Evidence Based Practice regarding Mother's Care for Infants with Pneumonia

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Abstract

Background: Pneumonia in infants usually suffer from many complications and health problems as the course of treatment or a result of disease process. **The aim of this study:** Was to assess evidence-based practice regarding mothers' care for infants with pneumonia**. Research design**: A descriptive research design was be used in this study. **Setting:** The present study was conducted at Pediatrics Outpatient Clinic in Benha University Hospital. **Sampling:** A simple random sample was selected from all mothers accompanied with infants with pneumonia. It includes 231 mothers. **Tools:** Two tools were used in this study. **I):** Structured interviewing questionnaire consist of three parts to assess socio-demographic characteristics of mothers, and personal characteristics of infants, medical history reported from mothers, and mothers' knowledge regarding pneumonia and evidence-based practice among infants with pneumonia. **II):** Mothers' EBP regarding caring of infants with pneumonia. **Results:** 63.2% of the studied mothers aged from 30- < 40 years old with Mean ±SD 33.52±5.24, while 55.8% of them had intermediate education, 76.2% of studied mothers had poor total knowledge level about pneumonia &EBP; 63.2 % of studied mothers had satisfactory total practices, while, 36.8 % of them had unsatisfactory total practices regarding care of the infant with pneumonia. **Conclusion:** There was highly statistically significant correlation between the studied mothers' total knowledge level and their total practices regarding pneumonia, p >0.01. **Recommendation:** Health educational program for mothers should be developed and implemented to improve knowledge &enhancing practices about pneumonia and prevent complication.

Key words: Evidence Based Practice, Mothers Care, Pneumonia.

Introduction

Evidence Based Practice (EBP) is an approach to care that integrates the best available research evidence with clinical expertise. It involves translating evidence into practice, also known as knowledge translation, and ensuring that 'stakeholders (health practitioners, infant, family and carers) are aware of and use research evidence to inform their health and healthcare decision-making'. Why is it important? Implementing clinical knowledge, and introducing new interventions and therapies, is an important way to minimize functional decline in infant guidelines, including ineffective, unnecessary or potentially harmful treatments (**Mathieson et al., 2019).**

Despite the availability of evidence-based guidelines, there are significant gaps in implementing evidence into routine clinical practice. Translating evidence into practice can not only improve outcomes and quality of life for infant, it can also improve productivity and reduce healthcare costs. How can you implement evidence based initiatives to improve outcomes for infant? Implementing evidence-based practice is a key part of improving outcomes for infant in hospital.

Evidence Based Practice regarding Mother's Care for Infants with Pneumonia

When considering current best practice in the areas of nutrition, breast feeding, oxygen therapy, medication, skin integrity, and cough relieve and nebulizer therapy (**Boswell & Cannon, 2022**).

Acute Lower Respiratory Tract Infections (ALRTIs) especially pneumonia are a leading cause of morbidity and mortality worldwide, especially during the first years of life. They are responsible for 6.8% of deaths in neonates, 20% of deaths in children aged 1–12 month and 12% of deaths in children aged 1 to 4 y and are considered to be responsible for 22% of deaths in children of age group 0–5 y in Southeast Asia. Respiratory infections are caused by a variety of viruses and bacteria with respiratory viruses being the commonest etiological agent of ALRTI among infants (**Sonawane et al., 2019**)

Globally, pneumonia is a leading cause of morbidity and mortality in children younger than the age of 5 years. Although the majority of deaths attributed to pneumonia in children are mostly in the developing world, the burden of disease is substantial, and there are significant healthcare-associated costs related to pneumonia in the developed world Pneumonia causes substantial morbidity in children worldwide and is a leading cause of death in children in the developing world. The incidence of pneumonia is the highest in children under 5 years of age and in recent years the incidence of complicated and severe pneumonia seems to be increasing (**World Health Organization (WHO), 2022**).

Risk factors for pneumonia include malnutrition, indoor air pollution (air polluted by cigarette smoke of family members who smoke in the room of the house, the use of mosquito coils, and the use of firewood stoves for cooking in the house), high population density in the house, zinc deficiency, educational status of the mother and any previous experience she might have caring for children, presence of comorbidities, daycare, humidity, cold, lack of vitamin A in the diet, birth sequence, and Low Birth Weight (LBW). Factors considered to be of primary importance toward prevention of pneumonia are exclusive breastfeeding until the age of 6 months and completed basic immunizations (**Sutriana et al., 2021**).

