

To Assess the Effect of Swaddling on Quality of Sleep among Neonate in Selected Hospital

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Abstract

Background: Swaddling is a traditional practice of wrapping a baby up gently in a light, breathable blanket to help them feel calm and sleepy. They should only have their body wrapped and not their neck or head, to reduce the chance of suffocation. The idea is that being swaddled will help little one feel snug and secure, just like in womb. A study conducted with aim to assess the effect of swaddling on quality of sleep among neonate in selected hospital, Pune.

Material and method: Quantitative research approach and Quasi experimental pre-test post-test only control research design used for this study. Fifty samples were selected for the study using non-probability sampling technique. The study was conducted in Dr. D. Y. Patil hospital & research Centre (PNC WARD) Pimpri, Pune. Data collection was done by demographic variable and Anders and Chalemian sleep scoring. Data were analyzed using descriptive and inferential statistics.

Result: The result shows that in the experimental group, all the neonates had deep sleep (score 5-6). In control group, 56% of the neonates had mild sleep (Score ≤ 2) and 44% of them had moderate sleep (score 3-4). Average quality of sleep score among neonates in experimental group was significantly higher than that among neonates in control group.

Conclusion: The research study concludes that the neonate who received the swaddling technique during the procedure has improve sleep pattern than the control group.

Keywords: Assess, Effect, Swaddling, Quality of Sleep, Neonate.

Introduction

Sleep is essential for the development of brain in the neonates. Adequate sleep is of great importance in neonates as it affects the development of sensory system, the structure of brain that is hippocampus, pons, brainstem, middle brain, motor system, limbic, learning, long-term memory, thermoregulation, preservation of the capacity of coping with changes, and appropriate responses to environmental stimulations. In neonates, the sleep cycle includes three stages of active, quiet, and undetermined sleep.¹ Developmental milestones, including pulling to a standing and crawling, may temporarily disrupt the sleep. Some study indicates that by 6 months of age, most babies are physiologically capable of sleeping through the night and no longer require night time feedings. However, 25% to 50% continue to awaken during the night. When it comes to waking, the most important point to understand is that all babies wake briefly between 4 and 6 times during the night.²

Swaddling is an ancient Indian practice, prevalent largely among the Gujarat and the Rajasthan is where a soft blanket or cloth is snugly wrapped around the baby offering him warmth and security. It keeps her warm and

composed; also, it helps her adjust with the world in the first few days.³ Modern swaddling is becoming increasingly popular today as a means of settling and soothing irritable to the neonates and helping babies sleep longer with fewer awakenings. Since the early 1990s, the medical community has recommended placing babies on their back to sleep to reduce the risk of sudden infant death syndrome. As many studies proved swaddled babies sleep better in the back sleeping position, swaddling has become increasingly popular in the world and it recommended so, parents avoid the dangerous stomach sleeping position. Swaddling also prevents neonates waking themselves with their Moro reflex.⁴

Need Of Study

New parents often learn how to swaddle their neonate from the nurses in the hospital. A thin blanket wrapped snugly around baby's body can resemble the womb and help soothe to the neonate. When done correctly, swaddling can be an effective technique to help calm neonates and promote to the sleep.⁵ Sleep-wake transitions in premature neonates predict early development reveals infants whose sleep-state transitions were mainly characterized by shifts between quiet sleep and wakefulness exhibited the best development, which including greater neonatal neuromaturation, less negative emotionality, better cognitive development, and better verbal, symbolic and executive competences at 5 years. Infants who cycled were mainly between states of high arousal, such as active sleep and cry or between short episodes of active and quiet sleep showed poorer outcomes.⁶

Swaddling can be an effective technique to help calm neonates and promote sleep when it done correctly. Most child health experts agree that a baby's hips should not be bundled too tightly. Instead, they should be allowed to relax in their natural frog-leg positions to allow for proper growth and joint development of the baby. For safety reasons, always be sure that swaddled baby is on their back—never on their side or tummy. Swaddling also has the potential to cause babies to overheat, so be sure to check and make sure baby isn't showing signs of overheating (sweating, damp hair, rash and rapid breathing). And should stop swaddling baby once they look like they're trying to roll over.⁷ Newborns who are wrapped with white cotton cloth also experienced more rest period. The combination of reflexes and involuntary movements may wake a baby during sleep. By swaddling baby's arms against their sides, there are decreasing the likelihood that baby's own movements and reflex responses will wake them.⁸ Swaddled bathing is a relatively new way for newborns to bath.⁹ The purpose of this study was to evaluate effect of swaddling on quality of sleep among neonate.

