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COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF PUBLIC HEALTH

LABOR PAIN MANAGEMENT PRACTICE AMONG OBSTETRIC CARE PROVIDERS IN BUTAJIRA TOWN PUBLIC HEALTH INSTITUTION, GURAGE ZONE,SNNPR, ETHIOPIA , 2023

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Table of Contents

LIST OF TABLE

LIST OF FIGURE

Summary

INTRODUCTION: Labor pain is the most severe form of pain in women' life and it was considered as a punishment given by God. Pain relief in childbirth is subject to many social and cultural modifiers, which continue to change. Labor pain is the result of a complex and subjective interaction of multiple physiologic and psychosocial factors on a woman's individual interpretation of labor stimuli. Delivery of the infant into the arms of a conscious and pain-free mother is the most exciting and rewarding moment in maternal care services. Developed nation give emphasis on continuous labor support, but in developing country pain is neglected especially managing labor pain. In a country like Ethiopia with low institutional delivery managing labor pain can help as an incentive to enhance institutional delivery rate.

OBJECTIVE: To assess labor pain management practice among obstetric care providers in , Butajira Town Public Health Institution, Gurage Zone Southern Ethiopia 2023

METHOD: Institution based cross sectional study design was conducted from July to Augest, 2023. The study was conducted on all obstetric care providers in Butajira Town Public Health Institute . Pre-tested and structured self-administered questionnaire was be used to collect the data. Data consistency was checked and entered into Epi Info then exported to SPSS for further analysis. Descriptive analysis was done, logistic regression analyses were used to see the association of dependent and independent variables. Finally, odds ratio and 95% Confidence interval were computed to determine the strength of association.

Result The magnitude of labor pain management practice among obstetric care providers at the study area was 77.1%. majorty of the respondents were midwifery regarding profession,81% of obstetric care providers had knew about both pharmacologic and non-pharmacologic labor pain

reliefer methods. factor associated to labor pain management practice which were found to be statically significant by multivariate analysis were being Diploma holder (AOR = , 0.063 95% CI =0.001-0.468, P = 0.018),and pharmacologic analgesia effect on the labor (AOR=0.063; 95%CI, (0.005-0.846)

Conclusion The routine practice of labor analgesia by healthcare providers was good in the study facilities

Recommendation Butajira health department: prepare special training, with task-oriented refreshment course, special emphasis on strengthening obstetric caregivers' knowledge and attitude practice towards the use of labor pain relief methods through communicating with other concerned bodies .

CHAPTER ONE: INTRODUCTION

1 1Background

Labor pain is the most acute pain of all women. It is similar to other types of visceral pain (sever, colicky, and intermittent). In contrast to many other sources of pain, is not pathological case, but a part of a normal physiological process[1] .In the first stage of birth, it is caused by uterine contractions and dilation of cervix to allow the exit of the fetus. In the second stage of labor, the pressure of the pelvic and the distension of enclosing structures[2]. The pain a woman experiences during labor and birth is subjective, individualized, and that is influenced not only by the physiological and anatomical factors, but also by psychological and socio-cultural implications[3]. Labor pain is worst acute pain,in which most women's experience in their lifetime andmost laboring mothers need labor analgesia [4]

Pain during labor has a great role on maternal preference on mode of delivery, relieving labor pain decrease laboring mothers decision for CS by 50% [5].

The most common approach to labor pain is to offer management to parturient in order to decrease pain. Labor pain management is generally classified in to two pharmacologic and non-pharmacologic labor pain management, the difference is by the use of drug for pain relief through pharmacologic pain management. Utilization of labor pain management methods varies from place to place even it varies from one setup to another[6].

Administration of labor analgesia in early stage of labor decrease negative impact on the mode of delivery and it improve maternal satisfaction .Continuous psychological support for laboring mother improves maternal satisfaction with the service, feto- maternal birth outcome and to decrease negative feeling on birth experience [7]. Labor analgesia decreases episiotomy rate, postpartum blood transfusion and improves neonatal birth outcome and maternal satisfaction [8]. Furthermore it can decrease postpartum depression, anxiety, postpartum fever and post-traumatic stress disorder, However, most of these pain effects are alleviated by effective labor analgesia that may benefit the mother and fetus

Labor support and care may also involve procedures and facilitation of communication between the woman and staff to assist her in making informed choices. Furthermore, it may comprise emotional support for the woman's partner. In developed world number of women receiving pharmacologic labor pain management in 2008 was more than 60**%[9]** and in 27 states vital statistics report, the percentage of women receiving epidural/spinal anesthesia ranges from 22-78%[10] In developing countries including Ethiopia use of obstetric pain

management for labor pain relieve is not a common practice. This may be as a result of several factors including unavailability of equipment, health care delivery systems, knowledge, perception, setting of hospital and managerial problems. It may also due to misconceptions including result of long-term backache, harm to baby, breast feeding problem, increased caesarean section, slow labour progress and permanent medical problems for the mother and newborn.

1.2 Statement of the problem

Severe pain adversely affects parturient and fetuses. Pain induced stress accelerates the basal metabolism of a parturient and increase cardiac output and ventilation. In this extreme case reflex hyperventilation leads to respiratory alkalosis manifested with maternal tentany and fetal cardiac arrthymia and maternal respiratory tentany shifts the hemoglobin dissociation curve to the left, leading to deterioration of the transplacental oxygen support. The sympathetic stimulation increased endogenous catecholamine concentration cause uterine vasoconstriction, with reduces the utero placental flow and is likely to lead to intrauterine fetal hypoxia and acidosis. This could be again dangerous for women with pre-existing cardiopulmonary problem. Released catecholamine impair uterine contractile function, which prolongs the delivery and secondary deteriorates the postpartum status of the newborn [11].

Addressing the problem of labor pain requires ongoing research and innovation in pain management techniques, improved education and support for expectant mothers, and equitable access to quality care. It is crucial to understand the physiological and psychological aspects of labor pain to develop personalized, evidence-based pain management approaches that prioritize the well-being of both the mother and the child [12]. Many women prefer to manage labor pain through a combination of techniques such as breathing exercises, relaxation techniques, massage, hot/cold therapy, hydrotherapy, and positions that promote movement and gravity. Medical interventions can also be utilized, including epidural anesthesia or other pain-relieving medications, depending on the individual's preferences and medical circumstances[13].the national institute of clinical excellence (NICE) of the United Kingdom recommends the education of women on the options and availability of effective analgesia in labor as a means of ensuring that women receive optimal analgesia during child birth [14] . There are various factors associated with this problem, including insufficient knowledge and training among healthcare providers, limited access to pain relief options, cultural beliefs and attitudes towards pain and childbirth, individual variations in pain perception and response, and concerns regarding potential risks and side effects of pain management techniques.[15] . labor pain management need for comprehensive approaches that prioritize the physical and emotional well-being of women during labor. the importance of addressing cultural attitudes and beliefs surrounding labor pain to ensure personalized and effective pain management strategies for each woman[16] Labor pain is a subjective and intense experience for women, and effective pain management techniques are crucial to ensure a positive birthing experience. However, there are several

