



Relationship Between Knowledge of the Role of Motivation and Work Period of Posyandu Cadres Towards the Use of Anthropometric Devices at UPTD Puskesmas Topo

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Abstract. Anthropometry is a direct technique for evaluating nutritional status, especially protein and energy levels of the body. One of the efforts to develop competent and skilled cadres in anthropometric measurements is through training techniques. To determine the relationship between knowledge, role, motivation and length of service of Posyandu cadres towards the use of anthropometric tools at the Topo Health Center UPTD. Method: This type of research is observational analytic using Cross Sectional Study. The research sample amounted to 30 cadres from 3 active posyandu. Data analysis used the Statistical Program For Social Science (SPSS) version 16.0. Results: Chi Square Test shows that there is no relationship between cadre knowledge and the use of anthropometric tools based on the measurement of the foot scale and stadiometer (p -value > 0.05). There is a relationship between cadre knowledge and the use of anthropometric tools based on the measurement of LiLa, infantometer, and head circumference (p -value < 0.05). While the relationship between work period and the use of anthropometric tools and the relationship between motivation and the use of anthropometric tools is not related (p -value > 0.05). Conclusion: There is a significant relationship between cadre knowledge and the use of anthropometric tools (measurement of LiLa, infantometer, and head circumference). There is no significant relationship between work period and the use of anthropometric tools, as well as motivation and the use of anthropometric tools. Suggestion: it is hoped that cadre training will be held frequently and will be improved and more active in using anthropometric tools.

Keywords: Anthropometry, Length of Service, Motivation, Knowledge, Role of Cadres

1. INTRODUCTION

Human sensing, or a person's desire to study an object through the nose, eyes, hearing, and other senses, is a source of knowledge. The ability of cadres to measure anthropometry can be improved by providing anthropometric measurement training based on applicable protocols. So far, Posyandu has used traditional activities to provide basic and refresher training to cadres in service activities. These activities include supervisor discussions and question and answer sessions. One step to creating many employees who are knowledgeable and proficient in anthropological measurement is to develop training methods that are selected based on problems, situations and situations at the time of training (Rahma Tri Juniarti, 2021).

In addition to organizing health service initiatives at the village level, cadres are also responsible for implementing service projects and ensuring their success in the community. Cadres have an important role in fostering community ties, especially with the target groups of the integrated health post. Through cadres, the community can more easily obtain various information from the government because they are more receptive and have a higher level of

health awareness than the target groups of the integrated health post (Ikha Dewi Puspita & Muhammad Ikhsan Amar, 2018).

Motivation is a person's unique willingness to do or persist in a series of recommended actions to achieve a goal. A cadre's motivation shapes his personality to be more pious in carrying out his responsibilities and duties. Therefore, it is important to create and maintain a supportive cadre environment, especially with the help of the cadre's close family and the surrounding community, such as professional medical personnel (Irma Afifa, 2019).

The talents possessed by cadres during Posyandu activities will depend on the length of time they have been cadres. A cadre's experience can be a basis for acting and making decisions in Posyandu activities the longer they have been active as cadres. Furthermore, involvement in Posyandu activities will be more of a responsibility for cadres who have worked for more than ten years (Monique Visera, 2020).

WHO (World Health Organization) said that in 2017, Indonesia still had the worst Primary Health Care service system. Out of 149 countries, Indonesia was ranked 101st in the world. Indonesia's ranking in ASEAN (Association of Southeast Asian Nations) is still lower than other ASEAN member countries. For example, Thailand is ranked 35th in the world, Malaysia is ranked 38th, Vietnam is ranked 69th, and Laos is ranked 94th (Rachmat Hidayatullah et al, 2020).

