

Counselor's Knowledge, Attitude and Practice of Infant and Young Child Feeding (IYCF) Counselling

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ABSTRACT

Background: It needs an effort to reduce the prevalence of undernutrition with the proper IYCF practices. IYCF promotion and counseling activities for caregivers can increase the success of IYCF implementation and reduce the prevalence of malnutrition.

Objectives: The objective of this study was to determine the association between the level of education, knowledge, and attitude of Posyandu counselors on IYCF practice in the Parongpong District of West Bandung Regency.

Materials and Methods: This research used a cross-sectional study with a consecutive sampling technique. The data collection was conducted from June until August 2020, involving 67 respondents. The dependent variable was Posyandu counselor practice; meanwhile, the independent variables were knowledge and attitude. Descriptive analysis was conducted to describe the characteristics of the respondents, and the multivariate test used multiple logistic regression.

Results: Bivariate analysis showed that only level of education had a significant association with a p-value of 0.024. Further analysis using a multivariate test showed that the variables that significantly related to the practice of IYCF counseling were the level of education, knowledge, and attitude, which were controlled by the confounding variable for the period of being a counselor.

Conclusion: The level of education, knowledge, and attitude of Posyandu counselors in IYCF counseling practice was an essential factor that can improve children's nutritional status.

Keywords: IYCF; knowledge; Posyandu counselor

BACKGROUND

Nutritional problems result from internal factors with cultural and socio-economic conditions in the community. The term Double Burden of Malnutrition (DBM) is the coexistence of overnutrition (overweight and obesity) alongside undernutrition (stunting and wasting) at all levels of the population, where many of these events are found in poor and middle-income countries (low-income and middle-income countries / LMICs). A study in 2019 showed that Indonesia is a country with the most considerable incidence of DBM in the world¹. Nutritional problems can occur in every stage of the life cycle, starting from babies, infants, children, adults, and the elderly. However, the most critical periods of human life are the periods of intense growth and development stages (the first 1000 days of a child's life)². Stunting in the childhood period is one of the significant factors that hinder human development, and globally affects around 162 million children under the age of 5³. A child is classified as stunting if the length or height according to their age is lower than the applicable standards⁴. The prevalence of stunting in Indonesia is the fifth largest

in the world. Indonesia Basic Health Research Data (*Riskesdas*) in 2018 showed the prevalence of stunting (body height/ age) was 30.8 %, whereas the number of short toddlers was 19.3 %, and very short toddlers were 11.5%. West Java is one of the provinces with a stunting rate of 31.1%, and in West Bandung Regency, the number has reached 13.23%⁵.

The lack of nutritional intake commonly causes growth failure conditions in children under five for a long time and recurrent infections. In contrast, these two factors are influenced by inadequate knowledge, especially in the first 1000 days of a child's life⁶. The 1000 days period is a critical factor in stunting children under five years and has a long-term effect⁷. Stunting in children, especially in children under two years of age, causes long-term effects such as lower body height as an adult, economic level/income, school achievement, and the risk of developing chronic disease as an adult⁸.

Nutritional problems can affect all aspects of life, especially the economic aspect and individual health status in the future. Efforts to reduce the prevalence of malnutrition can be made with adequate

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and proper Infant and Young Child Feeding (IYCF). The practice of IYCF starts with the early initiation of breastfeeding, followed by giving exclusive breast milk and providing appropriate complementary feeding⁹. However, the lack of knowledge and practical skills to provide adequate additional feeding for infants and children can affect the nutritional status of children and contribute to the high prevalence of stunting^{10 11}. IYCF promotion and counseling for caregivers are known to increase the success of IYCF implementation and reduce the number of malnutrition cases¹². Implementing IYCF counseling is also known to have an indirect effect on improving children's nutritional status, such as reducing the incidence of malnutrition and stunting in children¹³.

The delivery of information about IYCF practice by health workers or counselors is often considered ineffective and inadequate so that caregivers do not acquire adequate knowledge¹⁴. Various indicators such as lack of information regarding IYCF techniques/practices and lack of nutrition counseling materials for children who are not breastfed are known to affect the success of the IYCF program¹⁰. Good IYCF promotion and counseling can help caregivers make the right decision to provide nutritious food for their children. *Posyandu* in Indonesia is an integrated health service post that provides primary health service, especially for children and pregnant women. Adequate knowledge of *Posyandu* counselors in the IYCF counseling practice is an essential factor that can improve children's nutritional status. Currently, there is not much research in Indonesia that study the level of IYCF knowledge, attitudes, and practices of *Posyandu* counselor. A study in India shows that parents will implement better IYCF practices when counseling from counselors who have higher knowledge¹⁵. This study aims to determine the association between the level of education, knowledge, and attitude of *Posyandu* counselors on IYCF practice in the Parongpong District of West Bandung Regency.