challenges associated with labor pain management that need to be addressed[17] Effective communication between healthcare providers and expectant mothers is crucial for pain management. Clear and accessible information regarding available options, benefits, and drawbacks is essential for making informed decisions about pain relief during childbirth.Addressing these challenges requires a collaborative effort between healthcare providers, policymakers, researchers, and expectant mothers. It involves continuous education and training, improving access to pain relief options, promoting shared decision-making, and advancing research on safe and effective pain management strategies during labor [18]. the adverse consequences of uncontrolled pain during labor, including increased maternal stress, longer labor duration, and potential negative effects on maternal-infant bonding and early breastfeeding. It can emphasize the significance of addressing pain management to promote optimal maternal and neonatal outcomes[19].Attention is being focused on the very important area of childbirth. Provision of effective labor analgesia is not only the measure of maternal satisfaction but also is indirect evidence that the health system is functioning, health institutions are well organized and equipped, and there are competent maternal health care providers. Unfairly large disparities exist between developed and developing countries in this practice. Analgesia for labor is widely utilized in high-income countries but this is not the case in Africa [20] . While various pain relief options are available during labor, such as pharmacological methods (e.g., epidural anesthesia) or non-pharmacological techniques (e.g., relaxation exercises), there may be limitations in accessibility, effectiveness, or acceptability of these methods. Finding alternatives and expanding the range of options is important[21] effectively managing and alleviating pain experienced by women during childbirth. Childbirth is a natural and physiological process that can be accompanied by intense pain, discomfort, and anxiety. While pain during labor is inevitable, it is crucial to provide adequate pain relief measures to ensure the well-being and satisfaction of both the mother and the healthcare professionals involved [22]. there may be barriers to accessing effective pain management methods. Limited availability of resources, lack of healthcare infrastructure, and disparities in access to quality care can hinder the implementation of comprehensive pain management strategies. Moreover, cultural beliefs, fear of side effects, and inadequate communication between healthcare providers and patients can also impact the utilization and effectiveness of pain relief options [23].

The available evidence suggests that parenteral opioids are only somewhat effective and could even be harmful to be baby, yet are widely used [24]. The evidence for effectiveness of non-pharmacologic agents like TENS, acupuncture, and hypnosis is also scanty, although there are isolated reports of efficacy [25. The EFMOH has developed and implemented the first standard of midwifery care practice in 2013. Among the practice competencies stated; provision of physical and psychological support, and use of pharmacological and non-pharmacological comfort measures during labor and birth are listed as core competencies under Practice Standard III [26] . This is one of the critical components in the FMOH's efforts to improve the quality of maternal health services available to the Ethiopian public However, there is no any protocol for labor pain relief in our actual clinical setting and itspractice is not clearly known .

Many pharmacologic and non-pharmacologic treatments have been developed to alleviate the labor pain.During childbirth, women experience intense pain and discomfort. Despite advancements in medical science, the management of labor pain remains a challenge. While various methods, such as pharmacological interventions, non-pharmacological techniques, and alternative therapies, are available, there is a need to effectively address and manage labor pain to improve the birthing experience for women[27].researches related to labor pain management practice among obstetric care providers' in public health institutions in Ethiopia is six studies done but, no any documented study in Butajira city administration public health institutions reporting obstetric care providers' practice towards labor pain management . Therefore, the study was assess the labor pain management practice among obstetrics care providers in public health institution of Butajira Town, 2023

1.3 Significance of the study

Administration of appropriate pain management for normal labor is mandatory for better maternal outcome and satisfaction. On the other hand this study will provide insight to obstetric health care providers in identification mechanism of common associated factors for labor pain management practice and to determine the barriers observed, with a view to make recommendations for improvement. So, the aim of this study is to assess labor pain management practice among obstetric care providers.

Therefore, this study is expected to provide benefits primarily to maternal health care providers to appraise the forms and use of labor pain management is such a way that it meets the internationally accepted standards. Then, it will remind clinical preceptors and medical educators to give emphasis on training and retraining of obstetric analgesia as a core competency for their students in their pre-service and in-service environment. In addition to this, the result of this study will help to provide strategies to health policy makers and health care workers themselves on how to improve and implement effective labor pain management. Besides, the findings of this investigation also help the health institutions review their methods of managing a mother in labor pain and help other researchers as a source of information for further researches.

CHAPTER TWO: OBJECTIVES OF THESTUDY

2.1. General objective:

To assess labor pain management practice and associated factor among obstetric care providers in Butajira Town Public Health institution of Gurage Zone SNNPR Ethiopia July 2023GC

2.2. Specific objective:

- To determine labor pain management practice among obstetric care providers in Butajira Town Public Health institution of Gurage Zone SNNPR Ethiopia July2023GC

- To identify associated factor of labor pain management practice among obstetric care providers in Butajira Town Public Health institution of Gurage Zone SNNPR Ethiopia July 2023GC

CHAPTER THREE: LITERATURE REVIEW

3.1: Labor pain management practice

labour pain is physiological pain that occurs during labour progress and natural processes taking place in the women´s body [28]. It is the most severe pain for females and inevitable aspects of the childbirth process,but different from other pain. It is not a sign of injury ortissue damage, reduces spontaneously, is regular andcontinuous, gets tense gradually, and leads to a pleasant incident which is childbirth [29]. A study in Colombia reported inequity distribution of epidural analgesia in developed versus developing countries, in developed countries the use of epidural analgesia during labor is around 60% of deliveries; covering France 75%; Sweden 71% and Colombia 31.5%. In other less developed countries such as South Africa, only 21% of women used epidural [30] . In US nearly 30% of women used non-medical methods to start labor, and over 70% of women used non-medical pain management [31] . a survey conducted in Poland indicated that only 11% of hospitals employed anesthetists for labor ward. In addition, epidural analgesia was also used in 55% hospitals but only 20% provide the service 24 hours per day and free of charge. Entonox (N2O) was used very occasionally; most common way of pain relief was pethidine injection [32] . In Nigeria most respondents (94.8%) agreed that pain relief is needed during labor. Only 2.1% of respondents were undecided about the provision of pain relief during labor and 3.2% were of the opinion that pain relief was not necessary during labor. Most respondents (93.7%) had attended a woman in labor in the 4 weeks preceding the survey. Of these, 56.8% had counseled a parturient in labor. Most of the counseling (42.1%) took place during labor. Less than half of the respondents (48.4%) had administered pain relief in labor in the preceding 4 weeks and systemic opioids was the most commonly form of pain relief. Among the respondents who did not offer pain relief agents in labor, the majority (54.5%) had no reason for not offering it. Unavailability of methods, inability to afford the cost of pain relief, lack of knowledge and skills, as well as lack of essential equipment to provide the procedure were also given by respondents as reasons for not offering pain relief [33]. According to a study conducted in Tanzania, it shows that the barriers affecting the provision of pain relief options are barriers to the health system (lack of staff, equipment and protocols), limited educationand opportunities to practice pain relief methods and beliefs negatively, fears and bad practices The opioid is more effective in early active labor and less effective after seven centimeters of dilation and morphine is preferred over pethidine due to its reduced half-life in

women and children, and pethidine may be associated with reduced success in breastfeeding due to the child's reduced ability to initiate and support breastfeeding [34]. In our country Ethiopia the response rate was 81.5% with 164 questionnaires completed. The majority, 79% of respondents, understood that women can feel moderate to severe pain in labor and 77% were of the opinion that labor pain should be relieved. However, common practices included only supportive measures such as breathing and relaxation exercises, back massage and support from family. The general attitude of healthcare providers is that labor is a natural process, women should be able to cope and that pain relief is not a priority for women in labor. More than half, 52% of healthcare providers had safety concerns with using pharmacological methods to relieve pain in labor [35].Study was conducted in Addis Ababa offered labor analgesia routinely while 43(23.7%) offered is sometimes 10(6.6%) analgesia maternal request 45.8% never practice labor analgesia obstetric analgesia utilization in Addis Ababa, Ethiopia (54.2%) [36]. In addition to this Study was conducted in Tigray region found out practice of labor pain management methods was 43.3%, which is only non-pharmacologic methods, practice of pharmacologic method was nil [37]. In Amhara national regional state referral hospitals (ANRSRH) The overall utilization of obstetrics analgesia for labor pain management was 40.1 %. All professionals used non pharmacologic methods while the utilization of pharmacologic obstetric analgesia methods were found to be zero. psychotherapy 75(88.2%) was the most used method followed by breathing technique 61(71.9%) and massage 54(63.51%) [38]

