A SURVEY TO MEASURE THE LEVEL OF PROFICIENCY IN THE SKILLS NEEDED TO MANAGE PREGNANCIES, BIRTH AND POSTNATAL CARE.

An assessment of the public maternity care services p under the framework of the project:
Making it happen: training health care providers for Maternal and New-born Care

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Background

WHO refers maternal health as the health of women during pregnancy, childbirth and the postnatal period[1]. Maternal healthcare services involve a wide range of services, such as family planning, pre-conception, prenatal and postnatal which help woman to enjoy and have a positive pregnancy experience and reduce maternal morbidity and mortality. Survival and the wellbeing of both the mother and the infant, depends very much on the quality of delivery of healthcare services during pregnancy, childbirth and after delivery.

Even though, maternal healthcare care has received many attentions and a lot of progress has been made during the last twenty years, yet maternal mortality remains unacceptably high. According to WHO data, nearly 295 000 women died during and following pregnancy and childbirth in 2017. In addition, UNFPA reports that globally, approximately 808 women die every day[2]. Mothers and new-borns are still dying in unacceptably large numbers – mostly from preventable or treatable causes[3]. The largest threat of maternal mortality occurs during labor, birth and the 24 hours following birth. Excessive blood loss, infection, high blood pressure, unsafe abortion, and obstructed labour are the most common direct causes of maternal injury and death. Most of obstetric complications and maternal deaths are preventable with timely management by a skilled birth attendant (SBA) working in a supportive environment. Any delay, particularly in provision of the healthcare at the health facility level can result in loss of life and/or poor maternal health outcomes. Ending preventable maternal death must remain at the top of the global agenda. It is critical to expand efforts reducing maternal injury and disability to promote health and well-being.

Albania situation

Maternal and child healthcare services are integrated into the primary health care system and provided free of charge at prefecture and district level. The Antenatal care (ANC) and Postnatal care (PNC) in urban areas is delivered mainly through the women's and children consulting centres (WCCC) at maternity hospitals. While in rural areas through the health centers and villages clinics, with services provided by family doctors, nurses/midwifes. The second and the third level of health care are mainly provided by the public hospitals at prefecture and district level, whereas the tertiary health care is delivered through two Obstetrics and Gynaecology Hospitals in Tirana, which in the meantime serve as University Hospital Centers as well.

The most recent data on the utilization of maternal health services, women's access to services, and quality of services are those published from the last Albanian Demographic Health Survey

[1] WHO. Maternal health 2016 [Available from: http://www.who.int/maternal_child_adolescent/topics/maternal/en/. Accessed July 2020.
[2] UNFPA. Maternal Health 2017 [Available from: https://www.unfpa.org/maternal-health]
[3] UNICEF. Maternal and New-born Health 2018 [Available from: https://www.unicef.org/health/maternal-and-newborn-health]. Accessed July 2020.

(2017-2018) which are based on live births in the 5 years preceding the survey[4]. Key findings regarding the ANC and its component, delivery, PNC and accessing the healthcare services are summarized as followings.

Receiving ANC by an SBA was reported by 88% of women with a live birth in the past 5 years and 78% completed more than four visits, an increase from 67% in 2008-09 to 78% in 2017-18. However, compared with the last ADHS (2008 -2009) the percentage of women assisted by an SBA has decreased from 97% in 2008-09 to 88% in 2017-18.

Nearly all women who received antenatal care had urine and blood samples taken (98%), and 94% had the blood pressure measured. Two-thirds of them (67%) took iron tablets or syrup, and 2% took intestinal parasite drugs. The proportion of women receiving antenatal care who had a blood sample taken increased from 87% in 2008-09 to 98% in 2017-18. The proportion who had their blood pressure measured also increased during that time period, from 91% to 94%, and the proportion who had a urine sample taken increased from 88% to 98%.

Birth delivery in a health facility is almost universal in Albania, where all births took place in a health facility, 95% in a public health facility and 3% in a private one. All of births were delivered by a skilled provider;88% were delivered by an obstetrician or gynecologist, 10% were attended by nurses or midwives, and 2% of deliveries were attended by family doctors. Home deliveries are being decreased continuously from 3% in 2008-09 to 0.4% in 2017-18. Three-quarters of women (76%) had their postnatal check less than 4 hours after delivery, and the large majority (88%) received a postnatal check during the first 2 days after their most recent birth. Only 6% of mothers did not receive any form of postnatal check. The proportion of mothers who received a postnatal check less than 4 hours after their most recent birth has increased from 59% in 2008-09 to 76% in 2017-18. The proportion of mothers who did not receive any postnatal check was reduced by half, from 12% in 2008-09 to 6% in 2017-18.

Some problems related to accessing the maternal and child health care services were also noted by nearly 34% of women, where the most common ones were: was getting money for treatment (25%), followed by distance to the health facility (14%) and not wanting to go alone (13%).

Albania's infant and perinatal health has improved significantly over the past twenty years. Yet, national mortality rates remain unacceptably high, particularly in comparison to Europe Union average. For example, in 2019 the national infant mortality rate in Albania was reported as 8.6 deaths per 1000 live births, compared to the EU average of 3.4 deaths for the same year[5]. Infant and perinatal mortality rates are vital indicators of both quality and availability of healthcare services provided to mothers and their new-borns, and are key indices to monitoring and assessing current health trends and driving the necessary policy and investment decisions.

The aim of this assessment was to identify the level of proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal care for

[4] Albanian Demographic Health Survey 2017 -2018 [Available from: https://dhsprogram.com/pubs/pdf/FR348/FR348.pdf]

[5] https://gateway.euro.who.int/en/indicators/h2020_20-infant-mortality/

mothers and babies in the public maternities as well as to provide evidence regarding the availability and quality of the maternal and new-born care services.

Findings from this assessment will serve as basis in providing recommendations for improving the quality of maternal healthcare services in Albania.

Materials and method

Study design and settings

A facility based quantitative cross-sectional study was employed.

This assessment was conducted in the eight public maternities at University, Regional and District level, as following: Tirana (Regional Maternity Hospital- Mbreteresha Geraldine), Elbasan (Regional Maternity Hospital), Korce (Regional Maternity Hospital), Vlore (Regional Maternity Hospital); Sarande (District Maternity Hospital), Lezhe (Regional Maternity Hospital), Shkoder (Regional Maternity Hospital), Diber (Regional Maternity Hospital).

Interviews with Faculty of Nursing Administrators were carried out at the University of Technical Medical Sciences (public entities) covering six regions, respectively in Tirana, Korce, Elbasan, Durres, Vlore and Shkoder.

Study population and sampling

The study population were healthcare managers and providers in maternal healthcare services (ob/gyn and neonatologists), Faculty of Nursing Administrators and women who gave live birth during data collection period in the public maternities where this study was carried out.

Purposive sampling was used to select discussant women (98) considering variability in age, time gave birth and social status. Key informants for the in-depth interview were selected purposefully based on their involvement in maternal health care service provision (51 healthcare providers) and teaching experience to the Faculty of Nursing (8 University administrators).

Inclusive criteria:

- Mothers who were attended delivery services in study maternities and willing to participate.
- Healthcare providers/managers working in the public maternities and involved in antenatal and postnatal care.
- Administrator/manager of the Faculty of Nursing in the public universities.

Data collection and analysis

The research team was composed by 8 people, consisting of three investigators and 5 research assistants conducted interviews with recruited participants at their settings. Data collection commenced from 02/03/2020 for a 10 consecutive days.

The main data collection tool was a structured questionnaire, developed after intensive consulting of relevant

Five type of questionnaires were used in this study, one per each target audience: maternity healthcare managers and providers (questions), neonatologists, university managers and women at maternity ward.

Particular attention was place to ensure the quality of data collection, therefore the principal investigator carried out a one-day with the research team and data collectors, data entry and analysing people. Additionally, the investigators team carried out frequent on-site supervision visits during the data collection period and doubled-checked completed questionnaires in order incomplete and incoherent responses.

The data obtained were initially entered to Excel software and then transferred to SPSS 20 software for further analysis. In order to assure the quality of data, the researcher team before final analysis, collected data were double-checked and cleaned, by looking at the distribution of the data, identifying outliers and checking back again the original data.

Ethical Considerations

In the conformity with the ethical principles of the Helsinki Declaration for the medical research involving human subject, before the start of SII and FGDs, an oral informed consent form to all potential interviews was provided.

All of the study participants were briefed about the purpose of the study and their right to refuse to answer any question or withdraw from the semi-structured interviews (SII) at any time. They were also informed that there is no "right" or "wrong" answer and kindly requested to express their opinions and thoughts freely. Furthermore, participants were informed that their names or any identification leading to them will be kept strictly confidential and that their names will not appear in any report or publication resulting from this study.

Audio-recordings and hard copies of the transcripts were kept under lock and key and subsequently will be destroyed in due time.

Aim and Objectives

The aim of this study was to identify the level of proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal care for mothers and babies in the public maternities.

Objectives:

- Provide evidence regarding the availability and quality of the maternal and new-born care services.
- Review the component of neonatal curriculum in the faculty of nursing and better aligned in the context of national health care needs.

Results

Objective 1: *identify the level of proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal care for mothers and babies.*

Analyses of Maternity Health Providers

Section 1: Characteristics of participants

Table 1 outlines the characteristics of health providers who were willing to provide information regarding their experience working in Maternal Health Care facilities. A total of 51 healthcare providers participated in this study from University (*15.7%; n=8)*, *Regional (74.5%; n=38)* and municipal hospitals (*9.8%; n=5).*
Respondents' occupation was as followed: Medical Doctors (*19.6%; N=10)*, Nurse/Midwifes (*78.4%; N=40)* and Maternity Department/Health Centre Managers (*2%; N=2)*.

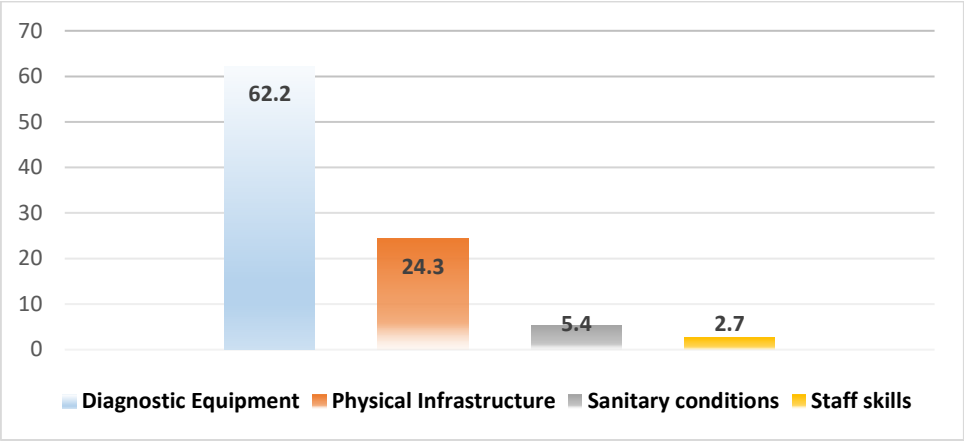
Most participants had more than 10 years and above working experience in the Maternal Healthcare Services. The percent of participants who worked in maternity departments were considerably higher (96.1%) then those working in neonatology care settings (3.9%).

Table 1: Profile of interviewees

Institution	Occupation	Work experience		
		< 10 years	*11- 20 years*	*21+*
University: *15.7% (n=8)*	Medical Doctor: *19.6% (N=10)*	*30% (N=3)*	*30 % (N=3)*	*40% (n=4)*
Regional: *74.5% (n=38)*	Nurse/Midwife: *78.4% (N=40)*	*38.5% (N=15)*	*28.2 % (N=11)*	*33.3% (n=13)*
Municipal: *9.8% (n=5)*	Managers*: 2% (N=2)*			*100% (N=2)*

When asked to provide an overall opinion whether there is room for improvement in their facility, the most common responses where regarding improvements in diagnostic and essential equipment in maternity service delivery (*62.2%; N= 23)* as well as improving the facility physical infrastructure (*24.3%; N= 9)*. Less than 5% of them mentioned improving of sanitary conditions. It is interesting to note that only 2.7% of respondents mentioned that there is a need to improve health workers performance (Figure 1).

Figure 1: Health providers' opinion regarding improvement in their health facility

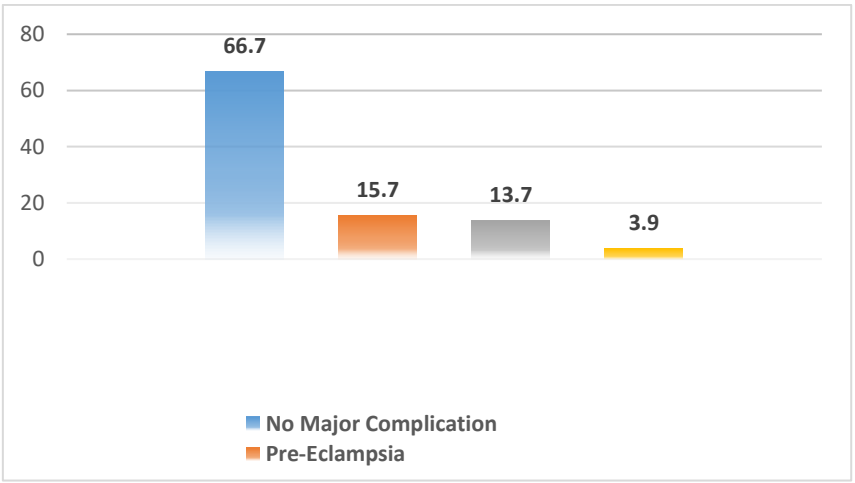


Section 2: Maternal mortality and pregnancy complications

Too many women throughout the world die as a result of complications during or after pregnancy because of health problems related to pregnancy. Most pregnancy-related deaths can be prevented if getting regular health care. Therefore, the next set of questions were related to maternal mortality and complications during or after the pregnancy in their respective health facility. Nearly ninety percent mentioned that they haven't had any death during the last years. However, those who have had maternal deaths in their units mentioned pulmonary thromboembolic (*7.8%; N=4)* and Uterine Atony (*3.9%; N=2)* as causes of maternal death among pregnant women.

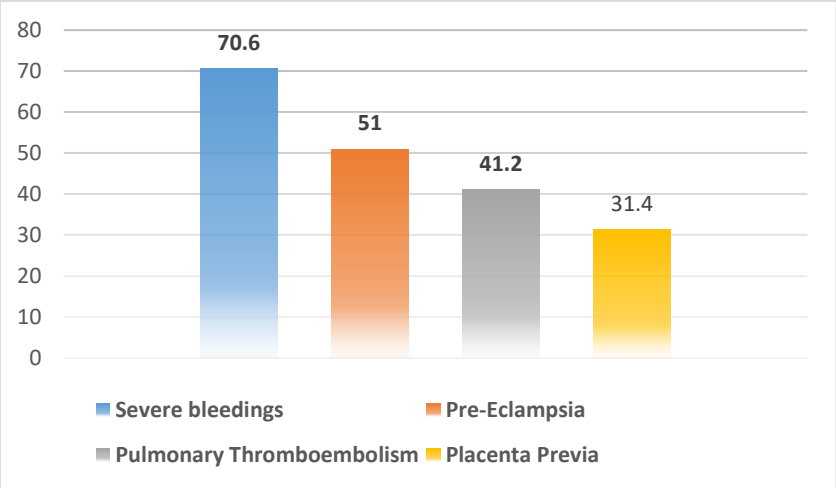
In addition to maternal deaths, respondents were asked whether they have had experienced severe complications that required a patient to be transferred to a specialized healthcare facility. The Figure 2, shows that majority of respondents (*66.7%; N=34)* mentioned that they haven't had any critical complication that required transfer to a more specialized facility. Nearly, one-quarter of them stated that they have had to deal with some critical complications and according to them the main factors were related to pre-eclampsia (*15.7%; N=8)*, inadequate and poor-quality services (*13.7%; N=7)* and distance to facilities (*3.9%; N=2)*.

Figure 2: Identified factors of complications during and following pregnancy and childbirth



In order to have a clearer picture regarding the major complication during or after pregnancy providers were asked to rank the most four (4) common ones they encounter in their routine practice. Figure 3 reveals opinion of health providers regarding the major complications during or after pregnancy. The most common ones are: severe bleeding (*70.6%; N=36)*, pre-eclampsia (*51%; N=26)*, pulmonary thromboembolism (*41.2%; N=21)* and placenta previa (*31.4%; N=14)*.

Figure 3: Self-reported opinion regarding common complications during or after pregnancy



Other complications such as, distacco placenta, cardiac and immune diseases, uterine atony were less frequently mentioned.

Additionally, they were asked about the top two frequented diseases (severe bleedings and pre-eclampsia) they mentioned in the previous questions and shed light on the reason(s) why maternal deaths and complications happen. Responses are summarized in the Table 2, where the most mentioned reasons for both diseases/complications are: the nature of disease, delayed hospital presentation, diagnostic testing problems, improper diagnostic equipment & tools and medicine shortages.

Table 2: Causes of maternal death and (or) complications during or after pregnancy

		Disease: Severe bleeding	Pre-Eclampsia
1	Nature of disease	96.1% (N=49)	66.7% (N=33)
2	Delayed hospital presentation	82.4% (N=42)	47.1% (N=24)
3	Diagnostic testing problems	37.3% (N=19)	25.5% (N=13)
4	Medicine shortage	29.4% (N=15)	23.5% (N=12)
5	Improper diagnostic equipment & tools	35.3% (N=18)	27.5% (N=14)
6	Lack of staff to provide healthcare and follow up	2% (N=1)	9.8% (N=5)
7	Wrong treatment/Medical negligence	9.8% (N=5)	7.8% (N=4)

Nowadays, most maternal deaths are preventable, and thanks to the new technologies and evidence-based practices the health-care solutions to prevent or manage complications are well known and already in place. Timely management and treatment can make the difference between life and death for the mother as well as for the baby, therefore a woman needs access to high quality care during or after pregnancy.