Aim Of The Study

To evaluate effect of swaddling on quality of sleep among neonate.

Material And Methods

The objective of the study is to assess the quality of sleep and to assess the effect of swaddling on quality of sleep among neonates The research approach used for this study is Quantitative approach. In this study Quasi experimental pre-test post-test only control research design was used assess the effect of swaddling on quality of sleep among neonate. The setting of the study was Dr. D. Y. Patil hospital & research Centre (PNC WARD) Pimpri, Pune – 411018. The sample selected for present study comprised of 50 neonates in selected hospital of Pune city. 50 neonates selected for this study. In this study convenient sampling technique was used. In this study, the tool consisted of following: - Section a - demographic variables. This section consists of 07 questions which seek information regarding demographic data such as Age of the baby, Gender of the baby, Weight of the baby, Time of delivery, Type of delivery, Education Status of mother, Source of knowledge. Section b - the anders and chalemian sleep scoring. A structured questionnaire consists 2 options. Scoring key is as below:

Scoring Key:

<=2: Mild Score

3 to 4: Moderate Score

5 to 6: Deep Score

The samples were selected considering inclusion & exclusion criteria. The researcher introduced herself to the subjects, assurance of confidentiality was given to the subjects and consent was obtained from them. Socio-demographic data was collected from each subject. Test was conducted by using questionnaire for all the participants. Reliability was assessed using test-retest method. Pearson's correlation coefficient was found to be 0.99 which is reliable.

Result

Table 1: Item analysis

N=25,25

STATE	PARAMETER	EXPERIMENTAL		CONTROL	
		Frequency	%	Frequency	%
Wakefulness	Fussy cry	23	92%	8	32%
	Wakeful activity	24	96%	10	40%
	Alert inactivity	21	84%	16	64%
	Drowsy	23	92%	7	28%
Sleep	Active/REM	25	100%	20	80%
	Quiet sleep	25	100%	0	0%

