Barriers of Neonatal Pain Management in the Intensive Care Unit: A Qualitative Study

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Abstract

Background: Recognizing and managing neonates' pain in the intensive care unit is challenging. Evidence shows that guidelines available in this area are not utilized effectively in practice.

Purpose: To explore barriers to neonatal pain management in a neonatal intensive care unit.

Methods: This was a qualitative study. Thirty-one nurses and physicians participated in the study. Data was collected through individual and focus group interviews. Data analysis was performed using conventional content analysis.

Results: The barriers consisted of lack of holistic views towards neonates (exclusive concentration on treating the diseases, the neonate's inability to demand and protest verbally), subjective and arbitrary working (unorganized teamwork, lack of unified approach in pain-relieving, limited supervision for pain management), work overload (workload, physical and psychological strain on the caregivers), insufficient professional knowledge (Insufficient expertise in using pain assessment tools, Low importance of controlling environmental stimuli, Insufficient knowledge about pain management medication, and Considering patient's pain as expected).

Conclusion: According to the professionals, the barriers to effective management of pain in neonates admitted to the intensive care unit in a developing country, are comprised of the individual, interpersonal, and organizational factors.

Practice Implications: Investigation the barriers of optimal pain management in NICU can help to take the proper steps to improve the quality of service provided. Education of care providers, designing and implementation of a unified neonatal-based pain management program, and proper organizational supervision could improve neonatal pain management. Also, physical and emotional support of care workers is essential for more quality performance.

Introduction:

Usually, people express their pain verbally and try to find its cause, treatment, and relief. Given that nonverbal people cannot express their pain, detection of pain in these human beings is challenging (Quinn et al., 2018). One of the non-verbal groups that seriously face this challenge is neonates (Anand, 2017). Despite the misconceptions about the neonate**s'** perception of pain in the past, scientists have proved it in recent decades. The evidence has shown that pain tolerance can cause severe short-term and long-term complications in neonates (Valeri et al., 2015; Wheeler, 2008). For this reason, experts claim that the prevention of pain in the neonate is not only ethically essential (International Pain Summit Of The International Association For The Study Of Pain, 2011), but it is also necessary for preventing short-term and long-term complications and developmental disorders in neonates (De Lima & Carmo, 2010).

Some neonates spend their early days of life in the Neonatal Intensive Care Unit (NICU) due to prematurity, need for surgery, or other illnesses. During hospitalization, they have to endure numerous painful diagnostic and therapeutic interventions to maintain their survival (Moraes & Freire, 2019; Olsson et al., 2018). Therefore, pain management is one of the most critical issues in this group of neonates, which has been discussed a lot in recent decades (De Lima & Carmo, 2010).

Despite significant theoretical advances and the development of numerous clinical guidelines (Wallace & Jones, 2017), pain management in NICU remains inadequate. This issue is a significant challenge for many therapists and many complex care conditions (Carter & Brunkhorst, 2017; Cong et al., 2013; Wheeler, 2008).

In recent years, the survival of neonates hospitalized in the NICU has increased in the developing country of Iran, and therefore optimizing the care provided at the NICU and reducing the complications of survived neonates has become a priority. Proper management of neonatal pain is one of the discussed priorities. However, the literature review and the observation of clinical practice show that the pain management of neonates in the NICU in Iran is not done properly (Shirazi et al., 2020; Tarjoman et al., 2019).

The investigation and recognizing existing barriers that cause sub-optimal pain management can be the first step improving the existing situations. Researchers have presented some barriers such as health staff's knowledge deficit (Akuma & Jordan, 2012; Cong et al., 2014; Mehrnoush et al., 2018; Zahedpasha et al., 2017). Some of the barriers are context-based. Stevens et al. examined the importance of the impact of context (e.g., organizational culture, structure, resources, capabilities, skills, and policies) on pain management in their study at NICU. They considered context to be effective in the occurrence of barriers (Stevens et al., 2011). In this respect, Losacco et al. concluded that there are differences in the quality of neonatal pain management among European countries due to differences in organizational context (Losacco et al., 2011). Razeq et al. also state that the NICU context in developing countries may be different from developed countries, and as a result, pain management barriers in the NICU can be different in them. He believes that little is known about this complex issue in many developing countries (Razeq et al., 2016).