Table 3 provides data on healthcare providers' satisfaction level regarding drugs, medical supplies and laboratory testing services at maternal department. In general, they show high level of satisfaction for several items, such as: i.v. Fluids, Maternal Oxygen and drugs. However, nearly one-third mentioned that hospital blood stock is sometimes inadequate. Moderate level of satisfaction regarding formula feeding was also seen in their responses, where only 42% of them said that are very satisfied (37.3%; N=19) or satisfied (15.7%; N=8). Formula Feeding has also the highest "non-response "rate (21.6%; N=11) compared with other items in this rubric.

Table 3: Satisfaction level regarding drugs, medical supplies and laboratory testing services at maternal department

Current stock	***Very satisfied***	***Satisfied***	***Sometimes inadequate***	***Often inadequate***
Drugs	37.3% (N=19)	45.1% (N=23)	11.8% (N=6)	
Maternal Oxygen	80.4% (N=41)	11.8% (N=6)	7.8% (N=4)	
Blood transfusion	39.2% (N=20)	33.3% (N=17)	27.5% (N=14)	
i.v. fluids	84.3% (N=43)	15.7% (N=8)		
Formula feeding	37.3% (N=19)	15.7% (N=8)	11.8% (N=6)	13.7% (N=7)
Laboratory testing services	49% (N=25)	31.4% (N=16)	19.6% (N=10)	

To have a better understanding of problems that health provider's encounter in their working place they were asked to mention what other problems they have in addition to those mentioned in the table above. They were encouraged to talk about supplies, equipment or other issues that lack of them might affect the quality of care for women during or after pregnancy time.

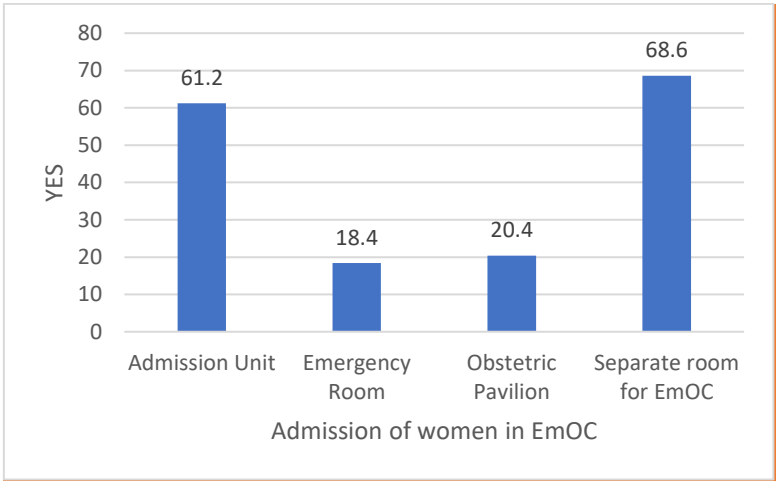
Just over half of the participants (62.7%) stated "lack of medical supplies" (39.2%; N=20) and "out-of-stock drugs" (23.5%; N=12) compared with nearly one-fourth (37.3%; N=19) who think that there are no major problems at their department that needs to be addressed.

Section 3: Emergency Obstetric Care and New-born Care (EmONC)

Access to emergency obstetric care (EmNOC) interventions has been identified as a means of improving maternal health outcomes. Providers skilled in EMNOC services are essential, particularly in countries with high burden of maternal and new-born mortality. Therefore, assessing the range of interventions provided in health facilities is, therefore, important in determining capacity to treat obstetric emergencies. In order to have an overall overview of the EmONC services survey respondents were asked to provide their insights regarding access and quality of this service at their facility. Questions were related to the Emergency Obstetric Care (EmOC) services, covering issues on physical infrastructure, access and referral as well as the presence of qualified staff.

The first set of questions were about availability of emergency obstetric care units, admission, patient flow, referral and the distance from admission to the emergency room. Data presented in the Table 4 reveals that majority of patients (61%; N=30) who requires intensive care are admitted to the admission care unit, whereas the rest at the Obstetric Pavilion (20.4%; N=10) and the Emergency Room (18.4%; N=9). Percentage of facilities with *separate room* or *space* for Emergency Obstetric *Care was reported by 68.6% of survey respondents.*

Table 4: Obstetric admissions to the intensive care unit



Those who stated that there is no separate room or space for EmOC at their facility were asked whether the room that admits women who needs intensive care have proper infrastructure and communication, essential drugs, equipment and supplies. Nearly all of them reported that conditions are adequate and have beds, essential drugs (intravenous fluids, antibiotics, anticonvulsants, oxytocic/ prostaglandins and drugs used in emergencies), basic equipment and supplies, running water, functioning toilets, etc. The emergency department/room was reported to be mostly at the same building and the distance between admission unit and emergency room is less than 50 meters. Among those who reported that there is room for improvement they

mentioned that this service needs to be updated based on the UN handbook of EmONC signal functions standards.

Furthermore, respondents were asked about the availability of promotion materials, algorithm and guidelines on the management of emergency obstetrics posted on visible places at their facility. Just over half of the interviewees (60.8%; N= 31) mentioned that even though these materials are available for the health staff and clients, yet they aren't posted/showed in a visible place. In cases where these materials were visible, the most common ones were algorithms, leaflets, posters or walk-in patients' symbols.

Section 4: Human resources and training needs

Availability of a qualified and trained health worker and emergency obstetric care are two recent strategies promoted to reduce maternal mortality. Therefore, in this section we analysed whether facilities had the required staffing or not, their training needs as well as were asked to give their insights on improving the obstetric care services.

The first group of questions were composed to address the availability of staff (administrative and health) during and after working hours and whether they have been trained in the evaluation and management of the EmOC. According to Table 5, during the day shift the EmOC department is fully equipped with staff (administrative, social and healthcare), while during the evening shift there were reported shortages of staff in all categories of health workers, except midwives and OB/GYNs. In relation to their training experience on the evaluation and management of EmOC, OB/GYNs and midwives present the highest percentage of those who have received training in such topics. It is interesting to note that only 5.9% of general physicians have received training on evaluation and management of EmOC.

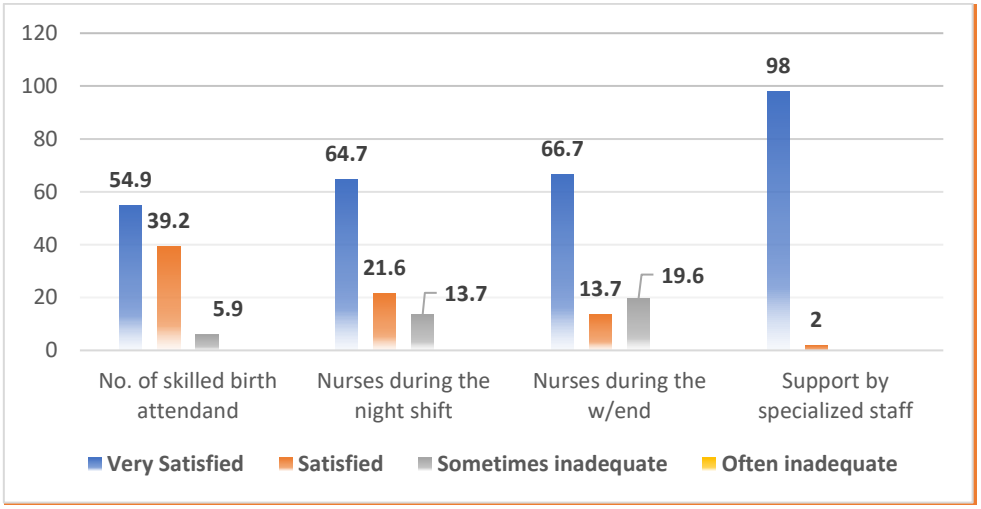
Table 5: Availability of staff in the Emergency Obstetric Care

Type of staff and employment	**Day shift** ***Yes (no. of staff)***	**Evening shift** ***Yes (no. of staff)***	**Trained in the evaluation of EmOC** ***Yes***	**Trained in the management of the EmOC** ***Yes***
Administrative	70.6% *(no.:1- 5)*	33% *(no.:1- 3)*	31.4%	29.4%
Nurse auxiliary	31.4% *(no.:1- 2)*	3.9% *(no.:1)*	11.8%	11.8%
Registered nurse	92.2% *(no.:1- 6)*	54.9% *(no.:1- 3)*	54.9%	56.9%
Midwife	98% *(no.:1- 20)*	76.5% *(no.:1- 14)*	68.6%	62.7%
General Physician	9.8% *(no.:0- 4)*	2% *(no.:1)*	5.9%	5.9%
OB/GYN	100% *(no.:1- 20)*	88.2% *(no.:1- 12)*	84.3%	84.3%

In addition, they were asked whether the current number of skilled birth attendants is adequate or additional staff is needed, particularly during night shift or the weekend. Furthermore, they were also asked in case they need second opinion who does support them. In general, over

eighty percent of them were positive about number of available staff and the support they receive by a specialized colleague (98%; N=50). However, they mentioned that health staff during the night shift (13.7%; N=7) or weekend is sometimes inadequate (19.6%; N=10).

Figure 4: Respondents opinion regarding the availability of skilled birth attended staff



Nevertheless, despite the fact that majority of them think that number of skilled birth attendants is either very satisfied or satisfied, just over half of interviewees (58.8%; N= 30) reported that their facility lacks specialized staff to help them provide a better care for pregnant women. Moreover, less than twenty percent also stated that the main problem they face when they seek help for a second opinion is difficulty to reach or contact a specialized staff, low response or readiness by the "on call" specialist.

In addition to the availability of qualified and skilled health workers 24/7, the next group of questions aim to assess their training skills and needs, as well as sharing information and skills among healthcare providers.

As shown in Table 6, the large majority of respondents (90.2%) believe they have very good (41.2%; N=21) or good (49%; N=25) training skills. On the other hand, when asked about their knowledge on maternal morbidity two-third of them reported to have either very good (21.6%; N=11) or good (54.9%; N=28) knowledge level on maternal morbidity. However, some of them mentioned that their knowledge level are sometimes inadequate (15.7%; N=8) or often inadequate (7.8%; N=4).

Table 6: Self-perception of training skills and knowledge on maternal morbidity

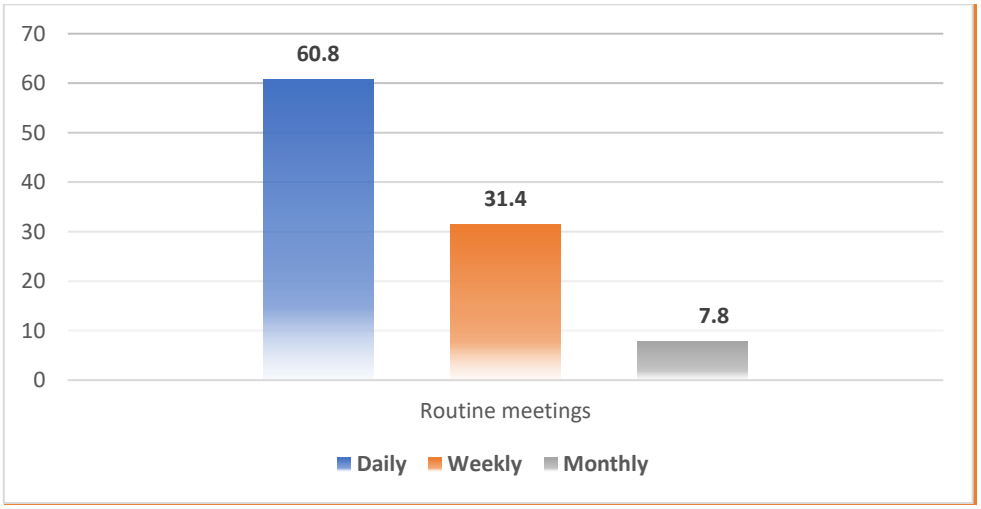
Staff training skills and knowledge on maternal morbidity	***Very Good***	***Good***	***Sometimes inadequate***	***Often inadequate***
Training skills	41.2% (N=21)	49% (N=25)	9.8% (N=5)	

Knowledge on maternal morbidity	21.6% (N=11)	54.9% (N=28)	15.7% (N=8)	7.8% (N=4)

It is interesting to note, that when asked about the field they need more trainings and gain knowledge on maternal morbidity they mentioned only one specific disease (post-partum: 80.4%), whereas the rest (17.6%) stated obstetrics/gynaecology diseases in general. Eighty percent of them believe that their institution/health facility has the capacity to organize trainings by their own.

Figure 5 below shows a high level of information-sharing and communication interactions between health providers via routine meetings that happens daily (60.8%; N=31), weekly (31.4%; N=16) and monthly (7.8%; N=4).

Figure 5: information-sharing and communication interactions between health providers



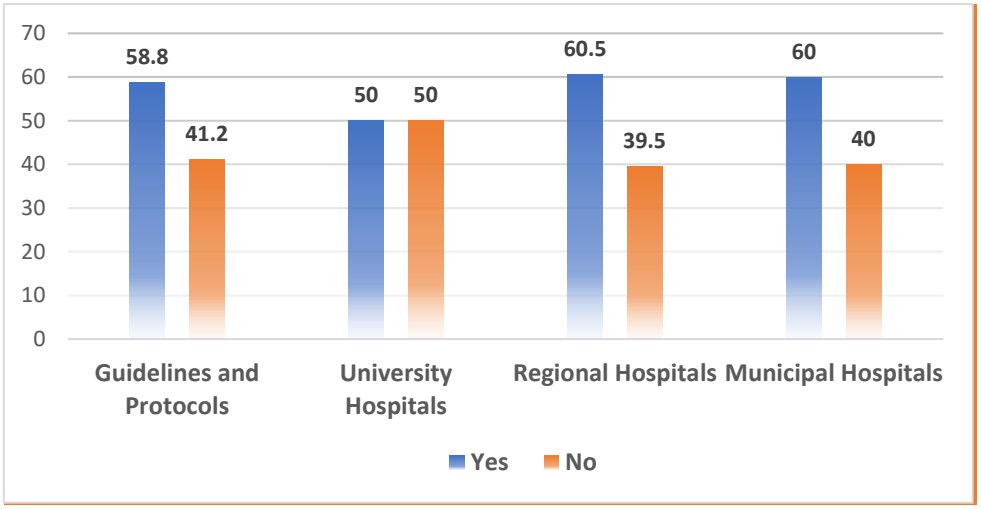
Apparently, two types of meetings are regularly organized: an administrative one (33.3%; N=17) with participation of all staff and technical meetings dedicated to health providers only (45.1%; N= 23). However, nearly twenty-percent of them mentioned no meetings organized at all (9.8%; N=5) or did not prefer to respond to this question (11.8%; N=6).

Additionally, to examine the experiences of inter-professional collaboration of maternity service providers they were asked to provide their opinion about exchange professional information *between* relevant health and social care professionals and what topics do they usually discuss the most. Nearly all of them (92.2%) stated that they regularly exchange information between and among staff and the most discussed topics are about quality assurance (62.7%; N=32), maternal death (19.6%; N=10) and other clinical management issues (15.7%; N=8).

Despite the fact that all facilities were expected to have guidelines and protocols, Figure 6 data reveals that just half of respondents (58.8%; N=30) stated that guidelines and protocols are

available at their facilities. A further cross-tabulation of providers 'opinion by type of facility supported the finding that protocols and guidelines are not present at the time of interview. These findings require further attention to understand the nature of the problem.

Figure 6: Availability of guidelines and protocols



The next group of questions seeks to measure the satisfaction level of healthcare providers regarding services and ways forward how to improve maternal care at their facility and beyond. As Table 7 describes, satisfaction (very satisfied and satisfied: over 90%) with services for maternal care as well as health providers interaction with patients.

Table 7: Health Providers opinion regarding services for maternal care at their facility.

Satisfaction with services for maternal care	***Very satisfied***	***Satisfied***	***Sometimes inadequate***	***Often inadequate***
Information given to patient about the disease	58.8% (N=30)	39.2% (N=20)	2% (N=1)	
Time spent talking with the patient about their disease	82.4% (N=42)	15.7% (N=8)		2% (N=1)
Providers satisfaction with the healthcare services	58.8% (N=30)	33.3% (N=17)	7.8% (N=4)	

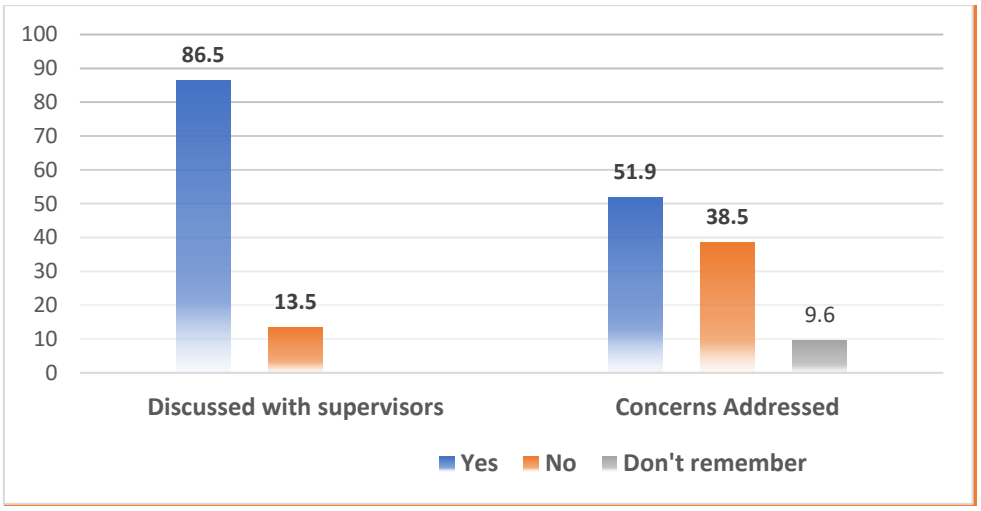
Additionally, they gave different opinions on how to improve patients knowledge and understanding about the nature of disease, where the most common ones where related to more time needed tove spent with the patient and simple language used while discussing with them or their closed relatives.

