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Research Article

A Study to Assess the Knowledge on Burping Technique among Primi Postnatal Mothers Using Video-Assisted Teaching

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Abstract

Background: Burping (also called belching and eructation) is the release of gas from the upper digestive tract (esophagus and stomach) through the mouth. Burped babies did not cry less than ones that were not burped. Moreover, the burped babies actually spit up more. They spit up about 8 times a week, on average, compared with 3.7 times a week for unburped babies.

Materials and Methods: The study was conducted to assess the knowledge on burping technique among primi postnatal mothers using video-assisted teaching in selected hospital, Tamil Nadu. The objective of the study was to assess the level of knowledge regarding burping technique among primi postnatal mothers. The study was conducted by adopting a pre-experimental one-group pre-test-post-test design. Sixty primi postnatal mothers who fulfilled the inclusive criteria were selected by purposive sampling. A structured questionnaire was used to assess the level of knowledge of primi postnatal mothers. The tool was explained in detail and the pre-test was conducted. Video-assisted teaching on burping technique was conducted for the primi postnatal mothers and then the post-test was conducted on the 3rd day with the help of same structured questionnaire.

Results: The analysis of the study reveals that the overall mean improvement showed a paired t-value of 33.790, which was statistically at $P < 0.001$ level and hence indicates the effectiveness of video-assisted teaching.

Conclusion: Primi postnatal mothers can improve their knowledge regarding burping techniques among the newborn babies. Moreover, it should enhance their daily activities throughout the growth of child.

Keywords: Assess, burping technique, infants, knowledge, newborn, primi postnatal mothers, video-assisted teaching

Introduction

Burping (also called belching and eructation) is the release of gas from the digestive tract (mainly esophagus and stomach) through the mouth. It is usually but not always audible.[1]

Try different positions for burping that are comfortable for you and your baby. Many parents use one of these three methods: [2]

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Sit upright and hold your baby against your chest. Your baby's chin should rest on your shoulder as you support the baby with one hand. With the other hand, gently pat your baby's back. Sitting in a rocking chair and gently rocking with your baby while you do this may also help.[3]

Hold your baby sitting up, in your lap or across your knee. Support your baby's chest and head with one hand by cradling your baby's chin in the palm of your hand. Rest the heel of your hand on your baby's chest, but be careful to grip your baby's chin, not the throat. Use the other hand to pat your baby's back.[4]

Lay your baby on your lap on his or her belly**.** Support your baby's head and make sure it's higher than his or her chest. Gently pat your baby's back.[5]

If you're burping a newborn after breastfeeding, the baby will typically burp less because they swallow less air. Most

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babies will outgrow the need to be burped by 4–6 months of age.[6]

Burping helps to get rid of some of the air that babies tend to swallow during feeding. Not being burped often and swallowing too much air can make a baby spit up, or seem cranky or gassy.[7]

Burping a baby can be important day and night. Sometimes, babies fall asleep while eating and you may need to find a way to burp them while they are still asleep. It's remarkable how much a newborn can sleep through.[9]

Burping is one of the many tasks parents have until their child grows into being more self-sufficient. Kids and adults can easily release their own gas, but many babies need help because they have so little control over how their bodies are positioned.[18]

Primipara – A women who are pregnant for the 1st time. A women who have given birth for the 1st time to an infant or infants and alive or stillborn.[20]

Postpartum (or postnatal) period beings immediately after childbirth as the mother's body, including hormone levels and uterus size, returns to the non-pregnant state, and extending for about 6 weeks.[16]

A newborn, infant or neonate, is a child under 28 days of age. It is thus crucial that appropriate feeding and care are provide during this period, both to improve the child's chances of survive and to lay the foundations for a healthy life.

A new born baby, those who under 4 weeks after birth. After a month, a baby is no longer considered a neonate.

Infants healthy growth and development are predicated, in part, on regular functioning of the gastrointestinal tract. In the first 6 months of life, infants typically double their birth weights. During this period of intense growth, the GI tract needs to be highly active and to function optimally. Identifying modifiable causes of GI tract dysregulation are important for understanding the pathophysiologic processes of such dysregulation, for identifying effective and efficient interventions, and for developing early prevention and health promotion strategies. One such modifiable cause seems to be maternal smoking, both during and after pregnancy.

