

Preconception Posyandu Performance Assessment Instrument with European Foundation Quality Management (EFQM) Method: Indicators, Validity and Reliability

Fitrianty Sutadi Lanyumba^{1,10*}, Muhammad Syafar², Darmawansyah³, Apik Indarty Moedjiono⁴, Healthy Hidayanty⁵, Wahiduddin⁶, Faizal Fahmi⁸, Anang S Otoluwa^{9,10}, Anwar Mallongi⁷

Fitrianty Sutadi Lanyumba^{1,10*}, Muhammad Syafar², Darmawansyah³, Apik Indarty Moedjiono⁴, Healthy Hidayanty⁵, Wahiduddin⁶, Faizal Fahmi⁸, Anang S Otoluwa^{9,10}, Anwar Mallongi⁷

¹Doctoral Program, Faculty of Public Health, Hasanuddin University, Makassar, INDONESIA.

²Department of Health Promotion, Faculty of Public Health, Hasanuddin University, Makassar, INDONESIA.

³Department of Administration and Health Policy, Faculty of Public Health, Hasanuddin University, Makassar, INDONESIA.

⁴Department of Biostatistics and Demographics, Faculty of Public Health, Hasanuddin University, Makassar, INDONESIA.

⁵Department of Nutritionist, Faculty of Public Health, Hasanuddin University, Makassar, INDONESIA.

⁶Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Makassar, INDONESIA.

⁷Department of Environmental Health, Faculty of Public Health, Hasanuddin University, Makassar, INDONESIA.

⁸BKKBN Department, South Sulawesi Province, INDONESIA.

⁹Health Department, Gorontalo Province, INDONESIA.

¹⁰Faculty of Public Health, Tompotika University Luwuk Banggai, INDONESIA.

Correspondence

Fitrianty Sutadi Lanyumba

Doctoral Program, Faculty of Public Health, Hasanuddin University, Makassar; Faculty of Public Health, Tompotika University Luwuk Banggai, INDONESIA.

Email: fitri.sutadi@gmail.com

History

- Submission Date: 05-07-2024;
- Review completed: 11-10-2024;
- Accepted Date: 04-12-2024.

DOI : 10.5530/pj.2025.17.5

Article Available online

<http://www.phcogj.com/v17/i1>

Copyright

© 2025 Phcogj.Com. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International license.

ABSTRACT

Preconception Posyandu is one of the preconception women's health services created to help reduce MMR, IMR and stunting prevalence in Banggai District. This study aims to create a performance assessment instrument for the Preconception Posyandu so that it can maintain the existence of the service. The development of performance assessment indicators through Focus Discussion Group (FGD) activities using the European Foundation Quality Management (EFQM) method consists of using 9 variables. We involved 30 village midwives and 30 preconception women at three health centers within Luwuk City to test the performance assessment instrument. Internal reliability was assessed with Cronbach's alpha and criterion validity. The performance appraisal instrument using the EFQM method obtained development results, namely from 52 indicator questions made into 92 questions, then after testing the validity of the instrument, 81 questions were declared valid and 11 questions were invalid. The results of Cronbach's alpha value, there are 5 variables with strong reliability ($\alpha > 0.80$), namely leadership variables, strategic policies, staff management and partnerships and resources, while there is 1 variable with perfect reliability ($\alpha > 0.90$), namely process variables, and 3 variables with sufficient reliability ($\alpha > 0.70$), namely performance outcome variables, customer satisfaction and impact on society. The questions generated from the development of indicators can be used to measure performance. The service of the Preconception Posyandu Program that has been running so far, this is evidenced by the average value of the reliability test which is 0.83, which means strong reliability.

Keywords: Instrument, Performance Appraisal, Preconception Health Post, EFQM.

INTRODUCTION

Maternal health before and during pregnancy is an early determinant in the life and health of a child in the future. There are many ways that can be done to improve maternal health before conception, one of which is by providing preconception care. To get the maximum impact, several interventions in preconception care can be carried out, where the aim is to identify and modify biomedicine, conduct social health management for women and prevent risky behavior before conception¹.

