4, 8)	2.89	1.36	6.30	1.04	73.90	0.000*
Stress experienced during labor (4-items) (Q1, 2, 7, 9)	6.65	2.71	13.31	1.48	80.23	0.000*

*$\Box$: **Mean, SD:** Standard Deviation, **t:** paired t test*
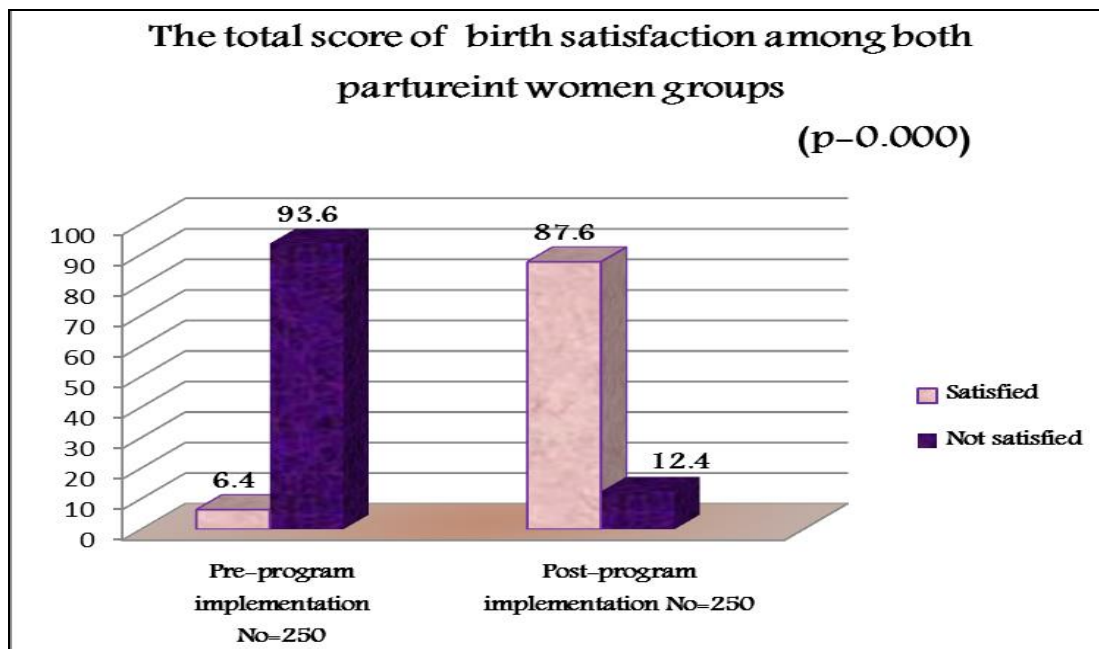*(*) Statistically significant at p ≤0.05*

Figure (3): Distribution of the total childbirth satisfaction score among both parturient women groups

Table (7): Distribution of the childbirth experience score among both parturient women groups

Birth experience	Pre-program implementation group No=250		Post-program implementation group No=250		Test of significance	
	No.	%	No.	%	χ^2	P-value
As expected/mixed feelings	188	75.2	46	18.4		
Worse than expected	51	20.4	16	6.4	202.59	0.000*
Better than expected	11	4.4	188	75.2		

(*) Statistically significant at p ≤0.05

Table (8): Correlation of the studied health care providers' communication score and the studied parturient woman child birth (VAS) pain, childbirth coping scale, and childbirth satisfaction scale before and after the program implementation

Variables	The maternity care providers' communication score			
	Pre-program implementation		Post-program implementation	
	R	P-value	R	P-value
Parturient women child birth (VAS) pain	0.062	0.667	0.289	0.04*
Parturient' pain coping with childbirth	-0.020	0.892	0.310	0.02*
Parturient women' birth satisfaction	0.415	0.003**	0.397	0.004**

*P: Significance. * Significant (p≤ 0.05).*
*Correlation is significant at the 0.05 level.
**Correlation is significant at the 0.01 level

Table (1): Showed that the majority of staff were aged 30 years and over,. Participants' qualifications naturally reflected their healthcare classifications: physicians (58% of qualifications/certificates), nursing staff had varied qualifications (52%). The majority (80%) of participants had not been trained in effective patient communications.

