



## Parturient Needs during Labor: Egyptian Women's Perspective toward Childbirth Experience, a Step toward an Excellence in Clinical Practice

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### ABSTRACT

**Background:**

Every woman giving birth has expectations. Identifying women's expectations, wishes, needs and fears enable the health care provider(s) to work toward a common goal of safe and positive childbirth experience.

**Aim:**

The aim was to determine women's preferences and needs during labor.

**Design:**

Analytic- cross sectional study.

**Setting:**

El Kasr- Aini, - Cairo- University Maternity Hospitals.

**Sample:**

A random sample of 400 women were recruited in the present study with the following criteria; age ranged between 20-30 years old, can read and write, primigravida, nulliparous woman with singleton low risk pregnancies, in the third trimester, up to 37 weeks of gestational age, no previous abortion and free from any medical complains.

**Procedure:**

Data collection took place in the antenatal clinic, each interview administrated questionnaire took a time between 10-15 minutes. Mothers completed the questionnaire in the antenatal clinics during their waiting for medical examination.

**Results:**

Twenty two need requirements emerged from the women's perspective. The highest ranked needs for parturient women during labor are; maintaining privacy through all procedures of 86.5%, accessibility of nurses demonstrate empathy of 67.5%, availability to ventilate and expressing fear and anxiety of 57.5%, quick response to request of 67.5%, frequent monitoring of 52.8%, accessibility of caring medical staff of 47.2% and short delivery of 52.8%.

**Conclusion:**

Despite good general coverage of labor care among women, there were clear variations in the type of management given to them or needed by them. This study confirms that different factors predict the multidimensionality of childbirth satisfaction.

**KEY WORDS:** Parturient woman, Labor, Birth, Needs, Requirements, Satisfaction.

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### INTRODUCTION

Quality improvement of reproductive health care has been announced as one of five global strategies to accelerate progress toward reproductive health goals. The World Health Organization (WHO) emphasizes the evaluation of structure, procedure and outcome of health services to improve quality of care [1].

Worldwide, several methods have been used for improving the quality of maternity care in hospitals such as; clinical practice guidelines (CPGs), clinical pathways and clinical audit [2, 3]. Almost all of these methods have their origin in evidence-based practice (EBP) to apply the best evidence in clinical care [4]. Evidence-based practice is simply the integration of the best available research based evidence, clinical expertise and patient needs, values and preferences to develop a system of quality care [5]. Quality improvement thus requires professional consensus about implementation of research based clinical evidence, and attention to patient needs, values and preferences [6].

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Although evidence based practice has been recognized as necessary for quality care in developed countries, it has often been conceptualized in term of research based clinical evidence and less attention has been paid to patient needs and preferences [7].

Yet service quality has been defined as meeting service users' needs [8]. Patient satisfaction has been recognized as an important outcome measure for the quality of health care since the late 1980s [9]. Furthermore, the identified patient's needs and requirements had a major role in design of the new care model. So, available evidence based guidelines alone do not guarantee patient satisfaction or high quality of care [7].

In Egypt, the large maternity governmental hospitals are facing serious challenges in providing care that is of consistently high quality in a rapidly changing and uncertain environment. Health care providers perceived load as the leading challenge to quality care. The caseload observed included obstetric emergencies, high risk cases, caesarean sections, in addition to normal deliveries. Their main concern is how to manage the cases with minimum loss. Furthermore, limited facilities, the current nursing shortage, nurse job dissatisfaction and inequality of distributed cases over the day are causing staff overloading at peak intake [10]. This surrounding environment minimizing the chance to stop for minutes and think about the woman's expectations and how to be enjoyed with her birth experience. Questions about specific aspects of patients' needs and preferences may be the key ingredients to ensure optimal birthing experiences in term of modifying the performance. Thus the aim of the present study was to determine women's preferences and needs during labor.

## MATERIALS AND METHODS

### **Design:**

Analytic cross sectional study.

### **Research question:**

What are the women's preferences and needs during labor?

### **Setting:**

This study was conducted at El Kasr Aini, Cairo University Maternity Hospitals, at the antenatal clinics. The maternity hospital provides services for approximately 33660 pregnant women in the outpatient clinic, a total of 12455 deliveries, 7725 normal deliveries and 4730 caesarean section deliveries per year (local statistical unit 2010).

