Indian Journal of Public Health Research & Development

EXECUTIVE EDITOR

Vidya Surwade
Associate Professor, Dr Baba Saheb Ambedkar, Medical College & Hospital, Rohinee, Delhi

INTERNATIONAL EDITORIAL ADVISORY BOARD

1. Dr. Abdul Rashid Khan B. Md Jagar Din, (Associate Professor) Department of Public Health Medicine, Penang Medical College, Penang, Malaysia
2. Dr. V Kumar (Consulting Physician) Mount View Hospital, Las Vegas, USA
3. Basheer A. Al-Sum, Botany and Microbiology Deptt, College of Science, King Saud University, Riyadh, Saudi Arabia
4. Dr. Ch Vijay Kumar (Associate Professor) Public Health and Community Medicine, University of Buraimi, Oman
5. Dr. VMC Ramaswamy (Senior Lecturer) Department of Pathology, International Medical University, Bukit Jalil, Kuala Lumpur
6. Kartavya J. Vyas (Clinical Researcher) Department of Deployment Health Research, Naval Health Research Center, San Diego, CA (USA)
7. Prof. PK Pokharel (Community Medicine) BP Korala Institute of Health Sciences, Nepal
8. Sajjad Salim Issa AL-Musawi, Supervisor for Student of the Arab Board in Family Medicine
9. Prof. Dr. Ayad F. Alkaim, Professor of Surface Chemistry and Applications of Nano-materials, Babylon University, Iraq

NATIONAL SCIENTIFIC COMMITTEE

1. Dr. Anju Ade (Associate Professor) Navodaya Medical College, Raichur, Karnataka
2. Dr. E. Venkata Rao (Associate Professor) Community Medicine, Institute of Medical Sciences & SUM Hospital, Bhubaneswar, Orissa
3. Dr. Amit K. Singh (Associate Professor) Community Medicine, VCSG Govt. Medical College, Srinagar – Garhwal, Uttarakhand
4. Dr. R G Viveki (Professor & Head) Community Medicine, Belgium Institute of Medical Sciences, Belgium, Karnataka
5. Dr. Santosh Kumar Mulage (Assistant Professor) Anatomy, Raichur Institute of Medical Sciences Raichur(RIMS), Karnataka
6. Dr. Gouri Ku. Padhy (Associate Professor) Community and Family Medicine, All India Institute of Medical Sciences, Raipur
7. Dr. Ritu Goyal (Associate Professor) Anaesthesia, Sarwath Institute of Medical Sciences, Panchsheel Nagar
8. Dr. Anand Kalaskar (Associate Professor) Microbiology, Prathima Institute of Medical Sciences, AP
9. Dr. Md. Amirul Hassan (Associate Professor) Community Medicine, Government Medical College, Ambedkar Nagar, UP
10. Dr. N. Girish (Associate Professor) Microbiology, VMS&RC, Bangalore
11. Dr. BR Hungund (Associate Professor) Pathology, JNMC, Belgaum.
12. Dr. Sartaj Ahmad (Assistant Professor), Medical Sociology, Department of Community Medicine, Swami Vivekananda Subharti University, Meerut, Uttar Pradesh, India
13. Dr Sumeeta Soni (Associate Professor) Microbiology Department, B.J. Medical College, Ahmedabad, Gujarat, India

NATIONAL EDITORIAL ADVISORY BOARD

1. Prof. Sushanta Kumar Mishra (Community Medicine) GSL Medical College – Rajahmundry, Karnataka
2. Prof. D.K. Srivastava (Medical Biochemistry) Jamia Hamdard Medical College, New Delhi
3. Prof. M Sriharibabu (General Medicine) GSL Medical College, Rajahmundry, Andhra Pradesh
4. Prof. Pankaj Datta (Principal & Prosthodontist) Indraprastha Dental College, Ghaziabad
5. Prof. Samarendra Mahapatro (Pediatrician) Hi-Tech Medical College, Bhubaneswar, Orissa
6. Dr. Abhiruchi Gathora (Additional Professor) Community and Family Medicine, All India Institute of Medical Sciences, Raipur
7. Prof. Deepti Pruthvi (Pathologist) SS Institute of Medical Sciences & Research Center, Davangere, Karnataka
8. Prof. G S Meena (Director Professor) Maulana Azad Medical College, New Delhi
9. Prof. Pradeep Khanna (Community Medicine) Post Graduate Institute of Medical Sciences, Rohtak, Haryana
10. Dr. Sunil Mehra (Paediatrician & Executive Director) MAMTA Health Institute of Mother & Child, New Delhi
11. Dr Shailendra Handu, Associate Professor, Pharma, DM (Pharma, PGI Chandigarh)
12. Dr. A.C. Dhariwal: Directorate of National Vector Borne Disease Control Programme, Dte. DGHS, Ministry of Health Services, Govt. of India, Delhi