Etiological factors vary with age, source of infection (community vs. hospital acquired pneumonia) and underlying host defects (e.g immunodeficiency). Viruses are the most common etiological factors in infant, although in many cases more than one causative agents can be identified. There are several emerging pathogens in community acquired pneumonia in infant: virulent strains of Streptococcus pneumonia that are not present in currently available vaccines, Panton-Velentine leucocidin producing Staphylococcus aureus, human Boca viruses and metapneumoviruses being the most important (**Scott et al., 2020**).

Diagnosis in most of milder cases of community acquired pneumonia is based on clinical judgment alone, since laboratory tests and radiologic examination do not provide clues concerning etiology. Infant with severe pneumonia, hospital acquired pneumonia and immune compromised infant require invasive diagnostic approach (**Kerneis et al., 2021**).

Treatment of mild and moderate cases consists in supportive care and antibiotic treatment. First-line recommended therapy in previously healthy infant regardless of age is amoxicillin, as it provides sufficient coverage against the most common invasive bacterial pathogen, namely Streptococcus pneumonia . For hospital acquired pneumonia initial empiric treatment should be based on local antimicrobial susceptibility patterns, and modified adequately as soon as the results of microbiological tests are available (**Mathur et al., 2018**).

Despite the fact, that if properly diagnosed and treated pneumonia resolves with no residual changes, in some cases due to pathogen virulence and/or host susceptibility its course might be complicated with pleural effusion and empyema, pneumoatocele, lung abscess or necrotizing pneumonia. A recognized complication of severe pneumonia is hypernatremia and SIADH (Syndrome of Inappropriate Antidiuretic Hormone Secretion). Burden of pneumonia can be diminished using preventive measures ranging from the simplest infection control methods like hand washing, limiting exposure to infection, limiting exposure to tobacco smoke, vaccinations to passive immunization in selected cases **(Omer et al., 2019)**.

Infant with pneumonia need to get plenty of rest and drink lots of liquids while the body works to fight the infection. If infant has bacterial pneumonia and the doctor prescribed antibiotics, give the medicine on schedule for as long as directed. Keeping up with the medicine doses will help infant recover faster and help prevent the infection from spreading to others in the family. If infant is wheezing, the doctor might recommend using breathing treatments. Ask the doctor before use a medicine to treat infant cough.

Mothers care of infant with pneumonia is ability to recognize respiratory illness is the key to seeking care and reduction in mortality as many deaths occur within 3–5 days of disease onset. Poor understanding of severity of illness demand that the focus of community educational messages should stress more on recognition of early symptoms of cough with/without fever which may have more value than perhaps educating mothers about fast breathing viz-a-viz chest wall in drawing which focuses on severity of illness. Use of home remedies has been reported in many recent studies from Asian and African countries which are influenced by cultural practices, advice from elders at home, recovery on previous occasions of illness, monetary constraints and compromised medicines are not recommended for any infant under 6 years old. If infant doesn't seem to be feeling better in a few days, call doctor for advice **(Jacob& Priya, 2022)**.

The role of Community Health Nursing (CHN) of infant suffering from pneumonia is primary supportive and symptomatic to meet physical, psychological, and social needs of each infant. Therefore, their need will be related to severity of illness .It can be conducted through observation of respiratory status ,administration of antibiotic, and oxygen therapy, ensuring adequate hydration and clearance airway **(Scott et al., 2020)**.

Significance of study:

Acute Respiratory Infections (ARIs), especially pneumonia, remain major causes of morbidity and mortality among infants and toddlers in developed countries and in the developing world. Globally, Streptococcus pneumonia is the most common pathogen causing community-acquired pneumonia. Pneumonia ranks among the 5 main causes of infant mortality. The high mortality rate caused by pneumonia makes it called 'The Forgotten Pandemic.' Based on 2015 data from United Nations Children's Fund, 100 infants died each hour due to causes related to pneumonia, and in developing countries, death due to pneumonia occurs at a rate of 20% compared to a rate of 4% in developed countries .Pneumonia, a leading cause of illness and mortality in children worldwide, causes nearly 1.5 million deaths annually. It is the most common cause of under-5 (U-5) mortality and contributes to 15% of U-5 mortality in 2017, killing an estimated 808,920 children **(Ren et al., 2020)**