The same satisfaction level (very satisfied: 94.1%) was seen when asked to remember a patient who has had positive treatment outcomes and the ways how the patient are treated at their facility (92.2%). Those who admitted to have had problems with treatment effectiveness, the

most common reason mentioned by them was either related to treatment compliance or complications during the care pathway.

The last set of questions were related to addressing providers and patients' concern regarding the improvement of quality of healthcare. The large majority of respondents stated that they have shared their concerns/suggestions with their supervisors (86.5%; N=45), but nearly half of them (51.9%; N=27) admitted that their concerns have been addressed (Figure 7).

Figure 7: Addressing providers' concern regarding improvement of quality of healthcare



To investigate the level of general satisfaction of health care workers and to examine dissatisfaction reasons they were asked to provide their opinion about overall satisfaction level of healthcare workers at their facility. The large majority of them showed high level of satisfaction (88.5%; N=46), but also mentioned that particular attention should to be paid to increase staff salary (66.7%; N=34), find ways how to motivate staff during their work (17.6%; N=9) and revise the current staff workload (15.7%; N=8).

Further improvements of physical infrastructure, particularly of hygiene and sanitary conditions (toilets) were mentioned by slightly over half of them (51.9%; N=27), followed by improving of working conditions (39.2%; N=20) and medical supplies (5.9%; N=3).

Results: Analyses of Neonatologist Providers

Section 1: Characteristics of participants

Table 1 outlines the characteristics of health providers who were willing to provide information regarding their experience working in Neonatology Departments. A total of 51 healthcare providers participated in this study from University Hospitals (*11.8%; n=6), Regional (74.5%; n=38)* and municipal hospitals (*13.7%; n=7).* Their occupation were as followed: Medical Doctors (*27.5%; N=14)* and Nurse/Midwifes (*72.5%; N=37).*

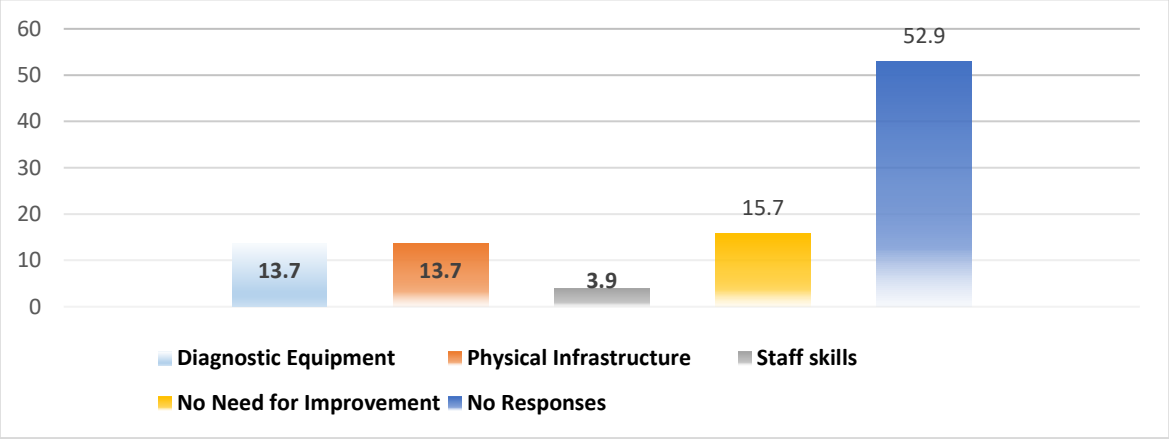
Most participants (64.3%; N=9) had more than 10 years and above working experience in the Neonatology Healthcare Services. The percent of participants who worked in maternity departments were considerably higher (96.1%) then those working in neonatology care settings (3.9%).

Table 8: Profile of interviewees

Institution	**Occupation**	**Work experience**		
		< 10 years	*11- 20 years*	*21+*
University: *11.8% (n=6)*	Medical Doctor: *27.5% (N=14)*	*35.7% (N=5)*	*50 % (N=7)*	*14.3% (n=2)*
Regional: *74.5% (n=38)*	Nurse/Midwife: *72.5% (N=37)*	*27% (N=10)*	*27% (N=10)*	*45.9% (n=17)*
Municipal: *13.7% (n=7)*				

When asked to provide an overall opinion whether there is room for improvement in their facility, the large majority of them *(80.4%; N= 41)* stated that there is some room for improvement. Surprisingly, half of them *(52.9%; N=27)* didn't give any suggestion regarding specific improvements in their facility. Among those who provided suggestions, the most common one where regarding improvements in diagnostic equipment tool as well as improving the facility physical infrastructure (*13.7%; N= 7)*. It is interesting to note that needs to increase staff skills was mentioned by only 3.9%. On the other hand, 15.7% of them didn't response to this question (Figure 1).

Figure 8: Health providers' opinion regarding improvement in their health facility



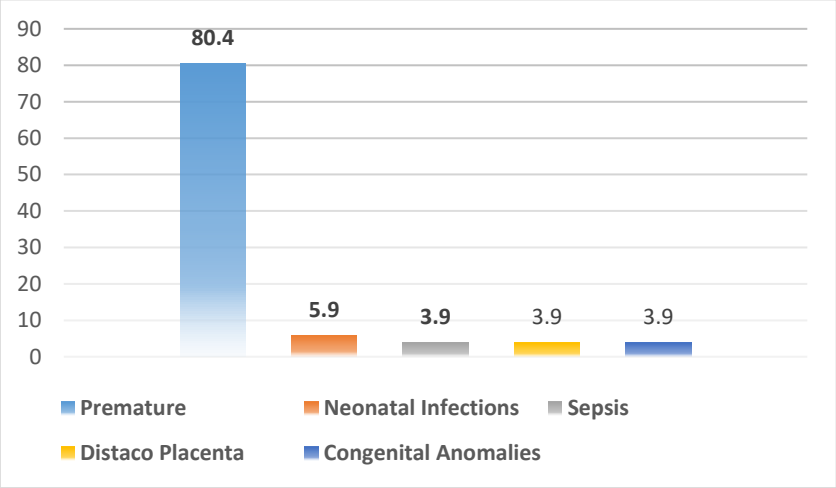
Additionally, respondents were asked about the infrastructure condition of neonatology services at their facility. Questions were related to the physical infrastructure (infant space), hygiene and sanitary conditions. Table 2 data reveals that high level of satisfaction (over ninety-percent) was reported for infant space and facility cleanness. Whereas, percentage of satisfaction level drops considerably for Toilets conditions (very satisfied: 33.3% and satisfied: 11.8%).

Table 9: Overall satisfaction level about physical infrastructure of neonatology services

New-born non intensive care units' condition	***Very Satisfied***	***Satisfied***	***Sometimes inadequate***	***Often inadequate***
Infant space	29.4% (N=15)	66.7% (N=34)	3.9% (N=2)	
Toilets	33.3% (N=17)	11.8% (N=6)	43.1% (N=2)	
Facility cleanness	47.1% (N=24)	51% (N=26)		

The neonatal period (the first 28 days of life) is a very delicate phase in life due to the risk of acquiring potential life-threatening diseases, and the complexity of the adaptive process of the new-born. In order to have a clearer picture regarding the complications and perinatal/neonatal hospital mortality rate, respondents were asked to rank the most four (4) common ones they encounter in their routine practice. Figure 3 shows that the main causes of stillbirth and neonatal mortality and morbidity rates, which are grouped as follow: a) pregnancy-related complications (e.g., complications of prematurity (*80.4%; N=41)*, congenital anomalies (*5.9%; N= 3).*) and infectious diseases: Sepsis (*3.9%; N= 2)*, Distaco Placenta: (*3.9%; N= 2)* and Respiratory Distress Syndrome (*2%; N= 1).*

Figure 9: Self-reported opinion regarding common complications during or after pregnancy



Additionally, they were asked about the most frequented diseases they mentioned in the previous question and to shed light on the relationship between the disease itself and causes of neonatal mortality. Responses are summarized in the Table 3, where the most mentioned reasons for both diseases/complications are: the nature of disease, delayed hospital presentation, improper diagnostic equipment & tools, diagnostic testing problems and medicine shortages.

Table 10: Causes of maternal death and (or) complications during or after pregnancy

		Complications of prematurity Yes	Neonatal Infections Yes
1	Nature of disease	98% (N=49)	84% (N=42)
2	Delayed hospital presentation	52% (N=26)	56% (N=28)
3	Diagnostic testing problems	33.3% (N=17)	23.5% (N=12)
4	Medicine shortage	17.6% (N=9)	10% (N=5)
5	Improper diagnostic equipment & tools	56.9% (N=29)	37.3% (N=19)
6	Lack of staff to provide healthcare and follow up	9.8% (N=5)	13.7% (N=7)
7	Wrong treatment/Medical negligence	2% (N=1)	3.9% (N=2)

High quality of care in neonatology implies providing an appropriate level of care to well new-born babies as well as more specialised care for the few babies who need it. Table 4 provides data of healthcare providers' satisfaction level regarding drugs, medical supplies and laboratory testing services at maternal department. In general, they show high level of satisfaction for several items, such as: Maternal Oxygen and i.v. Fluids. Moderate satisfaction level was seen for other topics such blood transfusion (very satisfied: 52.9% and satisfied: 27.5%) and laboratory testing services (very satisfied: 25.5%and satisfied: 52.9%).

However, nearly half of them showed low satisfaction level regarding "Formula Feeding" (Sometimes inadequate: 12% and Often inadequate: 42%) and the "quantity of drugs" (sometimes inadequate: 41.2%) at their neonatology department.

Table 11: Satisfaction level regarding drugs, medical supplies and laboratory testing services at maternal department

Current stock	***Very satisfied***	***Satisfied***	***Sometimes inadequate***	***Often inadequate***
Drugs	25.5% (N=13)	33.3% (N=17)	41.2% (N=21)	
Maternal Oxygen	96.1% (N=49)	3.9% (N=2)		
Blood transfusion	52.9% (N=27)	27.5% (N=14)	9.8% (N=5)	
i.v. fluids	78.4% (N=40)	21.6% (N=11)		
Formula feeding	18% (N=9)	16% (N=8)	12% (N=6)	42% (N=21)
Laboratory testing services	25.5% (N=13)	52.9% (N=27)	13.7% (N=7)	7.8% (N=4)

To have a better understanding of problems that health provider's encounter in their working place they were asked to mention what other problems they have in addition to those mentioned in the table above. They were encouraged to talk about supplies, equipment or other issues that lack of them might affect the quality of care for women during or after pregnancy time.

Just over half of the participants (62.7%) stated "lack of medical supplies" and "out-of-stock drugs" (11.8%; N=6) compared with nearly one-fourth (23.5%; N=12) who think that there are no major problems at their department that needs to be addressed.

Furthermore, they were asked about the presence and the availability of qualified staff at neonatology services, whether the current number of health staff is adequate or additional staff is needed, particularly during night shift or the weekend. Besides, they were also asked in case they need second opinion who does support them.

In general, the respondents 'opinion regarding the availability of qualified staff varied greatly where nearly half of them were positive about the availability of health and slightly half of them thought that the presence of staff is sometimes or often inadequate. The only rubric that over ninety-percent of them show very high satisfaction level was the one about seeking support by a specialized staff (Table 5).

Table 12: Presence and the availability of staff at the neonatology services

The availability of staff at the neonatology services	**Very satisfied**	**Satisfied**	**Sometimes inadequate**	**Often inadequate**
Enough number of health staff	29.4% (N=15)	21.6% (N=11)	17.6% (N=9)	31.4% (N=16)
Adequate time to care for new-borns	35.3% (N=18)	29.4% (N=15)	23.5% (N=12)	11.8% (N=6)
Availability of nurse staff during shift nights	27.5% (N=14)	29.4% (N=15)	41.2% (N=21)	2% (N=1)

Availability of nurse staff during the weekend	29.4% (N=15)	29.4% (N=15)	41.2% (N=21)	
Support by a specialized staff/second opinion	70.6% (N=36)	23.5% (N=12)	5.9% (N=3)	

To complete the picture about the availability of staff the next set of questions aimed to further explore their needs about qualified staff. Nearly two-third of them were satisfied (very satisfied: 43.1%; N=22; satisfied: 33.3%; N=17) about the qualified health personnel at their department. However, (24%; N= 12) reported that their facility lacks specialized staff to help them provide a better care new-borns. Moreover, 18% (N=9) also stated that the main problem they face when they seek help for a second opinion is low response or readiness by the "on call" specialist.

In addition to the availability of qualified and skilled health workers 24/7, the next group of questions aimed to assess their training skills and needs, as well as sharing information and skills among healthcare providers.

As shown in Table 5, the large majority of respondents (95.7%) believe they have very good (46.9%; N=23) or good (38.8%; N=19) training skills. However, some of them mentioned that their knowledge level are sometimes inadequate (14.3%; N=7).

Table 13: Self-perception of training skills and knowledge on maternal morbidity

Staff training skills and knowledge on maternal morbidity	***Very Good***	***Good***	***Sometimes inadequate***	***Often inadequate***
Knowledge level on neonatal morbidity	46.9% (N=23)	38.8% (N=19)	14.3% (N=7)	

Subjects in which they need more training to increase their skills were about prematurity complications (39.2%; N=20), followed by Intensive Care (29.4%; N=15), Respiratory Assist Device (23.5%; N=12) and the breast feeding (7.8%; N=4). Nearly two-third of them (72.5%; N=37) believe that their institution/health facility has the capacity to organize trainings by their own.

Staff rotation in the Neonatal Care Unit is intended to promote the compassionate and effective care for the new-borns. To understand the frequency of staff rotation and their opinion about this process, respondents were asked about the staff rotation process, its frequency and what do they think about it. Majority of them (68.6%; N=5) stated that there is a staff rotation in their facility. Regarding the frequency of staff rotation, as data in Figure 3 shown just half of them say there is a staff rotation, and it happens either monthly (33.3%; N=17) or quarterly (25.3%; N=12). The rest, which compromise slightly less than half of respondents said that staff rotation happens rarely (11.8%; N=6) or didn't respond to this question (31.4%; N=16).

Figure 10: Providers opinion regarding the frequency of staff rotation in their facility

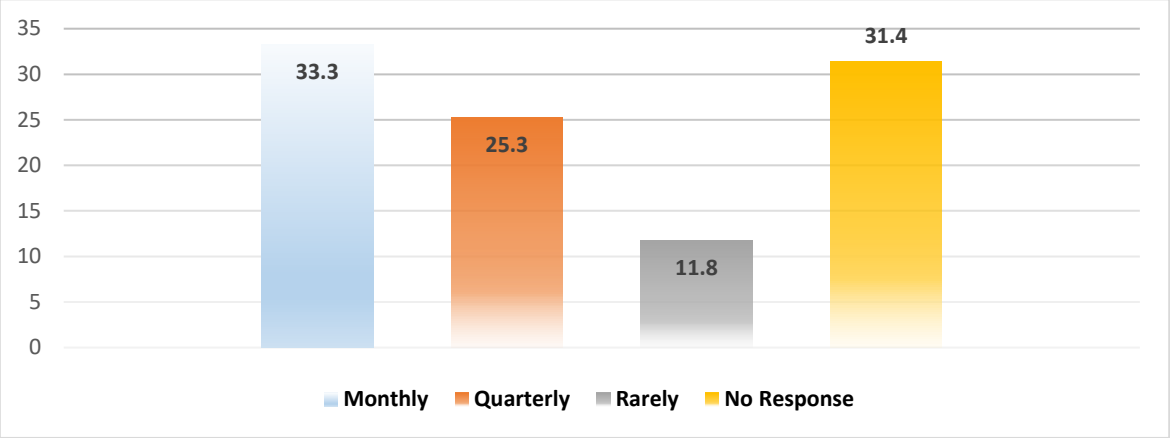
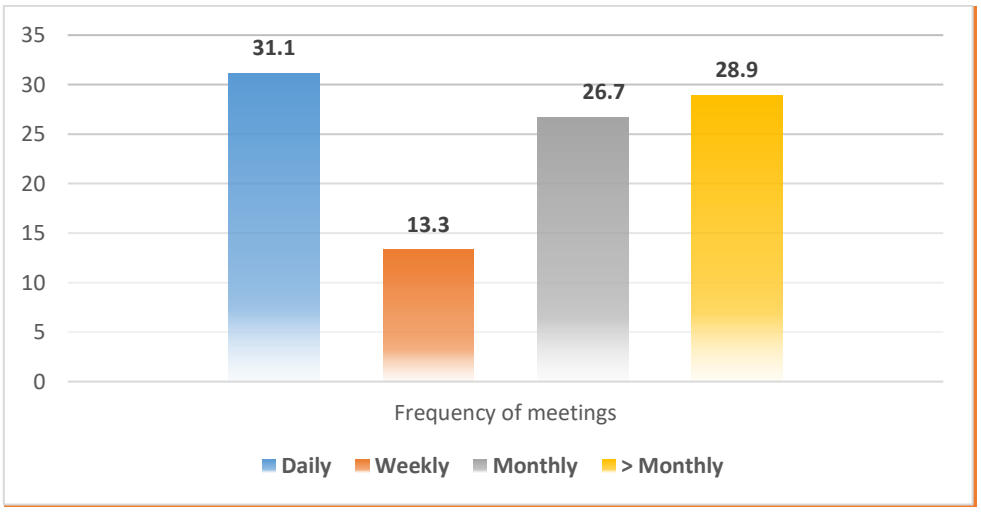


Figure 5 below shows a high level of information-sharing and communication interactions between health providers (86%; N=44) which is carried out via routine meetings that happens daily (31.1%; N=14), weekly (13.3%; N=6), monthly (26.7%; N=12) and more than once a month (28.9%; N=13).