According to the 2013 Riskesdas (Basic Health Survey) data, 55.4% of babies in Indonesia do not burden themselves with Posyandu. In 2020, there were 296,777 Posyandu throughout Indonesia. Around 63.6% or 188,855 users are Posyandu. Pregnant women, mothers who have given birth, babies and toddlers, family planning, vaccination, nutrition, cancer prevention and control are the main activities that can be carried out by Posyandu Sakti every month with a minimum of 50% per job for other jobs (Indonesian Health Profile, 2020).

The Ministry of Health announced that in 2017, the number of Posyandu in Papua Province reached 3,525 Posyandu and the intensity of Posyandu in Papua Province reached 2,241 Posyandu, this was due to a decrease in the intensity of Posyandu in Papua Province reaching 63.57% (Ministry of Health, 2017). In 2020, the percentage of districts/cities with a minimum posyandu intensity of 80% in each province of Indonesia, the posyandu intensity in Papua province was only 37.9%, decreasing from 2017 (Indonesian Health Profile, 2020).

Based on research conducted by Devina Sari Siregar (2019) "The Relationship between Knowledge and Motivation with the Activeness of Cadres in Posyandu Activities at the Rasau Health Center, Torgamba District, South Labuhan Batu Regency in 2019" The results of the bivariate analysis showed that there was a relationship between knowledge and the activeness

of cadres in integrated health post activities, with a p-value of 0.01 obtained with the calculation of the test results using chi-square.

Based on data from the Nabire Regency Health Office, the number of Community Health Centers in Nabire Regency, Central Papua Province is 32 Community Health Centers with a total of 136 Integrated Health Posts (Posyandu) with 129 active Posyandu, the total number of cadres is 959 cadres with the number of active cadres being 925 cadres (Health Office, 2023).

Based on research conducted by Ulfa Hidayati (2021) entitled "The Relationship Between Mother's Education and Length of Service with the Skills of Posyandu Cadres in Weighing Toddlers Using Dacin in Purworejo Regency", the test results showed a significant relationship between education and the skills of posyandu cadres (OR = 4.63; 95% CI = 2.29 to 9.34; $p < 0.001$). There is a relationship between education and length of service with cadre skills. Cadres with a high school education or more are 3.96 times more likely to have good skills. Posyandu cadres who have a length of service ≥ 3 years are 4.63 times more likely to have good skills.

The number of Posyandu in Topo Health Center is 3 active Posyandu, namely Posyandu Kamboja, Posyandu Mekar Sari, and Posyandu Mawar. The total number of active cadres in 3 Posyandu in the Working Area of UPTD Topo Health Center is 30 cadres and there are no inactive cadres (Topo Health Center, 2024).

Based on information from the Nutrition officer at the Topo Health Center UPTD, all of its integrated health posts have just received new anthropometric tools. These anthropometric tools refer to the Decree of the Minister of Health Number HK.01.07/Menkes/1182/2022 concerning the standards for anthropometric tools and early detection tools for child growth and development. Anthropometric tools consist of baby and toddler weight measuring tools (baby scale), infantometer, stadiometer, and measuring tape. The addition of these measuring tools requires integrated health post cadres to measure toddlers' weight, height, LILA, and head circumference, but the problem is that not all cadres know the new anthropometric tools and how to use them properly.

Based on the description above, the researcher is interested in conducting a study on the relationship between knowledge, role, motivation and length of service of Posyandu cadres on the use of anthropometric tools at the Topo Health Center UPTD.

2. METHOD

Data analysis is the process of processing data for the purpose of finding useful information that can be used as a basis for decision making to solve a problem (Nur Al-faida, 2023). Data analysis tasks include organizing data according to the type of respondents and their variables, tabulating data based on variables from all respondents, presenting data for each variable studied, and performing calculations to answer the problem formulation (Sugiyono, 2019). In this study, the researcher will use Microsoft Excel 2010 and Statistical Package For The Social Sciences (SPSS) version 16.0. A p-value below 0.05 ($p < 0.05$) indicates a relationship between the independent and dependent variables.

