Factors associated with women's satisfaction during labor

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Abstract

Labor is a critical time for women and newborns. Every day in 2017, approximately 810 women died from preventable causes related to pregnancy and childbirth. Many studies revealed that labor care satisfaction is a critical point of intervention to eliminate the high maternal mortality rate. Thus, the **Aim** of this research was to assess factors associated with women's satisfaction during labor. A descriptive research design was utilized. A convenience sample of 384 women in labor was chosen from El-Shatby Maternity Hospital affiliated to Alexandria University. **Tools:** A socio-demographic and reproductive history interview schedule and the Birth Satisfaction Scale (BSS) were used. **Results:** the study revealed that 57% of the studied women had low satisfaction level. Significant correlations (0.01) were observed among satisfaction level and age, education, occupation, income and residence. Significant correlations (0.01) were observed among satisfaction level and number of gravidity, parity, abortion and type of delivery. **Conclusion:** more than half (57 %) of the study subjects had low satisfaction level. Many factors were associated with women's satisfaction during labor especially elect the place of birth, birth environment, sufficient support, staff communication, coping during labor, feeling in control, preparation for childbirth, relationship with baby and stress experienced during labor. Those factors are important indicators to improve women satisfaction during labor experience. **Recommendation:** midwifery care staff need to fully understand woman's expectations for their care, and provide care that is consistent with those expectations.

Keywords: Factors associated with, women satisfaction, labor.

Introduction

Nursing is a deeply human practice, particularly in obstetrics and gynecologic specialty including labor. Labor is a critical time for women and newborns. Every day in 2017, approximately 810 women died from preventable causes related to pregnancy and childbirth.(World Health Organization [WHO], 2018) Many studies revealed that labor care satisfaction is a critical point of intervention to eliminate the high maternal mortality rate.(Getenet et al., 2019) World Health Organization (WHO) highlights ensuring women's satisfaction as a mean of secondary prevention of maternal mortality and suggests that women's satisfaction must be assessed to improve the quality of healthcare provided to them and enhance rates of health-seeking behaviors of women.(World Health Organization [WHO], 2018)

The concept of satisfaction is complex and poorly defined. Ware et al, defined an individual's satisfaction with healthcare as "personal evaluation of healthcare services and providers". These evaluations reflect the personal preferences of the individual, the individual's expectations and the realities of the received care.(Mucuk & Ozkan, 2018) Childbirth satisfaction of women is an ultimately important issues for the woman's health, infant's well-being, mother-infant relationship and better for all family relationships. A positive childbirth experience motivates the mother to deal with her baby effectively, rapidly and easily adapts with her maternal role by feeling positive emotions towards her baby. On the other hand, mother's negative childbirth experience has a negative effect on breastfeeding and baby bonding behavior.(Hairston et al., 2019)

According to previous studies factors associated with women's satisfaction with childbirth experience. The concepts of control and confidence are firmly associated with birth satisfaction. Where, women who feel in control during labor usually have high levels of satisfaction at six weeks postpartum and also more likely to express long-term satisfaction with their birth experience when asked years later.(Jafari et al., 2017) Feeling in control during labor is connected with high levels of

choice provision and expressions of emotion during birth. Thus, women must empower to participate in decision-making about how their labor is to be managed, through having right to refuse specific treatments and opportunity to choose among the available options.(Maputle, 2018)

Choice and autonomy to choose where to give birth are significant factors in maternal satisfaction with childbirth. Some countries show an increasing number of women who elect home birth because it is considered safe, involves fewer medical interventions, gives them the opportunity of having their babies in the comfort of their own homes and conveys reassurance to the woman that giving birth is normal and not an illness. On other hand, literature, highlights women's belief that hospital was safer than home if complications arise, includes feeling 'protected' by the medical environment, easier access to pain medication, increased monitoring, and belief that it is cleaner than home birth. (Yuill et al., 2020) Ultimately, clean delivery rooms are important indicator of birth satisfaction for all childbearing women. A recently published review summarized the following factors associated with women's satisfaction in childbirth namely accessible, safe, non-threatening, good physical environment, cleanliness, availability of drugs, supplies and human resources. Where infection risks are minimized and feeling of comfort increased.(Mocumbi et al., 2019)