Figure 11: information-sharing and communication interactions between health providers



To examine the experiences of inter-professional collaboration of maternity service providers they were asked to provide their opinion about exchange professional information between relevant health and social care professionals and what topics do they usually discuss the most. The large majority (84.3; N=43%) stated they have regular exchange information meetings between and among staff and the most discussed topics are about quality assurance (72.6%; N=36) and neonatal mortality and morbidity (22%; N=10). The greatest part of respondents (88.2%; n=45) also stated the presence of guidelines and protocols at their facility, in addition to some algorithms which are placed in visible places.

The next group of questions seeks to measure the satisfaction level of healthcare providers regarding services and ways forward how to improve neonatal care at their facility and beyond. As Table 7 describes, there is a high level of satisfaction (over 90%) perceived by respondents regarding information given, time spend and quality of care given in their respective departments.

Table 14: Health Providers opinion regarding services for neonatal care at their facility.

Satisfaction with services for neonatal care	***Very satisfied***	***Satisfied***	***Sometimes inadequate***	***Often inadequate***
Information given to parents about the new-born disease	80.4% (N=41)	17.6% (N=9)	2% (N=1)	
Time spent talking with the parents about the disease	41.2% (N=21)	51% (N=26)		7.8% (N=4)
Providers satisfaction with the healthcare services	64.7% (N=33)	35.3% (N=18)		

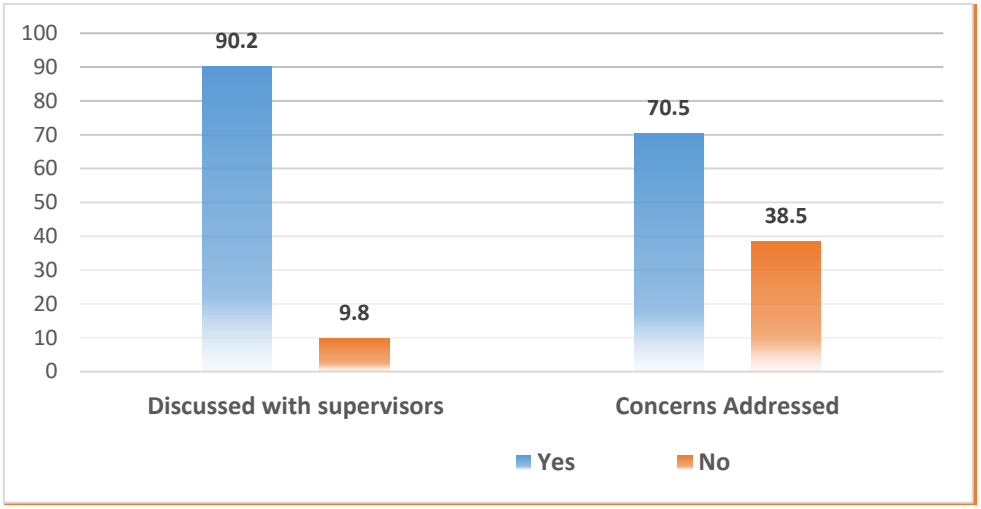
Moreover, they gave different opinions on how to improve parents knowledge and understanding about the nature of disease, where the most common ones where related to more time spent with the parents/family members of the new-borns and the simple language used while discussing with them.

The same satisfaction level (very satisfied: 98%; N=50) was seen when asked to remember a patient who has had positive treatment outcomes and the ways how the patient are treated at their facility. Those who admitted to have had problems with treatment effectiveness (50%; N=25), the most common reason mentioned by them was either related to the nature of the illness or complications during the care pathway.

Most providers reported moderate (often: 51%; N= 26) to high level of satisfaction (29.4%; N=15) regarding capacity and current efforts that their hospital is already doing to ensure a better quality of care for the new-borns. However less than twenty percent of them said they are somehow satisfied with the current quality of care given at their facility.

The last set of questions were related to addressing providers and patients' concern regarding the improvement of quality of healthcare. The large majority of respondents stated that they have shared their concerns/suggestions with their supervisors (90.2%; N=46) and around seventy percent (70.5%; N=31) admitted that their concerns have been addressed (Figure 5).

Figure 12: Addressing providers' concern regarding improvement of quality of healthcare



To investigate the level of general satisfaction of health care workers and to examine dissatisfaction reasons they were asked to provide their opinion about overall satisfaction level of healthcare workers at their facility. The majority of them showed positive opinions about providers satisfaction (62.7%; N=32), but also mentioned that particular attention should be paid to increase staff salary (68%; N=35), find ways how to motivate staff during their work (25%; N=12) and revise the current staff workload (15.7%; N=8).

Further improvements of physical infrastructure, particularly of hygiene and sanitary conditions (toilets) were mentioned by slightly over half of them (53%; N=28), followed by improving of working conditions (37.2%; N=18) and medical supplies (4.8%; N=3).

Objective 2: *provide evidence with regards to availability and quality of care at each health care facility, regarding Maternal and New-born Care.*

Results: Analyses of mothers

Section 1: General characteristics of interviewed mothers

Questions in this section aimed to gather a broad information on general characteristics of respondents, such as place and years of living at the current location, age, education, occupation, number of children and presence of closed relatives during the childbirth delivery.

Table 1 provides summary data about the socio-demographic characteristics of the respondents in this survey. Nearly all of them (99%) are younger than 35 years old. The large majority of respondents (73.2%) are between 18-24 years of age in the sample, while approximately 27 percent belong to the 25-35 age range.

Small majority of them (58.2%) live in urban area with nearly sixty-percent of them (58.9%) who were born in the city/region where the interview took place. For those who were not originally from the current place of residency, half of them have been living in that area for less than ten years, followed by some of 36.8% (n=14) residing between 11-20 years. Only thirteen percent (13.8%) reported a longer time of residency that varied from 21-30 years.

The nearest maternity unit is reported to be 5-30 minutes for the majority of them (63.3%), followed by slightly over one-fifth (26.5%) who reported that the distance from the nearest maternity is about 30-60 minutes. Around ten-percent reported a longer distance from one to four hours. A more detailed analysis comparing place of residence with the maternity distance showed that there is a strong connection between them. For instance, the large majority of women (78.9%; N=45) living in urban area reported that the distance from the place of residence to the closest maternity unit was 5-30 minutes compared with 41.5% of those living in a rural area. The longer distance from the maternity the higher percentage of respondents living in rural area.

The variable “Occupation” and “Educational level” was also investigated and the data pertaining to education showed that a small majority of the respondents (57.1%; N=46) were unemployed at the day of interview and the remaining (41.8%) were employed.

Regarding the “Education Level” it is quite evident that an overwhelming number of respondents (94%) were educated between high school and up to Bachelor/PhD education. Only 6.1 percent reported to have attended or completed the primary school.

Majority of interviewed women reported to have more than one child (*second child: 41.8%; third child 26.5%*), whereas nearly thirty-percent of them have only one child. The overwhelming number of them stated the either the husband (41.2%) or a closed relative (41.2%) was present at the birth of their children.

Table 15: General characteristics of mother who took part in the study

Age	**18-24 y/o** *73.2%; N=71*	**25-35 y/o** *26.8%; N=26*	**36 y/o +** *1%; N=1*	
Place of living	**Urban** *58.2%; N=57*	**Rural** *41.8%; N=41*	**No Response**	
Newcomers in the current place of living	**Yes** *40%; N=38*	**No** *58.9%; N=56*	**No Response** *1.1%; N=1*	
How long ago	**1-10 years** *50%; N=19*	**11 -20 years** *36.8%; N=14*	**21 – 30 years** *13.2%; N=5*	**30+**
Distance from the nearest maternity	**5 – 30 min** *63.3%; N=62*	**30 – 60 min** *26.5%; N=26*	**61 – 120 min** *1%; N=1*	**121 – 240 min** *9.2%; N=9*
Occupations	**Yes** *41.8%; N=41*	**No** *57.1%; N=46*	**No Response**	
Education status	**Primary (8/9 years of education)** *6.1%; N=6*	**Secondary (High school)** *34.7%; N=34*	**Tertiary (Bachelor and master degree)** *25.5%; N=25*	**Quaternary (PhD and above)** *30.6%; N=30*
Number of children	**First child** *30.6%; N=30*	**Second child** *41.8%; N=41*	**Third child** *26.5%; N=26*	**Fourth child**
Presence of partner/closed relative	**Yes, Partner/Husband** *41.2%; N=40*	**Yes, closed relatives** *41.2%; N=40*	**None** *17.5%; N=17*	**No response** *1%; N=1*

Section 1: Pregnancy

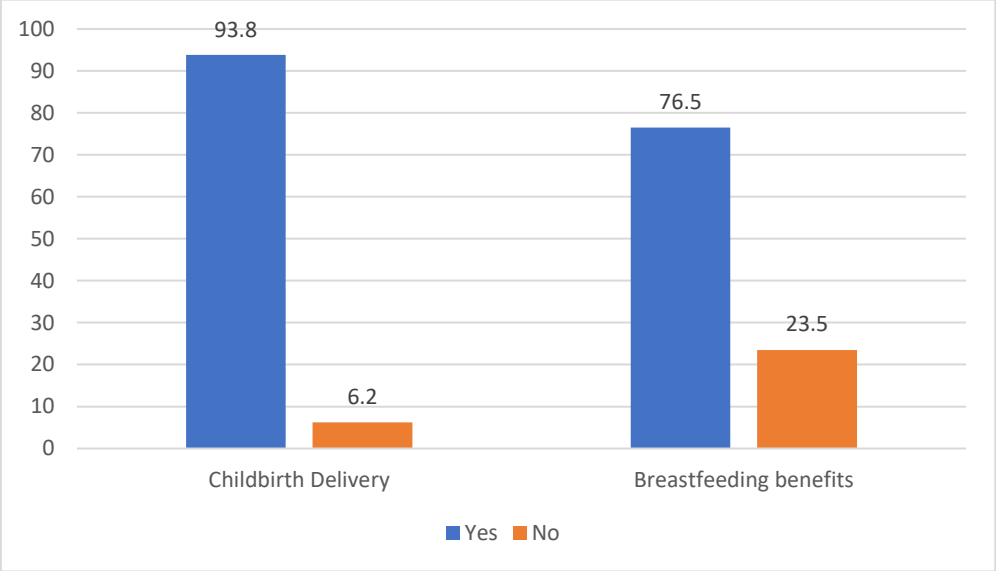
Pregnancy care consists of prenatal (before birth) and postpartum (after birth) healthcare for expectant mothers. Preventing problems for mothers and babies depends on an operational continuum of care with accessible, high quality care before and during pregnancy, childbirth, and the postnatal period.

To explore women's experiences and perceptions of antenatal care questions in this section cover topics on medical history and mother's feeling during this period. The first question was about the general information a mother might have received by an OB/GYN or midwife/nurse on things to do before delivery. Nearly seventy percent (69.4%; N=68) stated that they have been informed or counselled by a health provider on what to bring to their labour and delivery.

The great majority of those who responded positively to this question, the main information given to them was about preparing the hospital bag and managing pain during childbirth delivery.

It becomes clear from the Figure 1 data that over ninety percent (91.8%; N= 90) of interviewees have been informed and counselled about the labor and delivery. Even though that an overwhelming number of respondents have received counselling about childbirth delivery, it is quite interesting to note that only nearly two-third of them (76.5%; N=75) stated to have been informed about the breastfeeding benefits during the antenatal care visits.

Figure 13: Percentage of women informed about childbirth delivery and breastfeeding



When asked about the number of antenatal visits, over sixty-percent of respondents reported a number of antenatal visits that varied from 6-10 times, followed by 34.7 percent who have had up to five visits. Whereas the number of women who have had more than ten visits was 4.1 percent (Table 2). The next question was how many ultrasound scan (all types) they have had during the pregnancy. Half of them (50.5%) mention up to five ultrasound scan, followed by some of 47.4 percent who reported up to 10 times and those who reported more than ten times (2.1%).

Table 16: Number of antenatal visits and ultrasound during the antenatal period

Number or check-up	**1 – 5**	**6 – 10**	**>10**

Antenatal visits	34.7%; N=34	61.2%; N=60	4.1%; N=4
Ultrasound scan	50.5%; N=49	47.4%; N=46	2.1%; N=2

They were also asked whether they have visited or have had any check-up visit in private hospital/clinics. The number of responses was almost equal with some of 48 percent reporting to have paid some visits in private facilities compared with 46.9 percent who stated that all visits during pregnancy were carried out at the public facilities. In most cases, the antenatal care visits were carried out by an OB/GYN assisted by a midwife. Over ninety-percent of them stated that didn't have any specific requests during the check-up visits.

Regarding the pre-hospital delivery, almost all women (97.9%; N= 94) admitted that they have been hospitalized at the same day of labour and delivery.

The next group of question aim to explore pregnant women support they have received during childbirth delivery and hence the data in that regards was collected and presented in Table 3.

Table 17: Distribution of women receiving support during childbirth delivery

Receiving support during childbirth delivery	**Yes**	**No**
Presence of a nearest relative to admission to hospital?	43.9%; N=43	56.1%; N=55
This person helped you to move around or change clothes?	73.5%; N=72	26.5%; N=26
Did you feel comfortable with hospital admission procedures?	100%; N=98	
Did hospital staff shave you before delivery?	67%; N=65	33%; N=32
Did you have an enema before labour and delivery?	57.1%; N=56	42.9%; N=42
Did they ask you to have a Vaginal Examination (VE) to "obtain entry" to hospital?	95.9%; N=94	4.1%; N=4
Did they Electronic Foetal Monitoring (EFM)	99%; N=97	1%; N=1

From the Table given above it is evident that just over half of the respondents (56.1 per cent) had said that they were alone when admitted to hospital. Whereas remaining of them (43.9%) stated that a nearest relative was along with them. Nearly two-third (73.5 percent) of those who admitted to have had a nearest related mention that this person helped her to move around the room or change clothes if necessary. The data clearly shows that all interviewed women (100 percent) felt comfortable with the hospital admission process.

The next group of question were related to prenatal care and medical examinations prior delivery. Majority of them stated that have been shaved (67 percent) and have had an enema

(57.1 percent) by health staff prior delivery. The vast majority of respondents indicated that have had a Vaginal Examination (95.9 percent) and the health staff did a routine Electronic Fetal Monitoring (99 percent).

Section 3: Labor Care

Labor: Childbirth is the process of delivering a baby and the placenta, membranes, and umbilical cord from the uterus to the vagina to the outside world. To optimize maternal health, all women must have access to high quality care before, during and after childbirth. Ensuring essential care is provided around labor, delivery and immediately afterwards is critical to ending both maternal and new-born deaths. Available, skilled, well-equipped birth attendants to assist women and new-borns during labor and birth are vital to their survival.

Section three aims to explore women's perception regarding labor care in general and more specifically the clinical aspects, consent form for medical examinations, mother's care and pain management.

3.1. Clinical aspects

This section covers question about clinical aspects of labor, such as: the length of labor and delivery, whether they have had Vaginal Examination, type of anaesthesia, use of oxytocin and whether the amniotic sac has been ruptured intentionally (amniotomy) by healthcare providers.

The first question was about the length of labor and delivery. The vast majority of women (90.7%; N= 88) reported to generally experience one to12 hours in the first stage of labor with an average length of 5.6 hours. Whereas the second stage of labor have been reported to be somehow between 5 minutes up to two hours.

The details of the medical examinations of the respondents is presented in Table 4. As shown in the table below, nearly 90 percent of respondents reported having a Vaginal Examination during delivery and the large majority (63.2%; N=62) of the women reported being examined up to two times. Whereas remaining report not being examined at all (10.2 percent) and nearly 25 percent report being examined three times or more. An overwhelming number of women (72.4 percent) reported to had received at least one form of intravenous injection and it was also found that nearly forty-five percent had received oxytocin injection. Percentage of women who reported to have passed amniotomy was found to be 58.2 percent.

