Contents lists available at IOCS

# **Science Midwifery**

journal homepage: www.midwifery.iocspublisher.org

# Development of a flip chart based on local wisdom regarding exclusive breastfeeding

### Linda Puji Astutik<sup>1</sup>, Herlinadiyaningsih<sup>2</sup>, Yena Wineini Migang<sup>3</sup>

1,2,3Department of Midwifery, Poltekkes Kemenkes Palangkaraya, Indonesia

## A R T I C L E I N F O ABSTRACT

### Article history:

Received Sep 3, 2023 Revised Sep 4, 2023 Accepted Sep 11, 2023

### Keywords:

A Local wisdom Counseling Exclusive breastfeeding Flip Chart lactation

Exclusive breastfeeding is only given to babies from birth for 6 (six) months without adding or replacing it with food or beverages other than plain water, except vitamins, mineral drops, or medicines. The benefits provided by exclusive breastfeeding are essential for Infants and mothers; therefore, exclusive breastfeeding is a human right of infants that must be fulfilled. This study aims to describe the development of a flip chart-based media local wisdom regarding exclusive breastfeeding to improve counseling skills for midwifery students. This research uses the design of Research and Development (R & D) level 4. which seeks to make a new product in the learning system, namely the media of flip chart based on local wisdom and testing of products. Internal testing uses breastfeeding experts/practitioners, namely five breastfeeding counselors. External testing is carried out on midwifery students. The average score of counseling skills in the treatment group was found to be higher than that of the control group. The treatment group was very well motivated using a local wisdom-based flip chart higher than the control group. From qualitative data, it is stated that local wisdombased flip charts make students happy and interested to make them more confident in providing counseling. This study concludes that the local wisdom-based flip chart media regarding exclusive breastfeeding can be used for lactation counseling media to improve lactation counseling skills.

This is an open access article under the CC BY-NC license.

### Corresponding Author:

Linda Puji Astutik, Department of Midwifery, Poltekkes Kemenkes Palangkaraya, Jl. G. Obos No 30, Palangkaraya, 73111, Indonesia Email: Linda.puji.astutik2010@gmail.com

# INTRODUCTION

Exclusive breastfeeding is only given to babies from birth for 6 (six) months without adding or replacing it with food or beverages other than plain water, except vitamins, mineral drops, or medicines (Kemenkes, 2018; Pemerintah Indonesia, 2012; Santi, 2017; Widodo, 2014). Breastfeeding can exclusively help children survive and form antibodies that they need to be protected from various diseases that often occur in childhood (Karana, 2020)The benefits of exclusive breastfeeding are also felt by mothers, namely overcoming the trauma of childbirth and preventing breast cancer (Kementrian Kesehatan, 2018; Mufdillah et al., 2017). The benefits provided by

exclusive breastfeeding are essential for Infants and mothers; therefore, exclusive breastfeeding is a human right of infants that must be fulfilled (Pemerintah Indonesia, 2012).

Only 1 in 2 infants (50%) under six months of age are exclusively breastfed in Indonesia. More than 40 percent of babies are introduced too early to complementary foods, i.e., before They reach the age of 6 months (Karana, 2020) From Susenas data in March 2021, it is known that the achievements of Exclusive breastfeeding in Indonesia in 2019, 2020, 2021 amounted to 66.69%, 69.62%, 71.58% (Statistika, 2021). The achievement of exclusive breastfeeding in Central Kalimantan Province in 2020 was 59.3% with a 2020 strategic plan target of 40% and a national target of 66.1%. (Kemenkes (2020) 'Kementerian Kesehatan Republik Indonesia', Kementerian Kesehatan RI, 2021) In the City Palangka Raya Achievement from 2018, 2019, 2020 is 41.69%; 49,25%; 45.82%, while The target is 80%. This figure shows that the achievement of breastfeeding is still low Exclusive, with a gap of 34.18%. The cause of low exclusive breastfeeding is the vigorous promotion of formula milk, differences in perception regarding the definition of breast milk exclusive, not yet optimal education, socialization, and advocacy activities, and still limited KIE ASI facilities and infrastructure (Wijayanti et al., 2021). From the results of the study, it was found that there was an effect of lactation counseling towards exclusive breastfeeding for six months (Nurfatimah et al., 2019). Lactation Counseling is one of the competencies that midwifery students must achieve. Midwifery students are The next generation of midwives who will come, so it is necessary to prepare their skills in counseling on exclusive breastfeeding. So, the cause of the problem of Exclusive breastfeeding can be handled, especially in conducting counseling skills for mothers.