3. RESULTS

The Working Area of the Technical Implementation Unit (UPTD) of the Topo Health Center is located in Uwapa District, Nabire Regency, Central Papua Province. The UPTD Topo Health Center has a working area in part of Uwapa District, namely Topo Village, Margajaya Village, Urumusu Village with a working area of 1808.96 km² (UPTD Topo Health Center Profile). The working area of UPTD Topo Health Center is bordered by Gerbang Sadu Health Center to the north, Topo Jaya Health Center to the south, Siriwo Health Center to the east and Karadiri Health Center to the west. The working area of UPTD Topo Health Center has 3 Posyandu, namely Mawar Posyandu located in Topo Village with 35 toddlers, Mekarsari Posyandu located in Urumusu Village with 24 toddlers and Kamboja Posyandu located in Margajaya Village with 65 toddlers. UPTD Topo Health Center conducts visits to Posyandu in each Posyandu every month.

The following is a table of sample frequency distribution based on cadre knowledge:

1). Cadre knowledge regarding the use of anthropometric tools based on foot scales.

Table 1. Frequency Distribution of Respondents' Knowledge of the Use of Anthropometric Tools Based on Foot Scales

Cadre Knowledge	f	%
Good	2	6.7
Enough	2	6.7
Not enough	26	86.6
Total	30	100.0

Source: Primary Data, 2024

Based on table 5, it shows that from the total of 30 respondents, the results obtained showed that the level of knowledge of cadres was lacking, amounting to 23 people or a

percentage of 86.7%, while the level of knowledge of cadres was good and sufficient, amounting to 2 people or a percentage of 6.7%.

2). Cadre knowledge regarding the use of anthropometric tools based onLiLa

Table 2. Frequency Distribution of Respondents' Knowledge of the Use of Anthropometric Tools Based onLiLa

Cadre Knowledge	f	%
Good	0	0
Enough	20	66.7
Not enough	10	33.3
Total	30	100.0

Source: Primary Data, 2024

Based on table 6, it shows that from the total of 30 respondents, the results obtained show that the level of knowledge of cadres is sufficient for 20 people or a percentage of 66.7%, while the level of knowledge of cadres is lacking for 10 people or a percentage of 33.3%.

3). Cadre knowledge regarding the use of anthropometric tools based on Infantometer

Table 3. Frequency Distribution of Respondents' Knowledge of the Use of Anthropometric Tools Based on the Infantometer

Cadre Knowledge	f	%
Good	0	0
Enough	20	66.7
Not enough	10	33.3
Total	30	100

Source: Primary Data, 2024

Based on table 3, it shows that from the total of 30 respondents, the results obtained show that the level of knowledge of cadres is sufficient for 20 people or a percentage of 66.7%, while the level of knowledge of cadres is lacking for 10 people or a percentage of 33.3%.

4). Cadre knowledge regarding the use of anthropometric tools based on Stadiometer

Table 4. Frequency Distribution of Respondents' Knowledge of the Use of Anthropometric Tools Based on Stadiometers

Cadre Knowledge	f	%
Good	3	10.0
Enough	26	86.7
Not enough	1	3.3
Total	30	100.0

Source: Primary Data, 2024

Based on table 8, it shows that from the total of 30 respondents, the results obtained showed that the level of knowledge was sufficient for 26 people or a percentage of 86.7%,

while the level of knowledge was good for 3 people or a percentage of 10.0% and the level of knowledge was lacking for 1 person or a percentage of 3.3.