World Health Organization (WHO) data indicate that acute respiratory infections

Evidence Based Practice regarding Mother's Care for Infants with Pneumonia

(ARIs) are the second most common cause of disability-adjusted life years lost around the world the WHO-led ARI control program reduced the burden of pneumonia deaths from 1.7 million annual cases to 0.9 million, a 30% decrease in burden. During the same time, the pneumonia mortality rate decreased by nearly 51%.The ARI control program is dependent on the early identification and treatment of children with signs and symptoms suggestive of pneumonia, presuming a bacterial etiology. goal to eliminate preventable infant deaths by 2030 will remain improbable unless deaths due to childhood pneumonia are significantly reduced**.** However, more knowledge on the risk factors affecting the severity of pneumonia is required to reduce deaths from childhood pneumonia. Studies from low/middle-income countries (LMICs) have tried to identify the risk factors for severe pneumonia (**Kasundriya et al., 2020**)

Aim of the study

This study aimed to assess evidence based practice regarding mother's care for infants with pneumonia

Research questions:

1. What is the level of mothers' knowledge regarding pneumonia, and EBP?
2. To what extent the mothers apply the EBP regarding care their infants with pneumonia?
3. Is there a relation between mothers' knowledge and their practice regarding care of infants with pneumonia?

Subjects and Method

Research design

A descriptive research design (a research method that describes the characteristics of the population or phenomenon that is being studied. This methodology focuses more on what of the research subject rather than why of the research subject) was utilized to conduct the aim of this study.

Setting

The present study was conducted at Pediatrics Outpatient Clinic in Benha University Hospital to collect the data.

Sampling

A simple random sample were selected from all mothers accompanied their infants with pneumonia according equation

$n = \frac{N}{1+N(e)2}$ It includes 231 from 548 of total mother attended at Pediatrics Outpatient Clinic in Benha University Hospital in the last six month at 2022.

Tools of data collection:

Two tools were be used in this study:

Tool I: Structured interviewing questionnaire: It was designed by the researcher after reviewing of related literature, and written in simple clear Arabic language, and consist of three parts to assess the following

First part:

A- To assess socio-demographic characteristics and home environment of mothers it included10 questions that are mothers age, level of education, job, residence, income, marital status, home type, level of ventilation, number of rooms and house sewage.

B- To assess personal characteristics of infants it included 5 questions as infant age, sex, type of breast feeding, ranking of infant and family member number.

Second part: It concerned with infants' medical history reported from mothers it included 8 questions as number of times infant is infected with pneumonia, number of times the infant hospitalized, the current symptoms the infant suffer from, period that infant diagnosed with pneumonia, upper respiratory health problem, lower respiratory heath

problem, infant suffer from and factor that cause pneumonia.

Third part: A- To assess mothers' knowledge regarding pneumonia it included 12 questions as meaning, infant most at risk of developing pneumonia, causes, types, signs and symptoms, treatment, Investigation, complication, medication used to treat pneumonia, health problem caused by medication, preventive measures and seasons in which pneumonia more active.

B-To assess mothers' knowledge about evidence based practice it included 7 question as meaning of EBP, importance ,importance of existing practice on evidence for the infant ,importance for society,, elements ,steps and obstacles to individual to implementing EBP .

Scoring system for mother s knowledge:

The complete answer was scored 2, the incomplete answer was scored 1 and don't know was scored (0). For each area of knowledge , the score of items were summed –up and the total divided by the number of the items, giving a mean score for the part .These score were converted into a percent score.

The total knowledge scores =38

The total knowledge scores were considered good if the score of total knowledge >75% (>28 point), considered average if it equal50-75% (28-19point) and considered poor if it less than 50%(<19point).

Tool II: To assess mothers' EBP in caring of infants with pneumonia as reported by the mothers. It contain 4 parts and 12 items:

First part is general practice to infant with pneumonia consists of 5 items as dealing with high temperature include (6 steps), personal hygiene include (5 steps), breast feeding include (11 steps), artificial feeding include (14 steps), use of antibiotics include (14 steps).

Second part is practice toward specific care with respiratory system to infant with pneumonia consists of 5 items as care of

cough include (6 steps),chest physiotherapy include (9 steps), difficulty breathing include (5 steps), use of oxygen therapy include (18 steps), use of nebulizer include (9 steps) .