Print-ISSN: 0976-0245-Electronic-ISSN: 0976-5506, Frequency: Monthly

Indian Journal of Public Health Research & Development is a double blind peer reviewed international journal. It deals with all aspects of Public Health including Community Medicine, Public Health, Epidemiology, Occupational Health, Environmental Hazards, Clinical Research, and Public Health Laws and covers all medical specialties concerned with research and development for the masses. The journal strongly encourages reports of research carried out within Indian continent and South East Asia.

The journal has been assigned International Standards Serial Number (ISSN) and is indexed with Index Copernicus (Poland). It is also brought to notice that the journal is being covered by many international databases. The journal is covered by EBSCO (USA), Embase, EMCare & Scopus database. The journal is now part of DST, CSIR, and UGC consortia.

Website : www.ijphrd.com

©All right reserved. The views and opinions expressed are of the authors and not of the Indian Journal of Public Health Research & Development. The journal does not guarantee directly or indirectly the quality or efficacy of any product or service featured in the advertisement in the journal, which are purely commercial.

Editor

Dr. R.K. Sharma
Institute of Medico-legal Publications
Logix Office Tower, Unit No. 1704, Logix City Centre Mall, Sector-32, Noida - 201 301 (Uttar Pradesh)

Printed, published and owned by

Dr. R.K. Sharma
Institute of Medico-legal Publications
Logix Office Tower, Unit No. 1704, Logix City Centre Mall, Sector-32, Noida - 201 301 (Uttar Pradesh)

Published at

Institute of Medico-legal Publications
Logix Office Tower, Unit No. 1704, Logix City Centre Mall, Sector-32, Noida - 201 301 (Uttar Pradesh)
1. The Etiological Profile of Seizures in Children in a Tertiary Care Hospital, Hapur, Uttar Pradesh .. 01
   Shweta Singh, M Agrawal, Yogesh Kumar Goel, Dayachand Verma

2. Does Pregnant Mother are aware about PMTCT of HIV? What is their Attitude and Do they Practice
   the Measures on PMTCT of HIV?: A Narrative Review ................................................................. 07
   Neethu Sabu, N V Muninarayanappa, Kavitha Mole P J

3. Recent Resting Habit of Adult *Phlebotomus argentipes* the Vector of *Visceral leishmaniasis*
   in a Kala Azar Endemic Foci of Bihar India ..................................................................................... 12
   Chandrima Das, Shilpa Raj, A K Mukhopadhyay

4. Substance Use Disorder - Vital Hurdle in Sustainable Development of Nigeria .......................... 18
   Jummai Fatima Muhammad, Malavika Bhattacharya

5. A Study of Urinary Uric Acid/Creatinine Ratio as an Additional Marker of Birth Asphyxia ........ 23
   Renu Yadav, Sangeeta Singhal, Gagan Agarwal

6. Incidence, Prevalence and Mortality of HIV/AIDS across Different Levels of Human Development
   Index: A Global Perspective .............................................................................................................. 28
   Ravi Prakash Jha, Krittika Bhattacharyya, Rabindra Nath Mishra, Akash Mishra

7. Study to Assess the Social and Economic Impact of Alcohol in a Peri-Urban Area of Tamil Nadu
   .................................................................................................................................................. 34
   Shankar S, Raghuram V, Elango S

8. Economics of Sustainability – A Theoretical Perspective ............................................................ 40
   S N Sugumar, S Balasekaran, S Chandrachud

