

The Effect of Posyandu Basic Skills Training on Knowledge: A Quasi-Experimental Study on Health Workers at the Medan City Health Office in 2024

Pengaruh Pelatihan Keterampilan Dasar Posyandu Terhadap Pengetahuan : Studi Quasi Eksperimen pada Tenaga Kesehatan di Dinas Kesehatan Kota Medan Tahun 2024

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Abstract

The role of health workers as supporters and trainers in improving performance, providing motivation for Posyandu cadres to always be involved in all Posyandu activities. The level of knowledge of health workers in assessing basic Posyandu skills will greatly determine the quality of services provided. The formulation of the problem in this study through preliminary research conducted on health workers in 10 health centers in Medan City showed that the average value of their knowledge about Posyandu was 63.5 (target ≥ 70). This study aims to determine the effect of health worker training conducted by the Medan City Health Office. The study was conducted using a quasi-experimental method. The number of research samples was 30 people. The material provided was the latest concept and regulation on the integration of primary services at Posyandu. With interactive lecture training methods, group discussions, role play and field practice. The results showed that the mean pre-test value was 72.52 while the mean post-test value was 92.56, there was an increase in value of 29.81 and after being tested with Wilcoxon the p-value was <0.001 . The results show that there is a significant difference in the knowledge of training participants about integrated health posts. Knowledge variables according to age, gender, education, work unit, length of service are not factors that influence the pre-test and post-test scores of health workers. It can be concluded that the training that has been given has increased the knowledge of health workers from the post-test assessment conducted. The results of this study are expected to be a medium for evaluating the implementation of basic competency training for integrated health posts for health workers so that the next training period can provide better results.

Keywords: Health Workers, Integrated Health Posts, Training.

Abstrak

Peran tenaga kesehatan sebagai penunjang dan pelatih dalam meningkatkan kinerja, memberikan motivasi kader posyandu agar selalu terlibat dalam semua kegiatan posyandu. Tingkat pengetahuan tenaga kesehatan dalam memberikan penilaian kecakapan keterampilan dasar posyandu akan sangat menentukan kualitas layanan yang diberikan. Rumusan masalah dalam penelitian ini melalui penelitian pendahuluan yang dilakukan pada tenaga kesehatan di 10 puskesmas di Kota Medan menunjukkan bahwa nilai rata-rata pengetahuan mereka tentang posyandu yaitu sebesar 63,5 (target ≥ 70). Penelitian ini bertujuan untuk mengetahui pengaruh pelatihan tenaga kesehatan yang dilakukan oleh Dinas Kesehatan Kota Medan. Penelitian dilakukan dengan metode quasi eksperimental. Jumlah sampel penelitian adalah sebesar 30 orang. Materi yang diberikan adalah konsep dan regulasi terbaru tentang integrasi layanan primer diposyandu. Dengan metode pelatihan ceramah interaktif, diskusi kelompok, bermain peran atau role play dan praktek lapangan. Hasil penelitian menunjukkan nilai mean pre-test adalah sebesar 72.52 sedangkan nilai mean post-test adalah sebesar 92.56, terjadi peningkatan nilai sebesar 29.81 dan setelah diuji dengan wilcoxon nilai p-

value adalah <0.001. Hasil tersebut menunjukkan bahwa ada perbedaan signifikan terhadap pengetahuan peserta pelatihan tentang posyandu. Variabel pengetahuan menurut umur, jenis kelamin, pendidikan, unit kerja, lama bekerja tidak menjadi faktor yang berpengaruh terhadap nilai pre-test dan post-test tenaga kesehatan. Dapat disimpulkan bahwa pelatihan yang telah diberikan meningkatkan pengetahuan tenaga kesehatan dari penilaian post-test yang dilakukan. Hasil dari penelitian ini diharapkan bisa menjadi media evaluasi terhadap pelaksanaan pelatihan kompetensi dasar posyandu pada tenaga kesehatan sehingga pelatihan periode berikutnya bisa memberikan hasil yang lebih baik.

Kata Kunci: Tenaga Kesehatan, Posyandu, Pelatihan



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Introduction

According to the Directorate of Statistics Analysis and Development, Indonesia continues its efforts to reduce both the Maternal Mortality Rate (MMR) and the Infant Mortality Rate (IMR), which currently fall short of the targets set in the Sustainable Development Goals. In 2023, the average MMR across Indonesia remained above 100 deaths per 100,000 live births, and the average IMR above 15 deaths per 1,000 live births [1]. The number of maternal deaths in Medan City in 2022 was 9 out of 34,508 live births, with a reported Maternal Mortality Rate (MMR) of 26 per 100,000 live births, meaning that out of 100,000 live births, 26 mothers died during pregnancy, childbirth, or postpartum. The MMR in Medan City has decreased compared to the previous year. In 2021, the number of maternal deaths was 18 out of 33,529 live births, and in 2020, the number of maternal deaths was 12 out of 37,890 live births. In Medan City, the Neonatal Mortality Rate in 2021 was 1.8 per 1,000 live births. Of the 34,508 live births, there were 63 neonatal deaths caused by low birth weight (LBW), asphyxia, infection, and congenital abnormalities [2].