MATERIALS AND METHODS

This study used a cross-sectional design with a consecutive sampling technique. All counselors are invited, and those present are taken as study samples. There are 67 *Posyandu* counselors involved in this study from 56 *Posyandu* in three villages in Parongpong District. Data for the *Posyandu* counselors were obtained through the Nutrition Driving Team (Tim Penggerak Gizi) from the Parongpong Community Health Center. The

inclusion criteria in this study are the *Posyandu* counselor who can communicate in the Indonesian language and can read well; meanwhile, the exclusion criteria are the counselor absent during the data collection process and did not fill all the questions in the questionnaire. First, descriptive analysis was conducted to describe the characteristics of the respondents. In the next stage, the chi-square bivariable test was used to determine the relationship between two categorical variables, where significant variables showed a significance value of $p < 0.05$. Furthermore, a multivariate test is carried out to determine which variables meet the logistic regression equation model. Logistic regression is a method of predictive analysis carried out when the dependent variable in testing is binary. This study has been approved by the Medical and Health Research Ethics Committee (MHREC) Faculty of Medicine, Public Health, and Nursing Universitas Gadjah Mada, KE/FK/0994/EC/2020.

RESULTS

1. Respondent Characteristic

The research was conducted in the Parongpong District of West Bandung Regency. A total of 67 *Posyandu* counselors participated in this study. A descriptive analysis of the respondents is presented in

The average age of *Posyandu* counselors was 43.18 years old, with the oldest being 63 years old. Most of them were graduated from high school (47.8%) and worked as housewives (97%). *Posyandu* counselors have an average monthly income of IDR 2,046,296.3, with the lowest income of IDR 600,000. On average, the counselors had worked for 7.8 years, and the counselors who had worked the longest were 34 years. Most *Posyandu* counselors have not received IYCF training (73.1%). The measurement results based on the questionnaire showed that the counselor's average score for knowledge was 76.2, the average attitude score was 46.25, and the average practice score was 68.8.

2. Bivariate Test

A bivariable test was conducted on the IYCF counseling practice and other variables in this study. Table 2 summarizes the result of the bivariable test. Knowledge, attitude, and IYCF practice were divided into two categories with a cut-off point from the median score. The results showed that only the education variable had a significant relationship with IYCF counseling practice, with a value of 0.024, $p < 0.05$.

The results of data analysis in Table 2 show that almost all variables did not meet the

requirements for multivariate analysis, except for the education and attitude variables which have a p-value less than 0.25. However, since the other variables are also considered essential variables, the researcher decided to include all the variables for the multivariate logistic regression test.

The next step is carried out by conducting an interaction test and a confounding test. The results show that there is no interaction between the variables.

Tabel 1. Respondent Characteristic

Variable	Mean	SD	Min	Max
Age	43.18 year	9.2 year	25 year	63 year
Education (n, %)				
Primary School	18 (26,9 %)			
Junior High School	7 (10.4%)			
Senior High School	32 (47.8%)			
College	10 (14.9%)			
Occupation (n, %)				
Housewife	65 (97%)			
Entrepreneur	1 (1.5%)			
Lecturer	1 (1.5%)			
Monthly income (n=54)	IDR 2,046,296.3	IDR 1,427,157.5	IDR 600,000	IDR 8,000,000
Service period	7.9 year	7.8 year	1 year	34 year
IYCF Training (n, %)				
No	49 (73.1%)			
Yes	18 (26.9%)			
Knowledge	76.2	0.76	30	100
Attitude	46.25	0.79	1	7
Practice	68.8	17.38	8	76

Table 2. Bivariable Test of IYCF Counseling Practice

Variable	IYCF Counseling Practice		total	p-value
	Poor	Good		
Age	43.18	9.2	43.18	0.784
Education (n, %)				0.024
Primary School	4(22.2)	14(77.8)	18 (26,9 %)	
Junior High School	2 (28.6)	5 (71.4)	7 (10.4%)	
Senior High School	19 (59.4)	13 (40.6)	32 (47.8%)	
College	7 (70)	3 (30)	10 (14.9%)	
Occupation (n, %)				0.366
Housewife	31 (47.7)	34 (52.3)	65 (97%)	
Entrepreneur	1 (100)	0	1 (1.5%)	
Lecturer	0	1 (100)	1 (1.5%)	
Service period	7.9	7.8		0.432
< 1 year	3 (33.3)	6 (66.7)	9 (13.4%)	
1-10 year	23 (53.5)	20 (46.5)	43 (64.2%)	
> 10 year	6 (40)	9 (52.2)	15 (22.4%)	
IYCF training (n, %)				0.378
No	25 (51)	24 (49)	49 (73.1%)	
Yes	7 (38.9)	11 (61.1)	18 (26.9%)	
Knowledge (n, %)				0.389
Poor	18 (52.9)	16 (47.1)	34 (50.7%)	
Good	14 (42.4)	19 (57.6)	33 (49.3%)	
Attitude (n, %)				0.194
Poor	13 (59.1)	9 (40.9)	22 (32.8%)	
Good	19 (42.2)	26 (57.8)	45 (67.2%)	