Recognizing the barriers of different contexts help formulate international practice guidelines. However, there are studies that have described pain management in NICU, but a limited number of studies have focused on barriers to pain management. Studies conducted in developing countries are less than studies conducted in developed countries. Given that, it is recommended to identify barriers to pain control in NICU in developing countries. Therefore, the purpose of this study is to investigate the barriers of neonatal pain management in the NICU in Iran as a developing country, which has been done as a descriptive qualitative study.

Methods:

A qualitative descriptive approach has been used to explore nurse/physician perceptions of pain management barriers in the NICU. The primary purpose of the descriptive qualitative study is to describe

a phenomenon, explore a problem, or an issue. This approach can encompass a wide range of questions relating to people's experiences, knowledge, attitudes, feelings, perceptions, and views (Cronin et al., 2014).

Ethical Considerations

The study has been reviewed and approved by the Ethics Committee of Tabriz University of Medical Sciences. The purpose of the research was explained to each of the participants, and written consent was obtained. Voluntary participation, confidentiality, and anonymity of the participants were also emphasized.

Setting and Participant

This study was carried out in the NICU of Children's Hospital of Tabriz University of Medical Sciences. Tabriz Children's Hospital has 580 beds including 27 beds in the neonatal intensive care unit. This unit has three levels of care, and it has various types of painful interventions such as: diagnostic, therapeutic, and care procedures performed according to the neonates' needs.

Thirty-one interested nurses and physicians participated in this study for three months (Table 1). A purposeful sampling was done to select them with the principle of maximum variation. To provide this condition, participants were selected with varying work experiences, ages, parities, educational levels, and organizational position**s**. The inclusion criteria were being a permanent NICU staff and informed consent for participation in this study. Three people (two nurses and a physician) refused the participation due to the lack of interest in the subject.

Data Collection

To collect data, 11 individual interviews and three focus groups (7, 8, and 5-person) were held and lasted 42 minutes on average. The face-to-face individual interviews took place in the coffee room of the participants' preferences. After gaining the participants' consent, discussions were recorded using a voice recorder. Data collection was conducted by the first researcher using a semi-structured interview guide. In this study, the data collection and the data analysis were conducted iteratively to allow emerging findings from early interviews to inform and improve the questions in later interviews. Accordingly, based on the first to the third authors' consensus, interviews began with a predetermined, general open-ended question: "as a person who has been working in the NICU, tell us your experiences of managing infant pain" Also, based on their responses, more questions were asked to gather in-depth data including: "What are the health care services regarding the infants' pain?" "What factors are effective in managing the infants' pain?" "How do you evaluate infant pain management in your ward?" "What are the performance problems of managing the infants' pain in your ward?" "What are the barriers against on optimal performance rate in your ward?". The discussions continued with probing questions such as: "Could you explain more?" "What do you mean?" "Can you provide examples that show what happened in practice?" Finally, the discussions ended with questions such as: "Is there anything you would like to talk about?"

In addition to individual interviews, “Focus groups” were formed to gain deeper information. Due to the information exchange and discussions between the participants, a deeper understanding of the topic is gained in the focus group, and richer data is usually obtained (Hennink M, 2011). The focus groups were held in the conference hall and began by providing information about the study. After gaining the participants' consent, focus groups were recorded using Voice Recorder. The questions presented were similar to the interviews. The first researcher handled the transfer of discussion from one topic to another and, if necessary, elicited the meaning of the participants' responses and obtained more details. Data saturation was met after eleven individual interviews and three “focus groups.” The data was encrypted and analyzed after transcription.

Data analysis

Conventional content analysis, which adhered to the naturalistic paradigm, was employed to interpret the transcripts. In this interpretive approach, codes, sub-themes, and themes emerged from the transcripts (inductive codes, sub-themes, and themes). Graneheim and Lundman have suggested an algorithm for data analysis applied in this study (Graneheim & Lundman, 2004). In the first step, we extracted the semantic units and assigned a specific code to each one. Subsequently, we reviewed similar units once more to cross-check the codes to reconsolidate or separate any conflicts that may exist in the concept of one code or any possible similarities in several codes. The process of coding and classification of data was continuously discussed in the group of 4 researchers until the group reached a consensus on the coding and classification of the data. To facilitate the analysis process, MAXQDA10 was used.

Trustworthiness

Trustworthiness is how researchers can persuade themselves and their readers that their research findings are worthy of attention. In this study, Guba and Lincoln's criteria were used obtaining the desired trustworthiness (Lincoln & Guba, 1985). Their criteria are credibility, transferability, dependability, and conformability. Credibility was enhanced through the researchers' prolonged engagement, and the member check was used to verify the data and the extracted codes. The researchers were also experienced in qualitative research and were familiar with the NICU department. Experts reviewed the results of the study to ensure dependability and confirmability. They confirmed analysis were according to the statements of the participants. For transferability, a purposeful sampling with maximum variation in participants’ background was employed.