CHAPTER FOUR: METHODS AND MATERIAL

4.1. Study area and period

The study was conducted in Butajira city administration. Butajira is a town located at the base of the Zebidar massif in the Gurage Zone of SNNPR in Ethiopia, it is situated approximately 117 km far from south of capital city of Hawassa 131 km far from Addis Ababa/capital city of Ethiopia. The city is administratively divided in to two sub-cities with total of Five Kebeles. Has a population of around 56,000 people there are three hospitals,and one health centers are found in Butajira.

4.2. Study design

Institutional based cross-sectional study design will be conducted

4.3. Population

4.3.1. Source of population**:** All obstetric care providers working in Butajira Town Public health facilities .

4.3.2. Study population**:** All selected obstetric care providers working in Butajira Town Public health facilities during data collection period.

4.4. Inclusion and Exclusion Criteria

4.4.1. Inclusion criteria: All obstetric care providers (obstetrician, midwives, nurses, physicians, Public Health) who are supposed to be involved in the provision of management for normal labor and delivery during the study.

4.4.2. Exclusion Criteria:

- Obstetric care providers who are critically sick at time of data collection

4.5 Sample

4.5.1 Sample size determination

The sample size was calculated using a single population proportion formula sample size calculation will be 5% marginal error (d) and confidence interval of 95% (z α 2= 1.96). and P=43.3%[37](taken from previous the same study in Tigray General Hospital Northern Ethiopia the sample size is calculate as follows :

$n=Z^2p\ (1-p)\ /d^{2,}$ where

- n: - number of study subjects
- p: - proportion of labor pain managemennt(p=43.3% or p=0.433)
- Z: - is the standard normal variable at (1- α) % confidence level and α is mostly 0.05. i.e. with 95% CI (z= 1.96)
- N:-total number of obstetric care providers who work in ButajraTown Public health institutions
- d: - the margin of error to be tolerated (%) W=5% =0.05.
- Zα/2:-level of confidence interval at 95%

  $n=1.96*^{2}0.433\ (1-0.433)\ /0.05^{2}$

  =377

The total number of obstetric care providers in 2015 E.C is 134. Since the total population is less than 10,000, so modified sample size will be determined using correction formula; N= ni/1+ni/N

- ni- initial calculated sample size.
- N – Total number of obstetric care providers who work in Butajira Town Public health institutions in 2015E.C.

N= ni/1+ni/N = 377 /1+377/134 = 99

Then, 10% for non-response rate was added. Therefore, the final sample size including the non-response rate will be 109.

4.5.2 Sampling procedure

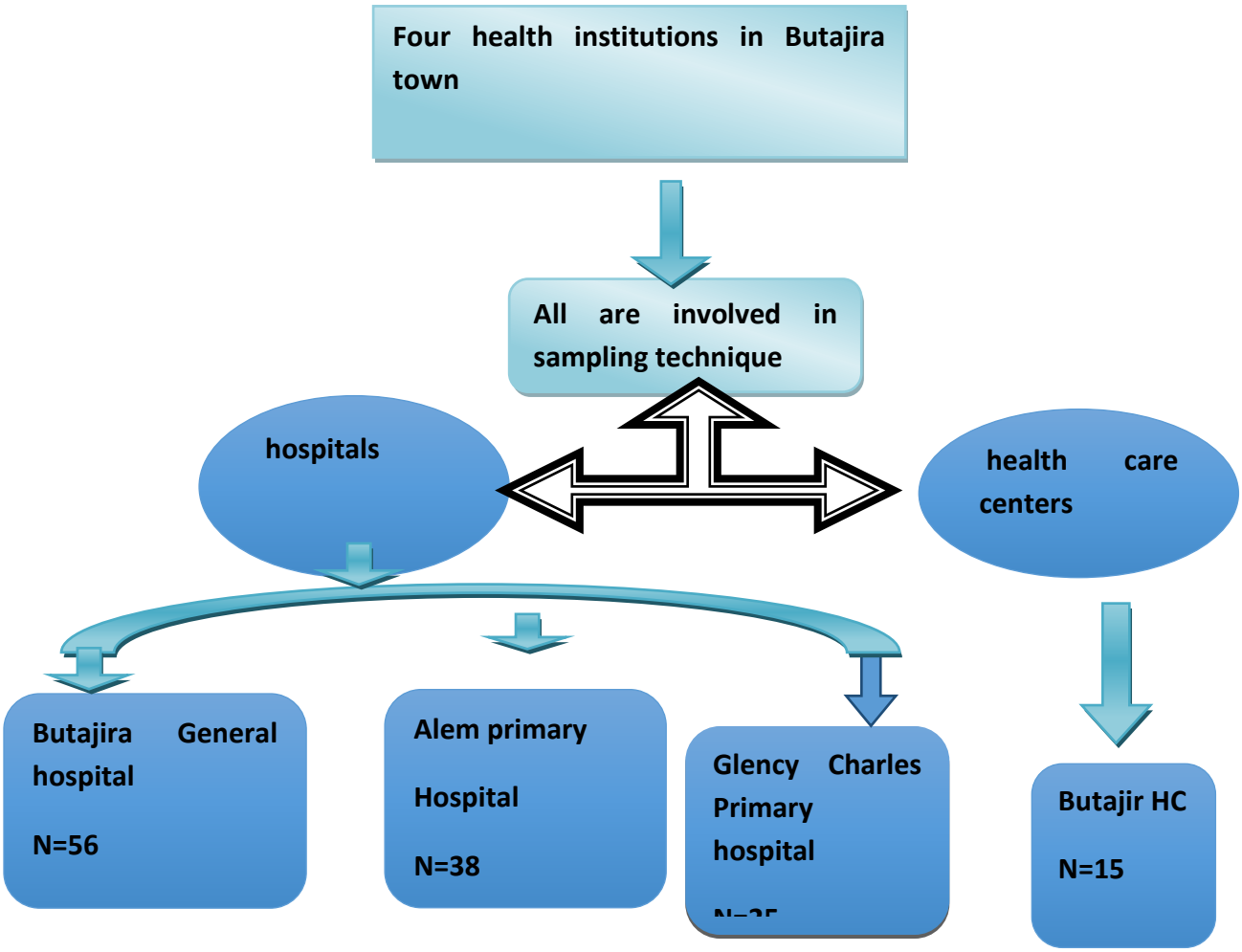

Figure 1: Schematic representation of the sampling technique

4.6. Variables

4.6.1. Dependent Variables: Practice of labor pain management

4.6.2. Independent variables

- Socio-demographic characteristics:
  - ✓ Sex
  - ✓ Age
  - ✓ Profession
  - ✓ Qualification
  - ✓ Years of service
  - ✓ Religion
  - ✓ Marital status
- Knowledge about labor pain management
- Attitude about labor pain management
- Fear of side effect