In accessing obstetric care, most women are influenced by factors, such as provider attitude and competency. Whereas cultural inappropriateness of care, disrespectful, inhumane services and lack of emotional support can deter them from accessing obstetric care.(Geleto et al., 2018) Provision of sufficient support of delivery staff especially midwifery nurse conveys comfort, reassurance and improve her satisfaction toward her labor experience which considered the basic part of birth satisfaction. Continuous support from her health providers during labor helps in reducing use of pain medication and less invasive procedures. Also, women with partner's who help during labor report less pain and greater satisfaction with the birth experience.(Thomson et al., 2019)

Effective communication with maternity care staff is an important factor for women's satisfaction with care during labor and delivery. An effective relationship between midwives and mothers can result in enhanced satisfaction, increased sense of security, mutual trust, interaction, an improved ability to make an informed decision, an enhanced sense of assurance and better control of the delivery process. Also, improved health, help in lowered blood pressure, anxiety, pain and fear of a vaginal birth.(Ahmed, 2020) Features of good communication include offering information rather than having to ask for it, provision of detailed information to facilitates choices, given explanations in simple language, informed of plan of treatment, honest in relation to any procedures or examinations and provided with consistent advice.(World Health Organization [WHO], 2017)

Systematic preparation for childbirth program helps in improving satisfaction with childbirth experience. This enables women to communicate better with healthcare providers, participate in decision-making regarding their care and decreasing the perception of labor pain intensity. Women who seek out information are more confident and able to cope. On the other hand, insufficient information is associated with reports of birth dissatisfaction.(Akca et al., 2017) Childbirth preparation are performed through different ways as attending antenatal classes, reading books, leaflets and follow hospital website.(Barimani et al., 2018)

A variety of studies have found differences in satisfaction among women according to their type of delivery (spontaneous vaginal, planned cesarean, emergency cesarean, and instrumental vaginal delivery (vacuum or forceps), degree of medical intervention in birth (epidural analgesia, induction), and the location of birth (home, birth center, hospital). Women who have emergency deliveries and instrumental vaginal delivery are more likely to experience distress during labor, prolonged labor and may be have obstetric injuries compared to spontaneous vaginal delivery.(Preis et al., 2019) Women who birth at free-standing birth centers report a more positive birth experience than women who give birth in a regular

hospital maternity ward. In addition, there is evidence that women who birth at home are the most satisfied compared to other groups. Although some studies suggest that medical analgesia reduces satisfaction and other research indicates that the link between analgesia and satisfaction is more complex.(Lewis et al., 2018)

The relationship a mother forms with her newborn immediately after childbirth is considered the basic part of birth satisfaction, which may shape her future relationship with the baby. Skin-to-skin contact immediately post birth results in mothers feeling and expressing greater emotional closeness to their newborn with more affection shown. So, a rewarding relationship with the baby will inevitably create greater satisfaction.(Widström et al., 2019)

Assessment of factors that shapes women's satisfaction with maternity services is crucial and helps in future utilization of service. Understanding woman's perspective, provision sufficient medical care during labor, respect her pain, using non pharmacological pain methods and addressing her needs during childbirth are considered as part of quality-improvement program can make delivery care safe, affordable, and respectful. (Panth & Kafle, 2018) So, care givers need to fully understand mothers expectations for their care and provide care that is consistent with those expectations. The health system should be encouraged to increase maternal satisfaction in the health institution and provide maternal-friendly service. Finding out more about what causes birth satisfaction/dissatisfaction will help maternity care professionals to improve the standards of intranatal care and allocate resources effectively.

Operational definition:

Labor was defined as the period from beginning of true contraction that cause cervical dilatation to the first 1 to 4 hours after delivery of the fetus and placenta.

Aim of the study

This study aims to assess the factors associated with women's satisfaction during labor.

Research question:

What are factors associated with women's satisfaction during labor?

Materials and methods

Materials

I-Research design:

A descriptive design was utilized in this study.

II-Setting:

The study was conducted at El-Shatby Maternity Hospital in Alexandria. The hospital is affiliated to Alexandria University. It is composed of sixteen units. The study was carried out in labor and postpartum units. The labor unit contains 12 beds and postpartum unit contains 8 beds.