To be able to create preconception health, it is important to implement preconception services. This has been regulated by the government in the Regulation of the Minister of Health of the Republic of Indonesia (Permenkes) Number 21 of 2021 concerning the Implementation of Health Services for the Pre-Pregnancy Period, Pregnancy, Childbirth, and the Postpartum Period, Contraceptive Services, and Sexual Health Services. In line with this, currently the Banggai District government has implemented preconception services and formed a forum that can provide preconception services, namely the Preconception Posyandu. Posyandu Prakonsepsi is an innovative effort produced by the Banggai District Government and aims to accelerate the reduction of MMR, IMR and stunting in the Banggai District area. Since its establishment in 2015, the preconception posyandu

has received strong support and commitment from various stakeholders and there has been an increase in the coverage of health programs and a decrease in health problems².

The presence of Posyandu Prakonsepsi in Banggai District has had a positive influence on reducing health problems in the area. The Preconception Posyandu itself has a network of implementers down to the village level. ranging from health center officers, village midwives, and posyandu cadres³. Based on data from the Banggai District Health Office in 2022, it is known that there are 356 preconception posyandu spread across 27 Puskesmas in Banggai District. The form of activities carried out is to assist preconception women in all areas of Banggai Regency by conducting a series of assistance and socialization about the importance of women's reproductive health since they will become prospective mothers. When viewed from the time it was formed to the present, this program due to the changes that have occurred in the handling of maternal and child health issues in Banggai District, it is necessary to maintain the existence of preconception posyandu.

Until now, the form of performance assessment carried out by the Banggai District Health Office at the Preconception Posyandu is only looking at the increase in membership of WUS who attend every month to take part in services, the prevalence

Cite this article: Lanyumba FS, Syafar M, Darmawansyah, Moedjiono AI, Hidayanty H, Wahiduddin, et al. Preconception Posyandu Performance Assessment Instrument with European Foundation Quality Management (EFQM) Method: Indicators, Validity and Reliability. Pharmacogn J. 2025;17(1):40-46.

Table 1. Results of Indicator and Question of Preconception Health Post Performance Assessment Instrument.

No.	Variable	Indicators	Question
1.	Leadership	Analysis Ability	The Head of Puskesmas has the ability to analyze good problems related to the implementation of the Preconception Posyandu program Head Health Center did not attempt to resolve problems encountered in supporting the implementation of Preconception Posyandu program
		Exemplary	The Head of Puskesmas always provides guidance to health workers for the implementation of the Preconception Health Post program The head of the health center is always friendly in providing guidance related to the implementation of the Preconception Posyandu program
		Rationality and Objectivity	The Head of Puskesmas provides easy-to-work directions in the implementation of the Preconception Posyandu program The head of the health center is not objective in assessing the performance of health workers who implement the Preconception Health Post programthe Preconception Posyandu program
		Work Instructions and Division of Duties	The Coordinating Midwife always provides work instructions that are easy to understood for the implementation of the Preconception Posyandu program Division of Tasks given by the Coordinating Midwife in the implementation of the Posyandu Preconception program is unclear
		Listening and Communication Skills	The Head of Puskesmas and the Coordinating Midwife always listen to suggestions and constructive criticism from health workers regarding the implementation of the Preconception Posyandu program The Head of Puskesmas and the Coordinating Midwife rarely communicate with health workers regarding the implementation of the Preconception Health Post program
2.	Policy and Strategy	Goal Achievement	Policies and strategies created for program Posyandu Preconception program is not in line with the Vision of the Puskesmas Policies and strategies made by the Head of Puskesmas do not have a good influence on health workers in implementing the Preconception Health Post program the Preconception Health Post program
		Environmental Change	Changes in preconception women's health related to policies and strategies implemented by health workers
		Briefing Implementation	Policies and strategies to support the preconception posyandu program not communicated and outlined to health workers Policies and strategies are easy for Health workers to implement
		Decision Making Action	Health workers are involved in developing policies and strategies for the implementation of the Preconception Health Post program Decision making for the improvement of Posyandu Preconception services by the Head of the Health Center is not based on the results of the evaluation of the implementation of previous services.
		Learning Implementation	Policies and strategies for the Preconception Health Post program made by the Head of Puskesmas modeled on the health service program. others that are considered good Policies and strategies for implementing the Preconception Health Post program are always evaluated.
3.	Staf Management	Planning, HR Management and Development	The Head of the Health Center gives permission to Health workers who want to attend training related to science
		Active Engagement	Health workers are actively involved and empowered in implementation of the preconception posyandu program The head of the health center does not involve health workers in developing strategic planning for implementation preconception posyandu program
		Good Communication and Coordination	Good communication between health workers, coordinating midwives and the Head of Puskesmas in the implementation of the Preconception Health Post program There is no good coordination between health workers, the coordinating midwife and the head of health
		Compensation	Health workers receive appropriate remuneration/honor/salary for the work done in implementing the Preconception Posyandu program The head of the health center recognizes the work that has been done in implementing the Preconception Health Post program
		Safety Guarantee	Head of Puskesmas provides health insurance in implementing the preconception posyandu program Puskesmas head does not provide assurance and security in implementing the preconception posyandu program

