

## Assessment of Maternity Care during Childbirth in Belqas Hospital

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### 1.ABSTRACT

**Background:** Maternity care during childbirth played a crucial role in ensuring maternal and child safety to reach woman satisfaction. **Aim:** This study aimed to assess maternity care during childbirth. **Study design:** A descriptive study design was used. **Setting:** The study was carried out in labor and delivery unit at Belqas center hospital, Dakahlia governorate, Egypt **Sample type:** A convenient sample was utilized. **Study Sample:** The study sample included 240 laboring women who attended for delivery. **Tools:** A structured interviewing questionnaire, observational checklist for the quality of care for mothers and newborn babies during labor & delivery. **Results:** The present study results show that less than half of staff washed their hands before assisting with delivery needed for some improvement, more than half of labor support as persons are allowed with women during delivery needed for some improvement , almost items of partogram needed for substantial improvement, more than two fifth of pubic shaving is not performed needed for substantial improvement, more than half of midwives physically helped women to find comfortable position and women In low risk pregnancy, the risks and benefits of physiologic versus active treatment of the third stage are discussed and intermittent foetal heartbeat auscultation is carried out needed for substantial improvement, less than half of disinfectant was not put on perineum after delivery needed for substantial improvement **Conclusion:** Around half of maternity care as condition of delivery, labor support, care during first, second, third stages of labor and care after delivery needed for some improvement, Also around half of fetal care needed for substantial improvement. While using partogram in maternity care needed for very substantial improvement plus not availability of CTG machine **Recommendation:** Nurses need educational program to improve quality care for mothers and newborn during labour and delivery.

**Keywords:** *Childbirth, Maternity care, Improvement.*

### 2.Introduction:

An important milestone in a woman's life is childbirth. It is frequently stressful and includes significant physical obstacles that happen quickly. ( **Berman, Thiel, Dishy, Chan & Dekel, 2020**). While a negative experience can lead to serious illnesses including postpartum depression, secondary dread of childbirth, post-traumatic stress disorder, as well as a condition of psychological discomfort, a happy experience can improve maternal well-being and encourage mother-infant attachment (**Fenaroli et al., 2019**).

Maternity care services entail giving pregnant women higher-level care and services, achieving the best medical results, satisfying the needs of women, their families and caregivers, maintaining sound managerial and financial performance and expanding current services in order to improve the caliber of care given to all women. (**Brown & Denicola, 2020**).

Health services offered to mothers, infants and families during pregnancy, labour, and

delivery, as well as for up to six weeks afterward are referred to as maternity care. It may involve keeping an eye on the mother's and baby's health and wellbeing, providing health education and helping with labour and delivery. To ensure the mother and child are healthy and well after giving birth support is crucial, as is providing breastfeeding advice. (**Sserwanja, Musaba, Mutisya, Olal & Mukunya, 2021**).

The act of childbirth itself carries a significant mental and physical toll. Due to the ramifications for the health and wellbeing of mothers, newborns, and the mother-infant relationship, it is crucial to measure how satisfied women are with their perceptions of childbirth. Additionally, it helps medical professionals give pregnant women with the greatest preparation possible (**Dean , Churchill & Ruppanner, 2022**).

#### 2.1 Significance of the study

Every year, almost 500,000 women worldwide pass while pregnant or giving birth.

(WHO, 2019). During labour and delivery, more than two thirds of obstetric problems have occurred. In low- and middle-income countries, maternal fatalities accounted for about 99% of all deaths globally (Demis, et al., 2020). Recent documents emphasise how crucial it is to give a positive "experience of care" during labour, such as the "WHO Guidelines of intrapartum care for a joyful delivery experience ( Brizuela, Leslie, Sharma, Langer&Tunçalp2019).

Assessment the quality of hospital care during childbirth helps to identify weak point and strength point inside hospital. Trying to solve this problem and improve of hospital service and help mothers to feel more comfort toward the service. Significance of study not only measuring hospital care during labor but also trying to connect it with woman satisfaction to improve this care and decrease woman morbidity and mortality and gives healthy baby.

### **2.2 Aim of the study**

This study aimed to assess maternity care during childbirth

### **2.3 Research question**

What is the maternity care for mothers and newborn during childbirth?

## **3. Method**

### **3.1 Study design**

A descriptive design was used. A descriptive research design used a wide variety of research methods to investigate one or more variables. The researcher didn't control or manipulate any of the variables, but only observed and measured them (Sharma, 2018).

### **3.2 Study setting**

The research was done in the labour and delivery department at Belqas center hospital, Dakahlia Governorate. It located at the first floor and consists of 5 rooms with approximately 2 beds and bathroom for each room for staying patient, sonar room ,eclampsia room with bathroom, room for preparing medication , doctors room with bathroom , natural birth booth and big hall with nursing station.

**3.3 Sample type:** A convenient sample was used

### **3.4 Study Sample:**

The study's sample consisted of 240 studied female attendees in labor and delivery unit at Belqas center Hospital for laboring.

### **3.5 Sample size calculation**

Based on data from literature (Mohammad, Shaban, Homer& Creedy, 2014). With a 5% level

of significance, an 80% research power, and information from the literature, the sample size can be estimated using the formula below: Sample size is equal to  $[(Z_{1-2})^2 \cdot SD^2] / d^2$  The usual normal variate,  $Z_{1-2}$  =, is 1.96 at a 5% type 1 error (p0.05), SD stands for standard deviation, D is the precision or absolute inaccuracy. Sample size is therefore  $[(1.96)^2 \cdot (0.63)^2] / (0.14)^2$ , or 238.2 .The sample size needed for the investigation is 240, according to the formula above.

### **3.6 Tools of data collection:**

Two tools were used for data collection

#### **Tool I: A Structured Interview Questionnaire:**

The researcher develop this tool after studying national and international literature. (Afulani et al., 2019).It consists of two parts:

**Part (1): Socio- Demographic data** of the studied women including their age, education level, and occupation,, residence, sex of fetus, being interested to sex of fetus, satisfaction of life ....etc

**Part (2): Obstetric History** of the studied women such as gravidity, parity, previous mode of delivery, previous delivery complications ....etc.