Until now, the existing lactation counseling facilities/media, such as leaflets, have not been up To date, especially following the development of local resources from Central Kalimantan. Signal access in Central Kalimantan is not as good as in Java, so counseling media is unnecessary. Digital-based is like a flip chart. A flip chart is a prop that resembles an album of Images, is easy to carry anywhere and make it easier for counselors to use them because they are in On the back is a note of material that helps the counselor conduct counseling. Therefore, This research focuses on developing media flip chart based on local wisdom regarding exclusive breastfeeding to improve lactation counseling skills in midwifery students. Previous research has not made a media flip chart on lactation based on the local wisdom of Central Kalimantan; this is the first. This can affect the achievement of exclusive breastfeeding.

This study aims to describe the development of a flip chart-based media local wisdom regarding exclusive breastfeeding to improve counseling skills for midwifery students. This research is expected to overcome the low achievement of breast milk exclusive by improving lactation counseling skills in midwifery students so that it Can be applied when practicing on practical land.

## **RESEARCH METHOD**

This research uses the design of Research and Development (R & D) level 4, which seeks to make a new product in the learning system, namely the media of flip chart based on local wisdom and testing of products. Internal testing uses breastfeeding experts/practitioners, namely five breastfeeding counselors. External testing is carried out on midwifery students in the midwifery department of Poltekkes Kemenkes Palangkaraya. The external testing consists of 3 steps: limited field trials, main field trials, and operational field trials. A limited field trial using six subjects. Furthermore, product revisions are carried out. Continued the main field trial using 30 subjects, the results of which were used for product revision again, and continued operational field tests in operational field trials using 40 subjects. This trial is related to lactation counseling skills using local wisdom-based flip chart media. External testing using a type of quasi-experimental research with a non-equivalent control group design using descriptive statistics (Sugiyono, 2019). The results of external assessments are in the form of quantitative and qualitative data. Quantitative

data came from Likert scale assessments, qualitative data from response questionnaires, motivation in using media, and criticism and suggestions.

In this development research, quantitative descriptive statistical data analysis techniques. The formula used to calculate the assessment percentage of each criterion.

The value obtained from the formula will be described to give decision-making meaning to the instrument using conversion table provisions adapted from the developed assessment criteria. (Riduwan, 2014).

<b>Table 1.</b> Conversion achievement rate with a scale of 4	Т	able 1.	Conversion	achieveme	ent rate with	n a scale of 4
---	---	---------	------------	-----------	---------------	----------------

Description	Score	Information
Excellent	76%-100%	Very Worth It
Good	51%-75%	Proper
Good enough	26%-50%	Less Decent
Not Good	0% - 25%	Not Worth It

## **RESULTS AND DISCUSSIONS**

#### Result

The results of the research and development analysis phase based on internal testing by five practitioners are below:

Table 2 Internal test results

Number	Judging Criteria	Score	Criterium	Value	Information
		Count	Score		
1	Fill in the flip chart media with the Exclusive Breastfeeding				
1	material.	14	20	70	Good
2	The content of the flip chart media is on the local wisdom of				
2	Central Kalimantan.	18	20	90	Excellent
3	A mix of text, images, and background colors	15	20	75	Good
4	Sentences in media are easy to read and understand				
4	(Comprehension)	18	20	90	Excellent
-	The information from the turnback media is self-				
5	explanatory.	17	20	85	Excellent
6	A flip chart media design attracts attention (attraction)	15	20	75	Good
7	A flip chart media is easy to accept and does not contradict				
/	the norm (Acceptability)	18	20	90	Excellent
8	The media flip chart is focused on specific groups, pregnant				
0	women, and postpartum mothers (Personal Involvement)	18	20	90	Excellent
9	Turnback media can influence the audience (Persuasion)	16	20	80	Excellent
	Total	149		745	
	Average			82,78	

The above data obtained an average score of 82.78%, including Excellent criteria. The external test results consist of 3 steps with the following results:

a. Limited field trial results

Table 3. Results of counseling skills in limited field trials						
Group	Mean	Minimum-Maximum				
Treatment	29,67	28-32				
Control	21,67	21-23				

The test results above show that the average treatment group using local wisdom-based flip chart is higher than the control group. External tests proceed to significant field trials.

### b. Results of Major Field Trials

Table 4. Results of counseling skills in major field trials						
Group	Mean	Minimum-				
		Maximum				
Treatment	28,87	26-32				
Control 20,40		15-28				

In Table 4 above, it is known that the counseling skills of the control and treatment groups experienced differences in average scores. The treatment group had an average score of 28.87 with a minimum-maximum range of 26–32. The control group had an average value of 20.40 with a minimum-maximum range of 15–28. The treatment group got a higher maximum score than the control group. From these data, it is known that the value of the counseling skills of the treatment group is greater than that of the control group.

Table 5. Motivational results in major field trials										
Group	Moderately	rately % Well % Very well % Total %								
	Motivated		motivated		motivated					
Treatment	7	46,7	4	26,7	4	26,7	15	100		
Control	10	66,7	5	33,3	0	0	15	100		
Total	17		9		4		30	100		

From Table 5 above, it is known that the majority of the treatment group had Moderately motivation (46.7%). The majority of the control group was well-motivated (66.7%). The control group had better motivation than the treatment group. However, the treatment group had very well motivation (26.7%). None of the control groups had very good motivation. The treatment group got a higher maximum score than the control group.

### c. Results of Operational Field Trials

Table 6. Results of counseling skills in rational field trials							
Group Mean Minimum-Maximu							
Treatment	29,50	24-33					
Control	22,88	17-31					

In Table 6 above, it is known that the counseling skills of the control and treatment groups experienced differences in average scores. The treatment group had an average score of 29.50 with a minimum-maximum range of 24–33. The control group had an average value of 22.88 with a minimum-maximum range of 17–31. The treatment group got a higher maximum score than the control group. From these data, it is known that the value of the counseling skills of the treatment group is greater than that of the control group.

Group	Moderately Motivated	%	Well motivated	%	Very well motivated	%	Total	%
Treatment	10	62,5	3	18,8	3	18,8	16	100
Control	18	75	5	20,8	1	4,2	24	100
Total	28		8		4		40	100

From Table 7 above, it is known that the majority of the treatment group had Moderately motivation (62.5%). The majority of the control group had good Moderately motivation (75%). The control group had better motivation than the treatment group. However, the treatment group had very well motivation (18.8%). The control group had very well motivation at 4.2%.