### **Sample:**

A random sample of 400 women were recruited in the present study with the following criteria; age ranged between 20-30 years old, can read and write, primigravida, nulliparous woman with singleton low risk pregnancy, in the third trimester, up to 37 weeks of gestational age, no previous abortion and free from any medical complains. The sample size has been determined utilizing sample equation based on information from the daily outpatient clinics' admission, which was approximately fifty percent.

### **Tool:**

After reviewing the literature, eleven open ended questions were adopted in order to be used to identify the women's needs and requirements during labor (table 1) [11]. The questions were designed based on 5Wh1H format (who, what, when, where, why, and how questions). The questionnaire was administered to thirty parturient women following birth at the postpartum unit. Based on their answers, twenty two needs and requirements emerged. Mothers' needs were organized into categories to develop a questionnaire according to Donabedian model, with reflective measures of structure (input, process and outcome).

The designed questionnaire consisted of two parts; 1) *Sociodemographic & obstetric information* which included; mother's age, educational status, family income and gestational age. 2) *Mother's needs questionnaire* consisted of five points Likert scale (1= very important, 2 = important, 3= less important, 4= not sure and 5= not important at all) with 22 items. The questions have been divided under three domains in order to make it easier to navigate among them. *The first domain (structure)* includes elements mainly related to hospital rules i.e. quick admission, accessibility of female doctor in the delivery room, accessibility of male doctor, caring and sensitive staff, presence of pediatrician during labor, availability of pain killer and ensures proper sterilization of equipment. While *the second domain (process)* includes elements in term of nursing behaviors and practice carried during labor, i.e. frequent maternal & fetal monitoring, providing simple information related to any procedure, maintaining privacy, providing continuous feedback related to labor progress, offering help and demonstrating empathy, availability to ventilate and express fear and anxiety, quick response to requests/ complains, washing hands when moving from patient to patient, frequent changes of linen and permission of taking different positions during labor. Finally, *the third domain (an output)* includes elements in term of the expected and desired outcome, which mainly

related to medical practice i.e. short delivery, immediate attachment with newborn, cosmetic incisions, instructions related to postpartum period, short hospital staying and early discharge.

The three domains were revised by the consultants. Content validity and expert's opinions were taken into consideration. The needed modifications were carried out. The reliability of the scale was calculated using the Statistical Package of the Social Science (SPSS) software (English version 9.0). Reliability coefficient was calculated and revealed Cronbach's alpha= 0.91. In addition, unequal split half Guttman's coefficient, alpha part 1 = 0.85, alpha part 2 = 0.91. All indicating very high internal consistency.

Table 1. Five Wh1H format for identifying patient's need & requirements.	
No	Question
1	Are you satisfied with type of your birth you have just had and why*?
2	Which type of birth would you prefer for next time and why?
3	Why did you choose this hospital?
4	Why did you not choose another hospital closer to your home?
5	Which experiences were positive during the hospital stay and why?
6	Which experiences were negative during the hospital stay and why?
7	Are there other services that you expected to receive why and how?
8	Who do you remember and why?
9	Which places do you remember and why?
10	Which moments do you remember and why?
11	Do you have any recommendation for better services in future?
*Patient needs and requirements are only identified by 'Why' questions.	
Adopted from Aghlmand et al. BMC Pregnancy and Childbirth 2008 8:20 doi:10.1186/1471-2393-8-20	

### **Administrative & ethical considerations**

The hospital's administrative authorities were formally informed by the research through the submission of a formal request attached with copy of the research protocol. Then an official permission was obtained. Participation and responding to the questionnaire was voluntary. The anonymity of participants and confidentiality of the mother's responses were ensured by using numerical codes for questionnaires. All participants gave their written consent before receiving the questionnaire.