5). Cadre knowledge regarding the use of anthropometric tools based on Head Circumference

Table 5. Frequency Distribution of Respondents' Knowledge of the Use of Anthropometric Tools Based on Head Circumference

Cadre Knowledge	f	%
Good	21	70.0
Enough	0	0.0
Not enough	9	30.0
Total	30	100

Source: Primary Data, 2024

Based on table 5, it shows that from the total of 30 respondents, the results obtained showed that the level of knowledge was good for 21 people or a percentage of 70.0%, while the level of knowledge was poor for 9 people or a percentage of 30.0%.

a. Role of Cadres

Role is the end product of the quantity and quality of work done by human resources. The results of a person's behavior in carrying out their work determine their individual role (Linda Raniwati et al, 2022). The frequency distribution table according to the role of cadres is as follows:

Table 6. Frequency Distribution of Respondents Based on Cadre Roles

Role of Cadres	f	%
Good	28	93.3
Enough	2	6.7
Total	30	100.0

Source: Primary Data, 2024

Based on table 6, out of 30 respondents, it shows that some of the respondents studied were cadres with a good role, as many as 28 people or a percentage of 93.3%, while others had a sufficient role, as many as 2 people or a percentage of 6.7%.

b. Cadre Motivation

Motivation is an intangible psychological concept, meaning that we cannot see motivation directly, we can only know someone's motivation by inferring their behavior, feelings and words when they want to achieve goals (Linda Raniwati et al, 2022). The following is a sample frequency distribution table based on Cadre Motivation:

Table 7. Frequency Distribution of Respondents Based on Cadre Motivation

Cadre Motivation	f	%
Good	26	86.7
Enough	4	13.3
Total	30	100.0

Source: Primary Data, 2024

Based on table 7, it was found that out of 30 cadres, 26 people or 86.7% had good motivation, while the other 4 people or 13.3% had sufficient motivation.

c. Years of service

The increasing length of service will be accompanied by increasing knowledge, experience, and skills in carrying out the tasks given. Length of service is the amount of time that has been spent carrying out the duties assigned by the employer (Ulfa Hidayati, 2021). The following is a table of sample frequency distribution based on the length of service of cadres:

Table 8. Frequency Distribution of Respondents Based on Length of Service

Cadre Work Period	f	%
Long Term of Service	19	63.3
New Term of Work	11	36.7
Total	30	100.0

Source: Primary Data, 2024

Based on table 8, from 30 respondents, it shows that most of the respondents studied were cadres with a work period of more than 5 years, totaling 19 people or a percentage of 63.3% of cadres, while others with a work period of less than 5 years totaling 11 people or a percentage of 36.7%.

d. Use of Anthropometric Tools

Anthropometry is the most frequently used method of measuring nutritional status in society. The use of anthropometric tools as a method for measuring the nutritional status of the community is very widespread (Ministry of Health, 2020). The following is a table of sample frequency distribution based on cadre motivation:

Table 9. Frequency Distribution of Respondents Based on the Use of Anthropometric Tools

Use of Anthropometric Tools	f	%
Skilled	23	76.7
Less Skilled	7	23.3
Total	30	100.0

Source: Primary Data, 2024

Based on table 13, it shows that out of 30 respondents, 23 people or 76.7% are skilled in using anthropometric tools. The other 7 people or 23.3% are less skilled in using anthropometric tools.

4. DISCUSSION

1. Relationship between Cadre Knowledge and the Use of Anthropometric Tools

Knowing comes from sensing, and sensing occurs after humans perceive a certain object. Human senses, namely sight, hearing, smell, taste, and touch are used for sensing. Most human information is collected through sight and hearing. A person's knowledge is a determining factor that determines their behavior (Devina Sari Siregar, 2019).

A person's health behavior is influenced by their level of education and information. Therefore, the participation of cadres in posyandu activities can be influenced by the high level of respondent knowledge. Lack of cadre knowledge will cause their lack of involvement in posyandu activities. In fact, the activeness of a cadre is influenced by several factors, such as beliefs, traditions, attitudes, availability of facilities, social support from family, friends, religious leaders, and community leaders, among others, not all cadres who have adequate knowledge will not be able to participate in posyandu activities (Subiyatun S, 2017).