   Tapan Pattanaik, Ratan Kumar Das, K Trimal Subudhi, Mahesh Chandra Sahu

10. Students’ Perception and Attitude on Education Curriculum and System in an Indian Dental
    School ............................................................................................................................................... 50
    Madhura Sen, Kundabala M

11. Perception of Anganwadi Services in Urban ICDS Blocks in Kozhikode Corporation – A Cross
    -Sectional Study ............................................................................................................................ 55
    Sivakumar D, Asma Rahim, Deepika
80. Quantitative Fire and Explosion Risk Assessment of Fuel Tanker Truck: Preliminary Case Study at Fuel Terminal X Jakarta ................................................................. 434
   Laksita Ri Hastiti, Fatma Lestari, Indri Hapsari Susilowati

81. Smile Card as a Breakthrough to Increase Dental and Oral Hygiene Level in Primary School Students in Jakarta .............................................................................................................. 440
   Jusuf Kristianto, Ita Yulita, Dwi Priharti, Heru Santoso Wahito Nugroho

82. Analysis of Determinant Factors of Exclusive Breastfeeding in Indonesia: A Case of Ulakan Tapakis District ........................................................................................................................................ 444
   Marisa Lia Anggraini, Arni Amir, Hardisman Dasman

83. Effect of Strategic Foresight on the Success of Healthcare Marketing ...................................................... 450
   Ahmed Mohammed Fahmi, Araden Hatim Khudair, Bushra Shakir Al-Shukri

84. Study of the Organic Pollution in Euphrates River, Southern of Iraq ........................................................ 456
   Ali Abdulhamza Al-Fanharawi, Ahmed Sabah Al-Jasimee

85. International Patients Safety Goals (IPSG) based on Knowledge Management of SECI (Socialization, Externalization, Combination and Internalization) on Adverse Events at Jakarta Islamic Hospital ................................................................................................................................. 462
   Harif Fadhillah, Nursalam, Muhammad Hadi, Ferry Efendi, Rr Dian Tristiana

86. Factors Affecting the Side Effects of Anti-Tuberculosis Drugs ........................................................................... 469
   Masriadi, Eha Sumantri, Sanasiah, Heru Santoso Wahito Nugroho

87. The Effects of Cold Compress and Warm Compress on β-Endorphin Levels, IL-6 and TNFα among Adolescent with Dysmenorrhea ................................................................. 474
   Mukhoirotin, Kurniawati, Diah Ayu Fatmawati

88. Mediating Effects of Wisdom in the relation between Lifestyle Habits (LH) and Health Conservation (HC) of Middle-aged Men ........................................................................... 480
   Hee Kyung Kim

89. Association of Helicobacter Pylori and Irritable Bowel Syndrome ............................................................. 486
   Ali Talib Al-Damarchi, Ghufran Abdulelah Al-Talakani

90. Groundwater Contamination of Some Soils Near the Kefal River ................................................................ 492
   Kifaya Hasan Qassim

91. Relationship of Patient Characteristics with Patient Satisfaction ................................................................. 497
   Anggun Wulandari, Ester Mariana, Nyoman Anita Damayanti

92. Evaluation on Preparation of Fire Hazards in Pt. X Muncar Banyuwangi (Study on Fish Canning Company in Muncar Banyuwangi) ................................................................. 501
   Hesti Jatnikowati, Yustinus Denny Ardyanto Wahyudono, Tjipto Soewandi

93. Association between Exclusive Breastfeeding with Health Belief Model in Working Mothers ...... 507
   Mardiana, Ave Aytalaththova Mahabay Aryotochter, Galuh Nita Prameswari, Muhammad Azinar, Lukman Fauzi, Efa Nugroho
Analysis of Determinant Factors of Exclusive Breastfeeding in Indonesia: A Case of Ulakan Tapakis District

Marisa Lia Anggraini¹, Arni Amir¹², Hardisman Dasman³
¹Master of Midwifery Program, ²Department of Biology, ³Department of Public Health and Community Medicine, Faculty of Medicine of Andalas University, Indonesia

ABSTRACT

Background and Aim: Infant’s nutritional needs for optimal growth and development up to 6 months can be supplied by exclusive breastfeeding because it contains all the nutrients as the infant needs. However, the exclusive breastfeeding practice has been relatively low in Indonesia, including Tapakis District in West Sumatera Province. The study aimed to explore the determinant factors related to this practice.