Table 18: Medical examinations in the first stage of Labor

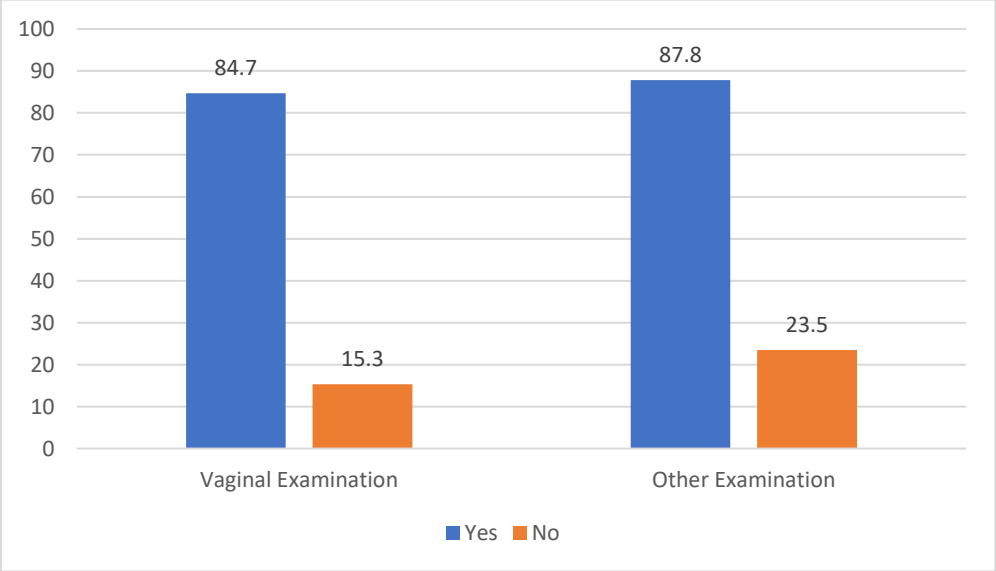
Medical examinations in the first stage of Labor	**Yes**	**No**
Vaginal Examination	*89.9%; N=88*	*10.2%; N=10*
Routine electronic monitoring of foetal heart rate and uterine activity during labor	*71.7%; N=66*	*28.3%; N=26*
Intravenous injection	*72.4%; N=71*	*27.6%; N=27*
Oxytocin Injection	*44.9%; N=44*	*25.5%; N=25*
Amniotomy	*58.2%; N=57*	*41.8%; N=41*

3.2. Ethical and Legal issues

Patient safety first. This is a multidimensional approach and grounded in ethical and legal imperatives, hence ethical and legal challenges should be taken into account. Therefore, this section presents different aspects of patient safety in terms of risk management, the role of human resources, the role of professionalism, the necessity of informing the parents about medical examinations (benefits, risks) with focus on ethical aspects.

Women who plan to give birth in hospitals, like other person agreeing to medical care, it's obligatory to be informed and sign the consent form. Figure data reveal that an overwhelming majority of respondents (84.7%; N=83) have been informed in advance and signed the consent form for Vaginal Examination and other medical examinations/procedures (87.8%; N=86).

Figure 14: Percentage of women who were asked to sign the Consent form for medical examinations



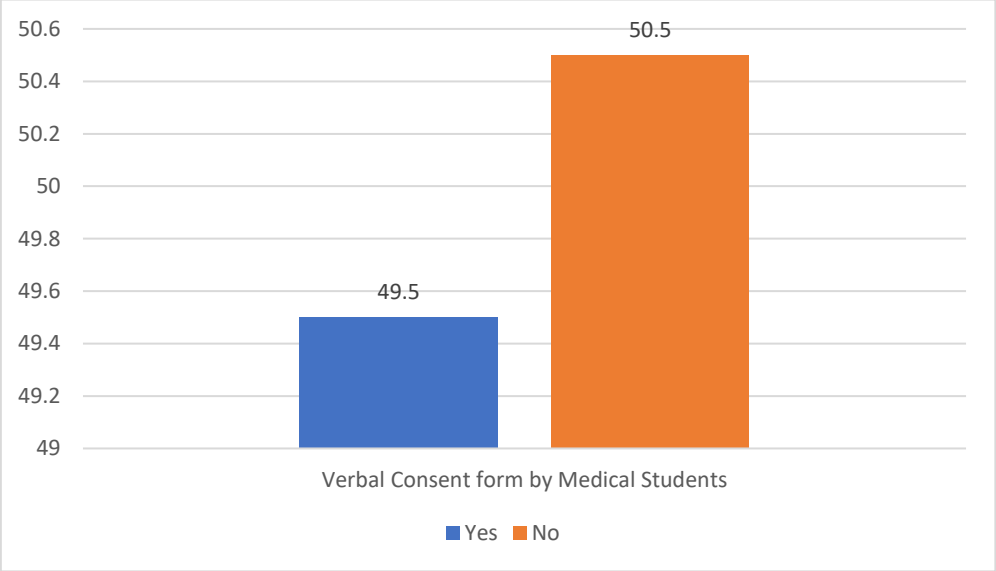
The next group of question under this section aim to explore women's experience of carrying their medical records throughout pregnancy. Even though each pregnant mother must have a Personal Health Book (Fletorja Shendetit) to look after and bring to each antenatal and postnatal visits, it is evident from the Table 5 that just over one-third (33.7 percent) reported getting this document. Additionally, less than half of interviewed women reported to have asked to read their medical records. This is to be questioned and needs to be further explored.

Table 19: Percentage of women who report having Pregnancy Health Book and aware of medical record data

Medical Records	**Yes**	**No**
Personal Health Book (Case Notes)	*66.3%; N=65*	*33.7%; N=33*
Allowed to read the medical records	*48%; N=47*	*52%; N=51*

It is a common practice that medical students are attending professional staff during medical examinations. However, following the ethical principle that for every medical intervention a consent form must be obtained, the same rules must be applied for the presence of medical students during interventions. The variable "Presence of medical students" and whether they were introduced and/or asked women consent to be present was therefore investigated and the data pertaining to the same is presented in table 5. It is a clear evidence that only 49.5 percent reported that a medical student has been introduced and asked for verbal consent.

Figure 15: Percentage of women who reported presence of a medical student and being asked for a verbal consent



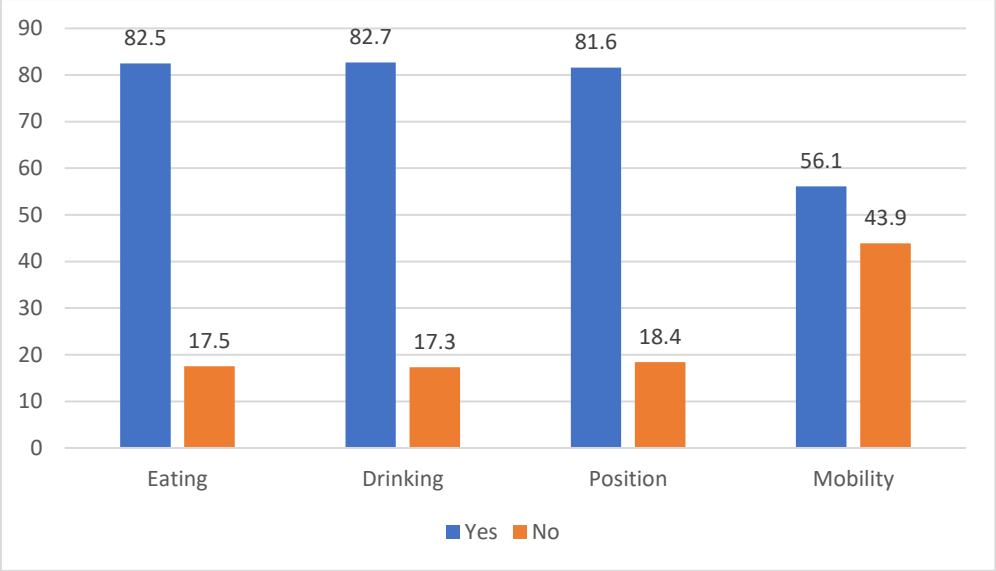
3.3. Mother care

Labour and birth of the baby is a unique experience in the life of any family and one of special personal significance for the mother. Caring for the woman in labour demands sensitivity from birth attendant, and awareness of the mother's perception of her labour and of her needs, as they relate to her experience.

The first set of questions in this section were about supporting the mother's labor, such as eating, drinking, changing position and moving during the second phase of delivery.

As shown in Table 4 over eighty-percent of women responded positively about Eating: 82.5%; N= 80; Drinking: 82.7%; N= 81 and Changing Position (81.6%; N=80). When asked whether they have been able to move or walk the bare majority (56.1%; N=55) said Yes, whereas the remaining (43.9%; N=43) admitted they weren't able to move or walk during the second phase of delivery.

Figure 16: percentage of women who were able to eat, drink, change position and move during second stage of labor



It is evident from the data shown in Table 6 that the 91.7 percent of women reported the presence of another pregnant women at the delivery room. On the other hand, the vast majority of women felt comfortable about the safety (98%; N= 96) and comfartability (100%) of the delivery room.

Table 20: Percentage of women who comfortable about the conditions of the delivery room

Comfortability of the delivery room	**Yes**	**No**
Presence of another pregnant women in the delivery room	*91.7%; N=88*	*8.3%; N=8*
Feel safe at the delivery room	*98%; N=96*	*2%; N=2*
Feel comfortable at the delivery room	*100%; N=98*	

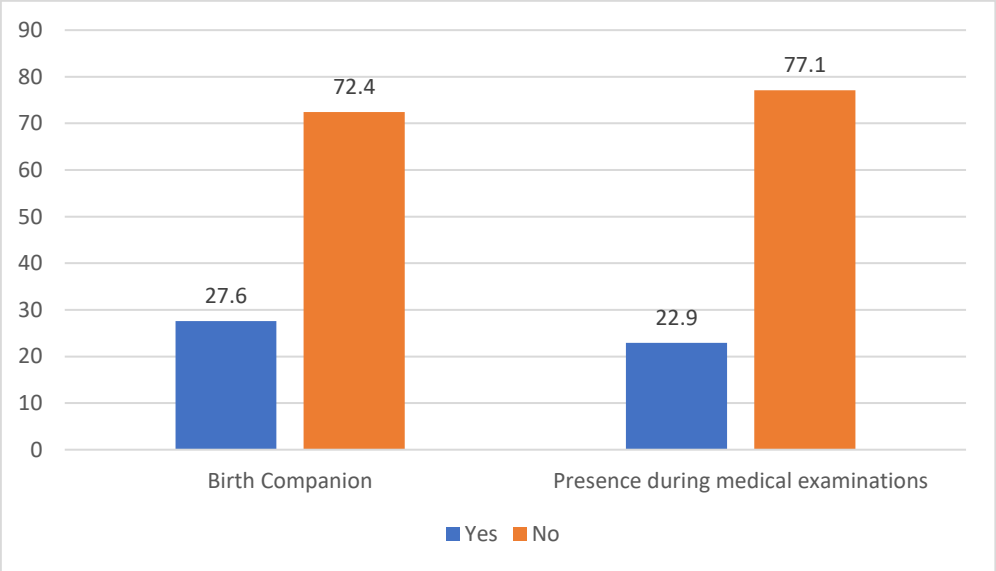
WHO recommends for an effective communication between maternity care providers and women in labour, using simple and culturally acceptable methods. Therefore, respondents were asked to provide their opinion about healthcare provider-patient communication as well as their presence during delivery. Over 92.9 percent of them mentioned that knew the name of the midwife and the neonatologist. However, when asked whether the health personnel introduced themselves at the first meeting (showing names and professions) only 61.5 percent of them responded positively to this question. An overwhelming number of them (88 percent) were satisfied with communication of sanitary staff as each time they asked permission to enter the room and do cleaning. It is interesting to note the fact that only 25.5 percent of women reported the presence of the health provider to be always present during labor process.

Table 21: Healthcare provider-patient communication and their presence during delivery

	Yes	**No**
Know the name of midwife	*92.9%; N=91*	*7.1%; N=7*
Know the name of the Neonatologist	*92.9%; N=91*	*7.1%; N=7*
Health providers introduced themselves at the first meeting	*61.5%; N=56*	*38.5%; N=35*
Sanitary staff asked permission to enter the room	*88%; N=87*	*11.2%; N=11*
Presence of a health personnel during the delivery process	*25.5%; N=25*	*74.5%; N=73*

During labour and childbirth, many women want to be accompanied by a spouse/ partner, friend, family member, or another community member. Table 8 data show that less than one-third of respondents admitted to had a birth companion (27.6%; N=27) and its presence during medical examinations, Vaginal Examination included (22.9; N=22).

Table 22: The presence of a birth companion



Labour and childbirth are usually a painful experience and women vary in their response to it. Some women are keen to avoid drugs or other medical interventions while others are happy to consider all available options. Therefore, it is highly recommended that pregnant women to be aware of the options for pain relief that are available and to know something about the different methods. Hence, the last set of questions were related to women's experience of pain management procedures and options. Hence variable Pain Management was investigated by the researcher and data pertaining to pain management is presented in Table 9. It is evident that only 26.5 percent of interviewed women stated application of anaesthesia before they asked for it, but on the other hand, around 15.1 percent of them mention to have by their own requested application of anaesthesia. Nearly twenty-two percent of them stated to have been able to move their legs (22.1%) or walk (22.7%) in cases where epidural anaesthesia has been applied.

Table 23: Percentage of women' experience regarding pain management producers and options.

	Yes	**No**
Application of anaesthesia before you asked for it?	*26.5%; N=26*	*73.2%; N=71*
Women requested for anaesthesia	*15.1%; N=14*	*84.9%; N=79*
In case of epidural anaesthesia, were you able to move your legs?	*22.1%; N=21*	*77.9%; N=74*
In case of epidural anaesthesia, were you able to walk?	*22.7%; N=22*	*77.3%; N=75*

Section 4: Childbirth delivery

An overwhelming majority of women reported have delivered a baby via vagina (84.7%; N=83), while remaining mentioned Seksio Cesare as the birth delivery method (15.3%; N=15). Less than ten percent of them (9.2%; N=89) stated they have received blood transfusion during delivery, and the reason for that it was anaemia. Who assisted you at the time of delivery was the next question asked to respondents: data in Figure 5 shows that a vast majority of respondents (95.9%; N=94) mentioned midwives, followed by an OB-GYN (89.8%; N=88) and nurses (35.7%; N=63) and sanitary staff (14.3%; N=14). Surprisingly, the percentage of women who reported the presence of a companion during time of delivery was only 8.2 percent.

Figure 17: Breakdown of persons who assisted a respondent at time of delivery

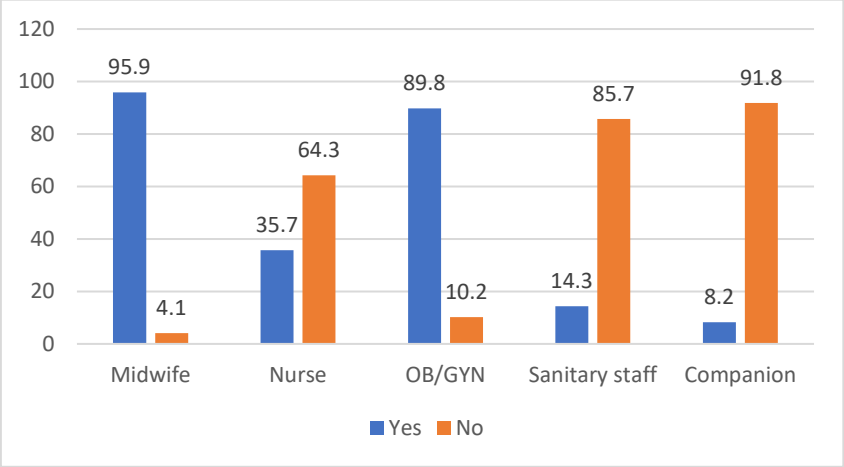


Table 10 provides data on episiotomy, perineal tear, whether a woman has been encouraged to push and take position the way she wanted, as well as whether she has been asked to keep her legs up and supported by staff to push her uterus to help birth of the baby.

Thirty-two women had episiotomy which gave an episiotomy prevalence of 34%. All (100.0%) episiotomies were mediolateral. With respect to perineal tear, only 10.3 percent of women reported that the perineal tear was severe. A large majority of them reported that while in labor were allowed to push during delivery (75.5 percent) and also the way they liked (66.3 percent). On the other hand, 48 percent of them mentioned that they were requested by health staff to put their legs up and the health staff also pushed their uterus to help birth of the baby (47.4 percent).

Table 24: Distribution of respondents by episiotomy category and birth delivery support

	Yes	**No**
Did you have episiotomy?	*34%; N=32*	*66%; N=62*
If Not, was your perineal tear severe?	*10.3%; N=10*	*88.8%; N=87*
Were you encourage to push during delivery?	*75.5%; N=74*	*24.5%; N=24*
While in labor, were you allowed to push when and the way you liked?	*74.5%; N=73*	*25.5%; N=25*

While in labor, were you allowed to adopt the position you liked?	*66.3%; N=65*	*33.7%; N=33*
Were you requested to stay with legs up?	*48%; N=47*	*52%; N=51*
A health staff pushed your uterus to help you birth your baby?	*47.4%; N=46*	*52.6%; N=51*

Section 5: Immediate Care after birth

WHO's findings suggest that late cord clamping (one to three minutes after delivery or longer) is recommended for all births. Additionally, a woman should deliver the placenta within 30 to 60 minutes after having her baby.

As it is shown in Table 11, in this study 97.9 percent of women reported that umbilical cord was cut directly after birth between five to ten minutes. Regarding placental expulsion, a large majority of them (63.9 percent) reported that placenta removal was painful and eighty-percent were encouraged to push while placental expulsion. Having an injection while delivery was reported by some of 77.3 percent of study participants and 69.8 percent were aware about the reasons and informed by the medical staff.