4.	Partnerships and Resources	Government and Community Engagement	Organization involves the Village government, Sub-district government and community groups in supporting the implementation of the preconception posyandu program
		There is a Budget	Organization no always communicate and coordinate with the village government, sub-district government and community groups regarding the Posyandu Preconception program There is a budget from the Health Office to support the implementation of the Preconception Health Post program There is a budget from the village to support the implementation of the Posyandu Preconception program
		There are Facilities and Infrastructure	There is a building/ infrastructure for the implementation of Preconception Health Post services There is health equipment to support preconception posyandu services
		There is an Information System	There is an information system that supports the Posyandu Preconception program Data and information related to the Posyandu Preconception program are not available and accessible to various parties who need them
		There is an SOP	Available SOP in the implementation of Preconception Health Post service Preconception Posyandu is run by health workers not based on existing SOPs.
5.	Process	Submission of Implementation Schedule	It is important to inform preconception women about the schedule of service delivery
		Preparation of Service Infrastructure and Facilities	Facilities and infrastructure and supporting equipment need to be prepared before the implementation of service activities
		Involvement of Health Cadres	Health cadres are not important to involve in providing preconception services
		Record Form Preparation	Health worker prepares recording form
		Anthropometric Screening	Officer Health conducting weight measurement on WUS Officer Health taking height measurements of women Health workers measure upper arm circumference (LILA) of pregnant women Health workers measure pelvic circumference and waist circumference of women.
		TT Immunization	Officer Health giving Tetanus Toxoid (TT) Immunization
		Provision of SRH and Nutrition Counseling	Officer Health Officer did not provide reproductive health services and counseling Officer Health provide nutrition counseling services Health workers conduct counseling on preconception health services in high schools and universities
		Health progress recording	Health workers do not record preconception women's health progress
		Blood Hb level check	Officer health worker check blood Hb levels
		Provision of Nutritional Supplements	Officer Health providing nutritional supplements
		Timely Reporting	Health workers report data on preconception services before the 25th of the current month
		Processed Data	Health workers do not process data
6.	Staff Satisfaction	Appropriate Compensation	Health workers are paid according to their performance Health workers do not receive additional wages Retrieved from leader organization Health workers receive facilities to support their work
		Good Working Environment	Officer Health was honored for his performance by organization leader Health workers never receive praise for their performance from the organization's leaders Health workers get support from leaders in providing services
		Appropriate Working Time	Health workers have appropriate working hours Health workers have time trest
		Safety and Health Insurance	Health workers are not guaranteed security in carrying out their work Health workers do not receive regular health checks from the organization
7.	Performance Outcome	Increased Routine Visits	No increase in customer visits every month (last 3 months)
		Increased K1 Coverage	No increase in K1 coverage (last 3 months)
		Increased TT Immunization Coverage	There was increase TT immunization coverage (last 3 months)
		Reduction in Prevalence of Nutritional Anemia	There is a decrease in the prevalence of nutritional anemia (last 3 months)
		Decrease in Prevalenceof SEZ	No decrease in prevalence of SEZ (last 3 months)

8.	Customer Satisfaction	Tangible	The service place is clean, tidy and smells good
		Reliability	No complete equipment and facilities available during service Stages service complicated and takes a long time
		Responsive	Health workers are deft and skillful in providing services to mothers Health workers are rude/unfriendly when providing services to mothers
		Assurance	Health workers are polite when providing services to mothers Health workers provide clear information to mothers regarding the services provided Officer Health did not motivate the mother
		Emphaty	Health workers do not try to know the mother's needs Health workers always provide a sense of security to mothers when providing services
9.	Impact on Community	Routine Visits	Mother does not regularly attend preconception posyandu services every month
		Health Conscious	Mother always asks the Preconception Health Post implementation schedule to the health worker Mothers are more aware of the importance of preconception health
		Increased Knowledge	Mothers did not consider it important to improve their nutritional status before pregnancy Mothers better understand the importance of pre-pregnancy nutrition
		Provision of Information	Mother knows the benefits of each service provided at the preconception Posyandu Mothers provide good information about preconception posyandu services to the community
		Family Support	Mother invites other mothers to come to the Preconception Health Post Mother does not receive support from family in preparing for a healthy pregnancy

Table 2. Results Validity Test of Preconception Health Post Performance Assessment Instrument.