Method: A cross-sectional study was conducted in Uakan Tapakis District, on 88 mothers who have a child aged 0-12 months. To understand the determinant factors, the data was analyzed both using bivariate and multivariate analysis.

Result: The result shows that exclusive breastfeeding is associated to knowledge (p=0.025), attitude (p=0.038), motivation (p=0.044), occupational status (p=0.025), health resource availability (p=0.028), health officer role (p=0.013) and family support (p=0.038). Moreover, the most dominant variable is the role of health workers in supporting the breastfeeding practice (p=0.013, OR=8.772).

Conclusion: The health workers, especially midwife plays significant role in supporting breastfeeding practice. It is necessary to have good communication and health education from health workers for the succeed implementation.

Keywords: Exclusive breastfeeding, determinants, health workers

BACKGROUND

The standard of health in a country can be seen from Infant Mortality Rate (IMR) and the life expectancy of its population. Globally, the World Health Organization (WHO) states that the number of infant deaths is about 1 million stillbirths and 2.7 million deaths in the first week of life. More than 63 countries in the world, including in the Asian region, are in dire need of efforts to reduce the infant mortality in order to achieve the Suitable Development Goals (SDGs) target, namely 12 deaths per 1,000 live births in 2030.

In Indonesia especially, the IMR is also relatively higher than neighboring countries. The data of Indonesian Demographic and Health Survey (IDHS) has shown that the IMR dropped from 68 to 32 deaths per 1,000 live births in 1991 and 2012 respectively. In West Sumatera Province especially, the cases of infant mortality was found 392 cases in 2014.

WHO and the United Nations Children’s Fund (UNICEF) lead global breastfeeding advocacy initiatives to ensure that exclusive breastfeeding rates increase by at least 50% by 2025. WHO and UNICEF in Infant and Young Child Feeding, recommend the gold standard for feeding infants and children are (1) early breastfeeding initiation at 1 hour of birth, (2) Exclusive breastfeeding in the first 6 months, and (3) introduction to complementary solid food with adequate and safe nutrition at 6 months together with continuing breastfeeding for up to 2 years or more. World Breastfeeding Week Guide in...
2016 states that exclusive breastfeeding has a large contribution to growth and endurance. Children who are given exclusive breastfeeding will have optimal growth and development and are not easily get ill. This is in accordance with several global studies and facts.\(^7\)

The coverage of exclusive breastfeeding in West Sumatra Province was relatively low, and did not reach the target, such as 60.0% in 2011 from the target of 67.0%, and 75.1% in 2015 from the target of 83.0%.\(^8\)

The exclusive breastfeeding practice in Padang Pariaman Regency was even lower, which was only 56% and 57.4% in 2014 and 2015 respectively. Among all districts in Padang Pariaman, Ulakan Tapakis Districts was the lowest with exclusive breastfeeding rate 29.8% in 2015.\(^9\) Therefore, the study aimed to explore the determinant factors related to exclusive breastfeeding in this district as a case study, that can be inferable data for Indonesia.

**METHOD**

A cross sectional study was conducted in Ulakan Tapakis District, with the data collection between June and November 2017. The participants of the study was 88 mothers who had a baby 06-12 months, which selected randomly.

The instrument was developed by using Ministry of Health of Indonesia guidelines on breastfeeding practice. Later the data analyzed quantitatively both using bivariate and multivariate analyses.