It's important to note that, despite this articles priority in internet search results, no peer-reviewed study has proven that either the presence or absence of burping is a contributing risk factor to SIDS deaths.[8]

Objectives of the study

The objectives of the study were as follows:

1. To assess the pre-test knowledge score on burping technique among primi postnatal mothers
2. To assess the post-test knowledge score on burping technique among primi postnatal mothers
3. To compare pre-test and post-test on burping technique among primi postnatal mothers
4. To find the association between the pre-test knowledge score with selected demographic variables of postnatal mothers.

Materials and Methods

Research approach

The research approach used for the study was experimental approach.

Research design

The design selected for the study is pre-experimental (one group pre-test and post-test design).

Sample size

A sample size of the study was 60 postnatal mothers.

Sampling technique

The sample of the study was selected by convenient sampling technique.

Data collection tool

Section A

Demographic data: It consists of demographic data which include age, type of deliver, educational status, occupation, type of family, dietary pattern, and sources of information.

Section B

Observational method using structured knowledge questionnaire. Structured questionnaire is used to assess knowledge regarding burping technique. A scoring key was prepared for each correct answer the scores "1" given and for wrong answer the score "0" given. The total score was 30. The questionnaire was given to the sample.

Ethical considerations

The approval was obtained from the Institutional Research Ethical and Committee. Formal permission was obtained from the Principal, Indira College of Nursing, and also permission was obtained from the managing director of the hospital. Informed written consent was taken from the postnatal mothers to process the study. Assurance was given to the mothers that confidentiality, privacy would be maintained and no harm will be inflicted on them and they can drop out of the study any time if they feel so.

Results

Following were the major findings of the research study:

1. Finding related to demographic data of the samples
2. Finding related to pre-test knowledge of samples
3. Finding related to post-test knowledge of the samples
4. Finding related to the comparison of pre- and post-test knowledge of the samples
5. Finding related to the association of knowledge with selected demographic data of the samples.

Finding related to demographic data of the samples

Regarding age about 12 (20%) belongs to the age group of 18–21 years, 18 (30%) belong to the age group of 22–25 years, 21 (35%) belong to the age group of 26–29 years, 9 (15%) belong to the age group of above 30 years, regarding type of delivery about 25 (41.7%) under normal vaginal delivery, 3 (5%) under instrumental normal delivery, 32 (53.3%) under cesarean delivery, regarding education about 1 (1.7%) was elementary school, 11 (18.3%) were high school, 13 (21.7%) were higher secondary school, 9 (15%) were diploma, 26 (43.3%) were graduates, regarding occupation of the mother about 27 (45%) were home maker, 9 (15%) were self-employers, 24 (40%) were private employees, regarding sources of information about 3 (5%) from newspaper, 31 (51.7%) from health personnel, 26 (43.3%) from mass media, regarding dietary pattern about 18 (30%) were vegetarian, 42 (70%) were non-vegetarian, and regarding sources of information about 3 (5%) from newspaper, 31 (51.7%) from health personnel, and 26 (43.3%) from mass media [Table 1].

Finding related to pre-test knowledge of samples

Distribution of pre-test knowledge score. Majority of 31 (52%) primi postnatal mothers had moderately adequate knowledge and 29 (48%) primi postnatal mothers had inadequate knowledge regarding burping technique [Table 2].

Table 1: Frequency and percentage distribution of demographic variables among primi postnatal mothers. *n*=60

S. No.	Demographic variables	Frequency (f)	Percentage
1.	Age		
	18–21	12	20
	22–25	21	35
	26–29	24	40
	>30	3	5
2.	Type of delivery		
	Normal vaginal delivery	25	41.7
	Instrumental normal delivery	3	5
	Cesarean delivery	32	53.3
3.	Education status		
	Illiteracy	0	0
	Primary school	1	1.7
	Elementary school	11	18.3
	High school	13	21.7
	Higher secondary school	9	15
	Diploma	26	43.3
	Graduate	0	0
4.	Occupation		
	Home maker	27	45
	Self-employer	9	15
	Private job	24	40
	Government job	0	0
5.	Type of family		
	Nuclear	24	40
	Joint	36	60
	Expanded	0	0
6	Dietary pattern		
	Vegetarian	18	30
	Non-vegetarian	42	70
7	Sources of information		
	Radio	0	0
	Newspaper	3	5
	Health personnel	31	51.7
	Mass media (TV, media, etc.,)	26	43.3

Finding related to post-test knowledge of samples

Distribution of post-test knowledge score. Majority of 56 (93%) primi postnatal mothers had adequate knowledge and 4 (7%) primi postnatal mothers had moderately adequate knowledge regarding burping technique [Table 3].