III-Subjects:

Study sample contained a convenient sample of 384 women in labor. Number of studied women was estimated according to Epi- Info program using the following parameters:

- Population size = 4238 women in labor.
- Expected frequency =50%.
- Acceptable error =5%
- Confidence coefficient = 95%
- Minimum sample size = 384 women in labor.

Inclusion criteria:

Mother free from any medical disease, no pregnancy risks and agreeing to participate in the study.

IV-Tools:

Data of the present study were collected using the following tools:

Tool (1): A socio-demographic and reproductive history interview schedule:

This tool was developed by the researcher and composed of two parts. The first part elicits socio demographic data as age, marital status, residence, occupation, and education. The second part elicits reproductive history such as gravidity, parity, history of abortion as well as type and place of last delivery.

Tool (2): The Birth Satisfaction Scale (BSS):

The Birth Satisfaction Scale was developed by The Martin C & Fleming V, 2011. It was developed to assess women's satisfaction of their birth experience. Three overarching themes were found to relate to women's satisfaction/dissatisfaction with their birth experience, and each theme underpinned by sub-themes as follow: (1) quality of care provision (home assessment, birth environment, sufficient support, relationships with health care professionals), (N= 8), (2) personal attributes (ability to cope during labor, feeling in control, preparation for childbirth, relationship with baby), (N= 8), and (3) stress experienced during labor (distress experienced during labor, obstetric injuries, perception of having received sufficient medical care, receipt of an obstetric intervention, pain experienced, long labor, health of baby), (N= 14).

The scale consists of 30 items, which are rated on five-point Likert scale that ranges from 1 to 5, with the following rating criteria; 1 (Strongly Disagree), 2 (Disagree), 3(Neither Agree nor Disagree), 4 (Agree), and 5(Strongly Agree). Half of the items are reverse scored. The total score of BSS is ranging between 30 to 150 with a score ranging from 111 to 150 indicating high, from 70 to 110 indicating moderate, and below 70 indicating low satisfaction with birth experience.

Methods:

1- Formal agreement of Research Ethics' Committee of Alexandria Faculty of Nursing was obtained before conducting the research.

2- An official approval was obtained from the medical director and head nurse of El-Shatby Maternity University Hospital after explaining the purpose of the study to conduct the study and collect the necessary data.

3- The development of the socio-demographic and reproductive history sheet was done by the researcher after thorough review of literature

4- Tool II was adapted by the researcher from (Martin C & Fleming V, 2011)

5- A jury composed of five experts in the field of Obstetric and Gynecological nursing was consulted to examine the content validity of the study tools. Modifications were done accordingly

6- A pilot study was done 20 studied women (Pilot study participants were excluded from the study), to ascertain the clarity and applicability of the study tools and to identify the obstacles that may be faced during data collection. The interview time ranged between 30 - 45 minute for each subject.

7- The reliability of the study tools was ascertained by measuring the internal consistency of their items using the Cronbach alpha coefficient test. The study tool reliable as $\alpha = (0.593)$.

Actual Study:

- Each studied woman was interviewed individually between 30 - 45 minute for each subject, in which the researcher explained the aim of the study, form of the study tools and then informed written consent was obtained from them.
- A second interview was done with each studied woman to apply the socio-demographic and reproductive history sheet and The Birth Satisfaction Scale (BSS). This interview lasted between 30-45 minutes according to studied woman ability and cooperation.
- The data were collected over a period of two months starting at the 3rd March 2019 and ending at 28th April 2019.

Ethical consideration was maintained by obtaining the appropriate approvals, the informed consent and by assuring the participants that their decision to be included or not in the study will not affect their care in any means at that they are free to withdraw at any point of time in the study. Their privacy and confidentiality were maintained.

Statistical analysis:

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp). Data were analyzed descriptively to obtain number

and percentage, means, and standard deviation. Significance of the obtained results was judged at the 5% level. Then, the correlations between two quantitative variables were assessed using Chi square and Monte Carlo tests.

Results:

Table (1): shows the distribution of the studied women according to their socio-demographic characteristics. It appears from this table that subjects' age ranged between 19 and 37 years, with a mean age of 24.88 ± 4.33 years, more than half of them (52.0%) being under 30 years. While, more than two third (65.63%) of them aged from 20 to 25 years. Concerning level of education, it was noticed that 65.88% of studied women were illiterate. The vast majority (98.44%) of the study subjects were housewives. All of them were married muslims. The table also shows that most (89%) of the study subjects were living in urban areas and 78% of them had just enough family income/month.