**RESULT**

The result shows that there are 21.6% participants who do an exclusive breastfeeding. The distribution of knowledge, attitude, education and other variables are comparable between high and low (as can be seen in table 1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>f (n = 88)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of Exclusive Breastfeeding</td>
<td>19</td>
<td>21.6</td>
</tr>
<tr>
<td>Exclussive</td>
<td>69</td>
<td>78,4</td>
</tr>
<tr>
<td>Not Exclusive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Knowledge</td>
<td>50</td>
<td>56,8</td>
</tr>
<tr>
<td>High Knowledge</td>
<td>38</td>
<td>43,2</td>
</tr>
</tbody>
</table>

The exclusive breastfeeding practice associated to knowledge (p=0.025), attitude (p=0.038), motivation (p=0.044), occupational status (p=0.025), health resource availability (p=0.028), health officer role (p = 0.013), and family support (p=0.038) (see table 2).
### Tabel 2. Variables relations with the implementation of exclusive breastfeeding

<table>
<thead>
<tr>
<th>Variable</th>
<th>Implementation of Exclusive Breastfeeding</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exclusive (n = 19)</td>
<td>%</td>
<td>Not Exclusive (n = 69)</td>
<td>%</td>
<td>p</td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>High</td>
<td>13</td>
<td>34,2</td>
<td>25</td>
<td>65,8</td>
<td>0,025</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>6</td>
<td>12,0</td>
<td>44</td>
<td>88,0</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>Positive</td>
<td>14</td>
<td>31,8</td>
<td>30</td>
<td>68,2</td>
<td>0,038</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>5</td>
<td>11,4</td>
<td>39</td>
<td>88,6</td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>Good</td>
<td>13</td>
<td>32,5</td>
<td>27</td>
<td>67,5</td>
<td>0,044</td>
</tr>
<tr>
<td></td>
<td>Not Good</td>
<td>6</td>
<td>12,5</td>
<td>42</td>
<td>87,5</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>High</td>
<td>11</td>
<td>28,2</td>
<td>28</td>
<td>71,8</td>
<td>0,278</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>8</td>
<td>16,3</td>
<td>41</td>
<td>83,7</td>
<td></td>
</tr>
<tr>
<td>Occupational Status</td>
<td>Unemployed</td>
<td>10</td>
<td>15,2</td>
<td>56</td>
<td>84,8</td>
<td>0,025</td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>9</td>
<td>40,9</td>
<td>13</td>
<td>59,1</td>
<td></td>
</tr>
<tr>
<td>Availability of Health Resources</td>
<td>Available</td>
<td>11</td>
<td>36,7</td>
<td>19</td>
<td>63,3</td>
<td>0,028</td>
</tr>
<tr>
<td></td>
<td>Not Available</td>
<td>8</td>
<td>13,8</td>
<td>50</td>
<td>86,2</td>
<td></td>
</tr>
<tr>
<td>Affordability of Health Resources</td>
<td>Affordable</td>
<td>8</td>
<td>19,5</td>
<td>33</td>
<td>76,6</td>
<td>0,855</td>
</tr>
<tr>
<td></td>
<td>Not Affordable</td>
<td>11</td>
<td>23,4</td>
<td>36</td>
<td>80,5</td>
<td></td>
</tr>
<tr>
<td>Health Worker Skills</td>
<td>Unskilled</td>
<td>9</td>
<td>22,0</td>
<td>32</td>
<td>78,7</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Skilled</td>
<td>10</td>
<td>21,3</td>
<td>37</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>The Role of Health Workers</td>
<td>Play a Role</td>
<td>17</td>
<td>30,9</td>
<td>38</td>
<td>69,1</td>
<td>0,013</td>
</tr>
<tr>
<td></td>
<td>Do Not Play a Role</td>
<td>2</td>
<td>6,1</td>
<td>31</td>
<td>93,9</td>
<td></td>
</tr>
<tr>
<td>The Role of Non-Health Workers</td>
<td>Play a Role</td>
<td>3</td>
<td>17,6</td>
<td>14</td>
<td>82,4</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Do Not Play a Role</td>
<td>16</td>
<td>22,5</td>
<td>55</td>
<td>77,5</td>
<td></td>
</tr>
<tr>
<td>Family Support</td>
<td>Play a Role</td>
<td>14</td>
<td>31,8</td>
<td>30</td>
<td>68,2</td>
<td>0,038</td>
</tr>
<tr>
<td></td>
<td>Do Not Play a Role</td>
<td>5</td>
<td>11,4</td>
<td>39</td>
<td>88,6</td>
<td></td>
</tr>
<tr>
<td>Myth</td>
<td>Do Not Believe</td>
<td>6</td>
<td>16,2</td>
<td>31</td>
<td>83,8</td>
<td>0,435</td>
</tr>
<tr>
<td></td>
<td>Believes</td>
<td>13</td>
<td>25,5</td>
<td>38</td>
<td>74,5</td>
<td></td>
</tr>
<tr>
<td>Formula Milk Promotion</td>
<td>Not Interested</td>
<td>9</td>
<td>17,0</td>
<td>44</td>
<td>84,0</td>
<td>0,304</td>
</tr>
<tr>
<td></td>
<td>Interested</td>
<td>10</td>
<td>28,6</td>
<td>25</td>
<td>71,4</td>
<td></td>
</tr>
<tr>
<td>Health Problem</td>
<td>No Health Problem</td>
<td>18</td>
<td>21,7</td>
<td>65</td>
<td>78,3</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>There are Health Problem</td>
<td>1</td>
<td>20,0</td>
<td>4</td>
<td>80,0</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 Dominant Factor The Implementation of Exclusive Breastfeeding