Table 25: Distribution of respondents by type of care after birth

	Yes	**No**
Was the umbilical cord cut directly after birth?	*97.9%; N=95*	*2%; N=2*
How long after birth was placenta removed?	*10.3%; N=10*	*88.8%; N=87*
Was removal of the placenta painful?	*63.9%; N=62*	*36.1%; N=35*
Were you encouraged to push while placental expulsion?	*80%; N=76*	*20%; N=19*
Have you had an injection?	*77.3%; N=75*	*22.7%; N=22*
If YES, do you know the reason why?	*69.8%; N=67*	*30.2%; N=29*

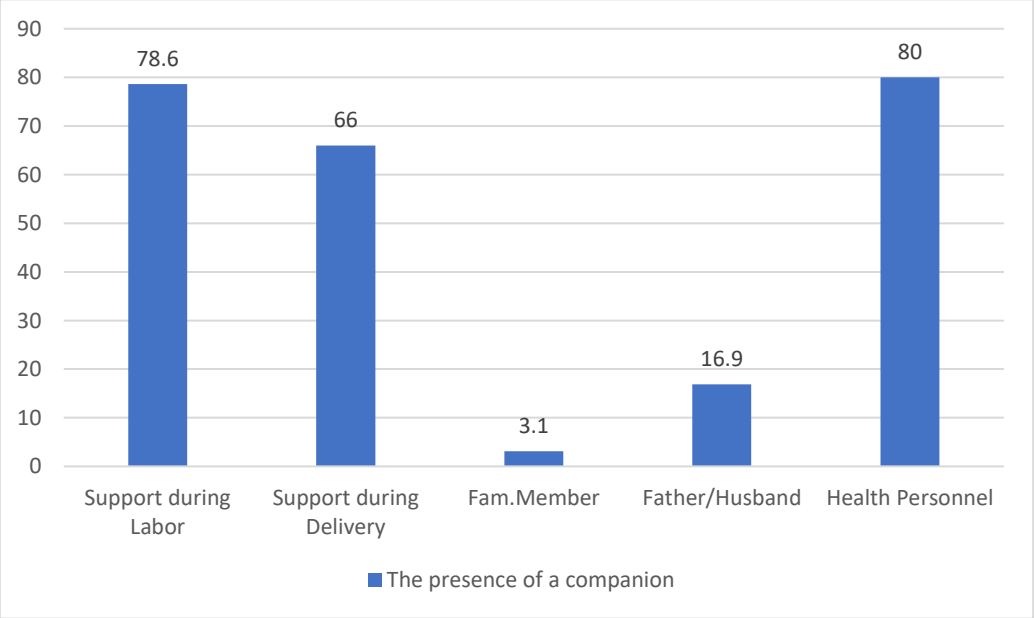
Section 6: Psychological Support

World Health Organization recommends that *"allowing and supporting the presence of a woman's companion of choice during labour and childbirth is an effective intervention that is respectful of women's autonomy and agency and which can, therefore, be an important aspect of improving quality of care during labour and childbirth".*

Therefore, the presence of a companion that she has chosen to stay with her during labour can improve a woman's experience of childbirth by facilitating her access to emotional and practical support from someone she trusts.

Table 8 reveals interesting data regarding the women' support during labor and delivery. The large majority of respondents (78.6%; N= 77) admitted the presence of a chosen companion during labor, however this percentage drop down when asked the someone's presence during delivery (66%; N=64). Among those who responded positively to this question, where asked to specify the relationship with the companion. Surprisingly, an overwhelming number of respondents (80.4%; N= 78) stated that a chosen companion was a health staff, followed by father/husband (16.9%; N= 15) and a friend of family member (3.1%; N=4). These data may need a further exploration, because on one hand it is a positive factor that pregnant women chose a health provider to assist her during labor and delivery, but bearing in mind the family bond and relationship in Albania, it is discouraging to see such a low percentage of closed relatives to be present and support the pregnant women during labor and delivery.

Figure 18: Distribution of respondents by type of support and the presence of a companion during labor and delivery



The next set of questions in the psychological rubric were related to the healthcare providers support given primarily to a pregnant woman and their chosen companion. The vast majority of them (over ninety percent) respondent positively for majority of questions such as the presence of a health staff during the entire labor process (94.8 percent), information and explanation about the labor activity and process (98 percent), encouragement given through verbal communication (94.9 percent), to adapt a position (94.9 percent) and relaxing techniques (92.9 percent). The large majority of respondents (over eighty-percent) were satisfied with the healthcare staff regarding given support to: walk (87.8 percent), receiving oral fluids (86.6 percent), meals and snack (86.6 percent), keeping clean and dry (89.9 percent) and also massage techniques (86.7 percent). Whereas other topics such as privacy (73.2 percent), support to stand up (74.5 percent), support for the companion (54.9 percent) and breathing techniques (61.2 percent) were rated to a lower percentage (Table 12).

Table 26: Distribution of respondents by type of support received by a healthcare provider

TYPE OF SUPPORT RECEIVED BY A HEALTHCARE PROVIDER	***YES***	***NO***
Presence of a health staff as much as you wanted	*93.9%; N=92*	*5.2%; N=5*
Privacy	*73.2%; N=71*	*26.8%; N=26*
Explained the labor activity/process	*98%; N=96*	*2%; N=2*
Encourage, through verbal communication	*94.9%; N=93*	*5.1%; N=5*
Encourage and support for a better position	*94.9%; N=93*	*5.1%; N=5*
Encourage and support to walk	*87.8%; N=86*	*12.2%; N=12*
Encourage and support to stand up	*74.5%; N=73*	*25.5%; N=25*
Support for the companion	*54.9%; N=50*	*45.1%; N=41*
Provide oral fluid	*89.8%; N=88*	*10.2%; N=10*
Provide meals and snacks	*86.6%; N=84*	*13.4%; N=13*
Keeping clean and dry	*89.8%; N=88*	*10.2%; N=10*
Relaxing techniques	*92.9%; N=91*	*7.1%; N=7*
Breathing techniques	*61.2%; N=60*	*38.8%; N=38*
Massage	*86.7%; N=85*	*13.3%; N=13*
Do you rate their support as effective?	*93.9%; N=92*	*5.2%; N=5*

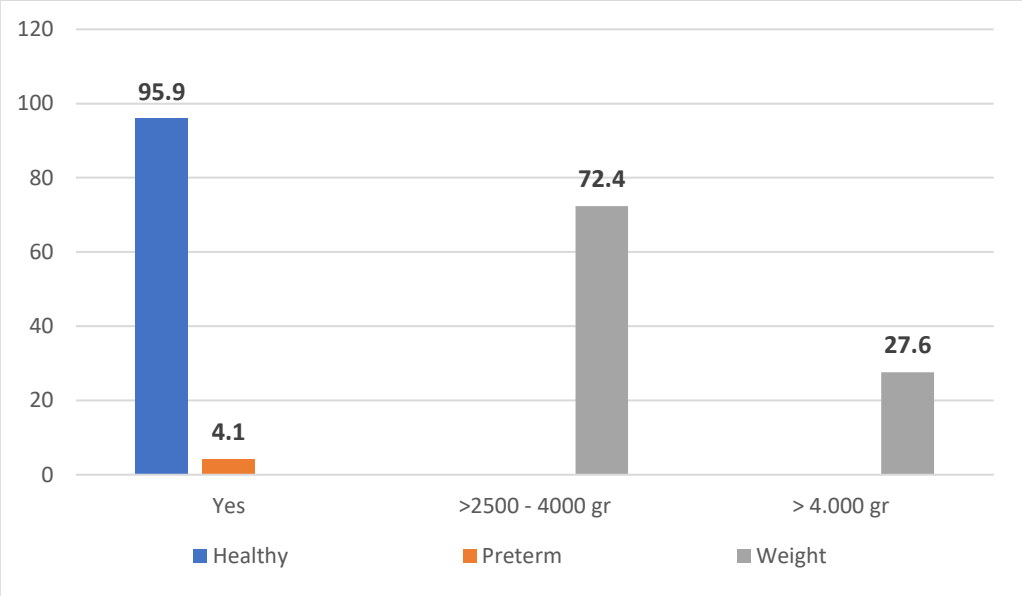
Section 7: The infant care

Questions in this section aim to explore mother's perception regarding health and care of the new-born immediately after birth.

Before a baby leaves the delivery area, ID bracelets with matching numbers are placed on the baby (often have 2 on the wrist and ankle) and the mother. The same practice was mentioned by all interviewed mothers who stated that a bracelet was placed to both of them and checked each time the baby comes or goes from the room.

Mothers were asked what their new-born looks like, whether it was born healthy or not? In addition, they were asked about the average weight birth. Figure 7, shows that a vast majority of interviewed mothers (95.9%; N= 94) mentioned that their baby healthy, versus 4.1% (N=4) who admitted that their child was not born healthy, and the most cited reason was the premature birth. Whereas in terms of weight birth, none of them mentioned that their baby was underweight (less than 2.500 grams). For nearly two-third of them (72.4%; N=71) their new-born weight birth varied between 2.500gr and 4.000 gr, followed by those who said that the weight was over 4.000 gr (27.6%; N= 27).

Figure 19: perception of mothers regarding the health of the new-born and weight birth



The next set of questions were related to the new-born care immediately after birth, covering topics such as immediate care, physical examinations, rooming-in and skin to skin experiences.

According to the WHO guidelines on the "New-born care at birth", the lives of the new-born can be saved by the use of simple interventions, which can be successfully provided by a trained birth attend caring for mother or the new-born. The immediate care includes: *thorough drying, skin to skin contact of the new-born with the mother, cord clamping and cutting after the first minutes after birth, early initiation of breastfeeding, and exclusive breastfeeding.* Birth weight,

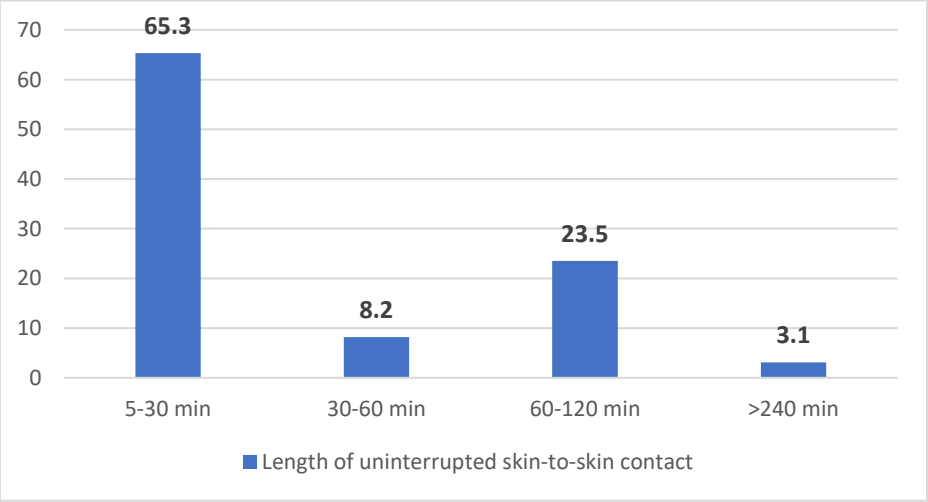
gestational age, congenital defects and signs of new-born illness should be assessed after an hour. The new-born should also should receive eye care, vitamin K, and recommended immunizations (birth dose of OPV and Hepatitis B vaccine). Particular attention must be given to premature/low weight babies or those born or at risk for other diseases.

In this study, it is encouraging to see that all interviewed postpartum mothers (100%; N=98) in this study had a positive rooming-in experience. They stated that their new-born was at the same room with them for almost all the time. ***Table 13 provides a summary of some variables related the immediate new-born care (see the end of this section).***

Skin-to-skin should begin immediately after birth and continue uninterrupted for at least one hour or until the first breastfeeding session for mothers who are breastfeeding. Nearly ninety percent (89.8%; N=88) of interviewed mothers admitted having skin contact with their baby in the first hour of life.

The length of uninterrupted skin-to-skin varied greatly, where for a large majority (65.3%; N=64) of those interviewed the length of stay with their baby up to 30 minutes. Staying from 60 to120 minutes was declared by less than one-third (23.5%; N=23) of mothers (Table 8). Some women reported 30-60 minutes (8.2%; N=8) and a small percentage (3.1) reported a longer time, which was more than four hours.

Figure 20: Length of uninterrupted skin-to-skin contact immediately after birth



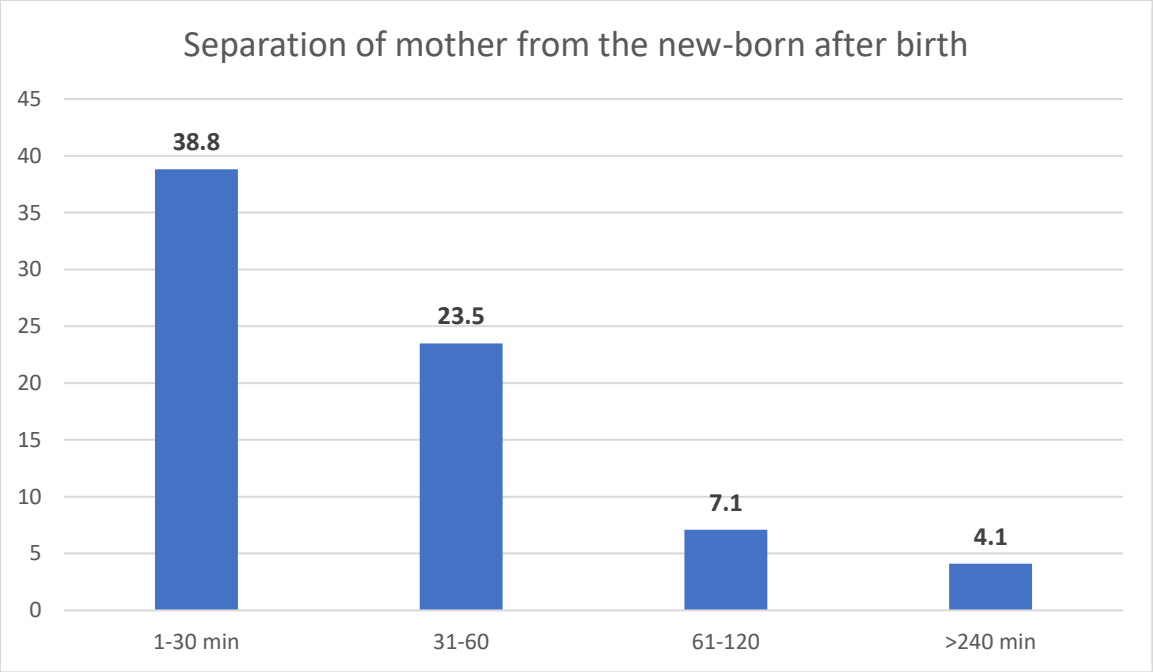
A brief, physical exam is done to check for obvious signs that the baby is healthy. During the first hour after birth, once the skin-to-skin contact and breastfeeding has been initiated, physical examination such as measurement of weight, length, and head circumference should be done to help find out if a baby's weight and measurements are normal. In this study, even though were not quite sure, for large majority of interviewed mothers (64.3%; N=63), their new-born was weighted before skin-to-skin contact.

Another physical exam procedure that should be done during the first hour after birth is the new-born eye care. It is highly recommended that prophylaxis doses of Vitamin K (1 mg/intramuscularly) should be given for all new-borns. For the vast majority of mothers

(91.8%; N=90) eye examination and Vitamin K prophylaxis was carried out within the first hour of life.

Part of post-natal care recommendation is that a mother and a baby shouldn't be separated and stay in the same room 24 hrs/day. However, separation of mother from baby after birth – may happen for several reasons such as: mother's incapacity, need for rest, effect of anaesthesia on the baby or infection control or other examinations. Even though it is recommended that mothers should stay with their new-born as much as possible, only a small percentage of mother (4.1%' N=4) reported to have stayed unseparated with their new-born for more than four hours, followed by those who stayed together between two to four hours (7.1%; N=7). The rest, which represent an overwhelming majority of respondents reported shorter time (Table 9).

Figure 21: Responses of interviewed mothers regarding length of separation immediately after birth



The most cited reason for separation was the need of mother to rest, fear of side effect of anaesthesia on the baby and the last one was additional check-ups.

WHO recommendations, suggest that bathing should be delayed until 24-hours after birth, or at least after 6 hours of birth in case when it is not possible. In this study, only a small majority of mothers stated that their new born was bathed after six hours (10.2%; N=10) or more (43.9%; N= 43). Less than one-third (28.6%; N=28) said that don't remember the exact time when their new-born was bathed, while 17.3% (N=17) stated that bathing happened after an hour.

Table 27: Care of the new-born immediately after birth

Some variables related the immediate new-born care	Frequency YES	Percentage
Rooming-in (Stay together with the new-born at the same room almost all the time)	98	100
Skin to skin contact immediately after birth	88	89.8
Measurement of weight in the delivery room	63	64.3
Eye care (Administration of Vitamin K prophylaxis)	90	91.8
Separation of the new-born immediately after delivery	68	69.4
Do you know the reason?	80	81.6

Section 8: Breastfeeding

Breastmilk is the ideal food for the new-born and the most effective way to protect the infant against many common childhood diseases. Several International recognized agencies, such as the WHO, UNCIED and American Academy of Pediatrics recommend that breastfeeding should be initiated within the first hour of birth and the infant must be exclusively breastfed for the first six months of life. This recommendation implies that the infant shouldn't receive no other foods or liquids, including water. Nevertheless, data from above sources indicate that nearly 2 out of 3 infants are not exclusively breastfed for the recommended 6 months.

Therefore, the aim of this section was to explore women' experiences regarding breastfeeding practices and infant feeding patterns.

Figure 10 provides data on breastfeeding practices, where the vast majority of mothers (95.9%; N= 94) stated that they breastfeed their babies. Nearly twenty percent of them mentioned that in addition to breastmilk they provide glucose water and use of nipple shield.