Table (1): distribution of studied women according to their socio-demographic:

Socio-demographic characteristics	No (384)	%
Age (year):		
<20	7	01.82
20-25	252	65.63
26-37	125	32.55
Min. – Max.	19.0 – 37.0	
Mean & SD:	24.88 ± 4.33	
level of education:		
- read and write	253	65.88
- primary education	65	16.93
- secondary	59	15.36
- university	7	01.82
Employment Position:		
- Housewife	378	98.44
- Employed	6	01.56
Religion:		
- Muslim	384	100.0
- Christian	0	00.00
Marital status:		
- Married	384	100.0
- Divorced	0	00.00
- Widowed	0	00.00
Residence:		
- Rural	40	10.42
- Urban	344	89.58
Family income/month:		
- More than enough	32	08.33
- Just enough	303	78.91
- Not enough	49	12.76

Table (2): exhibits that almost sixty percent of the study subjects had two previous pregnancies (59.64 %) and two deliveries (61.46 %). The majority (78%, 96%) of studied women had cesarean section delivery and delivered in general hospital, respectively.

Table (2): distribution of studied women according to their reproductive history.

Reproductive history	No (384)	%
Number of gravida		
<2	229	59.64
2-4	124	32.29
5 and more	31	08.07
Number of para		
<2	236	61.46
2-4	141	36.72
5 and more	7	01.82
Number of abortion		
- no	104	27.1
- Once	261	93.21
- Twice or more	19	06.79
Type of last delivery		
- NVD	84	21.88
- C.S	300	78.12
Place of delivery		
- Home with TBAS or relatives	7	01.82
- General hospital	371	96.62
- Rural hospital	6	01.56

Table (3): presents distribution of studied women according to their factors associated with satisfaction during labor through three themes. First theme, **quality of care provision**, it was found that more than two thirds (67.7, 67.2 & 69.3 %) of studied women had neutral satisfaction related to home assessment, birth environment and relationships with health care professionals respectively. On the other hand, it was found that more than two third (69.5 %) of studied women had high satisfaction related to sufficient support from midwifery staff. Second theme, **Women's personal attributes**, near two third (60.9 %) of studied women had high satisfaction related to preparation for childbirth. On the other hand, it was observed that majority (79.4, 69.3 and 78.1 %) of studied women had low satisfaction related to ability to cope during labor, feeling in control and relationship with her baby respectively. Third theme, **Stress experienced during labor**, it was exhibited that 91.9 and 62.5 % had neutral satisfaction related to receipt of an obstetric intervention and health of baby respectively. However, majority (83.3, 59.6, 64.3, 89.8 & 72.9 %) of studied women had low satisfaction related to distress experienced during labor, obstetric injuries, perception of having received sufficient medical care, pain experienced and long labor respectively.

Table (3): distribution studied women according to their factors associated with satisfaction during labor.

Factors	Total (384)					
	Satisfied		Neutral		Dissatisfied	
	No	%	No	%	No	%
Quality of care provision:						
1. Home assessment	19	4.9	260	67.7	105	27.3
2. Birth environment	93	24.2	258	67.2	33	8.6
3. Sufficient support	267	69.5	78	20.3	39	10.2
4. Relationships with health care professionals	59	15.4	266	69.3	59	15.4
Women's personal attributes						
5. Ability to cope during labor	32	8.3	47	12.2	305	79.4
6. feeling in control	56	14.6	62	16.1	266	69.3
7. Preparation for childbirth	234	60.9	104	27.1	46	12.0
8. Relationship with baby	32	8.3	52	13.5	300	78.1
Stress experienced during labor						
9. Distress experienced during labor	33	8.6	31	8.1	320	83.3
10. Obstetric injuries	75	19.5	80	20.8	229	59.6
11. Perception of having received sufficient medical care	65	16.9	72	18.8	247	64.3
12. Receipt of an obstetric intervention	25	6.5	353	91.9	6	1.6
13. Pain experienced	13	3.4	26	6.8	345	89.8
14. Long labor	65	16.9	39	10.2	280	72.9
15. Health of baby	129	33.6	240	62.5	15	3.9

Figure (1): represents the distribution of studied women according to their satisfaction level of labor experience. It was obvious that 57% of studied women had low satisfaction level, while 36% of them had moderate satisfaction level and only 6% had high satisfaction level.