Criteria	Indicator	Question	p-value	Alp-alfa (α)	Description
V1	I1	P1	0.485	0,3061	Valid
		P2	0.302	0,3061	Non Valid
	I2	P3	0.552	0,3061	Valid
		P4	0.394	0,3061	Valid
	I3	P5	0.688	0,3061	Valid
		P6	0.617	0,3061	Valid
	I4	P7	0.559	0,3061	Valid
		P8	0.097	0,3061	Non Valid
	I5	P9	0.579	0,3061	Valid
		P10	0.539	0,3061	Valid
V2	I6	P11	0.521	0,3061	Valid
		P12	0.383	0,3061	Valid
	I7	P13	-0.569	0,3061	Non Valid
		P14	0.507	0,3061	Valid
	I8	P15	0.448	0,3061	Valid
		P16	0.764	0,3061	Valid
	I9	P17	0.319	0,3061	Valid
		P18	0.450	0,3061	Valid
	I10	P19	0.575	0,3061	Valid
		P20	0.737	0,3061	Valid
V3	I11	P21	0.462	0,3061	Valid
		P22	0.264	0,3061	Non Valid
	I12	P23	0.676	0,3061	Valid
		P24	0.431	0,3061	Valid
	I13	P25	0.430	0,3061	Valid
		P26	0.539	0,3061	Valid
	I14	P27	0.418	0,3061	Valid
		P28	0.695	0,3061	Valid
	I15	P29	0.457	0,3061	Valid
		P30	0.698	0,3061	Valid
V4	I16	P31	0.800	0,3061	Valid
		P32	0.530	0,3061	Valid
	I17	P33	0.574	0,3061	Valid
		P34	0.464	0,3061	Valid
	I18	P35	0.602	0,3061	Valid

V5	I19	P36	0.607	0,3061	Valid
		P37	0.599	0,3061	Valid
		P38	0.289	0,3061	Non Valid
	I20	P39	0.503	0,3061	Valid
		P40	0.054	0,3061	Non Valid
	I21	P41	0.775	0,3061	Valid
	I22	P42	0.870	0,3061	Valid
	I23	P43	0.714	0,3061	Valid
	I24	P44	0.795	0,3061	Valid
	I25	P45	0.839	0,3061	Valid
P46		0.870	0,3061	Valid	
P47		0.870	0,3061	Valid	
I26	P48	0.870	0,3061	Valid	
	P49	0.645	0,3061	Valid	
I27	P50	0.507	0,3061	Valid	
	P51	0.776	0,3061	Valid	
V6	I28	P52	0.686	0,3061	Valid
		P53	0.269	0,3061	Non Valid
	I29	P54	0.815	0,3061	Valid
		P55	0.793	0,3061	Valid
	I30	P56	0.795	0,3061	Valid
		P57	0.715	0,3061	Valid
	I31	P58	0.624	0,3061	Valid
		P59	0.164	0,3061	Non Valid
	I32	P60	0.717	0,3061	Valid
		P61	0.712	0,3061	Valid
P62		0.197	0,3061	Non Valid	
I33	P63	0.602	0,3061	Valid	
	P64	0.712	0,3061	Valid	
I34	P65	0.466	0,3061	Valid	
	P66	0.708	0,3061	Valid	
I35	P67	0.566	0,3061	Valid	
	P68	0.465	0,3061	Valid	
I36	P69	0.537	0,3061	Valid	
	P70	0.407	0,3061	Valid	
I37	P71	0.749	0,3061	Valid	
	P72	0.666	0,3061	Valid	
I38	P73	0.148	0,3061	Non Valid	
	P74	0.404	0,3061	Valid	
I39	P75	0.570	0,3061	Valid	
	P76	0.317	0,3061	Valid	
I40	P77	0.590	0,3061	Valid	
	P78	0.359	0,3061	Valid	
I41	P79	0.396	0,3061	Valid	
	P80	0.466	0,3061	Valid	
I42	P81	0.599	0,3061	Valid	
	P82	0.376	0,3061	Valid	
I43	P83	0.608	0,3061	Valid	
	P84	0.405	0,3061	Valid	
I44	P85	0.706	0,3061	Valid	
	P86	0.127	0,3061	Non Valid	
I45	P87	0.563	0,3061	Valid	
	P88	0.481	0,3061	Valid	
I46	P89	0.625	0,3061	Valid	
	P90	0.652	0,3061	Valid	
I47	P91	0.322	0,3061	Valid	
	P92	0.364	0,3061	Valid	