Figure 22: How do you feed a new-born baby?

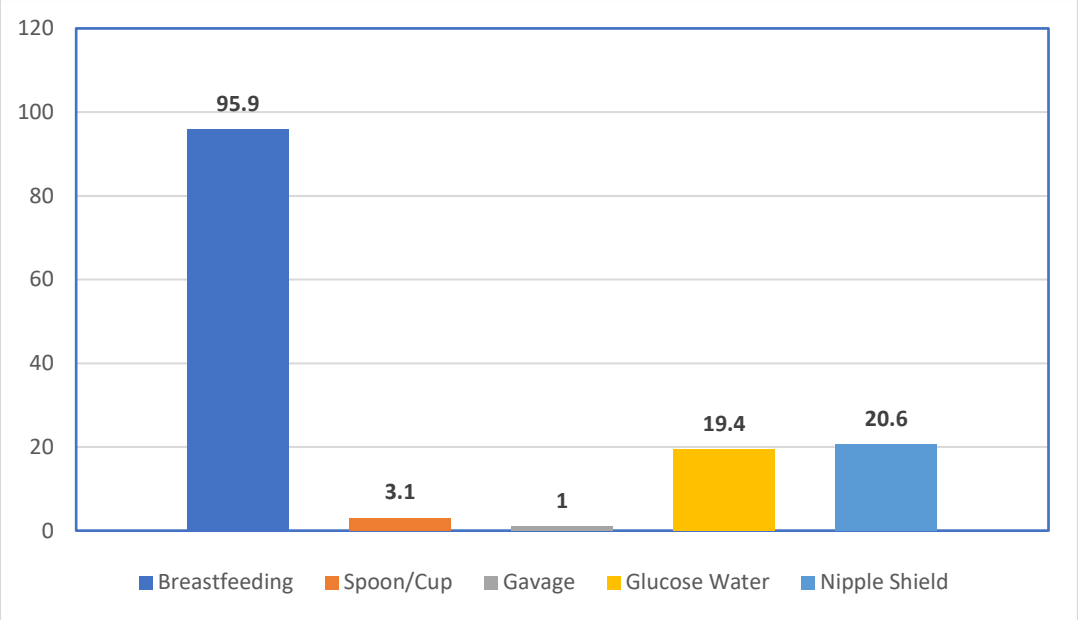


Table 14 provides a summary of some variables associated with breastfeeding, such as: initiation, length and interruption reason of the first breastfeeding, skin-to-skin-contact, receiving counselling and support about breastfeeding, as well as mother's decision about length of breastfeeding.

Initiation of breastfeeding within one hour of life is highly recommended and during the new-born period the most breastfeeding sessions take 20 up to 45 minutes on one or both breasts to ensure that the baby is getting enough breast milk. As babies get older and more skilled at breastfeeding, they may take about 5–10 minutes on each side. In our sample, slightly over sixty percent of interviewed mothers reported initiation of breastfeeding within one hour of life (43.9% within 5-30 min and 18.4% within 30-60 min).

The large majority (66.3%) mentioned the length of stay up to sixty minutes, where 31.6% (N= 31) stated that the first breastfeeding length was up to thirty minutes, followed by 34.7% (N=34) who said that the length of the first breastfeeding sessions was between 30 to 60 minutes. The most common cited reason for the breastfeeding interruption was that a new-born fell asleep during feeding (71.4%; N=70) where the rest mentioned the release of the breast by the new-born. Nearly two-third (71.4%; N=70) also mentioned they had skin-to-skin contact with their baby after birth, at least until after the first feed.

Table 28: Variables associated with initiation of breastfeeding

Some variables associated with initiation of breastfeeding	**Frequency YES**	**Percentage**
Initiation of breastfeeding:		
5-30 min	43	43.9

30-60 min	18	18.4
60-120 min	21	21.4
120-240 min	15	15.3
>240 min	1	1
How long took the first breastfeeding?		
5-30 min	31	31.6
30-60 min	34	34.7
60-120 min	10	10.2
120-240 min	11	11.2
>240 min	12	12.2
Reasons of first breastfeeding interruption		
fall asleep during feeding	70	71.4
release the breast by her/himself	28	28.6
Skin to skin contact followed by the breastfeeding in the first hour of life	70	71.4

Table 15 summaries findings regarding the breastfeeding counselling. As it can be noticed, the vast majority of mothers (94.9%) admitted that they have been helped and counselled by the staff to initiate the breastfeeding. The most common type of counselling was about breastfeeding practical support (87.8%), scheduled feeding (83.3%), water/glucose feeding (30.6%) and feeding on-demand (16.7%).

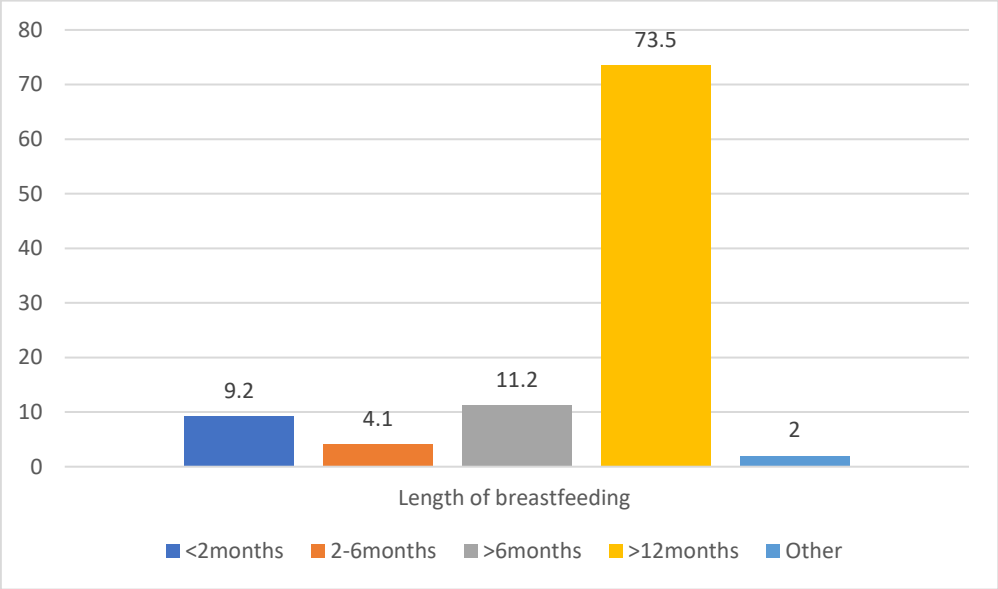
The most common source of receiving counselling was the neonatologist nurse (49%; N=48), followed by midwife (22.4%; N= 22) and the neonatologist (20.4%; N=20).

Table 29: Variables associated with breastfeeding counselling

Some variables associated with counselling of breastfeeding.	**Frequency YES**	**Percentage**
Counsel the mother to initiate breastfeeding	93	94.9
If YES, type of counselling related to breastfeeding		
Feeding on-demand	16	16.7
Scheduled feeding	80	83.3
Counselling about water/glucose feeding	30	30.6
Practical support regarding breastfeeding	86	87.8
The most common source of information		
OB-GYN	8	8.2
Midwife	22	22.4
Neonatologist	20	20.4
Neonatologist nurse	48	49
Roommate		
My mother		

An overwhelming majority of mothers' plan to breastfeed their babies for more than six months, where 73.5% (N=72) plan to breastfeed their babies for more than 12 months and 11.2% (N=11) for more than six months (Figure 11).

Figure 23: Mothers opinion regarding the length of breastfeeding.



Section 9: Maternity Care

WHO Technical Consultation on Postpartum and Postnatal Care document recommends three key best practices for postnatal care for all mothers and new-borns, which are summarized below:

- Provide postnatal care in the first 24 hours to all mothers and babies─regardless of where the birth occurs.
- Ensure healthy women and their new-borns stay at a health facility at least 24 hours and are not discharged early.
- All mothers and babies need at least four postnatal check-ups in the first 6 weeks.

Therefore, question in this section aimed to explore mothers' perceptions regarding postnatal care and support during the first 24 hours, as well as assessing women's satisfaction level with maternity services. Table 16 provides a summary of mothers' perception regarding the immediate care for the new-born.

Most of the postpartum mothers in this study had a positive rooming-in experience, as nearly ninety-percent of them (89.8%) stated that they stayed together with their new-born in the same room for at least 23hours a day. High satisfaction level was also noticed regarding the physical examination of the new born, where 82.7% (N=81) of interviewed mothers mentioned that such examination was performed in the presence of the mother. The hospital staff has encouraged the skin-to-skin contact and the separation has occurred for the paediatric assessment of the new-born (70.4%) or bathing (56.1%).

Table 30: Postnatal care and support during the first 24 hours

Some variables associated with mother experiences during maternity care	Frequency YES	Percentage
Carry the new-born almost all the time with mother (Rooming -in)	88	89.8
The new-born physical examination performed in the presence of the mother	81	82.7
Separation of the new-born for paediatric assessment	69	70.4
Separation of the new-born for bathing or other procedures	55	56.1

Table 17 provides a summary of mothers' perceptions regarding postnatal care staff support. High satisfaction level was also noticed regarding the staff support for routine postnatal care, such as: measuring the blood pressure (98%), receiving good quality of care for mother and the new-born, supporting mothers with a crying baby (93.9%) and monitoring women about abnormal bleeding (91.8%). High satisfaction level (98%) was also noticed about the quality of cleaning conditions of the hospital room.

Encouraging a mother to take a shower was reported by only 40.8% of interviewed women. Eating fresh fruits was reported by slightly over seventy percent of mothers (72.4%) and drinking up to 5 cups of tea a day before delivery was reported by 90.8% of them.

The presence of a family member or a companion was mentioned by 98% of respondents and nearly eighty percent of them mentioned that they were able to meet other mothers in a meeting room to discuss or share opinions.

Table 31: Postnatal care staff support

Some variables associated with mother experiences regarding postnatal care staff support	**Frequency YES**	**Percentage**
Mothers and new-borns received staff support for routine postnatal care	92	93.9
Mothers received staff support with a crying baby	92	93.9
Health staff measured the blood pressure	96	98
Health staff asked about abnormal vaginal bleeding	90	91.8
Mothers encouraged to take a shower	40	40.8
Satisfy with cleaning conditions of the hospital room	96	98
Eating fresh fruits/vegetables	71	72.4
Drinking tea: *how many cups of tea consumed a day before*		
1-5 cups	89	90.8
5-10 cups	3	3.1
>10 cups	6	6.1
The presence of visitors/family members	96	98
Able to meet other mothers in a meeting room to discuss or share opinions	79	80.6

The last set of questions in this section were related to the maternity of care before the day of delivery. As Table 18 data shows, nearly two-third of women reported to have met the healthcare provider in person since the first day of hospitalization. When asked whether the healthcare provider asked them about their or the new-born health, 80.6% of them responded positively to this question and a small majority of them (58.2%) mentioned that the health care provider stayed with them up to thirty-minutes.

Table 32: Mothers' perception regarding maternity care before delivery

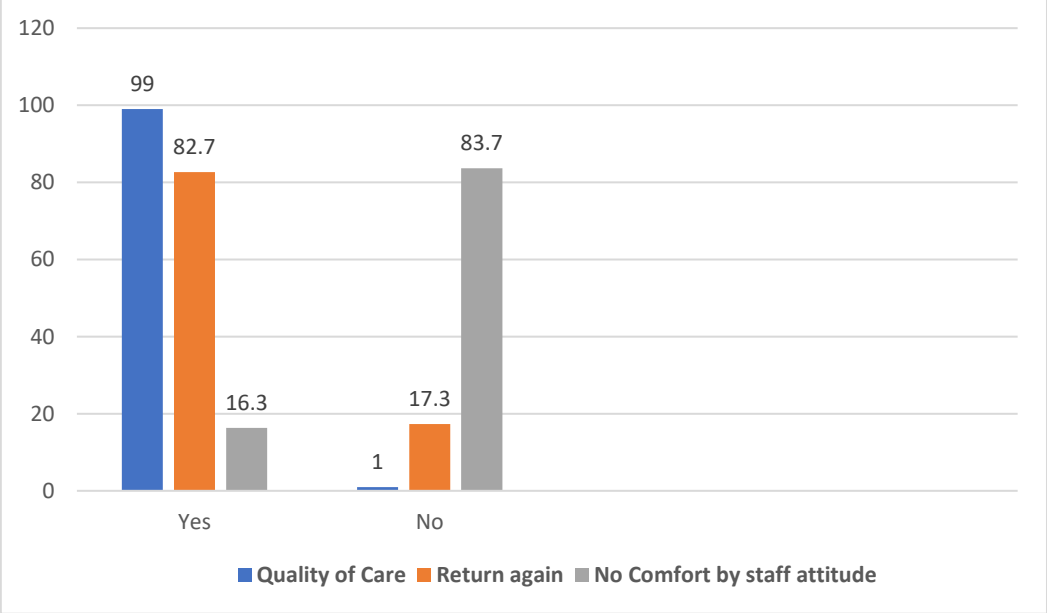
Maternity care before delivery	**Frequency YES**	**Percentage**
Met a healthcare provider in person since the first day of hospitalization	74	75.5
Asked about your or the new-born health during the last two days	79	80.6
Time spent with healthcare personnel today		
1-30 min	57	58.2
31 -60 min	20	20.4
61 -120 min	11	11.2
>120 min	10	10.2

Section 10: Emotional and Psychological Impact

Labour can be a very frightening experience for women, especially first births. In addition, women will experience physical sensations ranging from discomfort to severe pain. Helping the woman to be as relaxed as possible and aware of her situation can help minimize the physical pain and emotional distress of labour and birth. Women can be helped with this by receiving adequate care, timely information, comfort, support and maintain respect and courtesy whenever possible by explaining what you are going to do and why, and by being courteous to her and her family.

This section aims to explore women perceptions regarding the emotional and psychological impact while in maternity care. In general, women expressed very high satisfaction level about overall quality of maternity of care (99%; N=97) and in case of another pregnancy they would be happy to return again at the same facility (82.7%; N=81). In addition, only 16.3 percent mentioned that have felt not comfortable by the staff attitude.

Figure 24: Percentage of women who are satisfied with quality of maternity care



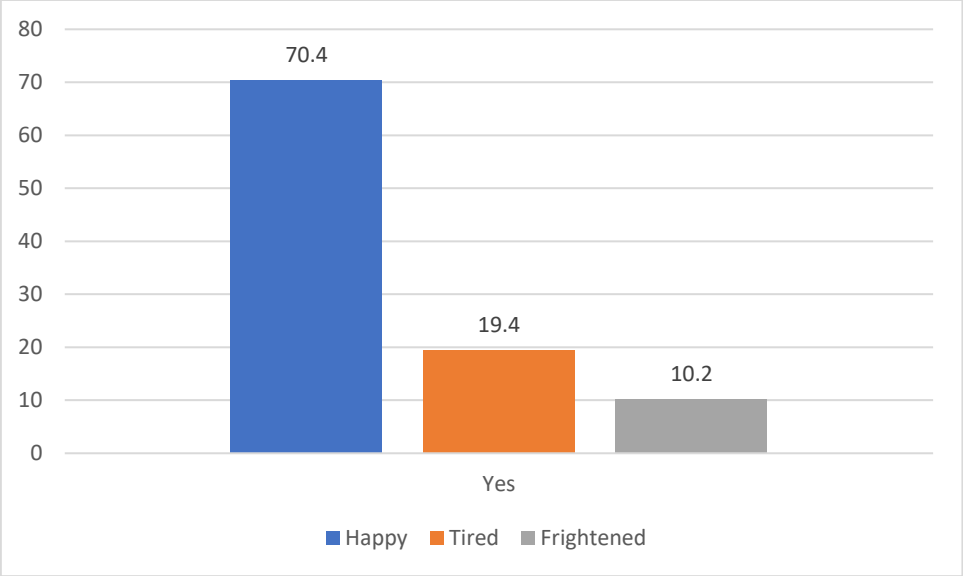
However, it is interesting to note that despite the fact that a vast majority of interviewed women, felt very satisfied with overall quality of maternity care, only 20.4 percent stated to have received psychological support by the maternity staff. Furthermore, nearly forty percent (39.8%; N=39) also stated that have ongoing remembering of fear and are still frightened. When asked about forming a bond with the new-born, nearly two-third (73.5%; N= 72) responded positively to this question. Furthermore, less than one-third (27.6%; N=27) of interviewed mothers said that separation of the new-born has affected the ability to feel comfortable taking care or have perceived any difficulties (48%; N=47) to take care of the baby (Table 19).

Table 33: variables associated with mothers' happiness and psychological impact

Some variables associated with mothers' happiness and psychological impact	**Frequency YES**	**Percentage**
Received no psychological support from maternity staff	20	20.4
Ongoing remembering when felt frightened	39	39.8
Forming a bond with the new-born	72	73.5
Separation has affected the ability to feel comfortable taking care of the baby *(In case separated from the new-born)*	27	27.6
Perceived difficulties to take care of the new-born	47	48

To conclude, nearly seventy percent (70.4%; N-69) said that they feel happy after delivery, compared with nearly twenty percent of them (19.4%; N=19) who felt tired and other ten percent who feel still frightened.

Figure 25: Overall emotional feeling after delivery



Section 11: Caring for the new-born at home

The survival of children through their early years depends on the adults who care for them. The aim of the postnatal care is not only to provide basic care during hospital time but also to inform, educate and support mothers and their families in adopting appropriate home care practices for the mother and baby, during pregnancy and after childbirth.