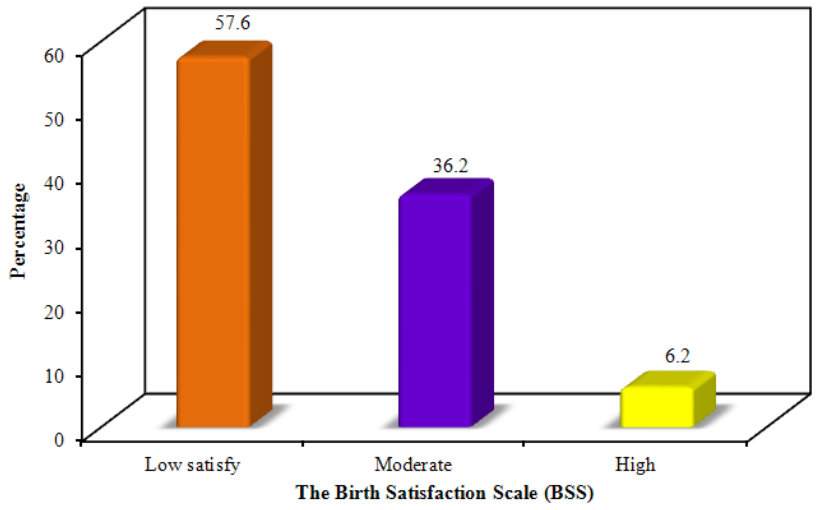

Figure (1): percentage distribution of studied women according to their satisfaction level of labor experience**.**

Table (4): shows the relationship between total score of women's satisfaction level and their socio-demographic characteristics. It was found that, there was a positive statistically significant correlation between level of satisfaction and age (P = 0. 001), level of education (P = 0. 001), employment position (P = 0. 008), original residence (P = 0. 001) and family income (P = 0. 001). Where the majority (84.6%) of the study subjects who aged between 20-25 year had low maternal satisfaction. While, all the study subjects (100%) who are illiterate, housewives have just enough income and (94.1 %) urban dwellers had low maternal satisfaction.

Table (4): Relationship between total score of women's satisfaction level and their socio-demographic characteristics.

Socio-demographic characteristics	Total score of studied woman Satisfaction						χ^2	P
	High (24)		Moderate (139)		Low (221)			
	No	%	No	%	No	%		
Age (year):								
<20	0	0.0	7	5.0	0	0.0		
20	18	75.0	47	33.8	187	84.6	100.964*	MCp <0.001*
26-37	6	25.0	85	61.2	34	15.4		
level of education:								
-read and write	18	75.0	14	10.1	221	100.0		
-primary education	6	25.0	59	42.4	0	0.0	367.638*	MCp <0.001*
-secondary	0	0.0	59	42.4	0	0.0		
-university	0	0.0	7	5.0	0	0.0		
Employment Position:								
-Housewife	24	100.0	133	95.7	221	100.0	9.448*	MCp= 0.008*
-Employed	0	0.0	6	4.3	0	0.0		
Original residence:								
-Rural	18	75.0	9	6.5	13	5.9	114.458*	<0.001*
-Urban	6	25.0	130	93.5	208	94.1		
Family income/month:								
-More than enough	0	0.0	32	23.0	0	0.0	224.165*	MCp <0.001*
-Just enough	0	0.0	82	59.0	221	100.0		
-Not enough	24	100.0	25	18.0	0	0.0		

χ^2: **Chi square test** MC: **Monte Carlo**
p: p value for comparing between the studied groups *: Statistically significant at $p \leq 0.05$

Table (5): shows the relationship total score of women's satisfaction level and their reproductive history. There was a positive statistically significant correlation between level of satisfaction and gravidity, parity, abortion history and type of delivery (P= 0. 001) respectively. Where majority of the study subjects (93.7, 93.7, 96.4 & 96.4 %) who had less than two pregnancies and deliveries, had one abortion and cesarean section delivery respectively had low maternal satisfaction. On the other hand, there was a negatively statistically significant correlation between level of satisfaction and place of delivery (P = 0. 003), where the study subjects who delivered in general hospital had high maternal satisfaction.