Sources: Primary Data, 2024

Information:

V: Variable

I: Indicator

Q: Question

Table 3: Reliability Test Results of Preconception Health Post Performance Assessment Instrument.

No.	Variables	r-Alpha	Description
1.	Leadership	0,842	Strong Reliability
2.	Policy and Strategy	0,820	Strong Reliability
3.	Staff Management	0,807	Strong Reliability
4.	Partnerships and Resources	0,856	Strong Reliability
5.	Process	0,956	Perfect reliability
6.	Staff Satisfaction	0,875	Strong Reliability
7.	Performance Results	0,783	Reliability is sufficient
8.	Customer Satisfaction	0,761	Reliability is sufficient
9.	Impact on Society	0,789	Reliability is sufficient
	Average	0,832	Strong reliability

Source: Primary Data, 2024

of anemia in WUS and the prevalence of SEZ in WUS. In addition, the Banggai District Health Office also does not have a standardized measuring tool in evaluating the performance of the Preconception Posyandu Program, so it is necessary to create a standardized performance assessment measuring tool that can be used to assess the performance of the program independently (*self-assessment*) and can be carried out annually. According to Evan (2020) in his research revealed that in assessing an organization's performance there are several factors that need to be identified, namely staff expectations, values, leadership, rewards, policies, education and training, and quality improvement⁴. In its implementation, each assessment instrument produced must be tested for validity and reliability so that it can be used in measuring the performance of a program⁵.

In terms of performance measurement, many theories are used to assess the performance of an organization. In many studies, the EFQM (*European Foundation Quality Management*) framework is often used as a high standard for providing comprehensive quality management in health services. This model is also used for self-assessment of performance by a health service organization that assesses all structural and functional aspects of the organization⁶. The EFQM concept focuses on 9 indicators in assessing a program, namely *Leadership, Policy and strategy, People Management, Partnership and Resources, Process, Employee/Staff Satisfaction, Customer Satisfaction, Impact of Society, and Results*.

RESEARCH METHODS

A qualitative approach was used to develop performance appraisal indicators based on the EFQM method by conducting FGDs with respondents who had been selected using purposive sampling techniques. The informants in the study consisted of: Head of the Banggai District Health Office, Head of the Public Health Division of the Banggai District Health Office, Head of the Nutrition Section of the Banggai District Health Office in charge of the Preconception Posyandu program, Head of Puskesmas in the Luwuk City area, and Midwife Coordinator at the Puskesmas in Luwuk City. While the quantitative approach was carried out to test the performance appraisal instrument on the target, namely each 30 respondents (village midwives and preconception women). Furthermore, data analysis was carried out by conducting validity and reliability tests. To determine the validity, the decision is based on the value of rcount (Corrected Item-Total Correlation) > rtable. While for internal reliability is assessed with Cronbach's alpha.

RESEARCH RESULTS

The results of indicator development, validity test and reliability test can be seen in the following table:

DISCUSSION

The development of performance assessment indicators is an effort that needs to be made to assist in assessing the performance of the Preconception Posyandu that has been running in an effort to reduce MMR, IMR and stunting in Banggai District. Maternal mortality factors according to Moedjiono (2019) occur because mothers, families and communities are not optimal in responding to maternal needs or making late decisions to obtain essential health services for mothers⁷. Meanwhile, the incidence of stunting can be prevented by reducing the rate of early marriage in adolescents. Explains that the knowledge factor possessed by the community and adolescents is still lacking about the impact of early marriage so that it is one of the causes of the high rate of early marriage in the Selayar Islands⁸. The socio-culture that exists in the community can be used as an approach to reduce the rate of marriage at an early age.