Conceptual frame work of study on labor pain management practice

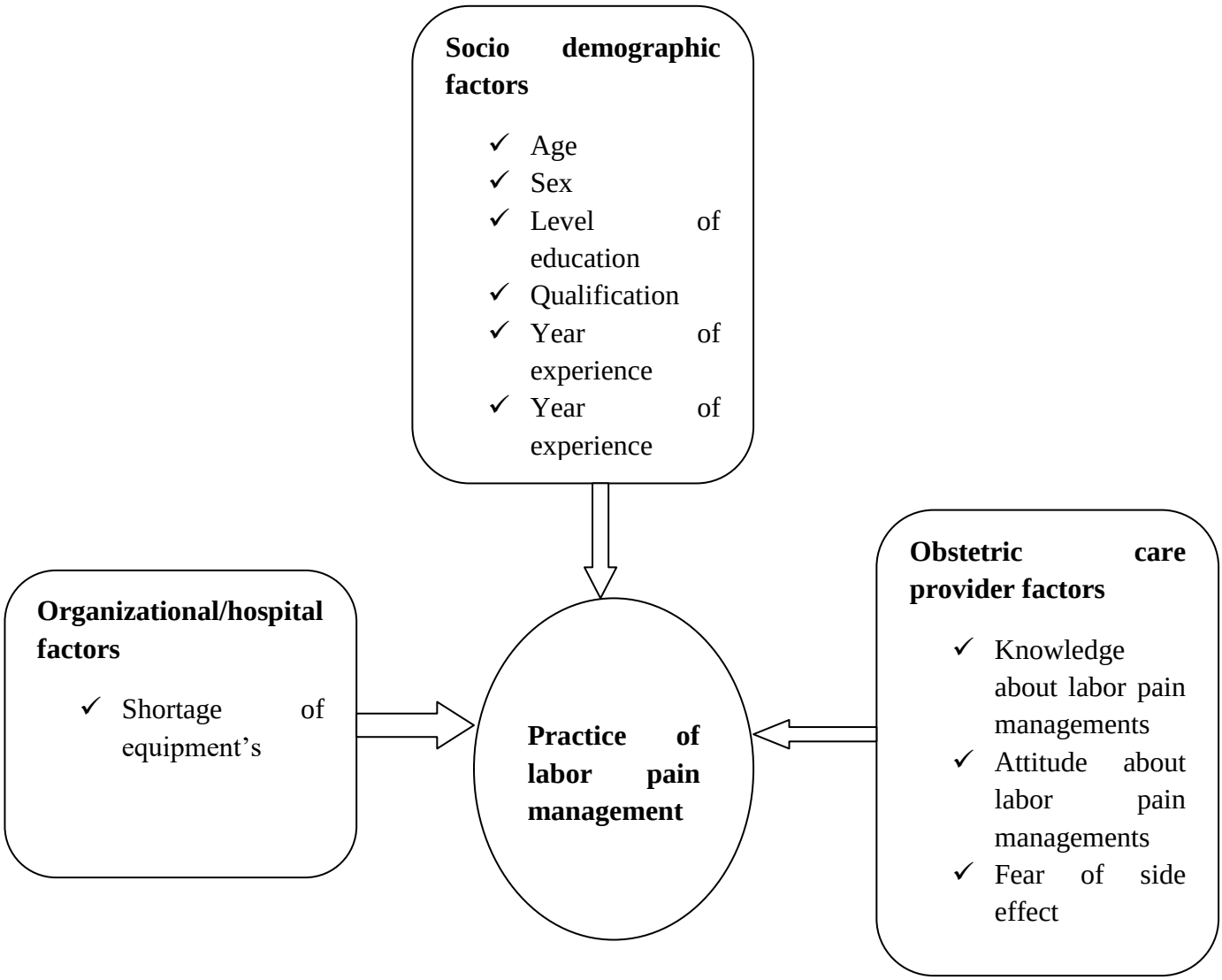

Figure 2: Conceptual framework of the study

4.7 Data collection and analysis plan

4.7.1. Data collection instruments

The data was collected by using pre-tested and structured self-administered questionnaire which developed and adopted after review of various relevant litrature from previously condacted similar study [37,38] with some modification by researchers based on our objective of the study. The data was include socio demographic characteristics and obstetric care providers' knowledge, attitude and labor pain management practice and assessment questionnaire. The questionnaire is prepared in English language.

4.7.2. Data collection plan

The data was collected and daily supervised by all trained group members in Butajira town Public health institutions and was collected from July 18 to 28, 2023 GC. The questionnaire was pre-tested out of the study population using 10% of the sample size and it was reconstructed based on information obtained from pre-tested results. Pre-test was conducted with 13 obstetric care providers of out of our study population.

4.7.3. Data quality control measures

A half day training was given for group members to provide common understanding on data collection process, how to assess the data, wisely using of time, data handling and submit the collected data and to be familiar with it. The collected data was cross-checked by our advisors and group members and we will use daily checkup. Brief explanation will be given for sampled obstetric care providers how to fill the questionnaires and close supervision was carry out during data collection by group members.

4.7.4. Data analysis

Data entry and analysis was conducted using SPSS version 27. All independent variable which had association in bivariate analysis with p value less than 0.25 was entered into multivariate logistic regression model. Independent variables with P-value < 0.05 under 95% CI was considered as having significant association with outcome variable and considered as statistical significance. Frequency, percentage, tables graphs was used to display the findings of the study.

4.8. operational definitions

Labor pain management practice-obstetric care provider's reportedly practicing analgesia to relieve labor pain for every woman where there is a need.

Non-pharmacological Labor Pain Management-non pharmacological therapies are methods that help to decrease pain without use of medication.

Pharmacological Labor Pain Management-pharmacological therapies are methods that help to decrease pain with use of medication.

Obstetric care providers-the providers include medical doctor, midwifery, nurse and puplic health which are given delivery by regular time, rotation and duty time.

Knowledgeable-Obstetric care providers who score 50% and above to knowledge related to question

Not Knowledgeable-Obstetric care provider who score less than50% to knowledge related question

Positive attitude-Those obstetric care providers who answer above the mean of the attitude questions

Negative attitude-Those Obstetric care providers who answer below the mean of the attitude questions

4.9. Ethical issue

Protocol approval was obtained from the Research Ethics and Evaluation Bureau (IRB) of College of Medicine and Health Sciences, Wolkite University. The personal information in the research was kept private and confidential.

4.10. Result Dissemination Plan

After the completion of the study was disseminate the results and findings to the CBE office, department of public health as partial fulfillment of BSC degree in Public Health, and other concerned sectors.