2. Relationship between the Role of Cadres and the Use of Anthropometric Tools

Because cadres are tasked with implementing the posyandu program, their involvement is very important. The implementation of posyandu will not run smoothly if the cadres are not involved, which will also make it difficult to identify the nutritional conditions of toddlers early and clearly. (Muhammad Sayuthi1 & Arfiza Ridwan, 2016).

Nutrition cadres collect toddler information, weigh and record it on the Healthy Menu Card (KMS), provide additional food, provide vitamin A, provide nutrition counseling, and visit the homes of mothers who have small children. Cadres are required to play an active role in the community and develop into community movers, motivators, and counselors (Muhammad Sayuthi1 & Arfiza Ridwan, 2016).

Compared to the average person, the task of a cadre is much greater. Cadres are volunteers from the community who are considered capable of providing health services and have sufficient influence in the community. However, because there is no guarantee that health cadres will be able to carry out their duties effectively, their existence is somewhat threatened. When it comes to family matters, cadres usually prioritize their personal interests or prefer to abstain from their work (Muhammad Sayuthi & Arfiza Ridwan, 2016).

Real behavior is manifested in the form of participation. As a result, research on variables that influence behavior and factors that influence roles are identical. As a result, experience, knowledge, attitudes, social, cultural, and physical environments all have an impact on roles. These stimuli, which can be internal and external, are categorized as factors that influence behavior. Predisposing, enabling, and reinforcing variables are examples of

behavioral factors. Predisposing variables are internal elements, such as knowledge, attitudes, values, perceptions, and beliefs, that exist within an individual, family, group, or community and facilitate certain behaviors. Factors that facilitate behavior include factors that are affordable, accessible, provide resources, skills, and recommendations. Factors that reinforce behavior include classmates, parents, superiors, and attitudes and abilities (Soleh Bastaman, 2014).

This is because the Posyandu cadres function as a channel for delivering health messages that are quite optimal in supporting maternal and child health service program activities through counseling, community mobilization and supervision of early detection of childbirth risks. In addition, Posyandu cadres also function to change the behavior of pregnant women to want to give birth to health workers and also play a role in motivating pregnant, postpartum and breastfeeding mothers in carrying out health care. The role or participation of Posyandu cadres through various organizations in efforts to realize and improve village community health development must be organized and planned properly and clearly (Bungawati, 2023).

3. Relationship between Length of Service and Use of Anthropometric Tools

The talents possessed by cadres during Posyandu activities will depend on the length of time they have been cadres. A cadre's experience can be a basis for acting and making decisions in Posyandu activities the longer they are active as cadres (Monique Visera, 2020). The amount of time spent carrying out tasks given by the employer is known as the length of service (Ulfa Hidayati, 2021).

Along with longer working days, more knowledge, skills, and abilities are acquired to complete the responsibilities delegated by the employer. Knowledge and abilities are developed through involvement and interaction with tasks performed in the workplace (Ulfa Hidayati, 2021).

The results of the chi-square statistical test analysis in this study indicate that there is no relationship between the length of service of cadres and the use of anthropometric tools, with a p-value ($0.760 > 0.05$). In this study, cadres with experience of more than five years have a higher level of accuracy (63.3%) compared to cadres with experience of less than five years (36.7%). Because cadres only pay attention to one anthropometric parameter and lack of training, the study shows that there is no relationship between length of service and cadre concentration.

The results of this study are in line with the research conducted by Rosliana Hardiyanti, Idrus Jus'at, and Dudung Angkasa in 2018 entitled "The Relationship between Length of Work

as a Cadre, Knowledge, Education with Precision and Accuracy of Toddler Weight Weighing Results by Posyandu Cadres in 2018" stating that there is no relationship between the accuracy of weighing skills and length of service. Because, according to the study, there is no division of rotating work, no compensation for cadres, and some cadres are over 40 years old, so that there is a possibility of a decrease in weighing accuracy skills.

