

A Qualitative Study: Implementation of Neonatal Developmental Care

Putri Setiyowati¹, Anafrin Yugistyowati¹, Nindita Kumalawati Santoso¹

¹ Department of Nursing, Faculty of Health Science, Universitas Alma Ata, Jalan Brawijaya No. 99,
Yogyakarta, Indonesia 55183

*Corresponding author: anafrin22_ners@yahoo.co.id

ABSTRACT

Background: *Neonatal Developmental Care* is the care that facilitates the development of the baby through the management of the nursing environment and observation of behaviors so that babies get adequate environmental stimulus. An adequate stimulus leads to physiological stabilization of the body and decreased stress.

Objectives: To know implementation *Neonatal Developmental Care* on the nurse in the perinatology room RSUD Panembahan Senopati Bantul.

Methods: This research uses qualitative research design with phenomenology approach. Participants in this study were 6 nurses working in the perinatology room. The selection of participants in this study was conducted through purposive sampling technique. Data were collected through in-depth interview using data recording, interview protocol, and field note. Colaizzi method was used to analyze data.

Results: This study identified four themes, that is: implementation of *Neonatal Developmental Care*, benefit apply of *Neonatal Developmental Care*, nurse's responses in applying of *Neonatal Developmental Care* and obstacles in applying of *Neonatal Developmental Care*.

Conclusions: Thus it can be concluded that *Neonatal Developmental Care* already applied in perinatology RSUD Panembahan Senopati Bantul.

Keywords: *Neonatal Developmental Care, Perinatology*

INTRODUCTION

Neonates are babies aged 0 to 28 days, during which time life adjustments occur from inside the uterus to outside the mother's womb. In this condition, babies are very fragile to health problems and the most common cause of neonatal death is Low Birth Weight (LBW) and premature problems (1,2).

LBW is a baby who when born weighs less than 2500 grams; and premature birth is the birth that took place before the gestational age 37 weeks of gestation. See the problems that occur in neonates, then required intensive care as an effort to increasing the quality of life at the beginning of period of life on the baby (3).

Sustainable development goals (SDG's) have some purpose in running the development, one of them is the third good health and well-being that sustains a healthy and encourage welfare for all people all these age in 2030 to reduce maternal mortality 70 per 100.000 birth, reducing infant mortality and baby have preventable death rate neonatal until 12 per 1.000 birth and the birth 25 per child mortality 1.000; reduce / 13 death of premature infants because of diseases not communicable by; prevention and care and support mental health and welfare mother (4).

According to a research conducted by Vivian in 2013 entitled factors influencing the death of neonates, 50% shows that as much as percent of the deaths mostly occurred in neonates in the first months of life (2). This is very important and it should be noted and government hospitals to improve health services especially in infants. The better the health services provided will help reduce and minimize mortality in infants.

Neonatal developmental care (NDC) is the care to improve growth and development the baby was hospitalized. NDC based on a theory that the baby brain will grow to babies born and will continue to the 3 years. Change happens to the brain fetus minggu-minggu last pregnancy. The natural development of the baby brain in-utero stopped when babies born prematurely. Growth the baby brain does not only depend upon the endogenous but it also affected by sensory input and experience (5). As a nurse very should look at once facilitate growth and development baby that the condition of infants stable.

The principles include facilitate sleep, NDC intervention management of stress and, environment,

therapeutic environment at least handling and the provision of proper position in infants (5). Thus nurses need to know the principles NDC to impose for neonates. There are two benefits from the NDC intervention at the hospital that long term benefit and short term. Short-term benefits the NDC is to reduce, occurrences of a disease down for long and lowering the cost of maintaining the (6).

Treatment with NDC principle is one form of professional practice nurse, education and opportunities for research to be done by a nurse to evaluate and improve is available continuously in providing health services in particular neonates. Many variations which appear and develops in the practice of giving health services in neonates. The goal is to continue to provide the same support, structured care support and guide the organization. NDC treatment based on the principles of science and nursing plotted by Florence Nightingale (7).

Based on the study introduction done by researchers obtained from the hospital room perinatologi Panembahan Senopati Bantul that nurses have got socialize the NDC. Nurses also revealed that the problems mostly happens in is LBW neonates, asphyxia and premature. So far the care of nursing given still focusing on neonates with medical piece alone, while still not care of development is of special attention. This problem for researchers to dig even deeper on the implementation of NDC in nurses.