Results:

Data analysis led to the identification of four main themes that explained the reasons for the lack of proper neonatal pain management in the NICU, which were: (1) lack of holistic views towards neonates, (2) subjective and arbitrary working, (3) work overload, and (4) insufficient professional knowledge (Table 2). Each theme had other sub-themes, which are described in detail below.

Lack of Holistic Views towards Neonates

Some of the main reasons that participants expressed for poor management of neonatal pain, can be ascribed to this category. Caregivers have focused on the biological treatment of the disease and have diminished some other neonates' needs such as pain relieving. This theme consists of 2 sub-themes: exclusive concentration on treating the diseases, and the neonate's inability to demand and protest verbally.

Exclusive Concentration on Treating the Diseases

Participants explained how some caregivers' attention was on diagnosing and treating the diseases or successfully performing the required procedures, thus marginalizing the neonate's pain relief. Participants stated that:

"*When I hospitalize a baby, I just focus on the steps that are related to treating illnesses. For example, I say let me get an x-ray soon, send the tests and decide on his condition. Besides, pain control becomes less important and is not very noticeable. "(Fifth participant)*

Participants believed that routine care was also defined to treat the diseases and that the importance of relieving the neonate's pain rendered low significance in the everyday responsibilities of the caregivers.

"*This issue has not been transferred well to those who deal with the patient. For example, we should know that as serum therapy and medication are our duties, relieving the patient's pain is also one of our daily professional responsibilities." (Seventh participant)*
The Neonate's Inability to demand and protest verbally

Participants cited the neonate's inability to communicate verbally, express pain, and demand pain relief as the reasons they forgot to relieve pain. Regarding this, more experienced nurses stated that the pain is not controlled seriously in neonates. It is due to neonates' inability to ask for pain relief and to prevent the procedure from continuing when they feel pain

"When an adult patient says: "I am in pain", he/she does not allow us to continue the procedure, but when the baby cannot stop us, pain control becomes unimportant in them" (Second participant)
Subjective and Arbitrary Working

The results showed that there are not any agreed procedures and specific standing orders for pain control in the ward. In addition to, there is little demand from the system in this case, and the organizational observation of the staff's performances regarding client pain management is not typically done. As no current guidelines are used, inconsistent quality of care is provided by the individual providers.

Unorganized Teamwork

Participants believed that poor coordination among team members and individual decision-making on doing tasks led to disorganization, repetitive manipulations of the neonate, and limited opportunities to relieve the neonate's pain.

"There is not the hospital confirmed plan in getting things done. For example, all of a sudden resident comes and says: "I want to do an LP on the patient". Can the nurse manage the neonate's pain relief instantly besides all the other responsibilities that she has?" (Third participant)… "There is no coordination among people. Staff wants to do their duties, the doctors want to do their duties, assistants want to do their duties, and in this situation, no one can manage and think about the neonate's pain control." (Twenty-second participant)

Lack of unified approach in pain-relieving

Lack of a comprehensive pain management protocol in the NICU is another barrier that has led to disagreements and arbitrary pain management in the ward. They believed that a protocol could lead to the unification of the performance among different professions, clinical individuals, and specialties.

"There is not any comprehensive and coordinated protocol among different professions and specialties. For example, how to How to use painkillers in a baby who has had surgery. Everyone can decide this." (First participant)

Limited Supervision for Pain Management

Lack of observations of staff's analgesic performance was another barrier in the study. Participants believed that the analgesic performances of caregivers were not often questioned. This lack of demand from the organization resulted in insufficient relieving the patient's pain.

"There are limited observation of the performances. For example, nobody asks residents why they have not relieved the neonate's pain who had a surgery. It is impossible to be under operation and not to have medications."(Tenth participant)

Work Overload

Work overload was another barrier to proper pain management in the context under study. Participants believed that in most cases, due to overwork or the resulting physical and psychological pressures of it, the caregivers did not perform well to relieve the neonate's pain.

Workload

Participants reported the large number of patients compared to the number of nurses and the crowded ward. They explained that workload was accompanied by the rush of professionals to get things done and this issue, along with the management procedures in the context of the study, resulted in insufficient attention to the neonate's pain or forgetting the analgesic interventions before starting the procedure.