4.11. Schematic Representation of Study Design

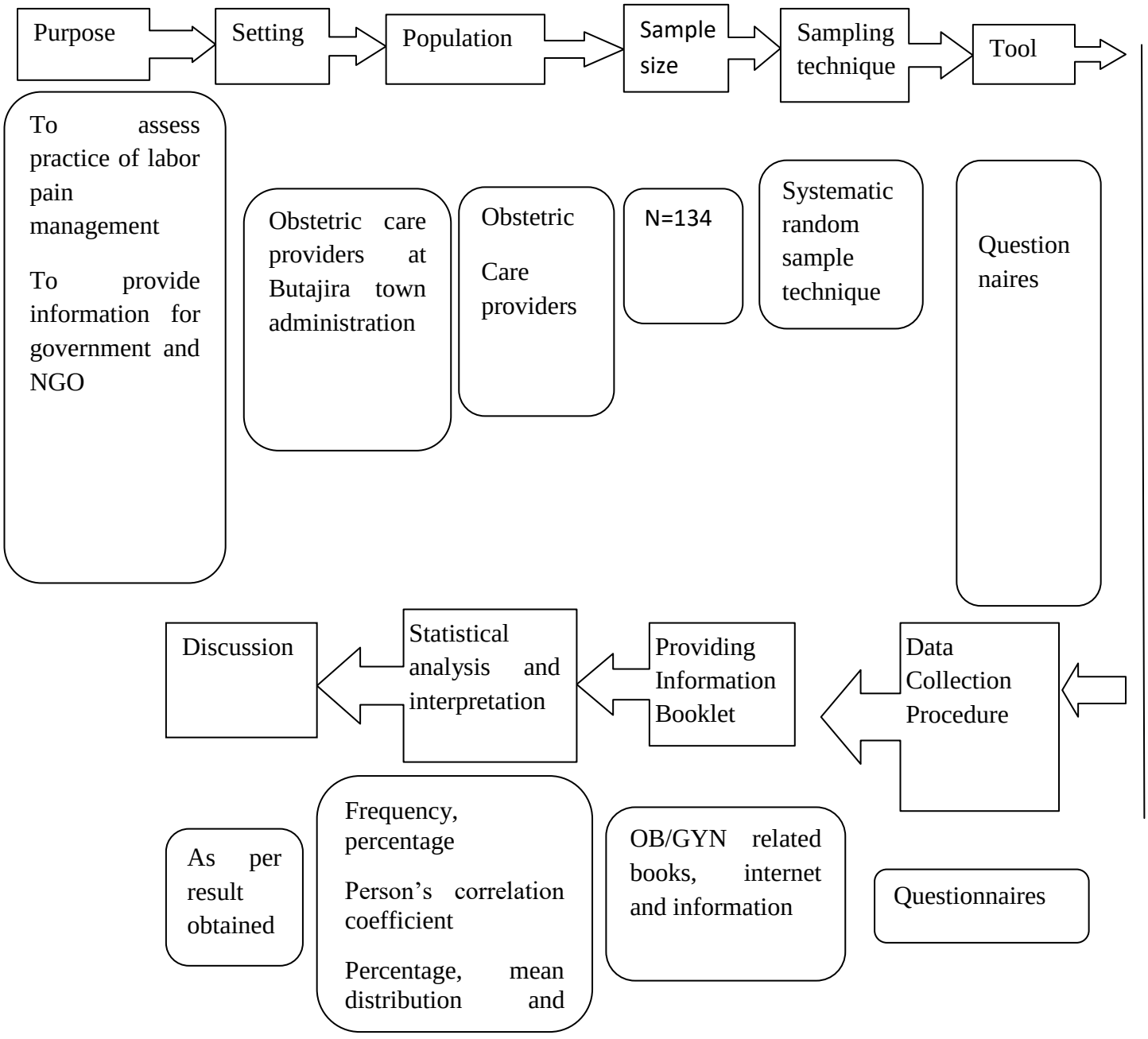

Figure 3: Schematic representation of the study design

4.12. Limitation of the Study

- ✓ Lack of time to collect the data
- ✓ Lack of financial resources
- ✓ Lack of data source

CHAPTER FIVE:RESULTS

5.1 Socio-demographic characterstics

All the sample sample size, 109 respondent had finished the provided questionnaire completely so the response rate in this study was 100% among 109 more than half 62 (56.9%) respondent of this study were female 62 (56.9%) near half 50 (45.9%)of the respondents were found 26-30 age group ,A 66 (60.6%) of respondent were merried the rest 39.4% were single, 86.2% of obstetric health care providers working at hospital the remaining 13.8% were at health center regarding their profession, (69.7%)of the participants were midwifery, followed by medical Doctor account for 16 (14.7%). 77 (70.6%) of them had BSC degree while the rest 14.7%,14.7% had diploma and medical doctorate respectively.majorty 59(54.7%) of their year of experience range between 1 and 5 year (See Table-1)

Table 1 socio- demographic character stics of the respondent

Variable	category	Frequency	Percent (%)
Gender	Male	47	43.1
	Female	62	56.9
Age of the respondent	<=25	19	17.4
	26-30	50	45.9
	31-35	28	25.7
	>35	12	11.0
Marital status	Married	66	60.6
	Single	43	39.4
Working Facility	Hospital	94	86.2
	health center	15	13.8
	Midwifery	76	69.7
	Nurse	12	11.0

Profession	public health	5	4.6
	M. Doctor	16	14.7
Qualification level	Diploma	16	14.7
	BSC	77	70.6
	medical doctor	16	14.7
Year of Experience	<=5	59	54.1
	6-10	41	37.6
	>10	9	8.3

5.2 labor pain management practice and associated factor

Among the total of respondents 84 (77.1%) offer labor pain relief for laboring mother among those 28.4% 36.7% and 11.9% were practice Routinely, some times and as maternal request respectively the rest 25 (22.9%) were not provide labor pain relief reason for not providing labor pain relief includes; belief that labor pain is natural which account for 15 (13.8%) followed by non availability of drug and late presentation in labor, 7.3% and 1.8% respectively near half 47(43.1%) of the respondents provide non-pharmacological pain relief normal vaginal delivery reassurance,breathingtechnique 57(52.3%),18(16.5%)respectively the rest 34(31.2%) were from the pharmacological method the most commonly use analgesia were pethidine 36(33%), tramadol 9(8.3), paracetamol 10 (9.2%), 25% were provide both method 81(74.3%) of the respondent report there is no any guide line or criteria to offer labor pain relief at theire working area (See Table- 2)

Table 2 show labor pain management practice and associated factor health facilitis of Butajira, SNNPR Ethiopia,2023

Variable	category	Frequency	Percent (%)
have you ever offer labor pain reilief before	Yes	84	77.1
	No	25	22.9
if no why	no availability of drug	8	7.3
	late presentation in labor	2	1.8
	belief that labor is natural	15	13.8
if yes how ofeten	Routinely	31	28.4
	Sometimes	40	36.7
	as maternal request	13	11.9
which type of pain	Pharmacological	34	31.2

relief do you offered for normal vaginal delivery	non -pharmacological	47	43.1
	Both	28	25.7
if pharmacological which are they	Pethiine	36	33.0
	Morphin	2	1.8
	Tramadol	9	8.3
	Paracetamol	10	9.2
	Diclofenac	7	6.4
have you ever used non pharmacological labor pain	Yes	98	89.9
	No	11	10.1
if you answer yes what are they	breathing technique	18	16.5
	Reassurance	57	52.3
	psychological support	9	8.3
	back massage	15	13.8
have you ever got on job training on labor pain management before	Yes	34	31.2
	No	75	68.8
is there any guide line or criteria to offer labor pain relief in you working area	Yes	28	25.7
	No	81	74.3