MATERIALS AND METHODS

Type the research is the research qualitative phenomenology. Participants in this research was nurse who worked in chambers rsud perinatologi panembahan senopati bantul. Technique in this study the sample using a technique purposive sampling the six nurses. Data analysis use of Colaizzi with an instrument field notes and interview guidelines.

RESULTS AND DISCUSSION

A. The Analysis Result of the Theme

The analysis using methods Colaizzi there are four themes identified among other: 1) Implementation of Neonatal Developmental Care, 2) Benefit Apply of Neonatal Developmental Care, 3) Nurse's Respons In Applying of Neonatal Developmental Care and 4) Obstacles in applying of Neonatal Developmental Care.

1. Implementation of NDC

In research participants expressing this several measures that were taken in the perinatologi where it is principles neonatal care development as family involvement, : discharging the (nesting), reduce noise, reduce lighting and stress management. **Family involvement** in treating babies are to cultivate ties between an infant with the inner, train skill mother in tending baby esp mother primipara. Participants and statement as follows:

"...ibu bayi masuk ke ruangan ki setiap 3 jam sekali mbak, nek jadwal nyusuni kan ono dewe, dadi ibu bayi nek pas jam e mlebu ruangan yo iso nggendong bayi, nyalini popok pipis opo pas bab ngono..." (P2)

[Mother walked into the bullpen every three hours once mbak , there are nursing own schedule at came in the room mother could will carry , replace infant diapers]

"...ibu bayi bisa memandikan, mengganti popok, nggendong dan menyusui ketika sudah waktu jam masuk ruangan mba..." (P5)

[She can take a bath, change diapers, holding, and lactation when came in the room]

The installation of the nesting movement aimed at minimizing. The participants describes experience of nesting installation are:

"...kan bayi wes dinei gedongan kae to, biasane pinggirane muk dinei kaen-kaen biasa kae ben bayi anget njuk obah e ra seko endi-endi..." (P1)

[Baby with invited and given its perimeter cloth to prevent from moving around]

"...tapi nek di ruang biasa sini kan digedong to mba, jadi koyone raperlu sarang iku mau meskipun semisal e ono bayi sek butuh dinesting kita yo bikin sendiri pakek kain seadane..." (P2)

[In the room, baby invited so unnecessary nesting but if need them our own making a simple]

Reduce noise is malformed management neonates given on the environment:

"...ngeroso kasian gitu mba, nek bayi yang dirawat di sini itu kan bayi yang sakit to jadi nek meh ngomong banter sok melas ngono, wong isine bayi sakit kok banter-banter ngomonge..." (P2)

[I feel sorry for invited because the baby treated by you a sick infant so we are talking not hard]

"...wes bayine tiap jam nangis mba, nek ditambah bengak-bengok engko ndak tambah bisung to ruangan e, jadi yo nek perawat ro perawat ki misal e perlu opo ngono kae yo moro langsung nek uwong e selagi jarak e ora adoh, ngomong e nek pas wes cedak ngono mba..." (P3)

[The baby cry each hour if a room will and talk louder so noisy. So nurse if needs anything approaching just spoken directly to another nurse]

Reduce lighting given by nurses is the effort to provide nursing care especially in it. With the regulation will make a light fitting the baby will be qualified .

"...setiap jam malem lampu ruangan utama dimatiin mba, kan nek malem keliatan terang to, jadi nek bayi istirahat kita matikan lampu di ruang utama..." (P2)

[Every night the lights turned off the main room, invited so babies can rest]

"...nek di ruang sini lampu khusus yang ada di ruang bayi kita pakeknya lampu yang redup itu..." (P4) *(In the babies use a special namely a dim]*

Stress management done by nurses in providing the care of nursing academies in neonates with the aim that baby do not stress. A newborn will work of life, which is in the womb with life outside of the his mother womb

“...bayi nek bar laer kae kan iseh nyesuaine kehidupan to mba ibarate, jadi nek di sini sek oleh nyekel bayi ki mong ibu ro perawat sek tanggung jawab, setiap ruangan kan jatah e dewe-dewe mba..”(P1)