#### **Tool II: Observational checklist for the quality of care for mothers and newborn babies during labor & delivery.**

This tool was adapted from WHO instrument for evaluating the effectiveness of hospital care for pregnant women and new moms during labour (WHO, 2009), which includes nine domains (72 items): Conditions of the delivery (10 items) , labor support (17 items), Partogram care assessment (5 items) , care during first stage (5 items), care during second stage (9 items), third stage management (5 items) ,care of mother after delivery (7 items) , fetal monitoring during labor (8 items) and neonatal equipment availability (6 items). This tool was collected by observation of practices, review of record and interview with staff and women.

#### **Scoring system**

For the purpose of determining the final score, each item is assessed using the data compiled from various sources. Numbers from 0 to 3 are given for scoring, with 3 representing good or standard treatment; The number 1 denotes substandard care that causes serious health hazards and needs to be significantly improved before being regarded as standard care; 0 denotes an urgent need for improvement (totally inadequate care and/or unsafe practises seriously endanger the health of expectant mothers and/or babies); 2 shows that there is opportunity for development in

order to deliver recommended treatment (subpar care, but no significant health risk).

### **3.7 Validity of the tools**

Three nursing professionals with expertise in women's health and midwifery nursing panels evaluated the tools. Dr Eman A. Fadel & Dr Ahlam Mohamed Goda and Dr Aml Yousef. Their suggested modifications such as the rephrasing of some sentences and translated sentences to help for understudied by women.

### **3.8 Reliability of tool II**

The tool's dependability was assessed using social science statistical software SPSS version 20. The Cronbach's Alpha was used to assess the internal consistency. With a Cronbach's alpha value of (0.894), the test appears to be high reliable.

### **3.9 Pilot study**

A pilot study was conducted on 10% (24) of the total sample were used in a pilot study to gauge the tools' usability and clarity as well as to determine how long they would take to complete. The overall sample did not include any of the women who participated in the pilot trial.

### **3.10 Ethical considerations**

- The study received ethical approval from the Mansoura University Faculty of Nursing Research Ethics Committee.
- Following an explanation of the study's nature and objectives, all participants provided their signed, informed consent.
- Each participant has the right to withdraw from the study at any time. Participation in the study was voluntary.
- Throughout the entire study, anonymity, privacy, safety, and secrecy were fully guaranteed.
- The outcome was used for publication, instruction, and the necessary research for a master's degree.

### **3.11 Study Procedure:**

- The actual fieldwork for the study, which lasted nine months, began in June 2021 and ended in February 2022. It was done in two stages: the operating stage and the preparation stage.
- The three stages of the preparatory stage were administrative, literature study and tool development, and pilot phases.
- The two phases of the operating stage were data collecting and data analysis.

#### **Preparatory stage:**

- 1- Administrative phase:** - After outlining the

purpose and scope of the study, I was able to obtain the head of the department's, the Research Ethics Committee's, and the hospital's

- 2- Reviewing literature and developing tools phases:** In order to construct the methods for data collection, the researcher researched the national and international literature on theoretical knowledge related to maternity care during childbirth.

#### **Operating Stage:**

##### **1- Data Collection Phase**

- Information was gathered from the hospital's labour and delivery unit in Belqas. After receiving written consent from the research ethics committee of the nursing faculty at Mansoura University, the request was submitted to the director of the Belqas medical centre.
- Before beginning the data collection process, the researcher introduced herself to each woman and explained the nature and goals of the study. The wife was informed and given her consent.
- From the time the sample size was calculated until it was obtained, the researcher spent three days a week in the aforementioned environment from 9:00 AM to 4:00 PM.
- A one-on-one interview between the researcher and the qualified woman resulted in the completion of the structured interview questionnaire.
- The researcher questioned each pregnant woman for 25 to 30 minutes in order to gather information about their demographics and obstetric history prior to childbirth.
- Maternity care was assessed by using observational checklist assessment tool for quality of care during labor and delivery through observation, interview with staff and women that taken 2 hours during labor with women for observational development of labor and 30 minute after delivery for asking women about satisfaction part regarding delivery and interviewed with nursing staff.
- After that and before woman discharge from the laboring unit and let her to rest for one hours the researcher was assessed women satisfaction with various aspects of health care by using woman satisfaction scale by interviewing with women .
- The final forms of the collected data were

coded, examined, and tallied.

-The total number of women in labour at the conclusion of data collection was 240.

### 3.12- Data Analysis:

SPSS for Windows version 20.0 was used to conduct all statistical analyses (SPSS, Chicago, IL). Each continuous data set's mean and standard deviation had a uniform distribution (SD). Numbers and percentages were used to express categorical data. The one-way analysis of variance (ANOVA) test was used to compare variables with more than two continuous data points, whereas the Student's T-Test was used to compare variables with two continuous data points. The chi-square test was used to compare variables using categorical data. Testing for correlations between two variables with continuous data was done using the correlation co-efficient test. For the questionnaires used in the study, the reliability (internal consistency) test was computed. The cutoff for statistical significance was  $p < 0.05$ .

### 4.Results

**Table (1)** Shows that more than two third (67.1 %) of the studied women had girl gender with (32.9%) had boy gender, more than half (53.7%) of studied women were interest of fetus gender and (46.3%) not interested of fetus gender and more than half (52.9%) of studied women had satisfied with her life and (47.1%) not satisfied with her life, (58.8%) of the studied women aged from 20-30 years with mean of  $(24.9 \pm 5)$  years). (63.3%) of them from rural areas and (42.9%) of them had university education, (70.8%) of studied women were housewife and (68.8%) had enough income.

**Table (2):** Shows that (43.8%) of studied women were 2-3 times gravidity and (35.8%) of them were 2-3 times parity with (63.7%) of studied women had delivery with episiotomy. (52.5%) of them had previous delivery complications

**Table (3)** Shows that (47.1%) of women's privacy is respected, (43.7%) of bed is positioned far from door or window, (40 %) of staff introduced themselves to the women, (37.1%) of consent is obtained from women for attendance of people other than staff, (47.9%) of staff washed their hands before assisting with delivery and (40 %) of staff used sterile gloves during delivery that all (**needs for some improvement**). (43.8%) of staff used gloves while disposing waste and (39.6%) staff used sterile instruments with (43.8%) of there was an appropriate temperature in the delivery rooms that were (**good or standard care**).