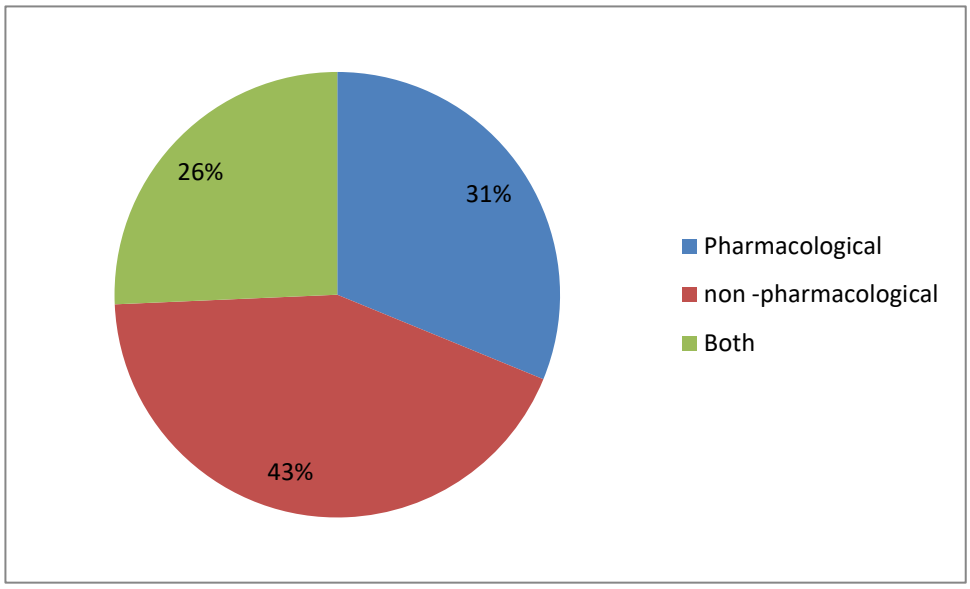

Figure 4 pie chart show types labor pain relief methods,

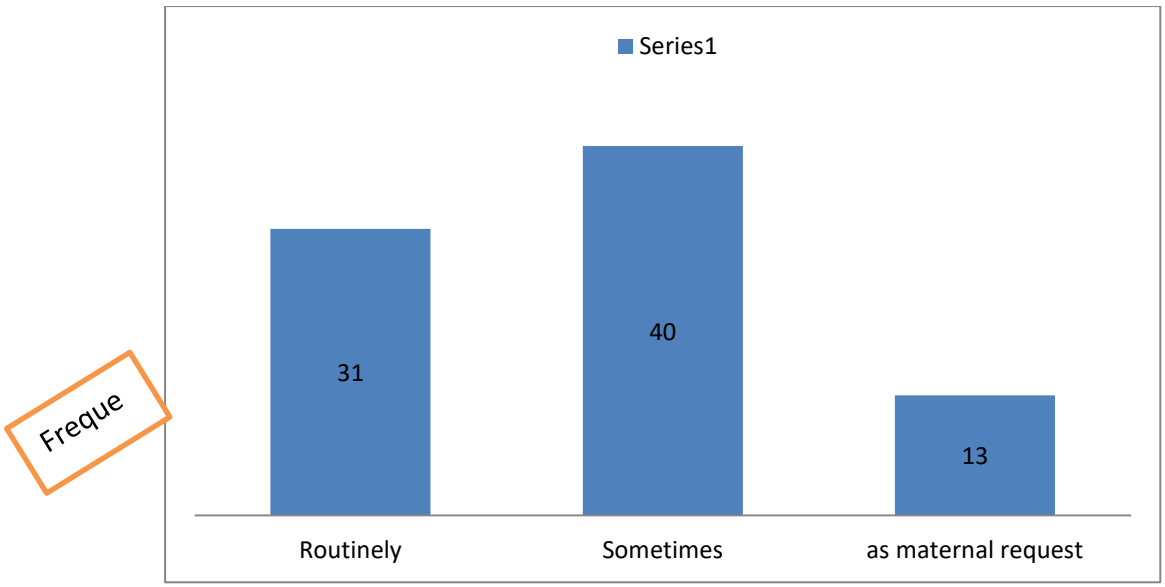

Figure 5 pattern of labor analgesia practice by respondents, health facilitis of Butajira, SNNPR Ethiopia,2023

5.3 knowledge on obstetric pain relief among obstetric care providers

Majority of respondents reported that they knew about labor pain management methods in general, of these 90 (82.6%) knew both pharmacologic and non-pharmacologic and 17 (15.6%) knew non-pharmacologic labor pain relief methods only. among non-pharmacologic methods, 32(29.4%) of obstetric care providers psychotherapy and massaging back of the mother Nevertheless, 2 (1.8%) of them reported that they knew pharmacological labor pain relief methods only.majority 105(96.3%)of the respondent were belief monitoring labor pain management is important to provide quality of maternal health from the pharmacological pethidine (37.6%),tramadol (20.2%) and paracetamol(18.3%) are the most known drug by the respondent, regarding adverse effect 62(56.9%)of the respondent were report no adverse effect a 37.6% were don't know only 5.5% respondent were report adverse effect these are case fetal distress, delay labor progress and cause fever (see Table-3)

.

Table 3 knowledge on obstetric pain relief among obstetric care provider health facilitis of Butajira, SNNPR Ethiopia,2023

variable	category	Frequency	Percent (%)
monitoring labor pain management is important to provide quality maternal health care	Yes	105	96.3
	No	1	.9
	do not know	3	2.8
which type/method do you know to manage labor pain	Pharmacological	2	1.8
	non pharmacological	17	15.6
	Both	90	82.6
ifyouansweredpharmacological or both which are they			
	Pethidine	41	37.6
	Fentanyl	3	2.8
	Tramadol	22	20.2
	Paracetamol	20	18.3
	Diclofenac	9	8.3
is there any adverse effect that coused by labor pain relief	Yes	6	5.5
	No	62	56.9
	don't know	41	37.6
if you aswered yes what is it	fetal distress	3	2.8
	Delay labor progress	2	1.8
	Fever	1	.9
use of non-pharmacological labor pain management methods has no value to mother on labor	Yes	8	7.3
	No	100	91.7
	don't know	1	.9
if you answered non pharmacological or both which are they	breathing technique	15	13.8
	Reassurance	19	17.4
	labor exercise	10	9.2
	back massage	32	29.4
	psychological support	32	29.4