"Sometimes the workload is very excessive. For example, a nurse with three patients admits other one, so his/her workload is high. Therefore proper pain management is not possible. She/he only think of doing their duties quickly in order to finish them until the end of the shift." (Twenty-fifth participant)

*Physical and Psychological Strain on the Caregiver*s

Participants believed that sometimes the workload was so heavy that it caused caregivers to become tired and bored in which they were not able to provide the desired performance, and this issue prevented managing the patient's pain properly.

"Sometimes when the shift working becomes demanding, the nurses get tired, they do not pay much attention to the neonate's pain. When I am fatigued, for example, late at night shifts, I subconsciously pay less attention to relieving the neonate's pain." (30th participant)

Insufficient Professional Knowledge

Insufficient knowledge of caregivers in various areas related to pain was another barrier expressed. In this case, participants mentioned the limited knowledge of caregivers about how to use pain assessment tools, control environmental stimuli, medication interventions, and misunderstandings caused by lack of knowledge.

Insufficient Expertise in Using Pain Assessment Tools

Limited knowledge of using neonatal pain assessment tools has prevented caregivers from acquiring sufficient expertise to use them in practice. They believed that the training provided was ineffective.

"The knowledge and experience of the staff about using neonatal pain assessment tools are limited, and we cannot use them properly. It means that we do not know how to estimate the severity of pain using them." (Fifth participant)... "In a time, we had a training class on how to score pain intensity with tools, but the training was theoretical and not enough for us to be able to use these tools in the clinical practices." (Fifth participant)

The Low Importance of Controlling Environmental Stimuli

Participants believed that the existing knowledge about the need to reduce environmental stimuli in the context under study was insufficient. They pointed to the harmfulness of ambient light and noise of the ward and its negative impact on neonate's relief. They acknowledged that some NICU caregivers were unaware of their importance in relieving the neonate's pain.

"The noise in the ward is so loud, and moving around is a lot. All of these cause the neonate to be distressed and feel more pain. Nevertheless there is not enough information about this in the ward, and as a result, it is not considered as important." (Ninth participant)

Insufficient Knowledge about Pain Management Medications

Insufficient knowledge about analgesic medications and consequently inaccurate implementation in this field was one of the significant reasons for knowledge deficiency. Sucrose was among the drugs that the participants talked a lot about its improper doses. They believed that lack of knowledge in this area results in giving too much medicine to the neonate.

"We do not know the dose of drugs well. For example we do not know how much sucrose we should give for different gestational ages. Sometimes our colleagues do not know the appropriate dose for neonates,

and they give sucrose to them without any consideration "(third participant) ..."

Insufficient information on the types of analgesic medications suitable for the neonate had caused the drug's maneuverability in the context under study to be low. They could not use the types of analgesics properly to provide analgesia to the neonate in different conditions.

"The analgesics we know and use for the neonate are very few. We are not certain on what medicine to use according to neonate conditions. Also, if the infant does not respond to medication, we don't know what other choice is the best." (Eleventh participant)
Considering Patient's Pain as Expected

Some participants pointed to the acceptability of a hospitalized patient's pain on the part of caregivers and acknowledged that there is a wrong assumption related to the rendering of the patient's tolerance of pain as usual in clinical settings:

"Sometimes you find that the procedure is painful and the infant is in pain, but you say that this condition is routine and happens all the time. Well, a patient who is in the intensive care unit may suffer a little to get better. This thought makes it impossible to control the patient's pain." (Second participant)

Discussion:

Barriers posed by caregivers regarding neonatal pain management in the NICU were categorized into four main themes, which are: lack of holistic views towards neonates, subjective and arbitrary working, work overload, and insufficient professional knowledge.

In standard caregiving, the patient is regarded as a comprehensive human being, and all his human needs in terms of age range, developmental level, and cognition are considered based on his unique characteristics (Eklund et al., 2019). The findings showed that in the context understudy, a holistic view of the neonates is suboptimal and some of the neonates' human needs, such as pain relief, are not well understood. Although this has not been discussed in previous studies as a barrier to neonatal pain management, its sub-themes have been confirmed in some studies, which are discussed below.

The focus on treating the disease has marginalized pain management. According to the some studies, the lack of routine pain relieving care in NICU is a barrier in pain management (Christoffel et al., 2019; Lago et al., 2013).