**Table (4):** Shows that (59.2%, 48.8%, 39.2%, 50.4%, 49.2%, 49.2%, 33.3%, 33.3%,

43.8%, 46.3% ,33.3% ,respectively ) of labor support as persons are allowed remain with women, at least one professional staff member present during labor and birth women receive support during labor, stay present at women side as much as possible, explain labor progress verbally, encourage and helped into comfortable position, encourage and helped with walking, encourage and helped into an upright position, help labor support companion, encourage voiding as needed , help women with relaxation technique and offering actively oral fluids light food are (**need for some improvement**). (37.9%, 38.3%, 35.4%, 43.3%, 57.5% ,37.9%, respectively) of labor support as keep clean and dry, offer warm and cool compress, assist with shower, explain breathing techniques, offer massage and encouraging, praising and reassuring are (**good or standard care**).

**Figure(1)** Shows that almost of items of partogram needed for substantial improvement because partogram not ideally performed.

**Figure (2)** Shows that around half of digital vaginal examination is not performed unless in labor, enema is not performed routinely and vagina is not swabbed with antiseptics during labor (43.3%, 50.4%, 42.1%, respectively) which (**need some improvement**). (40.4%) of pubic shaving is not performed that need for (**substantial improvement**). (45%) of women are free to walk and choose position during labor that is (**good or standard care**).

**Table (5)** Shows that (53.8% and 58.8%) of studied women allowed to choose position other than lying on back during delivery and episiotomy is not routinely performed that (**need some improvement**) with (42.9%, 40%, 47.1%, respectively) of women **encouraged** to choose position during delivery, fetal heart rate is monitor adequately and anesthesia is given for episiotomy. (51.7%) of midwives physically helped women to find most comfortable position that (**needed substantial improvement**). Around one third of women are not routinely forced to push during delivery, duration of the second stage is not limited unless there is fetal distress, pressure on the abdomen is not used to support the delivery of the baby (31.3%, 37.1%, 34.6%) that (**need for substantial improvement**).

**Table (6):** Shows that (57.9%) of women informed about risks and benefits of physiologic versus active management of third stage that (**needed for some improvement**). (48.8%) of active management of third stage performed unless

women choice is different, (34.6%) of oxytocin 10 U I.M. or sonometric given after expulsion of shoulders or within 1 min after birth of baby and (33.3%) of controlled cord traction performed after cord clamping that all **(needed for some improvement)**. (37.1%) of women uterus checked after placenta is delivered that was **(good or standard care)**.

**Figure(3):** Shows that more than half of minor tears were not stitched if not bleeding, cervix is not routinely checked after delivery (55.8% and 50.8% respectively) that **(needed for some improvement)**. Also less than half of maternity care after delivery **(needed some improvement)** as vagina was not swabbed with antiseptics after delivery, ice was not placed on the mothers' perineum after delivery and bladder catheterization was not routinely performed post-partum (41.7% , 40.8% , 47,1%, respectively).(49.2% and 36.3%)of maternity care after delivery need for **(substantial improvement)** as disinfectant was not put on the perineum after delivery and episiotomy/tears are repaired with local anaesthesia.

**Table (7):** Shows that (44.2%) of a form of assessment of fetal wellbeing is available in the hospital that **(need for some improvement)** and (50.8%, 46.7%, 41,3% ,respectively) of Intermittent auscultation of fetal heart beat is performed in low-risk pregnancy, Guidelines for intermittent auscultation are in place stating in which way the auscultation should be performed and Midwives performing intermittent auscultation are skilled enough to recognize the fetal heart beat pattern and the maternal uterine activity that **(needed for substantial improvement)**. Also, (31.3% and 30.4%) of at least every 30 minutes in the first stage of labor, at least every 5 minutes or after every contraction during second stage that **(needed for some improvement)**, (48.3%) of maternal pulse is checked when performing that **(good or standard care)**.Availability of neonatal equipment shows that all neonatal equipment such as device of suction, face mask, tracheal tubes oropharyngeal airways and laryngoscope with blades were present expect resuscitation bags and breathing valves.

Figure (4) shows that partogram is the most domains that need to be improved and maternity care for labor support is the least domain need to be improved.

## 5.Discussion

The present study aimed to assess maternity care during childbirth. The investigation's findings answered the research question by showing that

around half of maternity care, including labour support and care during the four phases of labour, needs to be improved , Also around half of fetal care needed for substantial improvement. While using partogram in maternity care needed for very substantial improvement.

### Regarding to conditions of delivery domain:

The present study results shows that around half of maternity care as condition of delivery needed some improvement. Which less than half of women privacy respected and needed a single room for delivery and curtains needed for some improvement. The study result was agreement with the study conducted by **Sayed, Abdelaal, Mohammed, Abbas & Zahran (2018)** they study maternal satisfaction with delivery services at tertiary university hospital in upper Egypt they reported that less than half of studied women had problem in privacy that needed for some improvement, Also the current study results were agreement with the study conducted by **Bohren et al. (2015)** they studied the mistreatment of women during childbirth in health facilities that the absence of curtains to keep women separated from other patients during vaginal and abdominal inspections demonstrated the lack of privacy

While the present study findings were disagree with the results conducted by **Siraj, Teka & Hebo (2019)** they study in Jimma University Medical Center, Southwest Ethiopia, revealed that more than four-fifths of mothers' privacy was not secured during facility-based childbirth due to the frequency of disrespect and abuse and associated issues. . The difference in studies results may be due to shortage in availability of hospital resources.

The present study findings revealed that about two fifth of staff used sterile gloves during delivery which needed for some improvement that similar with a study conducted by **Berhanu et al. (2021)** they study coverage of antenatal, intrapartum, and newborn care in 104 districts of Ethiopia. They reported that staff should take caution for using sterile gloves during delivery, also. The current study findings were in same line with the study done by **Agha et al. (2019)** that appeared large gaps in provider practises related to infection control, such as hand washing before and after contact with patients and the use of sterile gloves, were revealed in their assessment of the standard of labour and birth care in Sindh Province, Pakistan. This can be caused by a shortage of hospital resources.

The present study findings revealed that less than half of staff washed their hands before

assisting with delivery which needed for some improvement. The present study result was disagreement with **Sayed et al. (2018)** they revealed that more than 50% of the women in the study practised good hand hygiene before assisting with delivery. The difference in results may be due to shortage availability of hospital resources such as soap, surgical betadine and water.

The current study results showed that more than two fifth of bed positioned far from door or window which needed for some improvement. This result were disagreement with **MacAllister, Zimring & Ryherd (2019)** they explored the relationships between patient room layout and patient satisfaction they reported that the location of the head of the bed placed farthest from the room entry or the bed positioned farthest from window. The differences in result may be due to lack of hospital room space and found more than one bed in the room.