### Discussion

Lactation counseling can increase the success of exclusive breastfeeding achievements by increasing the knowledge and attitudes of mothers. One of the factors that supports the success of exclusive breastfeeding is the presence of health workers with adequate knowledge, competence, and skills. As prospective health workers, midwifery students must have skills in providing lactation counseling. Counseling media significantly influences the success of counseling goals. A flip chart is a medium that helps with counseling skills. This medium can improve lactation counseling skills. This is in line with Firdau's research, which found that using pigeon flip chart learning media in learning is effective (Liliana et al., n.d.; Nurfatimah et al., 2019; Ramlan & Margawati, 2016; Vidayanti et al., 2017) (Prihandani, n.d.) (Shofia Ulfiana Firdaus, 2022). From Table 2, each assessment criterion has an excellent average score. Fill in the flip chart media according to exclusive breastfeeding material. The content of the flip chart can help the counselor convey complete information without any material being forgotten. This aligns with research results that the influence of flip chart media can increase knowledge. The content of the flip chart media, by the local wisdom of Central Kalimantan, is considered Excellent. Using material from local wisdom where counseling is carried out will make it easier for clients to carry out directions because it is affordable in their area. This will encourage clients to support exclusive breastfeeding. Material made by local wisdom makes it easier for students as counselors to understand the material to be delivered because it adapts to the surrounding culture. This aligns with the theory that using local wisdom in a learning medium can increase knowledge. This is also to the theory that the media of a flip chart can help the counselor's understanding of the material in it (Fitriani et al., 2022) (Saidah et al., n.d.) (Ghasya, 2022).

The combination of text, image, and background colors and the design of the flip chart media attract attention (attraction) and are considered good. Engaging flip chart media will be seen from the text, image, and background colors. The background that adjusts to the local culture will make it feel familiar, so paying attention to the flip chart is interesting. This is in line with research that says that a flip chart that attracts attention from the display will interest the audience in reading the flip chart content. Sentences in the media are easy to read and understand (Comprehension), and the information from the flip chart media is excellent. The flip chart media contains information about exclusive breastfeeding. Arranged sentences are simple and easy to read to make participants better understand the content of the information provided. This is in line with the theory that states that the media of flip charts will be able to improve student learning outcomes. This is also in line with research that states that turning sheet media can improve understanding of concepts. (Rukmana Guidance et al., 2022) (Pramita et al., 2019; Sovia Hertarini et al., 2022) (Motong Liwun &; Candra Setiawan, 2018).

A flip chart media is readily accepted and does not contradict the norm (Acceptability is rated Excellent. A Flip chart based on local wisdom are made according to the existing local culture so that the counseling target readily accepts the expectations. This is in line with research that states that the media of turning sheets can increase the knowledge and skills of counseling targets. (Eluri et al., 2022).

The media flip chart focused on specific groups / pregnant women / postpartum mothers (Personal involvement) is considered Excellent. The purpose or objective of counseling in the flip chart is written explicitly in the media. This will make the recipient of counseling clear, and the information is focused on personally. A flip chart media that is able to influence the audience (Persuasion) is considered Excellent. If the feedback media can influence the goal, then this will make the purpose of counseling using the flip chart media successful. Feedback media that can influence the target will be able to increase the behavior of the target itself. This is by research that the media of turning sheets can improve the knowledge and skills of the target. (Eluri et al., 2022; Rahmawati et al., 2020).

After internal testing, external testing continued on the flip chart based on local wisdom. The first test was carried out in a limited field trial, and the result was that the average treatment group using a local wisdom-based flip chart was higher than the control group. It then continued the main and operational field trials. In operational field trials, it was found that the average score of counseling skills in the treatment group was higher than that of the control group. The treatment group was very well motivated using a local wisdom-based flip chart higher than the control group. From qualitative data, it is stated that local wisdom-based flip charts make students happy and interested to make them more confident in providing counseling.

## CONCLUSION

This study concludes that the local wisdom-based flip chart media regarding exclusive breastfeeding can be used for lactation counseling media to improve lactation counseling skills. This is based on the results of internal and external testing that has been carried out. The contribution of this research is to create a new product in the form of lactation promotion media based on Central Kalimantan local wisdom in the form of a turning sheet that can play a role in improving counseling skills regarding lactation to increase the achievement of exclusive breastfeeding. The limitation of this study is that special media is used only for the local area of Central Kalimantan. Suggestions for researchers can further develop other local wisdom-based promotional media regarding lactation in accordance with the local wisdom of each region.