[Babies just born, will adjust his life that holding a baby only maternal and nurses are in charge of) invited each room]

“...semisal bayi yang baru lahir, tidak sembarang di gendong sana-sini ya mba, apa lagi banyak praktekkan, koas, hanya ibu dan perawat jaganya saja, dan ketika bayi dalam keadaan tidak tidur juga bisa digendong..” (P4)

[A newborn do not haphazardly carry, only mother and orderlies course, and when baby in a state not sleep can also carrying]

2. Benefit Apply of NDC

NDC benefits can be perceived by, baby mother and baby nurse. Participants express advantages when applying ndc as benefits for nurses is to reduce the work done by nurses to provide nursing care to the infant:

“...bayi ra rewel muleh e yo cepet marine to mba, ngurangi tenogone perawat e...” (P3) [Infants who never fussy home, also more quickly so less work for a nurse]

“...dengan begitu kan perawat jaganya jadi bisa santai karena kerjaan sudah sedikit, tinggal yang belum-belum saja...” (P4)

[Workload nurse reduced invited his job a little and which has not done alone]

Besides benefits to nurse the **application of NDC** also provide benefits to a baby. A few advantages by infants among them were the quality of sleep baby be a good, time take care of a baby that the sooner, mobilization of the baby properly and can reduce the stress that happened.

“...nek sek tak rasakne bayi ki turue pules nek lampune remeng-remeng...” (P1)

[I thought i would be crib be long because the light dim]

“...sejauh ini yang saya nilai, bayi tidurnya lebih nyenyak, bayi enggak rewel, bayi enggak nangisan...” (P4)

[So far that i think, invited babies sleep well, no fuss and cry]

Time take care of a baby who became fast also is one of the benefits in the application of NDC.

“...bayi ra rewel dadi muleh e cepet marine yo cepet to mba...” (P1)

[Babies no fuss can go home also more quickly]

Both in terms of an orderly baby also **has been one stead** in the implementation of the NDC. The following are participating states related to exposure to both in terms of an orderly baby

“...bayi ra kakehan obah ketika dinei kaen pinggirane...” (P3)

[Babies do not move as many are cloth on the edge of the bed]

Other benefits the application of ndc was able to **reduce stress** in infant:

“...bayi juga ora rewel ngono lo, nek perawat e selagi bayi ra rewel kan iso istirahat...” (P1)

[Baby do not fussy so nurse can rest easy]

“...turune angler njuk jarang nangis...” (P2)

[his sleep soundly and rarely cry]

Besides benefit nurses and baby, the infants also felt the benefits of the application of is to increase **independence mother** in care for those.

“...ibu e iso mandiri karena diajari mbedong, nyalini popok ngenei susu...” (P3)

[Will be independent because his mother taught, wrapping manner change diapers and lactation]

“...ibu bayi jadi mandiri, dengan begitu kan perawat jaganya jadi bisa santai karna kerjaan sudah sedikit...” (P4)

[Mother baby more independent so that the burden of work nurse lighter]

3. Nurse's Respons in Appling of NDC

Participants will experience in applying NDC give rise to reactions that different on his life. That response could include the physiological response and psychological response. A **physiological reaction** are complained by nurses in applying NDC is **burnout**.

“...nek dari saya pribadi selama menerapkan yang tadi itu segala sesuatu itu diawal itu pasti banyak sambat, ngeluh, susah, tapi lama lama nek dijalani dengan enjoy...” (P3)

[I personally at the beginning of applying feels difficult mbak and complained a lot but for this sort of relaxed when endured]

“...capek ya pasti ya mba misal pas perawat jaga sedikit...” (P4)

[Tired of when the nurse who take care of a little sister]

In addition to the **physiological response**, participating states also revealed the existence of psychological reaction during apply NDC. Participating states **feel happy** during apply NDC.