Regarding to consent obtained from women for any procedure and attendance of people during labor, The results of the current study showed that more than a third of women agreed that improvements were needed, The present study finding was in disagreement with the study done by **Asrese (2020)** who evaluated the calibre of care given to mothers during labour at health clinics in the Jabi Tehinan district, North West, Ethiopia, found that less than 25% of moms gave their consent before any procedure was carried out. Lack of nursing awareness of the significance of obtaining women's consent may be the cause of the disparity in results.

The present study results revealed that about two fifth of staff introduced themselves to women which needed for some improvement. This finding was contrast with **Siraj et al. (2019)** they reported that more than three quarter of care provider didn't introduce him/ herself during childbirth. The difference in results may be due to load of work and not found time by nurse to introduce themselves to women.

The present study result showed that less than two fifth of staff used sterile instrument which good or standard care. The present study findings similar with a study conducted by **Buxton et al. (2019)** They reported that medical equipment was available and sterile, and staff used it. They evaluated the challenges and opportunities faced by staff while applying infection prevention and control (IPC) standards in maternity wards and delivery units in six health centres in two states in Nigeria. The similarity of the results could be explained by the infection control team's ongoing

monitoring of the sterility of the devices used in the hospital.

The current study revealed that more than two fifth of an appropriate temperature in the delivery room is good or standard care that agreement with **Caughey et al. (2018)** They noted that operating room temperature guidelines (21–25°C) may preserve both maternal and newborn normothermia in their guideline for intraoperative treatment in caesarean birth on better postoperative recovery.

The current study revealed that more than half of women accessed to a functioning shower which needed for some improvement that disagree with **Kheirkhah & Rajati (2021)** A decrease in pain intensity and a high labour experience score in the areas of individual ability, sense of security, and involvement were observed in the primiparous women admitted to Motazedi Hospital in Kermanshah, Iran when they studied the impact of the delivery ball and warm shower. the disparity in outcomes brought on by having too many women in one space and a lack of privacy.

#### **Regarding to labor support:**

The current study show that near to half of studied women received support from health care workers which needed for some improvement. The current study result was corresponding with **Shendy, Hassan & El-Nemer (2019)** According to research on the labour and delivery experiences of high-risk primipara women at Mansoura University Hospital, more than half of the study participants had negative experiences with supporting measures when getting nursing care, also agreement with **Asrese (2020)** who reported that near to half of studied women received supportive care. The similarity between studies due to nurses busy at work.

The current study founded that more than quarter of explained labor progress verbally was good or standard care and more than half needed for some improvement. The same results were also observed by **Asrese (2020)** who reported that more than one quarter of staff explained labor progress verbally. The similarity between studies due to nurses explained procedure during childbirth step by step.

The current study showed that less than half of encouraging and helping women with walking needed for some improvement. The present findings were in disagreement with the study done by **Minooee, Simbar, Sheikhan & Alavi Majd (2018)** they study In four educational hospitals in Tehran, Iran, they conducted an intrapartum care

study based on the National Guideline for Midwifery and Birth Services. They found that one-quarter of the respondents thought that congested wards were the biggest barrier to allowing the mother to move about freely.

Also current study showed that more than one third assisted with shower were good or standard care that disagreement with **Minooee et al. (2018)** Less than one fifth of pregnant women were reportedly advised to shower or take a bath. The discrepancy in the outcomes may be attributable to overcrowded wards, which are the primary cause of the mother's being discouraged from moving around freely, and a dearth of bathrooms with showers. The present study revealed that more than two fifth encouraged to void which needed for some improvement that disagree with **Minooee et al. (2018)** they reported that more than one tens encouraged mother to empty her bladder. The difference between results due to nurse's belief that is the women duty to rely on herself.

The current study findings revealed that more than two fifth explained breathing techniques are good or standard care that in same line with the study done by **Minooee et al. (2018)** they revealed that more than one third of nurses explained breathing techniques. The agreement in results may be due to nurses believes that breathing technique helped to shortage labour stage and facilitate labour.

The study result revealed that near to two third of family member are allowed to remain with women during labor which needed for some improvement that the importance of ongoing assistance during childbirth is supported by **World Health Organization (2016)** that women appreciated the continuous presence of support persons remain with women during labor.

The present study results revealed that less than tenth of women encouraged and helped women into upright position which needed for very substantial improvement. The findings were supported by the study conducted by **Côrtes et al. (2018)** they evaluate the impact of the implementation of evidence-based practices on normal delivery care in a public maternity hospital, Amapá, they reported that less than tenth of women helping into upright position. The agreement of results may be due to crowded work and no time by nurses to encourage and help women into upright position.

The current study results revealed that more than one third of women helping labor support

companion which needed for some improvement .The current study findings were disagreement with the study done by **Liu et al. (2021)** When researchers using traditional Chinese medicine-infused health products looked at the effects of unprotected birth and perineum block anaesthesia on the rate of perineal integrity and outcomes for mothers and their babies in primiparas , they found that the majority of women used support during labour and had family members stay with them throughout. The differences between results due to hospital policies about prevention relative of women to remain in labor department for long time.

Regarding to massage during labour the present study results showed that more than half of women offered massage were good or standard care that agreement with **Farnham (2020)** who denoted that pain management are unique to each woman in labor by available non pharmacologic who reported that majority of women received massage.

The study's findings revealed that more than one-third of women maintained a clean, dry environment by using warm and cool compresses which good or standard care that agreement with **Farnham (2020)** who reported that the majority women keeping clean and dry, offering warm and cool compress.

#### **Regarding to partogram**

Majority of partograph used in present study finding which needed for substantial improvement that were supported by study done by **Agha et al. (2019)** they reported that only 3% of births included use of the partograph to monitor the progress of labor. This may be due to not availability of partograph sheet in patient tickets.

The present study findings were dissimilarity with **Minooee et al. (2018)** They stated that while blood pressure measurements were done in every case, agreement with regard to other items, such as respiration and pulse rate measurement, was only evaluated in about one-fifth of the cases, indicating that the bulk of this study required significant improvement. The difference in results may be due to not found partogram sheet in women ticket and nurses follow up progress of labour in outside paper.