## ACKNOWLEDGEMENTS

Countless thanks are conveyed to the organizer of the Simlitabkes grant in 2022, the Directorate General of Health Workers, Poltekkes Kemenkes Palangkaraya, who has provided opportunities for financial assistance and support to researchers.

### References

- Eluri, S., Baliga, B. S., Rao, S. S., Vinayagamoorthy, V., & Kamath, N. (2022). Can Flip-Chart Assisted Maternal Education Improve Essential New Born Care Knowledge and Skills? A Randomized Controlled Trial. *Maternal and Child Health Journal*, 26(9), 1891–1906. https://doi.org/10.1007/s10995-022-03409-2
- Fitriani, D., Sanisahhuri, S., & Susanti, B. (2022). The effect of flip chart media on young women's knowledge of personal hygiene during menstruation at SMP O Mangunharjo, Musi Rawas Regency. JNKI (Jurnal Ners Dan Kebidanan Indonesia) (Indonesian Journal of Nursing and Midwifery), 10(1), 1. https://doi.org/10.21927/jnki.2022.10(1).1-6
- Ghasya, D. A. V. (2022). Feasibility of Flip Chart Media in Learning Reading Comprehension of Lower Grade Students in Elementary School. *Educative: Journal Of Educational Science*, 4(3), 5001–5007. https://doi.org/10.31004/edukatif.v4i3.2920
- Karana, K. P. (2020). World Breastfeeding Week: UNICEF and WHO call on Governments and Stakeholders to support all breastfeeding mothers in Indonesia during COVID-19. https://www.who.int/indonesia/news/detail/03-08-2020-pekan-menyusui-dunia-unicef-dan-who-menyerukan-pemerintah-dan-pemangku-kepentinganagar-mendukung-semua-ibu-menyusui-di-indonesia-selama-covid-19
- Ministry of Health. (2018). Guidelines for World Breastfeeding Week (PAS) 2018. Directorate of Community Nutrition, 2–18.
- Ministry of Health (2020) 'Ministry of Health of the Republic of Indonesia', Ministry of Health of the Republic of Indonesia, p. 1. A. at: https://www.kemkes.go.id/article/view/19093000001/heart disease-causeof-death-to-2-in-indonesia.html. K. (2021). Indonesia's Health Profile 2020. chromeextension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.kemkes.go.id/downloads/resources/do wnload/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-Indonesia-Year-2020.pdf
- Ministry of Health. (2018). *Benefits of Exclusive Breastfeeding for Mother and Baby*. https://promkes.kemkes.go.id/manfaat-asi-eksklusif-untuk-ibu-dan-bayi
- Liliana, A., Artanti, W., 1, N., & Hapsari, E. D. (n.d.). The effect of lactation counseling towards mother's knowledge, ability and success rate in breastfeeding.