Therefore, the aim of this section is to explore mother's opinion regarding information, knowledge and practical exercises for taking care of a baby at home after birth. As it can be seen, data from Table 20 show that an overwhelming majority of women mentioned that they would take care of following: keep the baby worm (92.9%), keep the navel clean and dry (87.8%), breastfeed on demand (84.7%) and not smoking at baby's room (79.6%). Surprisingly, variables related to sleeping patterns are much lower compared with the baby healthcare. For instance, care about sleeping position such to put the baby on their back for every sleep is mentioned by only 62.9% of women, whereas sleeping during breastfeeding or sleeping with the newborn with someone else who has taken sleeping pills have been mentioned by nearly 25 percent of them.

Table 34: Taking care of a by at home after birth

Some variables associated with instruction for taking care of a baby at home after birth.	**Frequency YES**	**Percentage**
Keep the navel (belly button) clean and dry	86	87.8
Keep the new-born warm (not hot)	91	92.9
Breastfeed on-demand	83	84.7
Put the baby on their back for every sleep	61	62.9
Not smoke at the new-born room	78	79.6
Sleeping with the new-born or sleeping during breastfeeding	25	25.5
Not sleeping with the new-born if someone else who sleep with you take sleeping pills	25	25.5
Plan to tight wrap up the new-born	37	37.8

Additionally, mothers were asked about situations if they know a place where to seek help for their baby and particularly in which situations. A vast majority of interviewed mothers mentioned that they know a place where to seek help (94.9%; N= 93) and situations where to seek help are presented in Table 21.

Table 35: Percentage of women who know a place and situations to seek help

Some variables associated with seeking help for a baby.	**Frequency YES**	**Percentage**
Know a place where to seek help	93	94.9
Situations where to seek help		
Belly button infections	86	87.8
Hypothermia	91	92.9
Convulsion	66	68
Latching problems	67	68.4
Vomiting/diarrhoea	92	93.9
Hypotonia or irritation	63	64.3
Breathing problems	92	93.9

The last set of questions, where related to mothers 'personal care once at home after birth. As data in Table 22, mothers seem to be more aware about their personal care for cleaning the nipples before breastfeeding (98%; N=96), involving partners/family members to help keep the hose (94.9%; N= 93) and if they sleep more than 8 hours during the day (93.9%; N=92) and bathing every day with soap (89.8%; N= 88). Quite surprisingly, their interest for care drops meaningfully down for wound treatments such as: episiotomy wound (57.1%; N53), regular checking of the surgery wound (57.1%; N= 56) and removal of the wound ligature (64.3%; N=63).

Table 36: Mothers' opinion regarding their personal care at home after birth

Some variables associated with mothers 'personal care once at home after birth.	**Frequency YES**	**Percentage**
Bathing every day with soap (including the perineum)	88	89.8
Regular checking of the surgery wound	56	57.1
Regular checking of the episiotomy wound	53	54.1
Removal the wound ligature	63	64.3
Cleaning the nipples before breastfeeding	96	98
Sleeping more than 8 hours during the day	92	93.9
Involving partner/family members to help keep the house	93	94.9

Section 12: Contraception and Fertility regulation

It is possible to get pregnant very soon after having a baby If not using a birth control method. Using a birth control method in the weeks after giving birth helps avoid an unintended pregnancy. Hence, question in this section aimed to explore mothers experience with use of modern contraception, history of abortion, number of children, whether health providers discussed about benefits and possible side effects of such methods and their intentions to use any type of modern contraceptive method/s (Table 23).

Ever use of any modern contraceptive methods was reported by nearly one-third of interviewed women (32.3%; N=31) and slightly over one-third of them)33.7%; N= 33) have had a history of abortion. Among those who reported to have had an abortion, 35.7 percent reported to have had one abortion, while the rest mentioned two ore more abortions. In regards to number of children, only 23.5 percent reported that this was the first birth, while the rest mentioned two to up four children.

In terms of information received by health staff regarding how to use, benefits and possible side effects of modern contraceptive methods, a large majority (over sixty percent) responded positively to this question.

Intention to use a modern contraceptive methods to avoid unplanned pregnancies was mentioned by a large majority of women (65.3%; N=64) and the method of choice seem to be oral pills (65.3%; N=64), followed by the IUD (36.7%; N= 36) and condom (20.4%; N=20).

Table 37: Variables associated with contraception and fertility regulations

Some variables associated with contraception and fertility regulations	**Frequency YES**	**Percentage**
Used of modern contraceptive methods before this pregnancy	31	32.3
Ever had an abortion	33	33.7
Number of abortions		
1	35	35.7
2	14	14.3
3	4	4.1
Number of children, including the new-born one		
1	23	23.5
2	27	27.6
3	26	26.5
4	22	22.4
Healthcare staff discussed about modern contraceptive methods	66	67.3
Healthcare staff explained how these method work	65	66.3
Healthcare staff explained possible side-effects	79	80.6
Healthcare staff explained how to deal with side-effects	78	79.6

Use of modern contraception methods to avoid unplanned pregnancies in the future	64	65.3
IUD	36	36.7
Oral contraceptive (Pills)	64	65.3
Condom	20	20.4
Vasectomy/Tubal Ligation	26	26.5
Injectables		
Vaginal spermicides (cream, suppository, gel)		
Other vaginal barrier methods (diaphragm, sponge, cervical cap)	1	1
Breastfeeding	6	6.1
Rhythm method or temperature	2	2
Abortion	1	1

Objective 3: *to what extent the component of motherhood and child care is included into the teaching curricula and what are the areas for continued development.*

Data analysis with University Managers

Three university managers were reached and provided their inputs.

Table 38: Number of students enrolled in Midwifery branches and professors teaching OB/GYN subject

	Respondent 1	**Respondent 2**	**Respondent 3**
No. of students	250	850	1.022
No. of midwife students enrolled each year	35	40	70
No. of professors teaching OB/GYN subject	4	3	4
No. of professors who are MD	3	5	1
No. of professors who are Nurses/Midwives	3	5	1

Questions in this section aimed to explore the number of professors teaching OB/GYN topics, their involvement in research and clinical work as well literature sources used by students.

University managers where asked whether they are involved in the development of training curricula in their respective universities. All of them stated that they are involved in such work (Always: 66.7% and Sometimes: 33.3%) in addition to other administrative duties. Whereas professors who teach the obstetric care subject mentioned (100%) their work is divided between University and clinical care at the OB/GYN department.

Regarding the literature source used for students, it seems that there is a wide range of sources, starting from text books written by Albanian and foreign authors, lectures and to a lesser degree they mentioned internet websites. HPP subject is also included in the training curricula, which includes theoretical and clinical practice. The number of study hours for this subject revised each academic year, based on the number of students and the availability of OB/GYN health care services to accommodate students.

The topic of pre-eclampsia and eclampsia are also included in the HPP curricula and the number of theory and clinical practice varies from one to four hours per month**.**

Regarding the regular update of the HPP syllables the opinion of University Managers varied, where two-third of them mentioned that this syllable is not frequently updated.

When asked to provide their opinion regarding the training skills and needs of the pedagogical staff, majority of them were satisfied (Good: 66.7%). However, all of them mentioned that a university training program should be developed and standardized and all pedagogical staff should attend such trainings periodically. They also mentioned, that for the time being most of the trainings on OB/GYN issues are carried out by Pharm Companies and to a lesser degree by professional groups or organizations.

Furthermore, they were asked about information sharing and communication between pedagogical staff themselves and the administrative one as well. They admitted that there are periodic meetings at each department as well as academic and administrative meetings.

To explore their opinions how to improve the quality of teaching, their opinions varied differently starting from improvement in pedagogical and e-learning tools, educational technologies, agreement with private hospitals for students to carry out more clinical education practice, etc.

Discussions and conclusions

Overall fifty-one health care providers, eight University Managers and ninety-eight women responded the assessment.

Majority of interviewed staff were nurse/midwifes, which accounted for 78.4% of the total sample for maternity providers and 72.5% for neonatologist ones. A significant proportion of the staff had >10 years working experience for both: maternity providers (doctors: 70% and nurses/midwives: 61.5%) and neonatologist (doctors: 64.3% and nurses/midwives: 72.9%).

Findings on quality of care showed that even though that majority of healthcare providers considered the quality of care as adequate, improvements in diagnostic equipment and physical infrastructure need to be improvements as tools that affect the quality of care. Emergency Obstetric and New-born care infrastructure was also considered adequate and 68.6 percent of facilities have a separate room/space for Emergency Obstetric Care, which is equipped with beds, running water, drugs, oxygen, functioning toilets, etc. Higher satisfaction level was seen among providers at neonatology department, where over ninety-percent of them were satisfied with the space dedicated to infant care and the cleanliness of the facility in general. However, over forty-percent of them rated toilet's conditions as very poor and suggested for radical improvements. However, improvements regarding the presence of promotion materials, patient flow signs and algorithms were mentioned by nearly half of respondents.

Maternal mortality and pregnancy complications weren't considering an issue among the vast majority of interviewed providers, as nearly ninety-percent of them stated that haven't had any death during the last years. Among those who reported maternal mortality in their facilities, pulmonary thromboembolism and Uterine Atony as the main causes of maternal death among pregnant women. The most common pregnancy complications were severe bleeding, pre-eclampsia, pulmonary thromboembolism and placenta previa. While neonatologist providers reported pregnancy complications (80.4%) and to a lesser degree infectious disease. According to them, the nature of disease, delayed hospital presentation, diagnostic testing problems and improper diagnostic/tools are the main causes of such complications.

In regards to their satisfaction level on stock in drugs, medical supplies and laboratory services, high satisfaction level was overall good among maternity and neonatologist providers. However, low satisfaction level was also observed about out-of-stock of blood transfusion and feeding formula.

In terms of human resources management, high satisfaction level was observed among healthcare providers who considered the current number of medical doctors or nurses/midwifes as sufficient, however concerns about the number of healthcare staff during the nightshift or weekend was often considered as inadequate. Lack of specialized staff was mentioned by nearly sixty-percent of providers who considered as a barrier that affects the quality of care. In addition, complains about low-response or readiness of "on call" specialized staff in case of second opinion consultation was frequently mentioned by both type of providers.

However, nearly fifteen-percent of neonatologist providers felt that their knowledge is sometimes inadequate and they identified some topics to be trained, such as prematurity complications, Intensive Care, Respiratory Assist Device and Breast feeding.

Perception of staff in regards to their knowledge and practical skills, very high satisfaction level was observed, where over ninety-percent of them mentioned that have good or very good knowledge and training skills. The percentage of staff reporting the updated protocols and guidelines and regular training were available was only 58.8-percent. The overwhelming majority of them believe that there are in-place capacities to organize regular and updated trainings. Information sharing and communication interaction among providers was found high, as over eighty-percent of them mentioned organization of daily and weekly meetings where issues about quality of care and management are discussed and shared among each other.

Overall, 86.5% of staff reported that a health system with regular data collection was available and their concerns regarding quality of care and patient suggestions/concerns are share with supervisors. However, only half of maternity providers believed that their concerns have been addressed properly, compared with nearly two-third of neonatologist ones.

In general, high satisfaction level about working conditions at their facility were seen among providers, however suggestions to increase the staff salary, improve sanitary conditions/toilets, working conditions and diagnostic tools/equipment were the most common suggestions mentioned by majority of them.

Findings from discussions with University Administrators revealed that despite the fact that number of OB/GYN and Family Planning syllabuses have been increased during the last years, yet these curricula are not frequently updated. Lack of trained pedagogical staff and assistants were raised as a concern that needs to be addressed. Improvements in teaching tools and equipment was also raised.

Among mothers, nearly one-third of them were between 18-24 years old, highly educated (bachelor's degree or specialist degrees), however high unemployment rates were seen among them (57.1%). Nearly one-third had a single pregnancy, and 63.3% reported a distance to the nearest maternity from 5-30 minutes. Over eighty percent stated the presence and/or closed relatives during birth.

Majority affirmed that had received clear information on arrival about what was happening, particularly about the labor and delivery (91.8%) and nearly two-third have been counselled about breastfeeding benefits. Overall, all of them felt comfortable with hospital admission procedures.

According to WHO guidelines, a minimum of eight contacts are recommended to reduce perinatal mortality and improve women's experience of care[6] and most healthy women should receive at least two ultrasound scans during pregnancy[7]. In our assessment, over sixty percent, have had more than six antenatal visits, which were assisted by either an OB/GYN or

[6] https://www.who.int/reproductivehealth/news/antenatal-care/en/#:~:text=It%20recommends%20pregnant%20women%20to,38%20and%2040%20weeks'%20gestation

[7] https://www.fda.gov/consumers/consumer-updates/avoid-fetal-keepsake-images-heartbeat-monitors

nurse/midwife. A bare majority of them (50.5%) to have had up to ten times ultrasound scan, whereas the remaining (47.4%) affirmed up to five times. Even though, administration of enema for reducing the use of labour augmentation and routine perineal/pubic shaving prior to giving vaginal birth are not recommended, findings from this assessment show that these procedures are routinely performed in our maternities (enema: 57.1 and shaving: 67%).

Nearly all of them (95.9%) received up two times Vaginal Examinations and Electronic Foetal Monitoring was performed almost universally (99%) and informed consent was asked in over eighty-percent of those procedures. Intravenous injection/Epidural analgesia was performed in 72.4% of women and oxytocin injection in 44.9 percent. Overall, 58.2% reported amniotomy procedure.

Regarding indicators of experience of labor care, over eighty-percent of women reported to have been supported by the maternity staff (eating, drinking, changing position) and moving during the second phase of delivery. Over 92.9% were always or often treated with dignity and respect, and nearly all of them felt comfortable about safety (98%) and comfortability at the delivery room (100%). The vast majority of women had often their privacy and confidentiality preserved and 88% of mothers declared that had an efficient communication with hospital staff.

Epidural analgesia was performed in 26.5% of women, where nearly twenty-percent of them declared that weren't able either to move their legs or walk.

Caesarean section (CS) rate was 15.3%, with nearly all (96.8%) mothers reporting to have received proper explanation regarding reasons for CS. Receiving blood transfusion during delivery was reported by less than ten-percent of women and the main reasons for receiving blood was anaemia. The episiotomy prevalence was found to be 34% with ten-percent of women reporting a severe perineal tear. Encouraging or allowing a woman to push and the way she liked was admitted by nearly two-third of them, while 66.3% reported to have been allowed to adopt the position they wanted and Lithotomy position was reported by 48% of women. Even though WHO no longer recommends Kristeller manoeuvre, yet the prevalence of this method was found to be 47.4 %.

Regarding the postpartum care, almost all women (97.9%) mentioned that cord clamping happened between five to ten minutes after birth, stated that removal of placenta was painful (63.9%) and were encouraged to push while placental expulsion (80%). Non-pharmacological analgesia was performed in 77.3% and the reasons for those procedures were proper explained (69.8%).

In general, supports provided by a health provider was found to be very high, as 93.9% of women considered staff support as effective.

All mothers reported that an ID bracelet was placed on the new-born and mother and checked each time that baby comes or goes from the room. According to mothers' opinion their baby looks healthy (95.9%) and two-third of them reported that weight birth varied between 2.500 to 4.000 gram.

As WHO recommends, early and uninterrupted skin-to-skin contact between mothers and infants should be facilitated and encouraged as soon as possible after birth. We found that the vast majority of mothers were supported and encouraged for skin-to-skin contact (89.8%), early breast feeding (95.9%) and rooming-in (100%) as well as the procedure of neonatal physical examinations and prophylaxis (91.8%) were carried out within the first hour of life. However, nearly less than fifty-percent of mothers reported that their new-born was bathed after six hours or more.

As soon as possible after birth, mothers must be counselled and supported to initiate within the first hour after delivery the breastfeeding, which ensures that the new-born receives the colostrum, which is very rich with protective factors. On the other hand, mothers should be supported and taught with practical tools no only to initiate the breastfeeding, but also to manage common breastfeeding difficulties. We found that more than one-third of mothers reported to have initiated the breastfeeding after an hour or more and the same percentage reported that the length of the first breastfeeding was more than an hour, compared with 20 up 45 minutes as recommended by WHO and UNICEF. Two-third of them plan to continue breastfeeding for their new-born for twelve months or more. Overall, very high satisfaction level was found about support received by health providers regarding the initiation and managing breastfeeding difficulties. The most common source of receiving information/counselling was neonatologist nurse and midwives.

Regarding mothers 'perceptions about post-natal care and support during the first 24-hours and once they leave the maternity. High satisfaction level was reported about routine post-natal care, rooming-in experience and physical examination of the new-born in front of the mothers. Additionally, high satisfaction level was reported about the quality of information, knowledge and practical skills on to take care of mother and the new-born at home, including use of family planning services and modern contraceptive methods.

Mothers also reported to have been treated with respect and dignity by healthcare providers and had an effective communication with them. However, only twenty-percent of them reported to have received psychological support by the psycho-social staff of the maternity.

In terms of physical infrastructure, they were satisfying with cleaning conditions of the facility and delivery room. Nearly all of them would return again at the same facility in case of pregnancy in the future.

As a conclusion, findings from this assessment show that a great progress is done in relation to reduction maternal morbidity and mortality, but yet these remain unacceptable high. A good indicator is that high satisfaction level was found among service users about the quality of care and communication with providers. However, there are too many areas for improvements such as: infrastructure, medical equipment and diagnostic tools, as well as in the clinical practice, where practices that have long been abandoned are still being used in Albania. More efforts need to be placed to enhance healthcare providers knowledge and skills on the latest practice recommendations and technical guidelines, as well as update university curricula to better align with international recommendations and country needs.