#### **Regarding to care during first stage of labour**

Regarding performed of vaginal examination, The current study findings showed that more than two fifth of studied women who performed vaginal examination which needed for some improvement, that is not in same line with a

study done by **Shendy et al. (2019)** More than two thirds of the women in the study had positive experiences undergoing vaginal examinations to verify cervical dilation, according to their report. The results of this study differed from those of other studies, which could be attributed to the nurses' varying levels of education and experience.

Concerning pubic shaving, the present study revealed that more than two fifth of pubic shaving is not performed which needed for substantial improvement that disagree with the results by **Minooee et al. (2018)** they reported that almost of women performed pubic shaving and also around one quarter of the women were encouraged to walk around freely but in present study less than half of women free to walk during labor and choose position during labor were good and standard care. The difference between the study results and other studied might be due to the difference in culture and hospital policy.

Furthermore, the current study results revealed that more than half of studied women not performed enema routinely that needed for some improvement that disagreement with **Minooee et al. (2018)** they reported that less than one fifth performed routinely enema. The difference between the study results and other studied might be due to hospital policy about routinely performed enema.

The current study results showed that more than two fifth of vagina is not swabbed with antiseptic during labor which needed for some improvement that disagreement with **Fahmi, Baraia & Abdelati (2021)** in numerous hospitals, they evaluate nurses' use of infection control procedures during the second stage of childbirth. They reported that almost of laboring women performed perineal care and swabbed vagina with antiseptic during labor. The difference between the study results and this studied might be due to nurses not found time to performed this step to women due to quickly head descend.

#### **Regarding to care during second stage of labour**

The findings of this study showed that more than half of the women who participated were given the option of giving birth in a position other than lying on their backs which needed for some improvement that disagree with **Siraj et al. (2019)** they reported that more than one tenth of mother not allowed to choose position during childbirth. The difference between the study results and other studied might be due to the difference in hospital policy.

The present study result revealed that more

than two fifth of studied women encouraged to choose position other than lying on her back during delivery which needed for some improvement that disagree with **Elmashad, El-Sayed & Elkayal (2018)** they investigate parturient women's self-reported measures compared with nurses compliance with supportive measures during labour they reported that about three quarter of women lie in left side position during labour. The difference between the study results and other studied might be due to the difference in hospital policy.

The present study result showed that two fifth of fetal heart rate is monitor adequately which needed for some improvement that not in the same direction with the study done by **Masuda, Ferolin, Masuda, Smith & Matsui (2020)** In a tertiary hospital in the Philippines, where they investigated the practise of evidence-based intrapartum care and its contributing factors as well as healthcare personnel' perspectives, they found that more than half of the moms did not receive FHR monitoring throughout the second stage. The discrepancy between the study's findings and those of other studies may be the result of a lack of readily available foetal equipment monitoring.

The current study result reported that more than half of midwives physically help women to find most comfortable position that need for substantial improvement. The current study result was corresponding with **Shendy et al. (2019)** According to their findings, roughly two-thirds of the women in their study had negative experiences with using a special, comfortable position during delivery. This may be because only one position can be used during labour and delivery, which results in their experiencing discomfort, pain, and tension. The similarity in to studies due to lying position on her back during delivery helping doctor to deal well with women according to doctor said in belqas hospital center.

Less than two fifth of women are usually compelled to push during birth, according to the results of the current study which needed for some improvement that in disagreement with study conducted by **Shendy et al. (2019)** they reported that around two third of studied women had positive experienced regarding routinely forced to push during delivery, Also disagreement with **Elmashad, El-Sayed & Elkayal (2018)** they reported that three quarter of women encouraged to push down during delivery. The disagree between results may be due to change in hospital policy from hospital to another.

The current study results reported that less than half of women given anesthesia for episiotomy



which needed for some improvement that contrast well with **Shendy et al. (2019)** they reported that more than two third had negative experience of anesthesia given for episiotomy that needed improvement.

The present study findings reported that near two third of studied women episiotomy is not routinely performed which needed for some improvement that disagree with the results by **Balcik Colak & Ozturk Can (2021)** they research how the timing of pregnant women's entrance to the labour ward affects interventions and the labour process in Turkey they reported that majority of women performed episiotomy ,Also the present finding were not in the same direction with the study by **Buran & Aksu (2022)** they determine the effect of Hypnobirthing training on fear of childbirth in the Philippines they reported that majority of childbirth were performed with episiotomy. The difference between the study results and other studied might be due to the difference in time that leading women to push forced until head labored normally.

The current study result revealed that more than one third of nurse reported that duration of second stage is not limited unless there is fetal distress that needed for some improvement that was in contrast to a study conducted by **Grantz et al. (2018)** When contrasted with the risk of a birth with major maternal or neonatal problems, a spontaneous vaginal birth without morbidity, they evaluated the morbidity associated with extending the second-stage duration of labour. They found that the second-stage duration is limited and in need of improvement.

#### **Regarding to care during third stage of labour**

The present study finding reported that more than one third of controlled cord traction performed after cord clamping which needed for some improvement that in the same line with the study done by **Saxena, Srivastava, Dwivedi & Bhattacharyya (2018)** they study quality of maternal healthcare services in northern India, they reported that controlled cord traction were not performed after cord clamping for most cases.

Also, the current results reported that more than one third of fundus of uterus checked after placenta is delivered that in contrast with **Ferolin et al. (2020)** they describe the practice of evidence-based intrapartum care and its associated factors in a tertiary hospital in the Philippines they indicated that more than one third of fundus of uterus checked after delivery of placenta that is good or standard care

The present study results showed that less than half of studied women had needed active management of third stage which needed for some improvement that in disagreement with **Minooee et al. (2018)** they reported that almost of active management of third stage were applied. The difference between two studies due to hospital polices and nurses knowledge deficit regarding active management of third stage of delivery.

The present study result showed that more than one third of studied women given oxytocin or sonometric after delivery of shoulder or one min after birth of baby which needed for some improvement that disagreement with **Güngördük, Olgaç, Gülseren & Kocaer (2018)** they studied active management of the third stage of labor they reported that oxytocin can be used just after delivery or expulsion of the placenta for almost cases.

#### **Regarding to maternity care after delivery**

The present study results reported that more than one third of studied women had repaired of episiotomy and tears with local anesthesia which needed for substantial improvement. This result was inconsistency with Egyptian study done by **Farg & Hassan (2019)** they studied investigate surgical intervention for first and second-degree perineal tears sustained during childbirth, they reported that more than two third of women had episiotomy repaired with local anesthesia. The difference between two studied due to inability to access narcotic drugs by hospital.