Third part is avoid risk factors of pneumonia consists of 1 items include (8 steps).

Fourth part is follow up care consists of 1 items include (7 steps) .

Scoring system for mothers EBP:

The scoring system for mothers practice was calculated as follows (1) score for done ,while (0) score for not done,.the score of the items was summed –up and converted in to percent score. The total practices score =112 steps. The total practices score was considered satisfactory if the score of total practices >60% (> 67 score) and considered unsatisfactory if it is ≤ 60%.(< 67score).

Reliability of the tool:

The tool reliability was measured using Cronbachs Alpha test to measure the internal consistency of the tool. It was found that the reliability of mothers knowledge was 0.65%and for practices was 0.75%.

Content validity

The tool validity was done by a panel of 3 experts from Community Health Nursing Department of Faculty of Nursing, Benha University, to test the relevance, clarity, comprehensiveness, applicability and easiness for administration, implementation and of contents and according to their opinion no modification were required.

Ethical consideration:

All ethical issues were assured, an oral consent has been obtained from each mother before conducting the interview and after giving them a brief orientation to the purpose and aim of the study. The researcher was assure maintaining anonymity and confidentiality of mothers and infants data and no names require on the forms. They was also reassured that all information gathered was

confidential and used only for the purpose of the study. Mothers were informed that they are allowed to choose to participate or withdraw from the study at any time.

Pilot study:

The pilot study was carried out on 23 of mothers who represents10% of mothers had infants with pneumonia to assess the tools clarity and applicability, also to determine Time needed for structured questionnaire. According to the results obtained from the data analysis, items correction, modification, omission and addition was done as needed. No modifications were done so the pilot study sample was included in the total sample.

Field work

The actual field work was carried out for data collection for a period of six months at the beginning of June 2022 to the end of November,2022.The researchers was available three days/week (Saturdays, Mondays ,Wednesdays)from 9am-1pm.The mother who fulfilled the criteria was invited to participate after providing mother with a simple and full explanation of the aim and process of the study to obtain her verbal informed consent .The mothers who agreed was interviewed using research tools with simple Arabic language to assess their knowledge and practice. It took about 30 to 45 minutes with mother, the average number of mothers was 3-5 mothers who having pneumonic infants, attending at the Pediatrics Outpatient Clinic in Benha university hospital, after taking the official permission, the researchers introduced themself to the mothers.. The researchers conducted interview with each mother individually.

Statistical analysis:

All data collected were organized, tabulated and analyzed using appropriate statistical test. The data were analyzed by using the Statistical Package for Social Science (SPSS) Version 2022, which was applied to calculate number and percentages for qualitative data and mean ± S.D for quantitative data as well as test statistical significance and associations by using chi-square test and correlation test (r) to detect the associations between the variables for (p value).

The level of significance:
• Highly significant (HS) $P \leq 0.001$
• Significant (S) $p \leq 0.05$
• Not significant (NS) $P > 0.05$

Results

Table (1): Shows that 63.2% of the studied mothers aged from 30- < 40 years old with Mean ±SD   33.52±5.24, while 55.8% of them had intermediate education and 52.8% of them didn't work, 79.2% of the studied mothers lived in rural area and 80.1% were married. In addition to; 68% of them had not enough income

Table (2): Shows that 59.3% of the studied infants aged from 6 months and more with Mean ±SD   11.52±4.11, while 54.5% of them were boy and 61% of them had breast and artificial feeding. Regarding ranking of the infant 48.9% of the studied infant was the second infant and 69.7% of them had 4-6 family members**.**

Figure (1): Shows; 76.2% of studied mothers had poor total knowledge level about pneumonia &EBP while, 14.3% of them had average total knowledge level and 9.5% of them had good total knowledge level regarding pneumonia and evidence based practice.

Figure (2): Illustrates that; 63.2 % of studied mothers had satisfactory total practices. While, 36.8 % of them had unsatisfactory total practices regarding care of the infant with pneumonia.

Table (3): Clarifies that, there were highly statistically significant relation between the studied mothers' total knowledge level and their total practices regarding pneumonia.

Table (1): Frequency distribution of studied mothers regarding their socio- demographic (n=231).