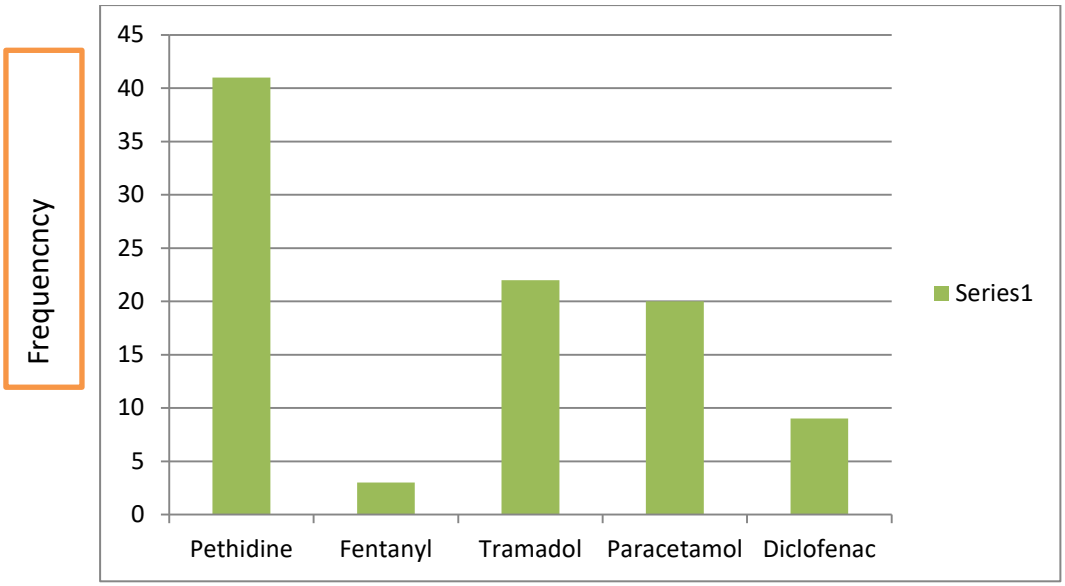

Figure 6 rate of usage of different form of labor analgesia by the respondents, health facilitis of Butajira, SNNPR Ethiopia,2023

5.4 Attitude toward among obstetric care providers

Regarding attitude of obstetric care providers, 59(54.1%) respondents believed that of obstetric analgesia should be given for laboring mother and also 23.9%, 12.8% were undecided, disagree respectively. About 86 (78.9%) the total study participants believed managing labor could help the laboring women to cope with labor pain. A 52(47.2%) believed as labor pain is natural, and the mother has to face it. Majority 54 (49.5%)obstetric care provider agree training on issue related to labor pain management method for health care providers,41(37.7%) respondents had negative attitude.

Table 4 attitude toward labor pain management health facilitis of Butajira, SNNPR Ethiopia,2023

Variable	category	Frequency	Percent (%)
do you think that women need pain relief during labor and delivery	strongly disagree	9	8.3
	Disagree	14	12.8
	Undecided	26	23.9
	Agree	59	54.1
do you think that training on issue related to labor pain management method should be given for health care provider	strongly disagree	9	8.3
	Disagree	32	29.4
	Undecided	14	12.8
	Agree	54	49.5
do you think that labor pain management help mother on labor	strongly disagree	10	9.2
	Disagree	11	10.1
	Undecided	2	1.8
	Agree	86	78.9
are you willing to provide labor pain management methods to mother on labor	strongly disagree	1	.9
	Disagree	3	2.8
	Undecided	15	13.8
	Agree	90	82.6
do you think that labor pain is natural and all women should face it	strongly disagree	5	4.6
	Disagree	27	24.8
	Undecided	25	22.9
	Agree	52	47.7

5.5 Factor associated with labor pain management practice

All independent variables showing P-value <0.25 in the bivariate analysis) were analyzed for multivariable logistic regression analysis to control potential confounding factors and to determine the association between factors and dependent variables.in the bivariate logistic regression qualification level, methods of analgesia, attitude job training and absence of guide line were factors associated with practice of obstetric care giver about labor pain relief methods. But only qualification level and methods of analgesia were were independent variables that have significant association labor pain management practice among obstetric care giver in butajira public health facilities. Accordingly, , Diploma (AOR = , 0.063 95% CI =0.001-0.468, P = 0.018), Both (AOR =0.063 ; 95%

CI =0.005-0.846), P =0.037) P < 0.05 were demonstrated as significant association with anemia among under five children.

Those participants being deploma were 0.01 times(AOR=0.012; 95%CI,(0.001-0.468) less likely to practice labor pain management as compared to the referentsThose participants who provide only pharmacological were 0.06 times (AOR=0.063; 95%CI, (0.005-0.846) less likely to practice labor pain management compared with those who provid both methods(See Table-5)

Table 5 factor associated with labor pain management practice health facilitis of Butajira, SNNPR Ethiopia,2023

Characteristic		No	Yes	COR (95%)	P-value	AOR (95%)	P-value
Have you ever got on job training on labor pain management before	Yes	255(73.3%)	9(85.3%)				1
	No	5(14.7%)	20(26.7%)	2.109(0.717-6.200)	0.175		
Is there any guide line or criteria to offer labor pain relief in your working area	Yes	25(89.3%)	59(72.8%)				1
	No		22(27.2%)	3.107(0.852-11.331	0.086		
Qualification level	Diploma	1(93.8%)	15(17.9%)	0.147(0.015-1.439)	0.099	0.012(0.001-0.468)*	0.018
	BSC	19(75.3%)	58(60.%)	0.721(0.222-2.339)	0.586	0.152(0.014-1.680)	0.124
	Doctor(MD)	5(31.3%)	11(13.1%)				1

Which types of pain relief do you offered for normal	Pharmacological	30(61.2%)	26(83.9%)				1
vaginal delivery	Non-Pharmacological	19(38.8%)	5(16.1%)	3.293(1.078-10.057	0.036	2.856(0.656-12.446)	0.162
	Both	1(3.4%)	28(96.6%)	0.186(0.020-1.697)	0.136	0.063(0.005-0.846)*	0.037
Do you think that training on issue related to labor pain management methods should be given for health care providers	Strongly	4(80%)	1(20%)		1		
	disagree	23(85.2%)	4(14.8%)	1.846(0.193-17.700)	0.595		
	Undecided	17(65%)	8(32%)	4.444(0.424-46.546)	0.213		
	Agree	40(76.9%)	12(23.1%)	2.537(0.289-22.226)	0.401		
Do you think that, labor pain is natural and all women should face it	Strongly	4(80%)	1(20%)	1			
	disagree	23(85.2%)	4(14.8%)	.696(0.061-7.941)	0.77		
	Undecided	17(68%)	8(32%)	1.8820(0.18-19.677)	0.597		
	Agree	40(76.9%)	12(23.1%)	1.2(0.122-11.782)	0.876		