“...nek seko aku yo seneng-seneng wae to mba, enjoy wae aku mbak selama kerjo...” (P1)

[I am happy and feel enjoy during work sister]

“...yo seneng-seneng wae mba, jeneng e kita kan harus mencintai pekerjaan e kita to bagaimanapun iku bentuk e mba...” (P2)

[I Feel enjoy sister because love our jobs whatever it is the difficulty]

4. Obstacles in appling of NDC

In applying NDC a number of obstacles. It expressed by study participants such as lack of resources .The statement expressed by participants as follows:

“...tapi yo pie mba nek pas tenogo sak itik pasien baru okeh dadi kerjaan dicandak sak-sak e kae lo...”(P1)

[When little nurse and the patient a lot of work carried out optimally]

“...perawat e kan nek di sini sedikit karena banyak yang cuti melahirkan jadi ya begitu lah mba susah diungkapkan dengan kata-kata...” (P2)

[Here a little nurses invited because many on maternity leave]

Not the the main constraints standart of operational procedure also delivered by participants in the whole perinatologi:

“...selama saya di sini SOP untuk teori itu belum ada mbak...”(P3)

[...as long as i am here SOP to the theory that has been not yet]

“...tetapi selama saya disini SOP terkait teori perkembangan di ruangan ini memang belum ada dari pihak atasan...” (P4)

[but during SOP related theory of the development of i am here in this room there has been not yet]

The **geographical area** of the room also one of the obstacles which was conveyed by participating states this research .An expression of participating states are as follow:

“...tapi kebiasaan koyo bengok-bengok antarane sana sama sana kan beda-beda ruangan misale pas njaluk tulong ro konco liyone ngono mbak...” (P1)

[...when want to ask assistance should talk louder invited because the room]

“...apalagi kan ruangnya jauh to pas kita lagi butuh bantuan otomatis kita

manggil to mba, bebengok an ngono kui..." (P2)

[We reflex talk louder because her room so far]

The habit of nurses also is one of the obstacles of the application of NDC. The following are the exposure of participating states:

"...tapi kebiasaan koyo kulino bengok-bengok..." (P1)

[Customs talk louder in the room]

"...misal e ngobrol ro konco sok keras mba, bengok-bengok..." (P2)

[When he spoke with friends often talk louder]

Besides a lack of human resources, as yet there are SOP, the geographical area of and habits of nurses, obstacles of the application of NDC can also be because the lack facilities.

"...nek di NICU ono mba, tapi nek men nek ruangan biasa koyo ngene aku urung tau nemoni mba..." (P1)

[If in the NICU there sister, but in this room has been not yet]

"...inkubatornya sudah usia lama mba, jadi ya kondisi pintu atau tutupnya itu meskipun kita sudah hati-hati..." (P4)

[an incubator has long been so condition is inappropriate]

B. Discussion

NDC is the care that facilitates the development of environmental management through treatment and observation behavior so babies get a stimulus adequate environment (1). There are five NDC nuclei in principle, that is facilitating sleep, stress and pain management, at least handling, the care that focuses on family and environmentalists who support healing (7). Physical contact between an infant with parents increase of emotions and improve the delivery of breastfeeding. Benefits the skin between skin contact with infants and parents to the old baby, show more movement less movement of flexion and extension, an infant slightly

cry, status behavior quieter and less increase heart rate and a little show a response at the time of the pain treatment (1). In this research participants mention some a thing done by the in take care of an infant in the perinatologi as replace diapers, the presence of family, do kangaroo mother care, feeding, holding her and washing baby.

The installation of the nesting aims to minimize the baby. The change can retain its right and functions in neuromuscular osteo-articular and provide opportunities for the development and motor function in premature infants (8). Participants in this research stated that in the perinatologi bedong uses a nesting in the provision on the baby; reduce noise and lighting is a modification environment teraupetik aimed at reducing excessive sensory goes from noise and not adekuat lighting. In the hospital in perinatologi Panembahan Senopati Bantul organized therapeutic environment among other: speaking softly with fellow nurses, use a sleep, turned off the lights at night, closing with a crib a neon and use with low quality.

LBW and premature having a lane that mature, pain perception so has the ability to feel pain. But because the pain not matur, and premature infants experienced pain longer. A neurotransmitter that hinder stimuli pains not working in premature babies to 6 to 8 weeks after birth (7). Stress and pain management conducted exposure in infants according to participants of this research is at least handling and physical contact can only be achieved by parents and nurses responsibility in a medical room.