Table (2): Portrayed that the observed mean ± SD of maternity care providers' communication with parturient women were significantly increased after program implementation than before with p – value (0.000)

Figure (1): Illustrated that the minority of maternity care providers were demonstrate good level of communication skills with parturient women   before program implementation (6.0%), meanwhile these percentage increased in post program implementation to 60.0% with high statistical difference p- value (0001)

Table (3): Showed that there were no statistical significant difference regards socio-demographic characteristics of the studied participant's women. (p- 0.262) As the Mean ± SD age between both groups was 33.40±6.09 vs.34.01±5.09, nearly more than one thirds of studied participants were illiterate and read and write among both groups (44.4% vs. 43.2%). Regards occupation, more than two thirds of participants were house wives and living in rural areas (74.8% vs. 71.6% & 68.4% vs. 67.6% p- value (0.347 & 0.500 & 0.600 &0.398) .

Table (4): Revealed that there were no statistical significant difference among both groups regarding obstetrics history in terms of no. of gravidity, parity, and history of abortion ,as well as their gestational weeks were 39 weeks among nearly half of participants in both groups (43.6% vs. 41.6%). P- Value (0.236, 0.236, 0.132, and 0.280).

Figure (2): Illustrated that degree of childbirth pain that experienced by the studied participants women who recruited before the program implementation were between very severe pain & worst pain possible (62.0% & 38.0%). While participant's women recruited after program implementation experienced severe pain and very severe pain degree (62.8% & 37.2%) with statistical significant difference P-value (0.000).

Table (5): Portrayed that there were statistical significant difference among both groups regarding score of childbirth pain coping scale. As (74.8%) of participants women who assigned to pre-program implementation were need a lot of a lot of help to cope with their severe pain with total mean ± SD 2.32±0.85 compared to (74.8%).of participant's women who assigned to the post-program implementation group were able to cope and adapt to labour pain through doing 3 Rs (relaxation, rituals, and rhythm) with total mean ± SD 5.32±0.85.

Table (6): Demonstrated that the mean ± SD of labor' birth satisfaction scale before and after training program implementation were statistically significant difference among both groups for all scale domains components; quality of care provision, women's personal attributes., and stress experienced during labor domain . p-value (0.000).

Figure (3): Cleared up that the percentage of birth satisfaction were significantly high among group of participant women assigned to post- program implementation (87.6%) compared to group of women assigned to pre- program implementation (6.4%), P- value (0.000).

Table (7) : Showed that the large proportion of the total participants women in pre-program implementation group reported their current child birth experience as they were expected/ mixed feeling and worse than expected (20.4%).

Meanwhile; the post-program implementation participant were reported their current labour experience were better than expected (75.2%) & as expected / mixed feeling (18.4%), p. value (0.000).

Table (8): Illustrated that there were strong positive correlation between women childbirth pain, women childbirth satisfaction and the total maternity care providers' communication score among both pre or post- program implementation groups p- value (0.04 & 0.004). Meanwhile; women's coping with labour pain report significant negative correlation with the total score of maternity care providers' communication score among pre-program implementation (0.892) than post program group p-value (0.02).

Discussion

A growing body of studies have linked health caregivers' communication abilities to a variety of important patient outcomes, such as satisfaction, adherence, and favourable health indicators. Maternity care is one health profession where the necessity of good communication has been highlighted. The use of language is an important communication tool in maternity services. Clinical guidelines will have noted a shift in the NICE Intra-partum care Guideline's emphasis over time. The current version of the guidelines emphasizes the need of effective intra-partum communication and respect for women's autonomy, whereas prior versions focused nearly entirely on clinical actions **(NICE, 2017).**

This study used data from an Egyptian hospital collected in response to the World Health Organisation's guidelines that focuses on offering a parturient women an opportunity for a positive birthing experience. So, this study conducted trying to support the World Health Organisation guidelines by Evaluate the effect of a training program for maternity care providers on their labour language, communication skills & maternal outcomes.

In this study, the mean score of maternity care providers performance regarding effective communications showed significant improvement in post training as the nearly two thirds of them achieved good level of performance and were communicate effectively with parturient women this reflect the effect of the training program & support the fist study hypothesis . These results could find support in the literature, are assumed/ recommended by the World Health Organisation **(WHO) a, 2018).**

According to **(Rezaei-Abhari, et al., 2019),** having a communication skill workshop improved the communication skills of midwives. Another study backs up these conclusions. **(Naghizadeh, et al., 2014 & Taheri, et al., 2015**) The nurses' study also

shows how training might help them improve their communication skills.