The present study results revealed that less than half of studied women not put disinfectant on the perineum after delivery which needed for substantial improvement. The current study findings were not in same line with a study done by **Chhetri, Paudel, Baniya, Gurung & Karki (2021)** At Nepal's Bharatpur Hospital, they research postpartum care services throughout the fourth stage of labour , they reported that more than half of women received perineal care after delivery. The difference between two studies may due to lack of availability of disinfectant resources.

The current study result reported that more than two fifth of the studied women not place ice on perineum after delivery which needed some improvement. The current study results were contrast with **Evcili, & Demirel (2018)** In the gynaecology and obstetrics clinic of a university in Central Anatolia, researchers looked at the effectiveness of procedures for emergency postpartum urinary care, and they found that almost

one-third of women reported receiving cold applications to the perineum and abdomen. The difference between studies may be due to women refusing to put anything on the painful perineum area.

The present study showed that more than half of studied women were not routinely checked for cervix after delivery, which needed some improvement. This disagreement with **Nuriy & Ahmed (2018)** who evaluated the quality of nursing and midwifery care provided during labor and delivery in the maternity hospital Teaching Hospital in Erbil City, they reported that almost all women were checked for cervix after delivery. The difference between the two studies is due to work pressure for nurses.

#### **Regarding to fetal care**

The present study results reported that more than one-third of studied women had intermittent auscultation of fetal monitoring during labor, which needed substantial improvement, which agrees with **Al Wattar et al. (2021)** who evaluated intermittent auscultation that all additional methods introduced to improve the accuracy of electronic fetal heart monitoring reported that more than one-third of intermittent auscultation of fetal monitoring during labor needed improvement.

According to the findings of the current study, more than half of the women involved in intermittent auscultation of the fetal heartbeat during low-risk pregnancies, which requires significant improvement. The present study findings were in disagreement with **Rosset, Lindahl, Blix & Kaasen (2020)** in two hospitals in Norway, they looked into fetal monitoring procedures for low- and high-risk pregnant women. They found that more than half of the patients received intermittent auscultation monitoring. The difference between studies is due to nurses not paying attention to cases of lower risk of pregnancy.

#### **Regarding to availability of neonatal equipment**

The present study showed that the availability of devices of suction, facemask, tracheal tube oropharyngeal airways and laryngoscope with blades and the availability of resuscitation bag and breathing valves that agree with **Marshall, Lang, Perez & Saugstad (2020)** who assessed current recommendations for delivery room handling of the newborn, they reported that the availability of neonatal equipment such as device of suction, face masks, tracheal tubes oropharyngeal airways and laryngoscope with blades.

## **6. Conclusion**

**Based on the findings of the present study, it can be concluded that:**

Around half of maternity care as a condition of delivery, labor support, care during first, second, third stages of labor and care after delivery needed for some improvement. Also around half of fetal care needed for substantial improvement. While using partogram in maternity care needed for very substantial improvement plus the non-availability of CTG machine.

## **7. Recommendations**

**Based on the study finding, the study is recommending the following**

- Nurses need an educational program about the application of Partogram sheet with the availability of partogram by hospital
- CTG machine should be available for helping with fetal monitoring and decreasing fetal complications.
- It is important to measure fetal heart rate by putting a guideline for intermittent auscultation in place
- Teaching women about the importance of personal hygiene before giving birth such as pubic shaving
- Family members are allowed to remain with women during labor for receiving support during labor
- Teaching women about comfortable positions that facilitate childbirth.
- Reorganization of the birth room to maintain privacy and to be comfortable for the mother

**Further studies are recommended to investigate the effect of using partogram on labor and neonatal outcome.**

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**Table (1) Distribution of the studied women according to their socio-demographic characteristic**

Items	n (240)	%
<b>Age (Years)</b>		
< 20	48	20.0
20 – 30	141	58.8
> 30	51	21.2
Mean ±SD	24.9 ±5.2	
<b>Residence</b>		
Urban	88	36.7
Rural	152	63.3
<b>Educational level</b>		
Basic education	52	21.7
Secondary education	85	35.4
University education	103	42.9
<b>Occupation</b>		
Worker	70	29.2
Housewife	170	70.8
<b>Monthly Income</b>		
Not enough (<4000)	48	20.0
Enough (4000 – 6000)	165	68.8
Enough and save (6000 – 10000)	27	11.2
<b>Fetus Gender</b>		
Male	79	32.9
Female	161	67.1
<b>Interest in Fetus Gender</b>		
Interested	129	53.7
Not Interested	111	46.3
<b>Life Satisfaction</b>		
Satisfied	127	52.9
Not Satisfied	113	47.1

**Table(2). Distribution of the studied women according to their obstetric history**

Items	n (240)	%
<b>Gravidity</b>		
Once	67	27.9
2 – 3 times	105	43.8
More than 3 times	68	28.3
<b>Parity</b>		
None	58	24.2
Once	85	35.4
2 – 3 times	86	35.8
More than 3 times	11	4.6
<b>Previous mode of delivery</b>		
Spontaneous vaginal delivery	39	16.3
Normal vaginal delivery with episiotomy	153	63.7
Cesarean section	48	20.0
<b>Previous delivery complications</b>		
Yes	126	52.5
No	114	47.5