Socio-demographic characteristics	No	%
Age/ year		
20- <30	53	22.9
30- < 40	146	**63.2**
40 and more	32	13.9
Mean ±SD	33.52±5.24	
Education		
Can't read or write	17	7.4
Primary education	11	4.8
Intermediate education	129	**55.8**
University education	74	32.0
Job		
Working	109	47.2
Do not work	122	**52.8**
Residence		
Urban	48	20.8
Rural	183	**79.2**
Marital status		
Married	185	**80.1**
Widow	35	15.2
Divorced	11	4.8
Income		
Enough	63	27.3
Not enough	157	**68.0**
Sufficient and saved	11	4.8

Table (2): Frequency distribution of studied infant regarding their Personal characteristics (n=231).

Personal characteristics	No	%
Age		
< 6 months	94	40.7
6 months and more	137	**59.3**
Mean ±SD	**11.52±4.11**	
Sex		
Boy	126	**54.5**
Girl	105	45.5
Types of feeding		
Breastfeeding only	59	25.5
Artificial feeding	31	13.4
Breast and artificial feeding	141	**61.0**
Ranking of the infant		
The first	70	30.3
The second	113	**48.9**
Third	45	19.5
Fourth or more	3	1.3
Family member number		
1 - 3 members	70	30.3
4-6 members	161	**69.7**

Evidence Based Practice regarding Mother's Care for Infants with Pneumonia
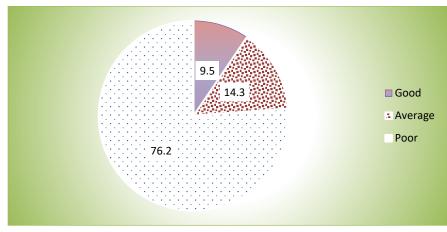

Figure (1): Percentage distribution of studied mothers regarding their total knowledge level (n=231).
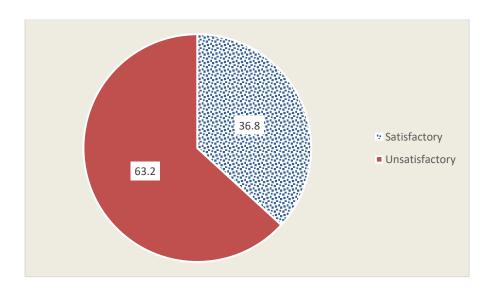

Figure (2): Percentage distribution of studied mothers total practices level (n=231).

Table (3): Statistical relation between total EBP and knowledge level among studied mothers

Total knowledge	Total practices				X^2	P-value
	Unsatisfactory (n=146)		Satisfactory (n=85)			
Poor (n=176)	118	80.8	58	68.2	32.26	.000**
Average (n=33)	26	17.8	7	8.2		
Good (n=22)	2	1.4	20	23.5		

Discussion

Regarding to socio-demographic characteristics of studied mothers, the current study revealed that more than half of the studied mothers aged from 30- < 40 years old with Mean ±SD 33.52±5.24, while more than half of them had intermediate education and more than half of them didn't worked. Regarding residence more than three quarters of the studied mothers were lived in rural area and more than two thirds of them had not enough income. In addition to; most of them were married.

This result was in agreement with **Akand, (2020)** who studied "Mothers Knowledge Related to Preventive Measure of Pneumonia in Hospitalized Children Under 5 Years Age: A Tertiary Care Center Experience." "(n=120) And reported that less than two third of the studied mothers were lived in rural area. Also, this finding were contraindicated with **Saeed and Awadalla, (2020)** who studied "Knowledge, Attitude and, Practice among Mothers of Under-Five Children about Acute Lower Respiratory Tract Infections an a Locality in Khartoum Urban Area"(n=300) and reported more than three quarters of mothers were house wife.

In the same line, these results were supported by **Eliyas et al., (2018)** who studied "Mothers knowledge related preventive measure of pneumonia in Slum community"(n=120) and found that more than half 51.6% study participant were in the age group of 31 to 41 years. These results disagreed with **Akand et al., (2020)** who reported that more than fifty of the studied mothers were under 20 years of age group with Mean ±SD 27.3±8.9.

In the same line these findings contraindicated with **Saeed and Awadalla, (2020)** who reported that less than one third of mother had secondary school and minority of them had low income.