Finding related to comparison of pre- and post-test knowledge of the samples

When comparing the pre-test and post-test knowledge, the pre-test mean was 9.75 with standard deviation 4.83 and the post-test mean was 23.11 with standard deviation 5.05. The calculated t-value was 33.790 which was highly significant at $P < 0.001$ level. The overall mean improvement value was 13.36 which shows a significant rise in the knowledge level of primi postnatal mothers 9.75–23.11 in pre- and post-test, respectively, which is suggestive of effectiveness of video-assisted teaching on burping technique [Table 4].

Finding related to association of knowledge with selected demographic data of the samples

With regard to the association of mean improvement, knowledge score among the primi postnatal mothers with selected demographic variables showed that no statistical

Table 2: Frequency and percentage distribution of pre-test knowledge score regarding burping technique among primi postnatal mother (*n*=60)

Category	Knowledge	
	Frequency (f)	Percentage
Adequate	0	0
Moderate	31	52
Inadequate	29	48
Total	60	100

Table 3: Frequency and percentage distribution of post-test knowledge score regarding burping technique among primi postnatal mothers (*n*=60)

Category	Knowledge	
	Frequency (f)	Percentage
Adequate	56	93
Moderate	4	7
Inadequate	0	0
Total	60	10

Table 4: Comparison of mean, SD, and paired t-value of pre-test and post-test knowledge score regarding burping technique among primi postnatal mothers (*n*=60)

Knowledge	Mean	Mean improvement	Standard deviation	"t" value
Pre-test	9.75	13.36	4.83	"t"=33.79
Post-test	23.11		5.05	*P*=0.001
				S

***P<0.001, S: Significant

significant association was found with age, type of delivery, educational status, occupation, type of family, dietary pattern, and sources of information. However, it was found that there is a significant of post-test level knowledge regarding burping technique among primi postnatal mothers with regard to educational status ($P < 0.05$) [Table 5].

Discussion

The result of the study was

The first objective was to assess the pre-test knowledge score on burping technique among primi postnatal mothers

Data analysis showed that of 31 (52%) primi postnatal mothers had moderately adequate knowledge and 29 (48%) primi postnatal mothers had inadequate knowledge regarding burping technique.

Table 5: Frequency and percentage distribution of the association of knowledge with selected demographic data of the samples

Demographic variables	Adequate (>75%)		Moderate (50-75%)		Chi-square value
	No.	%	No.	%	
Age (years)					
18–21	10	17	2	3	χ^2=2.506
22–25	20	33	1	2	d.f=3
26–29	23	38	1	2	*P*=0.474
>30	3	5	0	0	N.S
Type of delivery					
Normal vaginal delivery	24	40	1	2	χ^2=3.723
Instrumental normal delivery	2	3	1	2	d.f=2
Cesarean delivery	30	50	2	3	*P*=0.155 N.S
Education status					
Illiteracy	0	0	0	0	χ^2=19.415
Primary school	0	0	0	0	d.f=6
Elementary school	0	0	1	2	*P*=0.0006
High school	9	15	2	3	S
Higher secondary school	13	22	0	0	
Diploma	8	13	1	2	
Graduate	26	43	0	0	
Occupation					
Home maker	25	42	2	3	χ^2=1.173
Self-employer	8	13	1	2	d.f=3
Private job	23	38	1	2	*P*=0.759
Government job	0	0	0	0	N.S
Type of family					
Nuclear	23	38	1	2	χ^2=0.401
Joint	33	55	3	5	d.f=1
					P=0.526 N.S
Dietary pattern					
Vegetarian	17	28	1	2	χ^2=0.051
Non-vegetarian	39	65	3	5	d.f=1
					P=0.821 N.S
Sources of information					
Radio	0	0	0	0	χ^2=5.281
Newspaper	2	3	1	2	d.f=3
Health personnel	29	48	2	3	*P*=0.152
Mass media (TV, media, etc.,)	25	42	1	2	N.S