On the other side, one study by (**Dickinson, et al., 2003**) found that persons' clinical performance was diminished after communication skill training. This is in contrast to the findings of the current study. This could be due to a number of causes, including insufficient training duration, insufficient teaching methods and material, and low employee enthusiasm.

The findings concerned with child birth pain severity and the ability of the parturient women to cope with pain. The results reported that although the participant's parturient women who cared by trained care providers experienced variable degree of pain between severe and very sever but they were able to cope with it. These findings also support the second study hypothesis.

Also reflects the outcomes of a training program aimed at maternity care workers using effective communication and supportive emotive labour language while caring for parturient mothers. Furthermore, the self-affirmation theory, which holds that people have a fundamental motivation to retain their self-integrity and preparation in whatever situation, explains this (**Steele, 1988**). Positive language from health experts, according to this notion, emphasizes to women their underlying belief that they can cope with childbirth, boosting their basic motivation to succeed.

Furthermore, according to (**Van & Haken, et al., 2018**), Dutch mothers are separated in their delivery preferences, with those who felt less likely to cope preferring for more medical assistance, despite identical physical outcomes in labour time and pain levels.

To mitigate the severity of language difficulties, (**NICE, 2017**) recommendations propose that a woman's interactions with healthcare practitioners be translated by a language-appropriate interpreter at all times. According to studies, having a skilled interpreter on hand allows women to feel heard and more involved in their care (**Lyberg, et al., 2012**). Language choices in maternity care have been shown to have an emotional impact on outcomes. Words like "failure," "tear," and "inflamed" are frequently used in talks of women's care, and have been shown to have a negative impact on psychological well-being and pain tolerance (**Vranceanum, et al, 2012**). The use of positive words by professionals has been demonstrated to benefit patients, particularly when it comes to pain (**Howick, et al., 2018**).

Also this study indicated that the mean score of parturient women birth satisfaction with all domains of satisfaction including, quality of care they received from the trained providers, their personal attributes, and their perceived childbirth stress were significantly high among participant women assigned to post- program implementation.

A recent study conducted in Eraq by **Ahmed, 2020** concluded that women's satisfaction with health care professionals' verbal and nonverbal communication in the delivery room is related to their satisfaction with birth care. And recommended that, improving health care workers' communication skills can go a long way toward improving care in the birth room

In an Ethiopian institution-based cross-sectional descriptive study, conducted by **Melese, 2014** reported that the provider's communication with their clients resulted in client high satisfaction rates.

On the other hand, a recent study by **Sayed, et al., 2018** Conducted, among 400 women who gave birth in a tertiary university hospital in upper Egypt hospital, and reported that dissatisfaction with overall care were attributed to a lack of provider communication.

Maternal child birth experience in this study were found to be positive as the three quarters of parturient women who cared by trained care providers, reported their experience as better than expected that support the research hypothesis and indicate the effects of training program

This was supported by (**Downe, et al. 2018**) who reported that women wanted a fulfilling birth experience. However, results for the survey data on satisfaction with their experience of birth was not supported by this research, where the outcomes from the items and the survey were not statistically valid. This could be attributed to the structure of the survey or the means by which the data were collected, either of which could affect the analysis.

The relationship between a woman and the maternity providing care during labour has a significant influence on her birth experience. The most important factors to women are to be treated as an individual, with respect and warmth (**Oladapo, et al., 2018**).

Lastly, this study findings revealed that there were a significant strong positive correlation between women childbirth pain, childbirth satisfaction, and the total maternity care providers' communication score among both pre or post- program implementation groups . With exception to women's coping with labour pain that report significant negative correlation with the total score of maternity care providers' communication score among pre-program implementation than post program group. This is confirmation that despite potential data issues, maternity care providers' effective communication skills were influential in giving their parturient women a positive birth experience. This supports the literature, and the World Health Organisation's recommendations. (**Bashour, et al., 2013**)

Conclusion

Based on what is reported in this study finding, we can concluded that:

Women's childbirth pain and their ability to cope with it, childbirth satisfaction, and childbirth experience is significantly correlated with the effective maternity care providers communication, and language.

Recommendations

Based on the light of the current study findings we recommended the following:

1- All newly appointed maternity care professionals require ongoing training and orientation programs in order to follow the requirements for successful labor language and communication.

2- Future multicenter studies with a large sample size are recommended to focus on the assessment of such programs on pregnancy, labour, postpartum, neonatal outcomes.

Limitations of the study:

The study's limitations included a sample population limited to one hospital, which reduced the findings' generalizability.

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