### **Procedure**

Data was collected during a period of 3 months from the first of June to the end of August 2010. This study was grounded by Donabedian's model to characterize woman's needs during labor in term of structure, process and outcome. Donabedian (1980) emphasized the idea that improved patient outcomes are the ultimate criterion, which is a change in process must lead to positive change in patient outcomes. It considered an aid to implement a systematic and evidence based system for working with quality improvement in hospital departments. Donabedian defined structure as the physical and organizational properties of the settings in which care is provided. While process defined as the treatment or service being provided to the patient. And outcomes are the results of the treatment [12]. From the standpoint of patient, the Donabedian model in 1980 was modified to include genetics, socio-demographics, health habits, beliefs, attitudes and patient's preference. Procedure of the present study follows nursing process in term of assessment, implementation and outcome evaluation [13].

### **I. Assessment phase**

The first step was assessment of mother's needs in delivery and labor unit. This step accomplished through taking a pilot sample of thirty delivered mothers at postpartum unit who met the inclusion criteria and asked them eleven open ended questions were adopted related to their needs during labor (table 1) [11]. Based on their answers, an interviewing questionnaire was designed.

### **II. Implementation phase**

The second step divided into two components, randomization and the interview administration of the questionnaire.

#### **a) Randomization**

*First*, identifying primiparous women who admitted to the outpatient clinic in one day from admission registration notebook, at the outpatient ticket window. Then determining the serial numbers wrote on each ticket. *Second*, limiting the number of mothers in term of who was met the inclusion criteria. *Third*, ordering the numbers of tickets. Woman who had an odd number on her ticket was included in the study.

**b) An interview administration of the questionnaire**

It took place in the antenatal clinic, three days per week and three hours per day for three months. The researcher introduced herself to the primigravida woman and clarified the aim of the study. Each questionnaire took a time between 10-15 minutes to be completed. Mothers received the questionnaire through the period of waiting their medical examination.

**III. Outcome evaluation**

Analyzed the collected data utilizing the Statistical Package of the Social Science (SPSS) software (English version 9.0), and representing the results in form of frequency and percentage.

**RESULTS**

Regarding sample characteristics data denoted that, all pregnant women were primigravida, nulliparas, with mean age of the  $24.52 \pm 3.47$  SD and mean gestational age of  $38.65 \pm 0.97$  SD. Most of mothers had elementary education, with moderate income and chose El Kasr Aini maternity hospital for financial causes (table 2).

**Table 2.** Distribution of the sample by their characteristics.

Sample characteristics	n = 400	
	Mean	SD
Mother's age	24.52	3.47
Gestational age	38.65	0.97
Educational status	No.	%
Read and write	90	22.3
Elementary	175	43.8
Preparatory	63	15.8
Secondary	45	11.3
College	27	6.8
Family income per month		
Low: 150-200 pounds	179	44.8
Moderate: 250-500 pounds	181	45.2
High: Up to 500 pounds	40	10.0
Reason for choosing this hospital		
For medical staff's experience	95	23.8
Financial reason	305	76.2

The most important women's needs in relation to the hospital's rules were accessibility of caring medical staff and pain killer. Forty two percent of women perceived a need for female doctor to be present in delivery room. While the presence of pediatrician during delivery room was very important in case of emergency as expressed by 31.5% of mothers (table 3).

**Table 3.** Distribution of women's needs in relation to hospital resources (Input).

Questions Domains	Very important	Important	Less important	Not sure	Not important at all
	n = 400				
Input (Hospital rules)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Quick admission.	0 (0.0)	105 (26.2)	211 (52.8)	0 (0.0)	84 (21.0)
Accessibility of female doctor in the delivery room.	168 (42.0)	82 (20.5)	0 (0.0)	0 (0.0)	150 (37.5)
Accessibility of male doctor.	0 (0.0)	160 (40.0)	72 (18.0)	0 (0.0)	168 (42.0)
Accessibility of caring and sensitive medical staff.	189 (47.2)	175 (43.8)	36 (9.0)	0 (0.0)	0 (0.0)
Presence of pediatrician during labor.	126 (31.5)	84 (21.0)	0 (0.0)	118 (29.5)	72 (18.0)
Availability of pain killer.	189 (47.2)	61 (15.3)	78 (19.5)	72 (18.0)	0 (0.0)
Ensure proper sterilization of equipment.	147 (36.7)	163 (40.8)	0 (0.0)	90 (22.5)	0 (0.0)

Regarding women's needs in relation to activities carried by nurses in labor unit, eighty six point five percent of women reported their needs for maintaining privacy through all procedures. While 67.5% of them reported there is a need for qualified nurses offer help and demonstrate empathy. In addition, 62.5% and 82.0 % asserted that, it is very important to pay attention to the hygienic aspects in term of frequent changing of wet, unclean linen and hand washing from one patient to another respectively (table 4).