<table>
<thead>
<tr>
<th>Variable</th>
<th>p value</th>
<th>OR</th>
<th>95 % CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Step Motivation</td>
<td>0.004</td>
<td>8.560</td>
<td>1.978 – 37.054</td>
</tr>
<tr>
<td>Availability of health resources</td>
<td>0.998</td>
<td>1.778</td>
<td>0.000</td>
</tr>
<tr>
<td>Affordability of health resources</td>
<td>0.998</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>The role of health workers</td>
<td>0.013</td>
<td>8.772</td>
<td>1.584 – 48.596</td>
</tr>
</tbody>
</table>

Multivariate analysis shows that the most dominant variable is the role of the health worker, with p value 0.013 and OR of 8.772 (CI=1.584 – 48.596).

**DISCUSSIONS**

Based on the results of the study, it is found that only a small proportion (21.6%) of respondents who carry out exclusive breastfeeding on their babies. This result is very far from the achievement target of exclusive breastfeeding which is supposed to be 83.0%. According to research conducted by Rhokliana mother, family, and community have little understanding about exclusive breastfeeding. Not a few mothers who still throw colostrum away because it is considered dirty. In addition, the habit of giving food and drinks early to baby in community also cause unsuccessful exclusive breastfeeding. Some mothers also lack of confidence to be able to breastfeed their babies. This encourages mothers to easily stop breastfeeding and replace it with formula milk.

The study it reveals that the knowledge of mother is associated to the implementation of exclusive breastfeeding. Another research conducted by Kusumaningrum states that the poor knowledge is thought to be due to lack of information, lack of clarity of information, and lack of ability to understand the information received. The research conducted by Kusumaningtyas states that poor knowledge in Exclusive breastfeeding can be caused by other factors that influence knowledge, including non-supporting environmental factors that can prevent a person from having poor knowledge.

The study also shows that there is a significant relationship between the attitudes of respondents and the implementation of exclusive breastfeeding. This is in accordance with Haryati’s opinion, that a mother who has never received advice or experience, breastfeeding counseling and the ins and outs of others, as well as from reading books, the mother will have less knowledge and influencing her attitude so that it becomes negative towards exclusive breastfeeding.

The motivation is also significantly associated to the implementation of exclusive breastfeeding. Sopiyani’s study in Klaten District found a very significant positive relationship between social support and motivation to provide exclusive breastfeeding. That is, the higher (stronger) the social support, the higher the motivation for giving exclusive breastfeeding.

Leve of education is also associated to implementation of exclusive breastfeeding significantly. The results of this study are not in line with Atabik in his research, which states that there is a significant relationship between the level of maternal education and the implementation of exclusive breastfeeding in the Pamotan village of Rembang Regency. Mothers who have higher education generally also have better nutrition knowledge and have greater attention to the nutritional needs of children.

Meanwhile occupational status is also associated to exclusive breastfeeding practice. Its means that good environment very much influence the mother in their feeding baby practice. As Satino’s research in Surakarta City, explained that environmental factors support exclusive breastfeeding and the environment did not support exclusive breastfeeding.