3. Logistic Regression Model

The results of the multivariate logistic regression test are presented in Table 3. The results of

the multivariate analysis showed that the education level, knowledge, and attitude had a significant relationship with the practice of IYCF counseling, controlled by the service period.

Table 3. Fix Model from Multivariate Logistic Regression Test

Variable	B	P-value	OR	95% CI	
				Lower	Upper
Education		0.022			
Junior High School	-1.386	0.095	0.25	0.049	1.275
Senior High School	-3.824	0.002	0.02	0.002	0.244
College	-21.483	0.999	0.00	0.000	.
Service period		0.170			
1-10 year	-2.161	0.077	0.1	0.010	1.268
>10 year	-1.413	0.301	0.2	0.017	3.541
Knowledge	1.744	0.027	5.7	1.216	26.924
Attitude	2.140	0.010	8.4	1.666	43.356

Based on the analysis, the most dominant variable was attitude. This result also showed that the attitude variable's Odds Ratio (OR) value was 8.5. This result indicated that *Posyandu* counselors with poor variables are most likely to give poor IYCF counseling practices 8.5 times greater than *Posyandu* counselors with a good attitude toward IYCF counseling practice. The other result was that the Odds Ratio (OR) value of the knowledge variable was 5.7. This result shows that *Posyandu* counselors with a lack of IYCF knowledge have a 5.7 times greater possibility to conduct poor IYCF counseling practice.

DISCUSSION

The Convention on the Child's Rights states that every child has the right to receive good nutrition. Providing optimal infant and child feeding (IYCF) in the first 1000 days of life can prevent the mortality rate for children under five years by up to 20%¹⁶. About 60% of death in children under five years old are directly or indirectly related to malnutrition¹⁷. Malnutrition cases in children can be caused by parents' lack of understanding about providing nutritious food for children¹⁸. A study in 2012 revealed that the lack of knowledge and practical ability to provide supplementary feeding for infants and children could affect the nutritional status of children and further contribute to the highly increasing number of stunting in the world¹⁹. Community health workers (CHWs) are well-established as change agents for promoting health attitude change among community members. However, their knowledge and counseling skills play

an essential role in promoting optimal infant and young child feeding practices (IYCF)¹⁶. Counseling ability is a skill that must be possessed by a counselor in translating knowledge of IYCF into messages or interpreting existing IYCF practices to provide suggestions or advice for the caregiver²⁰.

The average age of *Posyandu* counselors is 43 years, which can be categorized as an adult person²¹. Adults have a greater responsibility because they deal with a broad group of people. Counselors' experience and age are related to their ability to provide information and understanding related to IYCF for mothers in their environment. Research by Faridi et al. (2020) states a correlation between the counselor's age and the implementation of the IYCF in Pandeglang, Banten. Senior counselors and counselors who are over 35 years old tend to be more active in assisting mothers in implementing PMBA compared to younger counselors²².

Posyandu counselors' knowledge showed an average score of 76.2, so it can be concluded that most of the *Posyandu* counselors have poor knowledge of IYCF, especially about infant feeding and basic knowledge of breastfeeding. According to Kohli and Chahda (2017), if the score for the subject's knowledge of IYCF is more than 80, the subject is considered to have a good level of IYCF knowledge¹⁶. *Posyandu* counselors are health promotion agents and positively impact health practices in the community²³. The practice of IYCF for the caregiver in the community, including the practice of breastfeeding, introduction to complementary feeding, the suitability of the amount,

frequency, and variety of foods, is influenced by the knowledge, abilities, attitude, and motivation of health counselors played an essential role in conveying IYCF messages to caregiver^{14 16 24 25}. In practice, the success of IYCF for children under five is inseparable from the ways the counselors explain the appropriate IYCF practice and grid. Contento (2011) explains that the success of external factors such as the availability of food and the role of counselors is one of the environmental factors that affect the practice of IYCF from caregiver to the children. The ability of counselors to build communication is highly dependent on empathy, the ability to listen, and pay attention to the child's feeding history²⁶.