NDC is a form of nursing care focusing and given to infants with age 0 28 until the (1). One of the advantages is the increased quality of sleep in infants. This is supported by the results of research conducted by Bertelle indicating that there are significant differences in the intervention of sleep, than the control group the total sleep time increase ($p = 0,002$) with increases in active sleep ($p = 0,024$), quite sleep ($p = 0,015$), and reduced to sleeping beds latency ($p = 0,0005$). Based on the research we can conclude that the NDC to raise a nap on neonates (9).

In addition to a baby, the benefit of the application of NDC can also be perceived by the baby mother, for example the baby mother

will be more skilled in caring for a baby. Based on research about the application of the family centered care (FCC) as a program the success of the care of premature infants mentioned that level of knowledge and attitude there is a significant difference; skills while there is no significant difference. Education and health in older people premature infants with care focusing on the family should be done sustainably so as to change the behavior of parents in caring for premature babies (10). Research on the impact of parental involvement in the treatment of premature infants also mentioned that the difference in patient long on the control and intervention group. The FCC program it can be used as one of forms of intervention nursing program in the process of the family empowerment perinatologi (11).

Response is an attitude closed an individual to a stimulus certain involving the opinion and emotions. concernedA response from some participants is felt exhaustion because poor working conditions. This is supported by research conducted explained that stated that there was a correlation between working conditions with the performance of the nurses at the hospital Manado based on the analysis Chi Square obtained p-value of 0,009 (12).

The obstacles in applying NDC can be caused by type of hospital. The hospital type a facilities will be more complete compared with hospitals type B and C. The research is a statement from participants or associated with obstacles in the implementation of the NDC, is the lack of human resources lack of standard operating procedures (SOP), habits of nurse, geographical location and inadequate facilities.

CONCLUSION AND RECOMMENDATION

The application of NDC in the hospital covering: family involvement, the nesting, reduce noise, reduce management and lighting stress and pain. Benefit the application of NDC can be perceived by infants, child mother and nurses. Not have a NDC implementation reaction including a physiological and psychological reaction. Obstacles found in applying NDC one is a shortage of human resources, as yet there are SOP, habits of nurse, the neighborhood not strategic and lack of existing facilities in the hospital. Recommendation at research is expected the governing management hospitals can

make SOP, arrange the socialization and training for staff especially nurses children about NDC.

REFERENCES

1. Hellen, F. (2009). *Perawatan Maternitas*. Edisi 2. Jakarta : EGC.
2. Vivian, K. (2013). *Faktor yang Mempengaruhi Kematian Neonatus*. Jurnal Keperawatan Anak.
3. Sutomo. (2009). *Perawatan Ibu dan Bayi*. Jakarta: EGC.
4. Indicator and Data Mapping to Measure Sustainable Development Goals (SDGs) Targets tahun 2015.
5. Aita & Snider. (2003). *World Development Report: Investing in Health*. New York: Oxford University Press.
6. Bertelle & Mabin. (2013). *Implementasi Neonatal Developmental Care*.
7. Aita. (2015). Sikap Perawat Anak tentang *Developmental Care* di Rumah Sakit PKU Muhammadiyah Yogyakarta dan PKU Muhammadiyah Bantul (Skripsi). Yogyakarta. Universitas Muhammadiyah Yogyakarta.
8. Horner. (2012). *Konsep Neonatal Developmental Care*. Edisi Pengalihan Bahasa.
9. Bertelle. (2015). Pengaruh Penerapan *Neonatal Developmental Care* Pada Bayi Prematur Dengan Peningkatan Kualitas Tidur. Jurnal Keperawatan Anak.
10. Yugistyowati, A., & Wahyuningsih, W. (2015). Penerapan Family Centered-Care (FCC) Sebagai Program Keberhasilan Perawatan Bayi Prematur. *Jurnal Kesehatan Al-Irsyad*, 62-74.
11. Yugistyowati, A. (2016). Penerapan Family Centered-Care (FCC) Pada Program Pendampingan Keluarga Terhadap Length Of Stay (LOS) Perawatan Bayi Prematur. *Medika Respati*.
12. Frunky. (2016). Faktor-Faktor yang Berhubungan Dengan Kinerja Perawat di Rumah Sakit Pancaran Kasih Manado Tahun 2016. *Jurnal Kesehatan Masyarakat*.