Table (5): Relationship between total score of women's satisfaction level and their reproductive history.

Reproductive history	Total score of women's Satisfaction level						χ^2	P
	High (24)		Moderate (139)		Low (221)			
	No	%	No	%	No	%		
Number of gravida								
<2	1	4.2	21	15.1	207	93.7		
2-4	19	79.2	92	66.2	13	5.9	252.585*	<0.001*
5 and more	4	16.7	26	18.7	1	0.5		
Number of para								
<2	1	4.2	28	20.1	207	93.7		
2-4	23	95.8	104	74.8	14	6.3	257.287*	MCp <0.001*
5 and more	0	0.0	7	5.0	0	0.0		
Number of abortion								
No	18	75.0	79	56.8	7	3.2		
Once	2	8.3	46	33.1	213	96.4	199.188*	<0.001*
Twice or more	4	16.7	14	10.1	1	0.5		
Type of last delivery								
NVD	3	12.5	74	53.2	7	3.2	126.493*	<0.001*
C.S	21	87.5	65	46.8	214	96.8		
Place of delivery								
Home with TBAS or relatives	0	0.0	0	0.0	7	3.2	13.853*	MCp= 0.003*
General hospital	24	100.0	133	95.7	214	96.8		
Rural hospital	0	0.0	6	4.3	0	0.0		

χ^2: **Chi square test** MC: **Monte Carlo**
p: p value for comparing between the studied groups *: Statistically significant at $p \leq 0.05$

Discussion

Women's satisfaction with maternal health care services, especially care during birth and labor, has great importance to health care providers. Researches show that women's satisfaction with childbirth is related to the health and well-being of the mother and her baby, it is most probably related to many factors.(Sayed et al., 2018) Thus, it is important to assess factors associated with women's satisfaction in order to develop effective and satisfactory nursing care. Accordingly, the aim of this study was to assess the factors associated with women's satisfaction in childbirth.

On investigating women's satisfaction level during labor experience in the present study. It was noticed that that more than half (57%) of studied women had low level of satisfaction, while 36% of them had moderate level of satisfaction. ***This could be attributed to the fact that*** they were not satisfied with the quality of the provided care. Especially, way of communication, labor support and the responsiveness to their needs. This may be due to the characteristics of the midwifery nurses who have assigned large number of patients and lack of sufficient time devoted to each patient due to crowded unit are a burden inducing stress, resulting in that the nurses tend to be task-oriented as a mean of coping. In this

regard, their main concern is to just provide the necessary physical care and avoiding attending to their patients' emotional concerns. In addition, the majority of the studied women experienced Caesarean Section (C.S) delivery. Thus, they may be dissatisfied due to physical stress of C.S labor and inadequacy of analgesia. This finding is in agreement with the study of **Kifle et al., (2017)** they conducted on women during intrapartum period. It reported that only 20.8% of their participants were satisfied with intrapartum service.(Kifle et al., 2017) In contrast, **Jha et al. (2017)** they found an overall high satisfaction with delivery services. Those results may be due to reported successful interpersonal communication with nurse-midwives and ensuring privacy during childbirth and hospital stay. (Jha et al., 2017)

On query about factors associated with satisfaction level during labor, according the present study three themes were found to relate to women's satisfaction/dissatisfaction with their birth experience and each theme underpinned by sub-themes. First theme, **quality of care provision**, it was found that more than two thirds (67.7, 67.2 & 69.3%) of studied women had neutral satisfaction related to home assessment, birth environment and relationships with health care professionals respectively. On the other hand, it was found that more than two third (69.5 %) of studied women had high satisfaction related to sufficient support from midwifery staff. These results are consistent with the findings of **Gashaye et al. (2019)** they reported that near half (41.8%) of the clients were not satisfied with their privacy, 61.5% were not satisfied by the freedom of movement in the ward during their labor and delivery process and almost half (59.07%) were not happy about the institutional regulation and professional's care and sufficient support. Only 22.45% of clients responded that they received respectful care and health professionals' communication. (Gashaye et al., 2019) On the other hand, these results are not harmony with **Asres (2018)** who revealed that the majority 88% of delivering mothers had high satisfaction level. Where, 95% of them had high educational level, access to ambulance service, respect full delivery service, welcoming hospital environment, proper labor pain management and listening to their questions respectively, which considered independent predictors for maternal satisfaction.(Asres, 2018)