**Table(3). Number and distribution of maternity care for conditions of delivery**

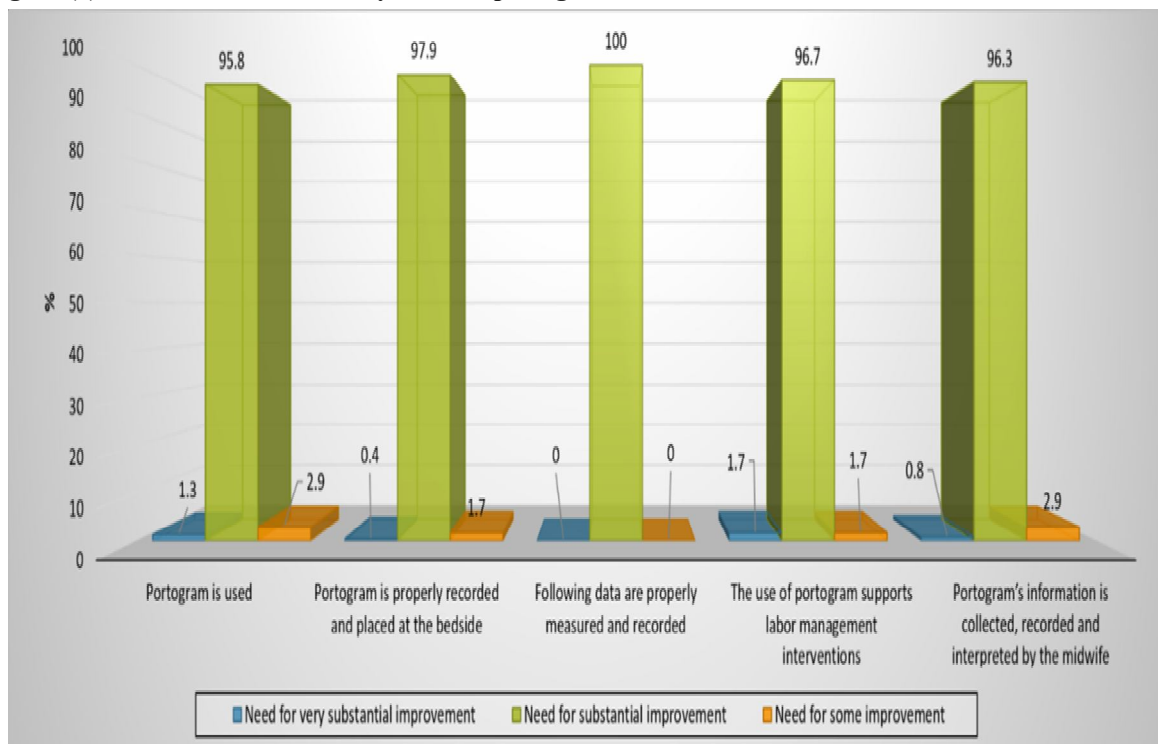
Conditions of delivery	Need for very substantial improvement		Need for substantial improvement		Need for some improvement		Good or standard care	
	N	%	N	%	N	%	N	%
- Women's privacy is respected; a single room for labor and delivery or curtains/screens are available if there is more than one woman per room	24	10.0	36	15.0	113	47.1	67	27.9
-Bed is positioned far from door or window (not in front of them)	2	0.8	99	41.3	105	43.7	34	14.2
-Staff introduce themselves to the woman	25	10.4	67	27.9	96	40.0	52	21.7
-Consent is obtained from women for attendance of people other than staff if present	20	8.3	65	27.1	89	37.1	66	27.5
-Staff wash their hands before assisting with delivery	21	8.8	66	27.5	115	47.9	38	15.8
-Staff use sterile gloves during delivery	4	1.7	72	30.0	96	40.0	68	28.3
-Staff use gloves while disposing waste	22	9.2	49	20.4	64	26.7	105	43.8
-Staff use sterile instruments	0	0.0	56	23.3	89	37.1	95	39.6
-There is an appropriate temperature in the delivery room (should not be below 25oC)	12	5.0	25	10.4	98	40.8	105	43.8
-There is access to a functioning shower	6	2.5	15	6.3	124	51.7	95	39.5

## Assessment of Maternity Care during Childbirth. . . .

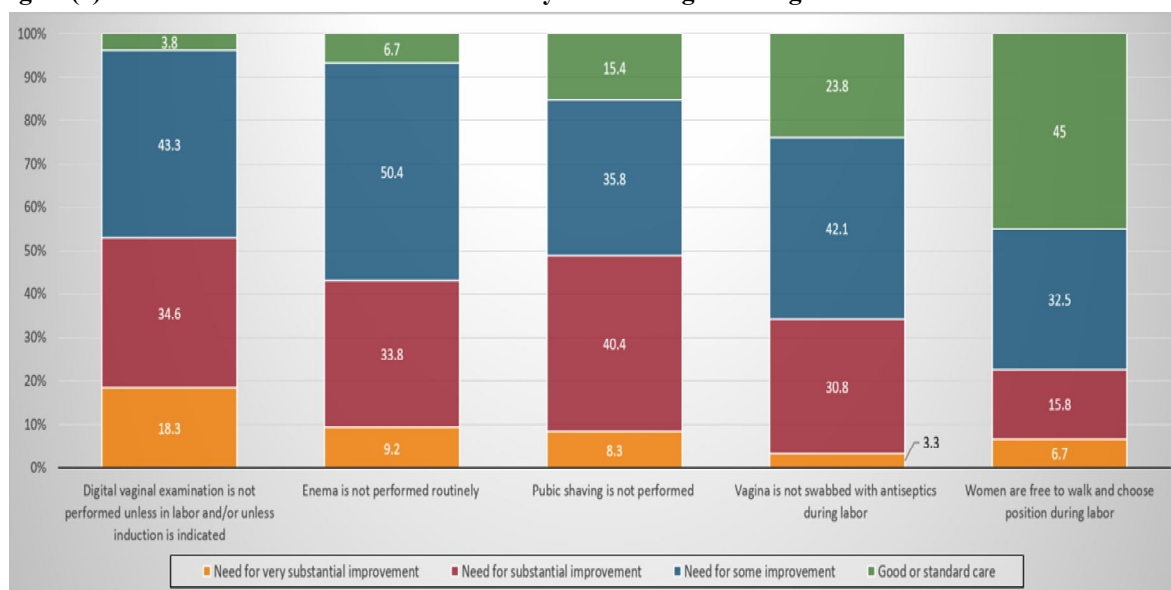
**Table(4). Number and distribution of maternity care for labor support**