Pain relief is one of the basic needs of every human being, in which its diagnosis is based on self-reporting due to its subjective nature. However the neonates cannot express and demand this need because of their age range and developmental level. Consistent with the findings of the present study, researchers state that the neonate's inability to express his pain is an influential factor in its inadequate pain management (Akuma & Jordan, 2012; Cong et al., 2013).

Subjective and arbitrary management of neonatal pain was other reported barrier which included individual, interpersonal, and organizational dimensions. From the participants' point of view, lack of suitable interaction between the clinical professions has made it difficult for them to act as a team and in an integrated manner. This issue has brought about inconsistencies in providing services, over-stimulation of the neonates, and losing opportunities in relieving their pain. Christoffel et al. and Razeq et al., pointed out that communication channels between professions need to be improved to perform appropriately against neonate's pain(Christoffel et al., 2019) (Razeq, 2016). Stevens et al. also considers inter-professional collaboration as the basis of effective practice on pain in the NICU and states that free participation of all team members, respect for each other's knowledge, joint decisions, and having a common goal to promote clinical outcomes for neonates are necessary for effective inter-professional collaboration (Stevens et al., 2011).

In addition to the above-mentioned factors, the lack of a clear policy in relieving the neonate's pain has also increased the number of inconsistencies. This phenomenon causes caregivers use analgesic procedures based on their individual opinion and knowledge, which leads to suboptimal neonatal pain management sometimes. This is one of the barriers that has been mentioned in some studies. Among these, we can refer to the study of Stevens et al., and Querido et al. in which the lack of institutional protocols and organizational structure is a reason for inconsistency and variously in pain practices (Querido et al., 2017; Stevens et al., 2011).

The other barrier is the lack of administrative supervision on staff's performance in neonatal pain management. Shirazi et al. maintained that the organizational supervision is effective in staff performance and stated that this issue could increase the caregivers motivation for optimal analgesic performance (Shirazi et al., 2020).

Work overload was one of the most significant barriers to appropriate pain-relieving treatment. Participants discussed the issue from different perspectives. On the other hand, workload and too little time has led caregivers to prioritize more important tasks, so pain management is often overlooked.

On the other hand, work overload caused burnout and physical and mental fatigue for the staff and deprived them of performing well in managing the neonate's pain. Although studies have not explicitly referred to burnout and mental fatigue caused by overwork and its impact on the management of neonate's pain, some of them have pointed to other barriers discussed in this theme. Some studies conducted in Iran have also introduced tremendous workload and physical fatigue of employees as a barrier to proper management of neonate's pain (Mehrnoush & Ashktorab, 2016; Zahedpasha et al., 2017). The other studies also emphasize heavy workload and lack of time as barriers to controlling neonate's pain (Cong et al., 2014; Twycross, 2013). Of course, it is worthwhile to study Yasmeen et al. be mentioned. They concluded that pain management enhancement in NICU can reduce staff’s stress, anxiety, and depression (Yasmeen et al., 2020).

The participants believed that the caregivers have little knowledge of various areas of pain management topics. They stated that caregivers' low ability to use pain assessment tools due to inadequate training is

one of the main barriers to proper pain management in NICU. Spence also considers a lack of knowledge in using pain measuring tools (Spence, 2010).

The staff's lack of awareness of environmental stimuli, such as noise and light, makes neonates oversensitive, and this issue prevents optimal pain management. Al-Braiki in his study, considers the noisy and crowded environment as stressful and believes that such an environment can prevent proper relief of neonate's pain (Al-Braiki, 2019). In another study, a noisy and bright environment was mentioned as a hostile environment that can irritate the neonate and aggravate his pain (Christoffel et al., 2019).

Pharmacological interventions are an essential part of the neonatal pain management program. Findings of the study revealed that due to a lack of pharmacological knowledge, the ideal use in the management of neonatal pain is not done. This insufficient knowledge has been addressed in a wide range of information related to the selecting of the appropriate drug in terms of the neonate's condition, the dosage of drugs, and how the drug is administered. Although in previous studies, the issue of drug knowledge deficiency has not been mentioned in detail, Razeq emphasizes inadequate knowledge of caregivers about analgesics as a barrier to better analgesic implementation (Razeq, 2016). Peng et al. also consider inadequate knowledge about providing sufficient opioid analgesics during painful interventions as one of the problems in managing neonate's pain (Peng et al., 2020).