**Table 4.** Distribution of women’s needs in relation to activities carried in labor unit (Process).

Questions Domains	Very important	important	Less important	Not sure	Not important at all
<b>n = 400</b>					
<b>Process (Nursing factors)</b>	<b>No. (%)</b>				
Frequent monitoring (maternal & fetal).	211 (52.8)	189 (47.2)	0 (0.0)	0 (0.0)	0 (0.0)
Provide simple information related to any procedure or examination.	105 (26.2)	185 (46.3)	74 (18.5)	36 (9.0)	0 (0.0)
Maintaining privacy through all procedures.	346 (86.5)	54 (13.5)	0 (0.0)	0 (0.0)	0 (0.0)
Providing continuous feedback related to labor progress.	98 (24.5)	230 (57.5)	0 (0.0)	72 (18.0)	0 (0.0)
Offering help and demonstrating empathy.	270 (67.5)	130 (32.5)	0 (0.0)	0 (0.0)	0 (0.0)
Availability to ventilate and express fear and anxiety.	230 (57.5)	170 (42.5)	0 (0.0)	0 (0.0)	0 (0.0)
Quick response to request/ complains.	270 (67.5)	130 (32.5)	0 (0.0)	0 (0.0)	0 (0.0)
Washing hands from patient to patient.	72 (18.0)	328 (82.0)	0 (0.0)	0 (0.0)	0 (0.0)
Frequently changes of wet, unclean linens.	250 (62.5)	0 (0.0)	150 (37.5)	0 (0.0)	0 (0.0)
Availability to move from bed and take different positions during labor.	0 (0.0)	168 (42.0)	178 (44.5)	0 (0.0)	54 (13.5)

The most important need for women in the present study was achievement of short delivery. While 31.5% women demonstrated their desire to have enough instructions related to postpartum period, newborn care and family planning (table 5).

**Table 5.** Distribution of women’s needs in relation to the desired outcome.

Questions Domains	Very important	important	Less important	Not sure	Not important at all
<b>n = 400</b>					
<b>Outcome (Medical factors)</b>	<b>No. (%)</b>				
Short delivery.	211 (52.8)	189 (47.2)	0 (0.0)	0 (0.0)	0 (0.0)
Cosmetic incisions for episiotomy/ C.S.	0 (0.0)	250 (62.5)	78 (19.5)	0 (0.0)	72 (18.0)
Immediate attachment with newborn.	84 (21.0)	186 (46.5)	130 (32.5)	0 (0.0)	0 (0.0)
Instructions related to postpartum period, newborn care and family planning.	126 (31.5)	274 (68.5)	0 (0.0)	0 (0.0)	0 (0.0)
Short hospital staying and early discharge.	0 (0.0)	126 (31.5)	124 (31.0)	0 (0.0)	150 (37.5)

Regarding the effect of woman’s age on her feeling of satisfaction during labor, multiple regression analysis indicated that there were good correlations between woman’s age and her need for keeping privacy as well as her need for health instructions after delivery. On the other hand, there were a positive predictors related to the effect of education on woman’s needs for accessibility of female doctor in the delivery room, presence of pediatrician during labor, ensure proper sterilization of equipment, frequent monitoring (maternal & fetal), availability to ventilate and express fear and anxiety, short delivery, cosmetic incisions for episiotomy/ C.S, immediate attachment with newborn and instructions related to postpartum period (table 6).