Labor support	Need for very substantial improvement		Need for substantial improvement		Need for some improvement		Good or standard care	
	N	%	N	%	N	%	N	%
-Family members/persons are allowed to remain with women constantly during labor and birth	6	2.5	49	20.4	142	59.2	43	17.9
-There is at least one professional staff member present during labor and birth women receive support during labor from health care workers	13	5.4	83	34.6	117	48.8	27	11.3
-Staying present at women side as much as possible	14	5.8	86	35.8	94	39.2	46	19.2
-Explaining labor progress verbally	7	2.9	40	16.7	121	50.4	72	30.0
-Encouraging and helping into comfortable position	18	7.5	30	12.5	118	49.2	74	30.8
-Encouraging and helping with walking	36	15.0	32	13.3	118	49.2	54	22.5
-Encouraging and helping into an upright position	16	6.7	69	28.7	80	33.3	75	31.3
-Helping labor support companion	18	7.5	63	26.3	80	33.3	79	32.9
-Encouraging voiding as needed	9	3.8	66	27.5	105	43.8	60	25.0
-Keeping clean and dry	35	14.6	49	20.4	65	27.1	91	37.9
-Offering warm/cool compress	30	12.5	40	16.7	78	32.5	92	38.3
-Assisting with shower	42	17.5	50	20.8	63	26.3	85	35.4
-Helping with relaxation techniques	7	2.9	33	13.8	111	46.3	89	37.1
-Explaining breathing techniques	4	1.7	29	12.1	103	42.9	104	43.3
-Offering massage	24	10.0	21	8.8	57	23.8	138	57.5
-Encouraging, praising and reassuring	6	2.5	78	32.5	65	27.1	91	37.9
-Offering actively oral fluids light food	30	12.5	66	27.5	80	33.3	64	26.7

**Figure (1). Assessment of maternity care for partogram**



Figure(2) . Number and distribution of maternity care during first stage of labor



Table(5). Number and distribution of maternity care during second stage of labor

Care during second stage of labor	Need for very substantial improvement		Need for substantial improvement		Need for some improvement		Good or standard care	
	N	%	N	%	N	%	N	%
-Women are allowed to choose position other than lying on back during delivery	11	4.6	61	25.4	129	53.8	39	16.3
-Women are encouraged to choose position other than lying on her back during delivery	5	2.1	95	39.6	103	42.9	37	15.4
-Midwives physically helps women to find most comfortable position	11	4.6	124	51.7	84	35.0	21	8.8
-Fetal heart rate is controlled adequately during period of active pushing second stage of labor	46	19.2	66	27.5	96	40.0	32	13.3
-Women are not routinely forced to push during delivery	36	15.0	75	31.3	91	37.9	38	15.8
-Duration of the second stage is not limited unless there is fetal distress	24	10.0	89	37.1	90	37.5	37	15.4
-Pressure on the abdomen is not used to support the delivery of the baby	9	3.8	83	34.6	89	37.1	59	24.6
-Episiotomy is not routinely performed	2	0.8	45	18.8	141	58.8	52	21.7
-Anesthesia is given for episiotomy	7	2.9	21	8.8	113	47.1	99	41.3

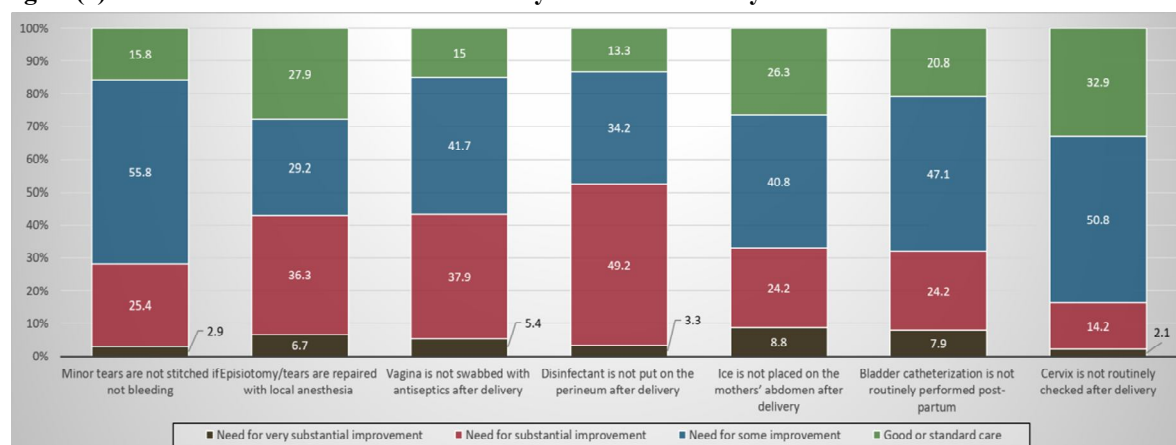
Table (6). Number and distribution of maternity care during third stage of labor

Care during third stage of labor	Need for very substantial improvement		Need for substantial improvement		Need for some improvement		Good or standard care	
	N	%	N	%	N	%	N	%
-Women are informed about risks and benefits of physiologic versus active management of third stage and are involved in decision for management	0	0.0	47	19.6	139	57.9	54	22.5
-Active management of third stage is performed unless women choice is different	3	1.3	88	36.7	117	48.8	32	13.3
-Oxytocin 10 U i.m. or sonometric given after expulsion of shoulders or within 1 min after birth of baby	53	22.1	60	25.0	83	34.6	44	18.3
-Controlled cord traction performed after cord clamping	41	17.1	70	29.2	80	33.3	49	20.4
-Fundus of uterus checked after placenta is delivered	33	13.8	50	20.8	68	28.3	89	37.1



## Assessment of Maternity Care during Childbirth. . . .

**Figure(3) Number and distribution of maternity care after delivery**



**Table(7). Number and distribution of fetal care**

Fetal care	Need for very substantial improvement		Need for substantial improvement		Need for some improvement		Good or standard care	
	N	%	N	%	N	%	N	%
A form of assessment of fetal wellbeing is available in the hospital	34	14.2	86	35.8	106	44.2	14	5.8
Intermittent auscultation of fetal heart beat is performed in low-risk pregnancy	68	28.3	122	50.8	32	13.3	18	7.5
Guidelines for intermittent auscultation are in place stating in which way the auscultation should be performed	53	22.1	112	46.7	56	23.3	19	7.9
Fetal heart rate is checked for 60 sec after contraction	81	33.8	84	35.0	60	25.0	15	6.3
Fetal heart rate is checked at least every 30 minutes in the first stage of labor	69	28.7	83	34.6	75	31.3	13	5.4
Fetal heart rate is checked at least every 5 minutes or after every contraction during second stage	67	27.9	78	32.5	73	30.4	22	9.2
Midwives performing intermittent auscultation are skilled enough to recognize the fetal heart beat pattern and the maternal uterine activity	12	5.0	99	41.3	86	35.8	43	17.9
Maternal pulse is checked when performing intermittent auscultation	13	5.4	53	22.1	58	24.2	116	48.3

**figure (4) .Percentage of domains that needs to be improved from high to low:**