- Motong Liwun, A., &; Candra Setiawan, D. (2018). The Application Of The Active Learning Learning Model Using Flip Chart Media To Improve The Understanding Of The Concepts Of Class Xi Science Students Of Sma Negeri 1 Tanjung Bunga On Organ System Material. 3(1), 1–5.
- Mufdillah, Subijanto, Sutisna, E. &, &; Akhyar, M. (2017). Guidelines for Empowering Breastfeeding Mothers in the Exclusive Breastfeeding Program. *Care for exclusive breastfeeding; Yogyakarta*, 0–38. http://digilib.unisayogya.ac.id/4083/1/Pedoman ashamed not to provide exclusive breastfeeding Jan 10, 2017.pdf
- Nurfatimah, N., Entoh, C., &; Ramadhan, K. (2019). The effect of lactation counseling on exclusive breastfeeding in the working area of the Mapane Health Center, Poso Regency. *Indonesian Journal of Public Health* Publications, 6(1), 1–6. https://doi.org/10.20527/jpkmi.v6i1.6869
- Government of Indonesia. (2012). *Government Regulation on Exclusive Breastfeeding*. 32. https://peraturan.bpk.go.id/Home/Details/5245/pp-no-33-tahun-2012
- Pramita, P. A., Sudarma, K., Murda, N., Teacher Education, J., Elementary, S., &; Education, J. T. (2019). The Effect of Flip Chart Media-Assisted Circuit Learning Learning Model on Science Learning Outcomes. *Scientific Journal of Teacher Professional Education*, 2(1).
- Prihandani, O. R. (n.d.). Lactation Counseling Training for Health Workers to Support Exclusive Breastfeeding.
- Rahmawati, R. S. N., Novitasari, R., & Supriyono, L. C. P. (2020). The Differences In Health Education On Hazard Signs In Postpartum Using The Media Flip Chart And Leaflets On Knowledge Of Postpartum Mothers In Aura Syifa Hospital Kediri. Jurnal Kebidanan Kestra (JKK), 3(1), 39-47. https://doi.org/10.35451/jkk.v3i1.478
- Ramlan, R., &; Margawati, A. (2016). The effect of intensive nutrition and lactation counseling and husband support on exclusive breastfeeding until the age of 1 month. *The Indonesian Journal of Nutrition*, 3(2), 101– 107. https://doi.org/10.14710/jgi.3.2.101-107
- Rukmana Guidance, F., Bachri Thalib, S., Pandang, A., &; Yasser Mansyur, A. (2022). Developing flip chart as career counseling media for college major selection for the students. Journal of Educational Psychology & Counseling: Journal of Educational Psychology Studies and Counseling Guidance, 8, 47–55. https://doi.org/10.26858/jpkk.v8i1.32034
- Saidah, A., Isni, K., Awuni, N. S., Health, F., University, M., & Dahlan, A. (n.d.). Proceedings of the IAKMI Annual Scientific Forum (Indonesian Association of Public Health Experts) Feasibility Test Of Animated Video Media Benefits Of Fruits And Vegetables Based On Local Wisdom.
- Santi, M. Y. (2017). Efforts to increase exclusive breastfeeding coverage and early breastfeeding initiation (IMD. *Kesmas Indonesia*, 9(01), 69. https://doi.org/10.20884/1.ki.2017.9.01.230
- Shofia Ulfiana Firdaus, S. F. M. (2022). The effectiveness of the application of Pegon Flip Chart educational props to improve students' writing skills. *JUPEIS: Journal of Education and Social Sciences*, 1(3), 28–36. https://jurnal.jomparnd.com/index.php/jp
- Sovia Hertarini, Y., Rohaeni, E., &; Ruhyanto, A. (2022). Improving Student Learning Outcomes Through A Scramble Type Cooperative Learning Model Assisted By Flipchart Media In Economics Subjects. In *Journal of Teacher Training and Education*) (Vol. 3, Issue 1).
- Statistics, B. P. (2021). Health Statistics Profile 2021. Central Bureau of Statistics, 148.
- Sugiyono. (2019). Research & Development Methods. Alphabeta.
- Vidayanti, V., Wahyuningsih Study Program, M. S., Nursing, I., Health Sciences, F., Respati Yogyakarta, U., Raya Tajem Km, J., &; Correspondence, P. (2017). The Effectiveness Of Lactation Counseling On Self-Efficacy And Breastfeeding Ability Of Mothers After Cesarean Section. *Journal of Nursing Respati* Yogyakarta, 4(2), 154–162. http://nursingjurnal.respati.ac.id/index.php/JKRY/index
- Widodo, Y. (2014). Exclusive breastfeeding coverage: accuracy and interpretation of survey data and program reports. *Gizi Indonesia*, 34(2), 101–108. https://doi.org/10.36457/gizindo.v34i2.106
- Wijayanti, A., Hidayah, M., Fatiah, G., Luther, M., Dwi, S., Febrina, T., Heriny, Irawan, D., Linda, Afifah, E. O., &; Oktoras, R. (2021). Health Profile of Palangka Raya City in 2020. In *Palangka Raya City Health Office*. https://dinkes.palangkaraya.go.id/download/