In addition to the above-mentioned factors, participants believed that there was a misunderstanding due to a lack of knowledge among NICU staff that hindered their proper performance in controlling the neonate's pain. They pointed out that pain tolerance is considered normal in neonates undergoing the procedure. This can reduce the motivation of the caregivers to prevent and alleviate the pain. Martinez (Martinez, 2014) concluded that, in the opinion of NICU staff, pain is an unavoidable experience in the NICU, and this reduces their efforts to provide the appropriate analgesic implementation.

Despite the various barriers, significant improvements in neonatal pain management in practice are gained in developed contexts. The evidence-based strategies applied by developed countries can be helpful for improving the pain management in developing nations. Some of the facilitators are recommended as:

- Providing educational resources for care givers in the NICU and continual assessment of their level of knowledge (Hall & Anand, 2014; Spence & Henderson-Smart, 2011)

- Collaboration and support among all health care providers (Balice-Bourgois et al., 2020; Stevens et al., 2011)

- Performing routine assessments to detect neonatal pain (Batton et al., 2006; Sharek et al., 2006).

- control of environmental stimuli (Witt et al., 2016).

- Avoiding prolonged or repetitive pain/stress during NICU care (Batton et al., 2006).

- Protocolized stepwise treatment for the painful conditions encountered in the NICU. (American Academy of Pediatrics, 2016; Spence & Henderson-Smart, 2011).

They are performing continues auditing for appropriate treatment for neonatal pain (Spence & Henderson-Smart, 2011).

Practice Implications:

Some strategies are required to improve neonatal pain management in NICU. There is a lack of knowledge regarding neonatal pain management in the health care team. Practical training of the care providers is essential in areas such as using pain assessment tools, control of environmental stimuli, and pharmacological and non-pharmacological pain-relieving interventions. Development and implementation of an evidence-based pain management protocol that considers the potential of context is one of the steps of achieving optimal pain management. Administrative supervision and frequent audit lead to integrated clinical performance. Also, work overload can disrupt the appropriate management of neonatal pain. To improve the current conditions, paying attention to people directly involved in pain management is necessary. Therefore, similar to educational needs, fulfilling their physical and emotional needs can affect the quality of their performance and create desirable results. Step-by-step change strategies can be used to implement the proposed facilitators successfully.

Conclusion:

Although four decades have passed since neonatal pain management was first studied, there is still poor pain management in practice. Since the barriers to pain management can vary depending on the context, the present study indicates barriers to optimal pain management in NICU in a developing country. These findings, which are the results of caregivers' opinions, can be categorized according to the framework of various areas, including individual barriers such as insufficient knowledge of professionals or the neonate's lack of verbally protest; interpersonal barriers like insufficient interaction of team members; and organizational barriers such as lack of a consistent approach and organizational demand.

Declarations:

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Contributions

The authors’ contributions were as follows;

HN involved in the conception, data collection, performing the analysis and interpretation of data, manuscript writing;

HH designed and supervised the study, made contributions to analysis and interpretation of data;

MJ made contributions to analysis and interpretation of data, involved in the revising it critically for important intellectual content;

RN made contributions to analysis and interpretation of data, involved in the revising it critically for important intellectual content;

MBH was involved in the data collection and revising it critically for important intellectual content;

MM was involved in the data collection. All authors read and approved the final manuscript.

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Tables:

Table 1: Demographic Characteristics of Participants

Participants (N=31)	**Age/Year**	**Marital status** **Married** **Single**	**Level of education**	**organizational position**	**Work experience in NICU/Year**
Nurse (N=26)	30-44	23 3	Master of Science =1 Bachelor of Science =24 Primary education =1	Clinical Supervisor=1 Educational Supervisor=1 Head Nurse=2 Nurse of Training to the mother=1 Clinical Nurse=20 Nurse Assistant=1	5-20
Physician (N=5)	35-48	5 0	Neonatologist=4 Fellowship of neonatology=1	Academic Member=2 Clinical Physician=2 Assistant=1	4-18

Table 2: Themes and Sub- themes

Main themes	Sub themes
Lack of Holistic Views towards Neonates	- Exclusive concentration on treating the diseases - The neonate's inability to demand and protest verbally
Subjective and Arbitrary Working	- Unorganized teamwork - Lack of unified approach in Pain-relieving - Limited supervision for pain management
Work Overload	- Workload - Physical and psychological strain on the caregivers
Insufficient Professional Knowledge	- Insufficient expertise in using pain assessment tools - Low importance of controlling environmental stimuli - Insufficient knowledge about pain management medications - Considering patient's pain as expected