The study also shows that the availability and access to health resources very much associated to the implementation of exclusive breastfeeding. Likely due to lack of information about exclusive breastfeeding from childbirth helper in the place of the mother giving birth. It can be expected that the combination of these two components is the key to the success of the lactation process. In order to be able to achieve a wider community health service, a Health Center (Puskesmas) was established *Posyandu* (Integrated service post). Particularly in the field of midwifery with the aim
of accelerating the reduction of maternal and infant mortality, the idea of a midwife in the village.\(^{18}\)

The role and support of health workers is significantly associated to implementation of exclusive breastfeeding. The results of this study are in line with Tesy Mamonto's research\(^ {19}\) in the work area of Kotobangon Public Health Center, West Kotamobagu Subdistrict, Kotamobagu City, where the results of the study stated that there was a relationship between the role of health workers and exclusive breastfeeding, where most respondents did not exclusively breastfeed because of the lack of role/ support from health workers. Based on the results of research conducted by Josefa\(^ {20}\) in the District of West Semarang, it turns out that the support of health workers in the period before and after childbirth, such as education and counseling, has not been as expected.

Moreover, the family support, including husband and relatives who stay at the same house with participants is very much influenced them to have exclusive breastfeeding practice. Research conducted by Hedianti\(^ {21}\) states that family members who play the most role in providing support in terms of informational support and assessment support are husbands, while family members who play the most role in instrumental support and emotional support are husbands and parents. From all of aspects of support, the family members who have the most role in providing support are husband and parents (67.9%).

About myth and false beliefs variables about baby food, based on the results of the study concluded that there was a significant relationship between the myths with the implementation of exclusive breastfeeding. One of the obstacles for breastfeeding mothers is their belief in myth. In fact, the myth cannot be proven true.\(^ {22}\) Myth is the fruit of ancient thought where analysis of a certain condition is still very limited. In line with the term 'not all myths are wrong', then not all myths can be held true.\(^ {23}\) Formula milk promotion variable, based on the results of the study concluded that there was no relationship between the promotion of formula milk with the implementation of exclusive breastfeeding. This study is in line with the research conducted by Isnaini\(^ {24}\), in which the mothers with poor education is at risk giving formula milk. Maternal education, in addition as the main asset in the household economy, also plays a role in the initial feeding of the baby.

Multivariate analysis result shows that the most dominant variable related to the implementation of exclusive breastfeeding is the role of health workers. In contrast to the research conducted by Tesy Mamonto\(^ {19}\) in the work area of Kotobangun Health Center, Kotamobagu Timur District, Kotamobagu City, stated that the most dominant variable is respondent attitude towards exclusive breastfeeding. And research conducted by Astuti\(^ {25}\) in the work area Serpong Health Center, said that the most dominant variable is the parent role related to the behavior of giving exclusive breastfeeding.

**CONCLUSIONS**

Based on the results of the research and discussion that refers to the research objectives, it can be concluded that the factors related to the implementation of exclusive breastfeeding are including predisposing factors (knowledge, attitudes, motivation, and work), enabling factors (the availability of health resources), and reinforcing factors (the role of health workers and the role of the family). The most dominant variable is the role of health workers, which implies that good communication and health education from health workers is necessary for the succeed implementation of exclusive breastfeeding practice.

**Ethical Clearance:** Research approval was taken from Medical and Health Research Ethics Committee of Faculty of Medicine of Andalas University. The formal permission was also obtained from the Department of Health of Padang Pariaman Regency of Indonesia.

**Source of Funding:** The research is self funded.

**Competing Interests:** The authors declare that there is no competing interests.

**REFERENCES**

4. Department of Health of West Sumatera Province. Health Profile of West Sumatera Province. Padang:
Department of Health of West Sumatera Province, 2016.


13. Haryati S. Determinant factors associated to exclusive breastfeeding up to four months in Kandangmas Village, Kudus Regency of Semarang [thesis], Faculty of Public Health, Diponegoro University, 2006.


20. Josefa KG. Determinant factors influence exclusive breastfeeding in Manyaran Health Center, Semarang Barat District [thesis], Faculty of Medicine of Diponegoro University, 2011.