Based on the results of FGDs, from 9 research variables, namely leadership variables, policies and strategies, staff management, partnerships and resources, processes, staff satisfaction, performance results, customer satisfaction and impact on the community, 52 indicators and 92 questions have been compiled as the content of the Preconception Post performance assessment instrument. The research has developed indicators of performance assessment of the Preconception Health Post, then further conducted validity and reliability tests on the data.

Collected from 30 village midwives and 30 preconception women through instrument trials. Validity shows the extent to which the measuring instrument used to measure what will be measured. The method is to correlate the score obtained on each question item with the individual's total score. Decision making is based on the value of r-count (Corrected Item-Total Correlation) > r-table of 0.3061 for df = 30-2 = 28; $\alpha = 0.05$ then the item / question is valid and vice versa. Meanwhile, the reliability test was carried out on question items that were declared valid. A variable is said to be reliable or reliable if the answers to the questions are always consistent. The reliability coefficient is intended to see the consistency of the answers to the items of questions given by respondents.

Based on the results of the validity test, it is known that out of 92 questions, 11 questions were declared invalid and 81 questions were declared valid. The questions that were declared invalid were related to the attitude of the Head of Puskesmas in solving problems to support the implementation of the Preconception Posyandu program, the clarity of the division of tasks given by the Coordinator Midwife in the service, the role of the Head of Puskesmas in influencing health workers on policies and strategies made for service, permission from the Head of Puskesmas for health workers to attend training, availability and access for related sectors to data and service information, use of service

SOPs by health workers, the role of health workers in recording the health of preconception women, additional wages from organizational leaders, praise for their performance from organizational leaders, service site conditions, and perceptions of preconception women regarding nutrition in the period before pregnancy. These eleven questions were declared invalid based on the results of data analysis in SPSS because $r\text{-count} < r\text{-table}$ (0.3061). When viewed from the test results, the eleven questions that were declared invalid had an influence with leadership factors. The type of leadership will greatly affect the way the leader manages his organization, this is corroborated by research by Muthmainnah where the variables of directive, supportive, participative and achievement-oriented leadership styles have a positive and significant effect on employee performance at the Pinrang Regency Health Office⁹⁻¹⁷.

In the reliability test, the high and low test numbers are empirically indicated by a number called the reliability coefficient value. High reliability is indicated by an r_{xx} value close to 1. The agreement in general reliability is considered satisfactory if ≥ 0.700 . The reliability test results illustrate that of the nine research variables all declared reliable because the test value meets the predetermined standard value of > 0.70 . It is known that the results of Cronbach's Alpha value there are 5 variables with strong reliability ($\alpha > 0.80$), namely leadership variables ($\alpha = 0.842$), strategic policy ($\alpha=0.820$), staff management ($\alpha=0.807$) and partnerships and resources ($\alpha=0.856$), while there is one variable with perfect reliability ($\alpha > 0.90$), namely the process variable ($\alpha=0.956$), and three variables with sufficient reliability ($\alpha > 0.70$), namely the performance outcome variable ($\alpha=0.783$), customer satisfaction ($\alpha=0.761$) and impact on society ($\alpha=0.789$).

CONCLUSION

Conducting FGDs with relevant elements of the Banggai District Health Office was very helpful in preparing indicators for assessing the performance of the Preconception Health Post. Based on the FGD results, 92 questions were obtained from 52 assessment indicators and 9 research variables based on the EFQM method. At the validity test stage, 81 questions were found to be valid and 11 questions were invalid. While the results of the reliability test of 81 questions that were declared valid showed that all questions were declared reliable because the Cronbach's Alpha value was > 0.700 . It can be concluded that the Preconception Health Post performance assessment instrument is valid and reliable so that the instrument developed can be continued to the next stage.