Regarding personal characteristics of studied infant, the present study showed that more than half of the studied infant aged from 6 months and more with Mean±SD 11.52±4.11, while more than half of them were male and less than two thirds of them had breast and artificial feeding. Regarding ranking of the infant less than half of the studied infant was the second infant and less than three quarters of them had 4-6 family members. From the researcher point of view, these results may be because children under five years are more susceptible to pneumonia and the studied mothers' experiences in the way of dealing with their children during respiratory tract infection episodes that occurred for the first and second child. Therefore, they responded with the researcher during the interview, but they do not have enough information about the disease.

These findings supported by **Hamdy et al., (2022)** who studied "Mothers' Measures Regarding Prevention of Upper Respiratory Tract Infection and its Occurrence for their Children""(n=409) and reported that more than half of infant were male and less than half of them were the third infant.

These results agreed with **Chheng and Thanattheerakul, (2021)** who conducted study about :Knowledge, Attitudes, and Practices to Prevent Pneumonia among Caregivers of Children Aged Under 5 Years Old in Cambodia""(n=113) and reported about the children's sex more than two third were male.

In the same line, these results agreed with **Akand et al., (2020)** who reported that more than half of the studied babies were male and less than half were females.

In another hand, these findings un supported by **Chheng, and Thanattheerakul, (2021)** who reported that more than half studied infants were less than 6 month in age contraindicated with **Saeed and Awadalla,**

(2020) who reported that less than half of infants were male.

These findings unsupported by **Hamdy et al., (2022)** who reported that more than one third of infants had breast feeding, less than tenth of them had bottle feeding and more than half of them had family food. This may be due to the children of this study were aged 3:≤ 5year**.**

The current study **s**hows that; more than three quarters of studied mothers had poor total knowledge level about pneumonia &EBP while, minority of them had good total knowledge level regarding pneumonia and evidence based practice. From the researchers' point of view, these results might due to characteristics of mothers as most of them from rural areas, with intermediate education and house wife. Besides, the focuses of the health care team on the disease management rather than total knowledge about disease.

The present result paralleled to **Abozed et al., (2020),** who studied under title "Effectiveness of Learning Package Application on the Use of Antibiotics for Mothers of Children with Upper Respiratory Tract Infection"(n=160) and stated that, majority of the studied mothers had poor knowledge. These results supported by **Eliyas et al., (2018)** who found that more than fifth of women had fair knowledge whereas more than half of women did not have knowledge about pneumonia.

In the same line, these results matched with the study that carried out by **Mutalik& Raje (2017),** who conducted study about "assess the knowledge, attitude and practice about Acute Respiratory Infections among school going children and their parents" and reported that, two thirds of mothers had poor knowledge about acute respiratory infection.

In other hand, this finding un supported by **Chheng, and Thanattheerakul, (2021)** who reported that there were more than three quarters had good knowledge, more than fifth

had moderate knowledge, and less than tenth have poor knowledge about pneumonia in children under 5 years old.

This results disagreed with **Saudi et al., (2020)** who studied " The Effectiveness of Health Education using Mobile Phone-based Audiovisual on Knowledge and Attitude among Mother in Treating Toddler with Pneumonia" ""(n=46) and found that more than half had fair knowledge about pneumonia at pretest results.

This result unsupported by **Gaikwad et al., (2020)** who studied "A study to assess the knowledge regarding pneumonia among parents of under five children in selected hospitals of Pune city." And found that that more than two thirds of the parents have average knowledge and more than one quarter of the parents have poor knowledge and less than tenth of the parents have good knowledge regarding pneumonia.

Mothers regarding EBP about their care of the infants with pneumonia illustrates that; more than one third of studied mothers had satisfactory total practices. While, less than two thirds of them had unsatisfactory total practices regarding general practices care of the infant with pneumonia. From the researchers point of view these results might be due to that studied mothers know that pneumonia is serious disease need to carful follow up doctor prescription to prevent its complication.

These findings came in harmony with **Chheng and Thanattheerakul, (2021)** who reported that for the level of practice found thatmore than two third of participants have good practice, less than one quarter have moderate practice, and less than tenth have poor practice. Also, these findings came harmony with **Al-Ali et al., (2019)** who studied " Parental knowledge, attitudes, and practices regarding the use of prescribed inhalers in asthmatic children attending Ambulatory Healthcare Services Clinics" and

reported that less than two thirds of the studied women had good level of total practice.