In addition to knowledge, we also measured the attitude and practices aspect of *Posyandu* counselors regarding breastfeeding and complementary feeding. The analysis results showed that 52.9% of *Posyandu* counselors had poor knowledge of IYCF counseling practice, and 59.1% had a poor attitude toward IYCF counseling practice. Attitude parameters in this study were collected through agreeing and disagreeing statements regarding the practice of IYCF based on the counselors' opinions of the material or concepts of IYCF practice. This value becomes a benchmark that the counselors' low attitudes regarding IYCF were affected by the lack of knowledge from the counselors (Table 1). Therefore, counselors' attitude data is obtained from practice when giving IYCF counseling to caregivers. In addition to the knowledge aspect, the results of this study also show that the attitude aspect shows a low score. This is presumably because the practice of IYCF counseling for mothers in the community has not been carried out routinely and focuses on measuring children's nutritional status without giving a proper IYCF education to children's caregivers.

The IYCF program has been proven to reduce the number of morbidity and mortality. Health workers have a significant role in providing education and support for caregivers regarding breastfeeding and infant feeding²⁷. The results of the descriptive analysis showed that most *Posyandu* counselors only graduated from high school and worked as housewives. *Posyandu* counselors in Indonesia are not health workers who can provide health counseling practice. They are generally individuals who have received training and knowledge from the Community Health Center (Puskesmas). Therefore, the level of knowledge, practice, and attitude of *Posyandu* counselors is minimal. World Health Organization (WHO) and the Indonesian Ministry of Health has various guidelines covering the

implementation of IYCF counseling activities^{5 28 29}. However, not all *Posyandu* counselors have access to received adequate IYCF training. In this research, we found that most *Posyandu* counselors have not received IYCF training (73.1%). IYCF training is a critical factor that ensures the community's successful implementation of IYCF practices. IYCF training makes *Posyandu* counselors manage to provide appropriate counseling to the community and help the caregivers provide nutritious and good food for babies and children³⁰.

The multivariate analysis in this study indicates that the level of education, knowledge, and attitude has a significant relationship with the practice of IYCF counseling. We find evidence for an association between health worker compliance and client health attitudes; however, small effect sizes suggest that attitude change is multifactorial and affects factors beyond care quality. Improvements to the technical quality of care may contribute to desired health outcomes. Health worker compliance may impact caregiver attitude through pathways other than the mediating pathway of IYCF knowledge. Health worker counseling compliance was significantly and positively associated with health worker knowledge. IYCF practiced at the age of 6-24 months must be done correctly and appropriately. Feeding errors during this period can lead to malnutrition and stunting. The role of counselors is needed to prevent the chain of nutritional problems that occur in society. According to Notoatmojo (2007) in Wahyuningsih and Handayani (2015), educational factors can influence a person's knowledge, which states that a person's education will make it easier to process information. However, the statistical analysis results show that the level of education does not affect one's knowledge, as well as with service period, so it requires further analysis or study whether it has nothing to do with or is there other factors that influence it³¹. The IYCF training is a crucial factor in the implementation of counseling. Even though a counselor has a high level of education, if they have never received IYCF training, their ability to carry out IYCF counseling becomes very limited³².

Based on table 3, the result showed that *Posyandu* counselors with a lack of IYCF knowledge have a 5.7 times greater possibility to conduct poor IYCF counseling practice. Other results showed that the attitude variable's Odds Ratio (OR) value was 8.5. This result indicated that *Posyandu* counselor with poor attitude is most likely to give poor IYCF counseling practices 8.5 times greater than *Posyandu* counselor, which has a good attitude toward IYCF counseling practice. The practice of IYCF counseling

will be ineffective if the counselors have problems in their ability to communicate, inappropriate knowledge, and failure to provide need-based advice were important gaps in the counseling skills of *Posyandu* counselors. In this study, we suggested that *Posyandu* counselors need to improve their practical ability to elevate their role as agents of change in public health studies.

The limitation of this study is that it does not compare the level of knowledge, attitudes, and practical skills of *Posyandu* counselors who have received IYCF training with counselors who have not received the training. Thus, this study has not been able to determine whether IYCF training has a significant effect on the ability of a *Posyandu* counselor to provide IYCF counseling.

CONCLUSIONS

Posyandu counselors' knowledge showed a low average score of 76.2. The value of the attitude of counselors from the Likert scale was 46.25, and the practice of counselors was 68.8. *Posyandu* counselors with poor attitudes are most likely to give poor IYCF counseling practices 8,5 times greater than those with a good attitude. The multivariate analysis in this study indicates that the level of education, knowledge, and attitude has a significant relationship with the practice of IYCF counseling. Therefore, the level of education, knowledge, and attitude of *Posyandu* counselors in IYCF counseling practice is an essential factor that can support the improvement of children's nutritional status.

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