REFERENCES

1. Goodfellow Ashley, et al. Improving preconception health and care: a situation analysis. *BMC Health Services Research* (2017) 17:595.
2. Local government of Banggai district. (2015). *Perbup posyandu preconception Banggai*.
3. Brown P, Stahl D, Appiah-Kusi E, Brewer R, Watts M, Peay J, et al. Fitness to plead: Development and validation of a standardized assessment instrument. *PLoS One*. 2018;13.
4. Evans L, Wewiorski NJ, Ellison ML, Ni P, Harvey KLL, Hunt MG, et al. Development and validation of an instrument to measure staff perceptions of recovery climate and culture in mental health programs. *Psychiatr Serv*. 2020;71(6):570-9.
5. Reedy GB, Lavelle M, Simpson T, Anderson JE. Development of the Human Factors Skills for Healthcare Instrument: A valid and reliable tool for assessing interprofessional learning across healthcare practice settings. *BMJ Simul Technol Enhanc Learn*. 2017;3(4):135-41.
6. Asadi, S. A., Hosseini Bargzan, S., & Sokhanvar, M. (2018). Applying the EFQM Model for Evaluating the Performance: A Case Study in a Public Hospital. *Evidence Based Health Policy, Management and Economics*, 2(3), 174-180.
7. Moedjiono, A. I., Hidayanty, H., & Abdullah, T. (2019). Prevention of Delay of Decision Making as Efforts to Improve the Mother Health in Polewali Mandar, West Sulawesi Indonesia. *Indian Journal of Public Health Research & Development*, 10
8. Ningsih, A. P., Syria, S., Syfar, M., Muis, M., Sukri, S., & Abdullah, M. T. (2020). Socio-cultural analysis of early marriage in Selayar Islands. *Health Behavior and Promotion: Indonesian Journal of Health Promotion and Behavior*, 2(2), 46-51.
9. Muthmainnah, H., Darmawansyah, D., & Marzuki, D. S. (2021). THE INFLUENCE OF LEADERSHIP STYLE ON EMPLOYEE PERFORMANCE AT THE HEALTH DEPARTMENT OFFICE PINRANG REGENCY: The Effect of Leadership Style on Performance of Employees in the Health Office of Pinrang Regency. *Hasanuddin Journal of Public Health*, 2(3), 312- 323.
10. Birawida, A. B., Ibrahim, E., Mallongi, A., Al Rasyidi, A. A., Thamrin, Y., & Gunawan, N. A. (2021). Clean water supply vulnerability model for improving the quality of public health (environmental health perspective): A case in Spermonde islands, Makassar Indonesia. *Gaceta Sanitaria*, 35, S601-S603.
11. Kasim, S., Daud, A., Birawida, A. B., Mallongi, A., Arundana, A. I., Rasul, A., & Hatta, M. (2023). Analysis of environmental health risks from exposure to polyethylene terephthalate microplastics in refilled drinking water. *Global Journal of Environmental Science and Management*, 9(Special Issue (Eco-Friendly Sustainable Management)), 301-318.
12. Saleh, R., Daud, A., Ishak, H., Amqam, H., Wahyu, A., Birawida, A. B., & Mallongi, A. (2023). Spatial Distribution of Microplastic Contamination in Blood Clams (*Anadara granosa*) on the Jeneponto Coast, South Sulawesi. *Pharmacognosy Journal*, 15(4)
13. Azis ASFW, Darmawansyah, Razak A, Arifin A, Syfar M, Mallongi A. Analysis of Policy Implementation of The First 1000 Days of Life Program in Overcoming Stunting in Phcogj.com Maros District. *Pharmacogn J*. 2023;15(3): 405-410.
14. Ernyasih, Mallongi A, Daud A, Palutturi S, Stang, Thaha R, et al. Model Prediction of Potential Disease Effects from PM2.5 Emission Among School Children in Coming 30 years in South Tangerang. *Pharmacogn J*. 2023;15(3): 400-404
15. Asrina A, Payapo R, Idris FC, Palutturi S, Mallongi A. Health Behavior and Social Support in Postpartum Mothers Treatment in Ba'ukup Tradition in Maluku. *Pharmacogn J*. 2023;15(3): 438-442
16. Siokal B, Amiruddin R, Abdullah T, Thamrin Y, Palutturi S, Ibrahim E, et al. The Influence of Effective Nurse Communication Application on Patient Satisfaction: A Literature Review. *Pharmacogn J*. 2023;15(3): 479-483
17. Pobas, S., Nazaruddin, B., Palutturi, S., ...Russeng, S.S., Mallongi, A. Policy Implementation of Hypertension Prevention and Control Program in Banjarmasin *Pharmacognosy Journal*, 2023, 15(4), pp. 641-649

Cite this article: Lanyumba FS, Syfar M, Darmawansyah, Moedjiono AI, Hidayanty H, Wahiduddin, et al. Preconception Posyandu Performance Assessment Instrument with European Foundation Quality Management (EFQM) Method: Indicators, Validity and Reliability. *Pharmacogn J*. 2025;17(7): 40-46.