In another hand, this findings disagreed with **Saeed and Awadalla, (2020)** who reported that mothers scored less than 3 were considered as having bad practice seeking medical help when their infant is sick , so the practice in general was bad.

Regarding relation between studied mothers total knowledge level and their total EBP., there were highly statistically significant relation between the studied mothers' total knowledge level and their total practices regarding pneumonia.

This finding supported by **Hamdy et al., (2022)** who reported that there was a positive correlation between mothers 'total knowledge scores and their total reported practice. Also, this result in agreement with **Abdul- Kareem et al., (2021),** who found that, statistically significant positive correlation between mothers' total knowledge scores and their total reported practice.

In addition, this result were supported with the study performed by **Joshy et al., (2018)** who conducted study about "Effectiveness of Information Booklet on Knowledge of Mothers Regarding Home Management of Respiratory Tract Infection among Under Five Children"(n=60) and stated that total knowledge of the studied mothers had a significant effect on their total practice.

Conclusion

More than three quarters of studied mothers had poor knowledge regarding pneumonia &EBP, More than half of studied mothers total practice were satisfactory, regarding care of the infant with pneumonia. There were highly statistically significant relation between the studied mothers' total knowledge level and their total practices regarding pneumonia.

Recommendations

1. Health educational program for mothers should be developed and implemented to improve knowledge & enhancing practices about pneumonia and prevent complication

2. Designing and distributing Arabic booklets and printing guidelines regarding care of infant with pneumonia to all mothers who attending at different health care setting .

3. Further researches in the studying the predisposing factors of pneumonia and how to avoid it.

4. Campaigns should be done regularly in the society to arise awareness about serious diseases like pneumonia especially in a vulnerable group like infant and families should be enrolled in the process of change.

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Evidence Based Practice regarding Mother's Care for Infants with Pneumonia

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الممارسة القائمة على الأدلة فيما يتعلق برعاية الأمهات للرضع المصابين بالالتهاب الرئوي

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يعد الالتهاب الرئوي أكثر الأسباب شيوعًا لكل من المرض والوفاة لدى الأطفال الرضع دون سن الخامسة ، حيث تحدث ثلاث إلى ست نوبات من التهاب الرئة سنويًا بغض النظر عن المكان الذي يعيش فيه الأطفال. **لذا** هدفت هذه الدراسة إلى تقييم الممارسة القائمة على الأدلة فيما يتعلق برعاية الأم للرضع المصابين بالإلتهاب رئوي وتم استخدام تصميم بحث وصفي لإجراء هدف هذه الدراسة. وقد أجريت الدراسة في العيادة الخارجية للأطفال بمستشفى بنها الجامعى و تم اختيار عينة عشوائية بسيطة من جميع الأمهات المصحوبات برضع مصابين بالالتهاب الرئوي وهي تشمل ٢٣١ من ٥٤٨ من إجمالي الأمهات اللائي حضرن في العيادة الخارجية للأطفال بمستشفى بنها الجامعى. وقد أسفرت نتائج الدراسة عن ٦٣,٢٪ من الأمهات تتراوح أعمارهن بين ٣٠- <٤٠ سنة بمتوسط SD ± ٣٣,٥٢ ± ٥,٢٤ ، بينما ٥٥,٨٪ منهن حاصلات على تعليم متوسط و ٥٢,٨٪ منهن لم يعملن. فيما يتعلق بالسكن ، فإن ٧٩,٢٪ من الأمهات كن يعشن في مناطق ريفية و ٦٨٪ منهن ليس لديهن دخل كاف. بالإضافة إلى؛ ٨٠,١٪ متزوجات. ٥٩,٣٪ من الأطفال الرضع تتراوح أعمارهن بين ٦ أشهر فأكثر بمتوسط ± ١١,٥٢±٤,١١ بينما كان ٥٤,٥٪ منهن كان ذكور و ٦١٪ منهن لديهن رضاعة طبيعية وصناعية. فيما يتعلق بترتيب الطفل ، كان ٤٨,٩٪ من الأطفال المدروسين هو الطفل الثالث و٧٢,٣٪ منهم ٤-٦ أفراد من الأسرة.بناء على نتيجة هذه الدراسة ، يوصى بالنقاط التالية يجب تطوير وتنفيذ برنامج تثقيف صحي للأمهات لتحسين المعرفة وتعزيز الممارسات حول الالتهاب الرئوي ومنع المضاعفات