Second theme in the current study, that was found to relate to women's satisfaction/ dissatisfaction. **Women's personal attributes**, near to two third (60.9 %) of studied women had high satisfaction related to preparation for childbirth. On the other hand, it was observed that majority (79.4, 69.3 and 78.1 %) of studied women had low satisfaction related to ability to cope during labor, feeling in control and relationship with her baby respectively. These results are supported by the study of **Nahaee et al. (2020)** they found that, the most labor predictors of the low childbirth satisfaction are anxiety, insufficient support from staff during labor, maternal dehydration, and allied interventions. So, they recommended that appropriate consultation with couple during pregnancy and encouraging to attend birth preparation classes may help to reduce some factors such as violence, fear and anxiety.(Nahaee et al., 2020)

On the other hand, these results are not matching with the study of **Goodman et al. (2004)** they revealed that women experienced high total childbirth satisfaction, high personal control during labor and moderate labor pain. ***This could be attributed to the fact that*** over than one-half (55%) of their sample had a high school education, over half (58.4%) were employed and 40% had attended childbirth preparation classes.(Goodman et al., 2004)

Third theme in the present study was found to relate to women's satisfaction/ dissatisfaction. **Stress experienced during labor**, it was exhibited that 91.9 and 62.5 % had neutral satisfaction related to receipt of an obstetric intervention and health of baby, respectively. However, majority of studied women (83.3, 59.6, 64.3, 89.8 & 72.9 %) had low satisfaction related to distress experienced during labor, obstetric injuries, perception of having received sufficient medical care, pain experienced and long labor respectively. This is in line with the study of **Falk et al. (2019)** they found that obstetric interventions and complications, including emergency cesareans section and postpartum hemorrhage, were significantly related to dissatisfaction with

childbirth.(Falk et al., 2019) The current finding is also in harmony with the study of **Nahaee et al. (2020)** they summarized that, the labor variables which correlated with low birth satisfaction score are dehydration, labor induction and labor augmentation with oxytocin, abnormal fetal cardiogram, receiving remifentanil and labor dystocia. As well as high fear, moderate or severe anxiety state, insufficient support by staff, vaginal birth with episiotomy and/or tear, emergency C-section and no breast feeding at 1st hour post childbirth are correlated with low birth satisfaction score.(Nahaee et al., 2020)

The current study revealed a positive statistically significant correlation between satisfaction level and their age, education, occupation, income and residence (P = 0. 001). There was also, a positive statistically significant correlation between satisfaction level and number of gravidity, parity, abortion and type of delivery (P= 0. 001), except place of delivery was a negative statistically significant correlation (P = 0.003). This is contradictory with the results of a study by **Elgazzar et al. (2018)** they a statistically significant difference between age of studied women and the level of satisfaction, while there is non- statistically significant difference between level of education, occupation or family income with women's satisfaction level. Also, they found a highly statistically significant difference between women's satisfaction and number of parity, while there is non- statistically significant difference between number of gravida, number of abortion and gestational age with women's satisfaction level (p>0.05).(Elgazzar et al., 2018)

Conclusion:

Based on the obtained results, it can be concluded that more than half (57 %) of the study subjects had low satisfaction level. Many factors were associated with women's satisfaction during labor especially elect the place of birth, birth environment, sufficient support, staff communication, coping during labor, feeling in control, preparation for childbirth, relationship with baby and stress experienced during labor. Those factors are important indicators to improve women satisfaction during labor experience.

Recommendations:

The followings are the main recommendations yielded by this study:

1. Midwifery care staff should assess studied women's satisfaction during labor, to be more inclusive and supportive to studied women who did not satisfied with care delivered.
2. Midwifery care staff in the hospital have frequent continuing education on communication and interpersonal relationship.
3. The code of ethics of the nursing profession should be strictly enforced.
4. Midwifery care staff need to fully understand woman's expectations for their care, and provide care that is consistent with those expectations.

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