1= indicate for Reference group **(*)** significant association at p-value <0.05

CHAPTER-SIX:DISCUSION

For a country like Ethiopia with a health policy of improving the quality of maternal services, it is important to assess the use of labour pain relief methods among obstetric caregivers to managelabour pain, which contributes to the quality of intrapartum care for a laboring woman. This facility-based cross-sectional study was conducted to assess the practice of obstetric caregivers towards labor pain relief methods and associated factors in the butajira public health facilities SNNP region. This study gives important findings regarding current activities carried out to manage labor pain and possible improvement measures that could be implemented to enhance the quality of maternal health services to meet the need of laboring women. According to this study, The vast majority of respondents never involved in the practice of labor analgesia (n=84, 77.1%), while 28.4 % (n=31) of respondents administered labor analgesia routinely, 36.7% (n=40) offered it sometimes and 11.9% (n=13) on maternal request. of obstetric caregivers were utilize labor pain relief for laboring mothert his finding was higher as compared to the results of study conducted in Tigray region general hospitals (56.7%) [37]and a study done in Amhara region referral hospitals (26.4 %) [9]. This may be due to the difference in study time and changing awareness among obstetric caregivers about the necessity of labor pain relief methods on labor pain management for a laboring mother through time and Region and socioeconomic status may differs. There are various techniques of providing systemic pharmacological management approaches and non-pharmacological techniques. In this study, the forms of analgesia offered by participants to mothers during labour and childbirth were high. majority of the respondents (29.4%) offered psychological support, a form of non-pharmacological analgesia, even though there are inconsistent evidences about its efficacy to manage labor pain [39]. pethidine, offered by 36.7% of the participants, were the commonest form of pharmacological analgesia utilized. This may be because opioids are readily available and do not require special skills to administer. These results are consistent with the studies reported in Nigeria where opioids were offered by 41.1% of respondents, and psychological support by 39.7% of them [40]. Among the other pharmacological labor pain management techniques assessed in this study, non-opioid systemic analgesics (paracetamol and diclofenac) were offered by 18.8% ,8.3% of respondents. Pethidine injection was offered by most of the respondents as compared from other forms of pharmacological management of labor pain. According to the participants that did not offer pain relief to laboring mothers routinely or not at all, their actions were adduced by non-availability of drugs and

negative attitude towards labor pain management,qualification level , and lack of training program practice standard labor analgesic techniques like labor epidural. Each of these barriers were statistically significant with high impact on the practice of labor analgesia . In this study highest qualification was statically significant being diploma holder of obstetric care workers were significantly associated to labor pain management practice in the current study. In this study, obstetric care workers whose qualifications are at diploma level were 0.01 times(AOR=0.012; 95%CI,(0.001-0.468)less likely to practice labor pain management .

CHAPTER-SEVEN: CONCLUSION AND RECOMMENDATION

7.1 CONCLUSION

Pain relief in labor is an important aspect of the management of pregnant women during child birth. It is desired by many women and contributes immensely to their satisfaction. Unrelieved, labor pain may impact negatively on the lives of parturient to such an extent that her baby and family may also be affected. Unfortunately, labor analgesia is rarely practiced in our setup by clinicians to all mothers in labor in keeping with international recommendations. This was related with the non-availability of drugs and equipment, lack of *emphasis* by the healthcare management system and shortage of skilled man power to practice standard analgesic techniques, this study show that utilization of labor pain management was high this is encourage but still not sufficien .

7.2 RECOMENDATION

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Butajira health department: prepare special training, with task-oriented refreshment course, special emphasis on strengthening obstetric caregivers' knowledge and attitude practice towards the use of labor pain relief methods through communicating with other concerned .

Non-governmental organization: participate in providing short-term training issues related to labour pain and labour pain relief methods for obstetric caregivers in Butajira town.

Obstetric caregivers: empower women to ask labour pain relief services and update their practice about labour pain relief methods. Researcher: researcher should examine the use of labour pain relief methods from maternal request point of view.

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Annex -1

Consent form

Dear participants, we are graduate class students attending in bachelor degree program in Public Health at Wolkite University. This questionnaire is prepared to assess labor pain management practice among obstetric care providers working in public health centers of Butajira city administration from July 18 to28

The information which is going to be gathered will hopefully help policy makers, health care providers and other responsible bodies to improve quality of the service for better maternal and fetal outcome during labor and delivery. Your genuine response is very helpful for the success of this study. Your participation in filling the questionnaire is completely voluntary. All your responses will be completely confidential. Your name will not be mentioned or be attached to anything that you say and all of your responses we get here is for research purposes only.

If you are clear with the information provided and agree to participate circle 'yes' if you do not agree to participate circle 'No'.

1. Yes 2. No

Instruction

The questionnaire contains close ended and open ended questions. So, circle the number of your choice for close ended questions and write the answer in the space provided for open ended

Questionnaire

Part-I Socio demographic characteristics of the respondents

Please, tick your choise to indicate your response

No	Questions	Coding categories
101	Your sex	1 Male 2 Femal
102	How old are you?	----------(specify)
103	What is your marital status?	1 Married 2 Single 3 Divorced 4 Widowed

104 Which health facility you are working? 1 hospital 2 Health center

105 your profession ? 1 Midwifery 2 Nurse 3 Public Health 4 obstetrician

106 Your qualification level 1 Diploma 2 BSC 3 MSC 4 Medical Doctor

107 Year of experience(practice) ----------year

Part II: Questions related to labor pain management practice and associated factors

Please, tick your choise to indicate your response

201 Have you ever offer labor pain relief before? 1 Yes 2 No

202 If no to Q 201 why you are not offer labor pain relief? 1 Non availability of drugs 2 Late presentation in labor 3 Belief that labor is natural 4 Fear of adverse maternal effect 5 Other__

203 If yes to Q 201 how often do you offer pain relief in labor and delivery? 1 Routinely 2 Sometimes 3 As maternal request

204 Which types of pain relief do you offered for normal vaginal delivery?

1 Pharmacological 2 Non pharmacological 3 Both

205 If pharmacological to Q 204 which are they? 1 Pethidine 2 Morphine 3 Fetanyl 4 Tramadol 5 Paracetamol 6 Aspirin 7 Diclofenac

206 Have you ever used non pharmacological labor pain management method? 1 Yes 2 No

207 If you answered YES to Q 205 what are they? 1 Breathing technique 2 Reassurance

3 Labor exercise 4 Back massage 5 Psychological support 6 Other (specify)------

208 Have you ever got on job training on labor pain management before? 1 Yes 2 No

209 Is there any guide line or criteria to offer labor pain relief in your working area? 1 Yes 2 No

Part III: Knowledge related questions

Please, tick your answer to indicate your response

301 Monitoring labor pain management is important to provide quality maternal health care?

1 Yes 2 No 3 Don't know

302 Which type/method do you know to manage labor pain?

1 Pharmacological 2 Non pharmacological 3 Both

303 If you answered pharmacological or both to Q 302 which are they? 1 Pethidine

2 Morphine 3 Fetanyl 4 Tramadol 5 Paracitamol 6 Asprin 7 diclofeac

304 Is there any adverse effect that caused by labor pain relief? 1 Yes 2 No Don't know

305 If you answered YES to question 304 what is it? (specify)----------

306 Use of non pharmacological labor pain management method has no value to mothers on labor? 1 Yes 2 No

307 If you answered non pharmacological or both which are they? 1 Breathing technique

2 Reassurance 3 Labor exercise 4 Back massage 5 Psychological support

6 Other(specify) _____

Attitude related questions

Please, tick your answer indicate to what extents do you agree or disagree with the following statemen

401 Do you think that women need pain relief during labor and delivery? 1 Strongly disagree **2** Disagree 3 Undecided 4 Agree

402 Do you think that training on issue related to labor pain management methods should be given for health care providers? 1 Strongly disagree **2** Disagree 3 Undecided 4 Agree

403 Do you think that labor pain management help mothers on labor? 1 Strongly disagree **2** Disagree 3 Undecided 4 Agree

404 Are you willing to provide labor pain management methods to mothers on labor?

1 Strongly disagree **2** Disagree 3 Undecided 4 Agree

405 Do you think that, labor pain is natural and all women should face it?

1 Strongly disagree **2** Disagree 3 Undecided 4 Agree

Principal investigators: - signature

Mohammed Sirbaro _____

Seada Sultan _____

Murad Redi _____