**Table 6.** Effect age and education on woman’s needs.

Dependent Variables	Maternal age		Maternal Education	
	R	P	R	P
<b>Input ( hospital factors)</b>				
Accessibility of female doctor in the delivery room.	0.020	0.69	0.073	<b>0.01</b>
Accessibility of male doctor.	0.008	0.87	0.066	<b>0.02</b>
Presence of pediatrician during labor.	0.017	0.74	0.069	<b>0.02</b>
Availability of pain killer.	0.013	0.80	0.009	<b>0.85</b>
Ensure proper sterilization of equipment.	0.002	0.97	0.043	<b>0.04</b>
<b>PROCESS (nursing factors)</b>				
Frequent monitoring (maternal & fetal).	0.007	0.89	0.75	<b>0.01</b>
Provide simple information related to any procedure or examination.	0.008	0.87	0.040	<b>0.04</b>
Maintaining privacy through all procedures.	0.048	0.03	0.029	<b>0.06</b>
Providing continuous feedback related to labor progress.	0.008	0.87	0.003	<b>0.09</b>
Availability to ventilate and express fear and anxiety.	0.011	0.83	0.074	<b>0.01</b>
Washing hands from patient to patient.	0.002	0.96	0.029	<b>0.06</b>
<b>Outcome (medical factors)</b>				
Short delivery.	0.007	0.89	0.075	<b>0.01</b>
Cosmetic incisions for episiotomy/ C.S.	0.013	0.79	0.050	<b>0.03</b>
Immediate attachment with newborn.	0.15	0.76	0.050	<b>0.03</b>
Instructions related to postpartum period, newborn and family planning.	<b>0.028</b>	<b>0.05</b>	<b>.044</b>	<b>0.04</b>

## DISCUSSION

### *Methodological consideration*

Data collection's tool in the present study was grounded by Donabedian model (1980). It was noticed that, the sub-items of each domain focused on woman's perception of care, her priorities and expectations toward the birth experience, which generated more subjective content (i.e. mother's opinion) than objective categories (i.e. such as facility and technical practices).

### *Results discussion*

Birth is a life changing event and the care given to women during labor has the potential to affect them both physically and emotionally in short and long term [14]. Every woman giving birth has expectations. Identifying women's expectations, wishes, needs and fears enable the health care provider (s) to work toward a common goal of a positive childbirth experience [15].

Regarding sample characteristics, women's mean age was  $24.52 \pm 3.47$  SD, they were primigravida and nullipara. We considered that these criteria were appropriate in term of the first birth experience is richest with feelings, needs and expectations. In one study, from total of 350 mothers, 66% of first time mothers needed to talk about their feeling toward birth experience [16]. In addition, the present results revealed that, most of mothers have elementary education. Although the mothers' level of education is not high, the mothers' judgment related to their needs during labor depends on their feminist nature. Another study matched our results, in which, there were no statistical relationships detected between women's attendance at antenatal classes and feelings of control during labor [17]. Further, most of women had moderate income, this may was a leading cause to select a governmental hospital as a birth place for insurance scheme that provides maternity services free of charge.

Data in the present study indicated that availability of pain killer, presence of female doctor in the delivery room, accessibility of caring medical staff and ensure proper sterilization of equipment were considered important elements of labor ward resources. The presence of a female doctor in a labor ward may decrease the sense of embarrassment and fear which parturient women may feel. The World health organization recommended that, the parturient woman should be accompanied by people with whom she feels safe and trust. Possibly doula, midwife, her partner or a friend [18]. In addition, need for pain killer may be because labor is one of the most severe forms of pain and no woman can predict what sort of pain she will have during labor or how she will cope with it. An important aspect of midwifery care is to help the laboring woman obtaining the right method of pain relief at the right time [16]. Understanding many options for pain management including non-pharmacological methods (position change, heat packs, massage, transcutaneous electrical nerve stimulation and baths) as well as pharmacological methods (inhalational analgesia nitrous oxide/ oxygen gas mix and pethidine) may help minimizing any anxiety [19]. On the other hand, a systematic review of the literature on the relationship between the use of labor analgesia and maternal satisfaction concluded that, pain relief methods did not play a major role in overall maternal satisfaction with the childbirth experience [20].

The present results demonstrated that, there was a need for caring sensitive medical staff. In fact there are many factors influence a woman's care during labor, these include; staff patterns and attitudes, hospital's policies, standard procedures and expectations of those receiving care. All of which are governed by beliefs, traditions and established norms. The present results supported by another results in which, clinical expertise, emotional support and successful communication are the key indicators for quality in maternity care as viewed by postnatal women [21]. It is essential that all health care providers demonstrate mutual respect and communicate effectively [22]. Women who received continuous labor support were likely to have a slightly shorter spontaneous vaginal birth. And they were less likely to have intrapartum analgesics or to report dissatisfaction with their childbirth experiences [23].