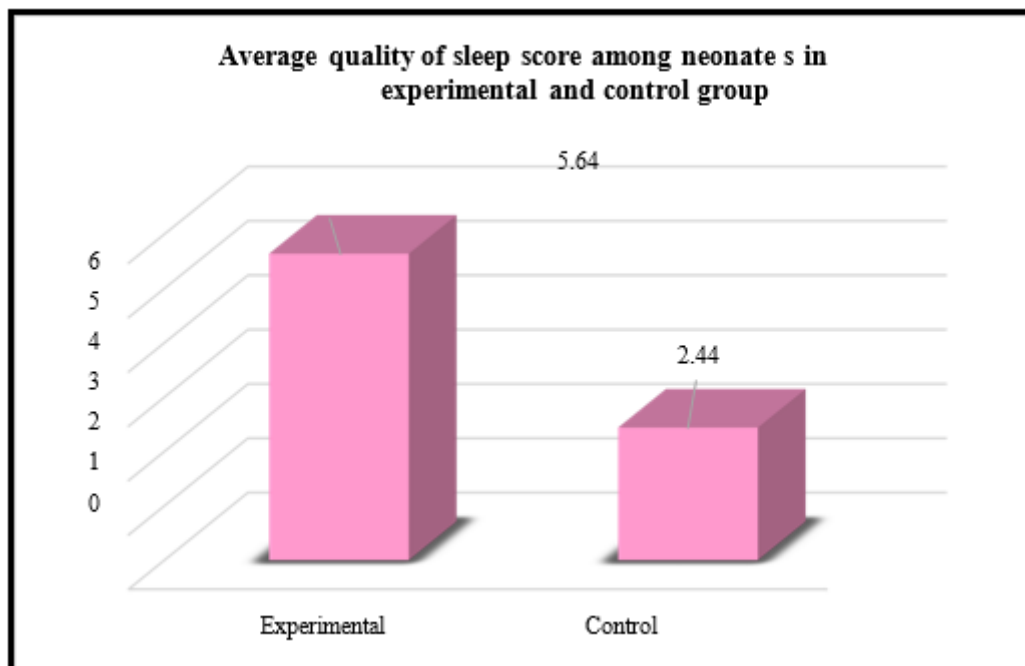


Fig.1 Description of sample based on average quality of sleep score

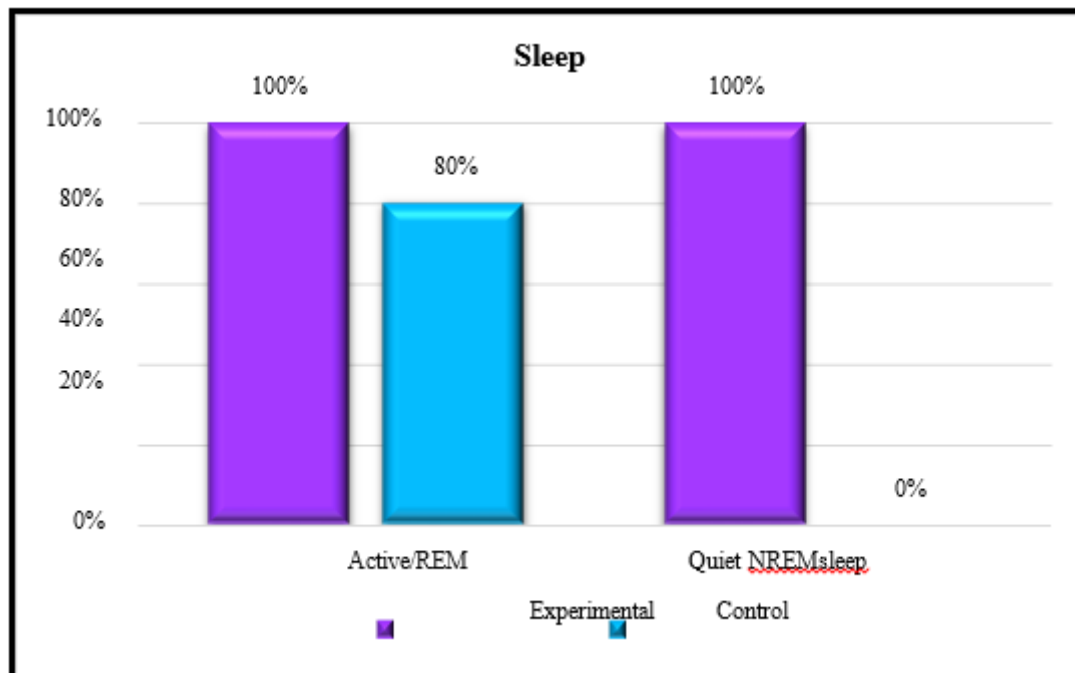


Fig 2. Description of sample based on sleep

Discussion

JS Angel Rose (2021) conducted study to assess the effectiveness of swaddling techniques on promotion of sleep pattern among newborns at Ashwin hospital, Coimbatore with aim to assess the effectiveness of swaddling techniques on promotion of sleep pattern among newborns. A Quasi experimental study was conducted with 60 newborns (0–28 days) were selected by non-probability sampling technique of which 30 are experimental group and 30 are control group. Researcher used the swaddling technique to assess its effectiveness on promotion of sleep pattern among newborns in the experimental group. The calculated paired, 't' value of $t=11.49$ was found to be statistically highly significant at $p<0.05$. It was found that swaddling techniques for the promotion of sleep pattern among newborn was effective in the experimental group.¹⁰

This study done with aim to assess the effect of swaddling on quality of sleep among neonate in selected hospital, Pune. Quantitative research approach and Quasi experimental pre-test post-test only control research design used for this study. Fifty samples were selected for the study using non-probability sampling technique. The study was conducted in Dr. D. Y. Patil hospital & research Centre (PNC WARD) Pimpri, Pune. Data collection was done by demographic variable and anders and chalemian sleep scoring. Data were analyzed using descriptive and inferential statistics. Average quality of sleep score among neonates in experimental group was significantly higher than that among neonates in control group. The research study concludes that the neonate who received the swaddling technique during the procedure has improve sleep pattern than the control group.

Conclusion

The study was conducted to find out if the swaddling technique is effective among neonate for the promotion of sleep pattern. On performing the research, the final outcome stated that the swaddling technique is found to be effective in promoting the sleep pattern of neonate when compared to the neonate those who were unswaddled in control group. Average quality of sleep score among neonates in experimental group was significantly higher than that among neonates in control group. The mean post-test sleep score of the experimental group significantly lower than the mean post-test sleep score of the control group during the procedure. There was no significant association between sleep score and age, weight, time of delivery. There was a significant association between score and sex (gender) and type/ mode of delivery. Thus, the research study concludes that the neonate who received the swaddling technique during the procedure has improve sleep pattern than the control group.

Acknowledgement

Authors acknowledge the immense support received from Dr. D. Y. Patil hospital & research Centre (PNC WARD) Pimpri, Pune for completing this study. Authors are grateful for the help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also thankful to authors/ editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

Source of Funding: None

Conflict of Interest: None

Authors' Contribution: All the authors have contributed to the planning, implementation and analysis of the research study and its presentation in the form of the manuscript.

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