The results of this study are also in line with research conducted by Islamiyati Islamiyati and Sadiman Sadiman in 2022 entitled "Factors Related to Cadre Skills in Stimulating and Early Detection of Toddler Growth and Development" stating that there was no relationship between the length of experience as a cadre and the skills to detect early child growth and development. The study also stated that experience can also be obtained through education and training, not only from the length of time as a cadre.

In contrast to the research conducted by Ulfa Hidayati in 2021 entitled "The Relationship Between Education and Length of Service with the Skills of Posyandu Cadres in Weighing Toddlers Using Dacin in Purworejo Regency" which stated that there was a significant relationship between length of service and cadre skills. The study stated that it was 4.63 times more likely for cadres who had more than three years of experience to have skills.

4. The Relationship between Cadre Motivation and the Use of Anthropometric Tools

A person's unique willingness to initiate or maintain a series of actions intended to achieve a goal is known as motivation (Lucia Retnowati et al, 2022). A cadre's motivation shapes his personality to be more pious in carrying out his responsibilities and duties. Therefore, it is very important to create and maintain a supportive cadre environment, especially through moral support from close family members or the cadre's environment, such as medical personnel (Irma Afifa, 2019).

The success of the operational implementation of Posyandu depends on the motivation of cadres in providing services. High motivation among cadres has a positive impact on the community, as evidenced by their active visits to Posyandu, the expansion of services they provide through their role as cadres, and the protection of infants and toddlers from disease, malnutrition, and other dangers because they are always under the supervision of competent cadres at Posyandu. Success in Posyandu will be closely related to high motivation. Because motivation shows that someone is actively and enthusiastically trying to improve public health (Erma Kusumayanti, 2022).

5. CONCLUSION

Based on the results of the research that has been conducted, the conclusions in this study are as follows:

1. The relationship between cadre knowledge and the use of anthropometry at the Topo Health Center UPTD
 - a. There is no relationship between cadre knowledge and the use of anthropometric tools based on foot scales because the p-value obtained is $(0.495) > 0.05$.
 - b. There is a relationship between cadre knowledge and the use of anthropometric tools based on LiLab because the p-value $(0.000) < 0.05$ was obtained.
 - c. There is a relationship between cadre knowledge and the use of anthropometric tools based on infantometers because a p-value $(0.000) < 0.05$ was obtained.
 - d. There is no relationship between cadre knowledge and the use of anthropometric tools based on the Stadiometer because the p-value obtained is $(0.157) > 0.05$.
 - e. There is a relationship between cadre knowledge and the use of anthropometric tools based on head circumference tape because a p-value $(0.000) < 0.05$ was obtained.
2. There is no relationship between the role of cadres and the use of anthropometric tools at the Topo Health Center UPTD because the p-value $(0.419) > 0.05$ was obtained.
3. There is no relationship between the length of service of cadres and the use of anthropometric tools at the Topo Health Center UPTD because the p-value obtained was $(0.760) > 0.05$.
4. There is no relationship between cadre motivation and the use of anthropometric tools at the Topo Health Center UPTD because the p-value $(0.236) > 0.05$ was obtained.

5.

SUGGESTION

1. For the Nabire District Health Service

It is expected that the results of this study can be used as input regarding the knowledge, role, motivation and length of service of cadres regarding the use of anthropometric tools so that the Health Service can improve knowledge by providing training or counseling for cadre mothers.

2. For Topo Health Center UPTD

It is expected to provide training and assistance when dividing tasks for cadres so that cadres can master all Posyandu activities.

3. For Persada Nabire Health College

The results of this study are expected to be used as study material and references that can help with further research activities.

4. For Cadres

It is hoped that cadre training will be held frequently and that they will be further improved and more active in using anthropometric tools.

5. For Further Researchers

It is hoped that further researchers who will study the problems related to this research can use it as a reference source to develop further research by considering the weaknesses and limitations of this research.

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