Besides, women's needs during active labor varied to include; maintaining privacy, frequent maternal and fetal monitoring, free movement and positioning, hygienic care, presence of empathetic nurses and availability to express feeling of anxiety. Women receive caring behavior when providers respond to their needs promptly, provide reassurance and information during labor and birth [24]. In Egypt, nurses in governmental hospitals suffer from shortage of registered nurses in one shift, stressors from doctor's orders, the large numbers of admission per day, low salaries compared to the amount of responsibilities required from them, inflexible working schedules in addition to lack of supplies, all enforce them to provide the essential routine care in a stressful manner that threaten quality of care. Our interpretation matched with another study which assessed mothers' satisfaction during labor and concluded that, the domains of emotional support, hand wash and assessment of vital signs were the lowest scores [1]. Nurses spend relatively small amounts of time providing supportive care for women in labor [25]. Most of nurses have relied on tradition, experience, and the advice of colleagues to direct their nursing practice. These alone cannot ensure that their patients are getting the best care [14].

Regarding the need of keeping privacy in the present study, it may be referred to large numbers of trainers from medical and nursing students those may interfere with keeping woman's privacy. Carrying out patients' examinations by medical personnel in the presence of other people (especially other patients) is an alarming practice [26]. Such practices represent a violation of the patient's right to protect their own dignity and intimacy [27]. So it is better to create labor and delivery rooms of home like environments where women can give birth in the same room [26]. While restriction in movement and mobility may increase woman's sensation of tension and discomfort. Sometimes it is hard to move in labor room due to routine procedures such as continuous monitoring of the baby's heart rate and intravenous lines. Moving freely in the labor room improve a woman's sense of control, decreases the need for pain medications, reduce the length of labor and does not exist that such activity could be harmful to the fetus or to the mother [28].

Furthermore, short delivery, immediate attachment with newborn, instructions related to postpartum period and having a cosmetic episiotomy or cesarean section incision were the desired outcomes. Early skin to skin contact between the mother and her infant after delivery assists in the adaptation of the newborn in term of temperature control and mother infant bonding [29]. In fact, midwives need further training in order to provide the necessary postpartum counseling. Without some form of education from health professionals or childbirth educators, women have to rely on media, family and friends for information which may not help in forming realistic expectations [30].

Finally, age and education were the most important factors affect on women's choices during labor. It has been shown that, woman's age had a little effect on her needs, but the needs priorities might be attributed to the influence of cultural differences, the individuals' different attitude to labor and educational achievements. Another study reported that, age, level of educations, social level, previous experiences gained from friends, family and media, all factors might affect woman's needs during labor. And whenever increasing level of awareness, reaching level of satisfaction will be more difficult [31].

### **Implications for practice**

The importance of acknowledging the parturient women's' own perceptions of their needs in the labor ward must be highlighted. Every woman regardless of their healthcare plan has the right to a dignified and respectful care. Woman must be informed about suggested healthcare actions and must have the right to express her desires. Further, the healthcare providers must also support and assist this moment which is of greatest importance woman's life. Women did not focus on the model of care, but instead on the content of the care provided [32]. Presenting proposals of change in the practices in labor ward might take the women's rights to a safe and pleasurable birth experience into account. This knowledge may therefore be crucial step towards improving clinical practice.

### **Conclusion**

Despite good general coverage of labor care among women, there were clear variations in the type of management given to them or needed by them. This study confirms that different factors predict the multidimensionality of childbirth satisfaction.

### **Recommendations**

Based on the results of this study, the following recommendations could be considered; 1) offers all birthing mothers' unrestricted access to labor support and professional midwifery care, 2) redesign care based on the selected evidence based recommendations and women's views, 3) the nurse to patient ratios should be suitable in order to improve patient care, and 4) more studies will be needed in order to examine work environment that threat medical/ nursing practice in maternity hospitals.

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