*P<0.05, **P<0.01, ***P<0.001, S: Significant, N.S: Not significant

The study was conducted by Danise (2009), it shows that only 23.97% of mothers were aware about the burping and 76.03% of mothers were not aware about the significance of burping. This may be due to lack of awareness regarding burping technique and concluded that the primi postnatal mothers should be educated on burping technique.

The second objective was to assess the post-test knowledge score on burping technique among primi postnatal mothers

Data analysis showed that of 51 (85%) primi postnatal mothers had adequate knowledge and 9 (15%) primi postnatal mothers had moderately adequate knowledge regarding burping technique.

The descriptive study was conducted by Patil (2015), the present study found that majority of 60% of mothers having good knowledge on burping technique. The study revealed about 35 primi postnatal mothers in that 11 (31.42%) having good knowledge, 22 (62.85%) having average knowledge, and 2 (5.71%) having poor knowledge. The result suggested that providing video-assisted teaching was effective to improve the knowledge regarding burping techniques.

The third objective was to compare pre-test and post-test on burping technique among primi postnatal mothers

Data analysis showed that means score of pre-test and post-test of primi postnatal mothers regarding burping technique was 9.75 (SD = 4.83) and 23.11 (SD = 5.05), respectively. The post-test mean higher scores were higher than pre-test means scores. The paired t-value is 33.790. Calculated t-value is higher than tabulated value. Hence, video-assisted teaching was effective in improving the knowledge of primi postnatal mothers regarding burping technique.

The fourth objective was to find out association between the pre-test knowledge score with selected demographic variables of postnatal mother

Data analysis showed that Chi-square values were calculated to find out the association between the knowledge regarding burping technique among primi postnatal mothers with age ($\chi^2 = 2.506$), with type of delivery ($\chi^2 = 3.723$), with educational status ($\chi^2 = 19.415$), with occupation ($\chi^2 = 1.173$), with type of family ($\chi^2 = 0.401$), with dietary pattern ($\chi^2 = 0.051$), and with sources of information ($\chi^2 = 5.281$). Therefore, there is no significant association between the demographic variables with their knowledge regarding burping technique among primi postnatal mothers.

Efficacy of burping in lowering colic and regurgitation episodes in healthy term babies lacks evidence in literature.[11]

The researchers studied two things with relation to burping, colic symptoms, and spit-up. Both of these are harmless, but as a mother of boys that did a lot of spitting up, and one with

really bad colic, I can understand why it's such a big deal for parents.[13]

The burping techniques for newborn taught to the mothers with the help of the planned teaching strategy did not have 100% knowledge and practice regarding burping techniques of newborn.[14]

Belch had a variety of clinical manifestations, related to the mood changes and the environmental stress, and normally was combined with the abnormalities of psychology and personality traits. The belch patients normally experienced the esophageal motility disorders, among which the typical pattern was supragastric belching.[15]

Burping a baby can be important day and night. It is usually takes a minute or two. Sometimes, a burp will come up as soon as.[16]

Sometimes babies do not need to burp as much at night time because they eat slower and do not get as much air while feeding.[17]

Parents try to burp the baby every ounce during bottle feeding and every 5 min during breast feeding. Baby does not burp after few minutes, change the position, and try burping for another few minutes before feeding again.[19]

Parents always burp the baby when feeding time is over. It helps to prevent the milk from coming back up. Try different positions for burping that is comfortable for the baby.[20]

Baby needs to be burped if the baby squirmy or pulling away while being fed. Pausing to burp frequently slows feeding and reduces air intake. The best method for burping will generally differ for babies and parents use the method that works best for the baby.[21]

Conclusions

The study revealed that the knowledge score regarding burping technique was highly significant administering video-assisted teaching program. Finding showed that the video-assisted teaching program was effective in increasing the knowledge among primi postnatal mothers regarding burping technique.

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Conflicts of Interest

All authors declare that they have no conflicts of interest.

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