Monitoring of toddlers' nutritional status development is carried out through monthly weighing and measuring of toddlers at integrated health posts (posyandu). Of the 119,225 toddlers whose heights were weighed and measured, 521 or 0.6% were found to be malnourished based on the weight-for-age index (BW/Age). Meanwhile, nutritional status based on the height-for-age index (BH/Age) included 364 or 0.3% of stunted toddlers. And nutritional status based on the weight-for-height index (BW/BH) included 531 or 0.6% of wasted toddlers. Several factors that need to be considered to reduce maternal and infant mortality rates are sociodemographic factors, health facilities, and immunization program penetration. Immunization is widely provided, especially in primary health care facilities or community health centers (Puskesmas) [2].

Levels of Health Services in Indonesia. Health services in Indonesia consist of primary health care, secondary health care, and tertiary health care. Primary health care is basic health care provided by primary health care facilities. Secondary health care is specialist health care provided by specialist doctors or dentists using specialist health knowledge and technology. Third-level health care is subspecialty health care provided by subspecialist doctors or dentists using subspecialist health knowledge and technology [3].

Primary Health Facilities (FKTP) are basic health services, including community health centers (Puskesmas), primary care clinics, general practitioner practices, and dental practices. In Indonesia, primary health care is provided by Puskesmas. In 2022, there were 10,374 Puskesmas and 27,768 sub-Puskesmas [4]. These facilities, along with other primary health care facilities and various Community-Based Health Efforts (UKBM), provide services. Primary healthcare is one of the pillars of health transformation, focused on meeting life-cycle health needs in an accessible and affordable manner, at the community, family, and individual levels. Primary healthcare services are implemented in an integrated manner at community health

centers (Puskesmas), primary healthcare networks, and primary healthcare networks to meet healthcare needs at every stage of life [4]. In the 2023 Basic Skills Training Curriculum for Posyandu Cadres of the Directorate of Health Promotion and Community Empowerment, Community Empowerment in the Health Sector is a process to increase the knowledge, awareness, and abilities of individuals, families and communities to play an active role in health efforts carried out by facilitating the problem-solving process through an educational and participatory approach and paying attention to local potential and socio-cultural needs [5]. Based on the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/MENKES/2015/2023 concerning Technical Guidelines for Integration of Primary Health Services, the Ministry of Health is rolling out a health system transformation. There are six pillars of health system transformation in Indonesia, namely: 1) Transformation of primary health services; 2) Transformation of referral health services; 3) Transformation of the health resilience system; 4) Transformation of the health financing system; 5) Transformation of health human resources; and 6) Transformation of health technology [4].

The transformation of primary healthcare services is implemented through public education, primary prevention, secondary prevention, and capacity building, including improving the quality of human resources in primary healthcare. This first priority pillar aims to reorganize existing primary healthcare services so they can serve the entire Indonesian population with comprehensive, high-quality healthcare [4]. The restructuring of primary healthcare services requires a new approach that focuses on service needs at every stage of life, delivered comprehensively and integrated across healthcare facilities. This new approach, known as Primary Healthcare Integration, involves community health centers (Puskesmas), village/sub-district health service units (Puskesmas Pembantu), and integrated health posts (Posyandu). Furthermore, all primary healthcare facilities will be involved [4]. Posyandu (Integrated Service Post) is a form of health service effort carried out by, from and with the community, to empower and provide convenience to the community in obtaining health services for mothers and toddlers [4]. Posyandu, a community-led initiative, will foster community commitment, especially among mothers, to preserving the lives and development of children. Through technology transfer from the government, these efforts will eventually lead to self-sufficiency. Community independence will impact the independence of families, mothers, and individuals [6].

Integrated Health Posts (Posyandu) aims to empower communities and facilitate access to basic health services to accelerate the reduction of maternal and infant mortality rates. Minister of Home Affairs Regulation Number 19 of 2011 stipulates the integration of basic social services at Posyandu, which include maternal and child nutrition and health development; disease control and environmental sanitation; clean and healthy living behaviors; elderly health; BKB; Early Childhood Education Posts; accelerating food consumption diversification; empowering the poor, remote indigenous communities, and those with social welfare issues; adolescent reproductive health; and improving family economics [4]. The existence of various UKBM as a network of Community Health Centers, such as Poskesdes (42,051) and Posyandu (301,068), Posyandu Lansia (109,415), Posyandu Remaja (18,300), Posbindu (79,099) shows the lack of integration of community empowerment at the village/sub-district level. On the other hand, there are still 18,193 villages/sub-districts that do not have health facilities in the form of Pustu/Poskesdes/Posyandu to meet the need for health services [1].

The form of community-based health efforts facilitated by the Medan City Health Office in 2022 that has been established is a total of 1,274 active Posyandu, where 96.0% of the existing Posyandu are Posyandu with the Purnama level and 0.2% are Posyandu with the Mandiri level. The ratio of Posyandu per 100 toddlers is 0.7. In addition, there are also 151 Posbindu evenly distributed in 151 sub-districts in Medan City that support the Alert Village program in UKBM [2]. Health workers are any person who dedicates themselves to the health sector and has knowledge and/or skills through education in the health sector which for certain types requires authority to carry out health efforts [7]. Health tasks play a role as a supporter and trainer for cadres in improving the performance of Posyandu cadres so that they are always involved in all Posyandu activities, health workers are also expected to be able to provide motivation to Posyandu officers to always be active in implementing Posyandu [8].

Based on the latest policy of the Decree of the Minister of Health of the Republic of Indonesia Number HK.01.07/MENKES/2015/2023 concerning Technical Guidelines for Integration of Primary Health Services and Basic Skills Training Curriculum for Posyandu Cadres for health workers and cadres from the Directorate of Health Promotion and Community Empowerment in 2023. Health workers in addition to playing a role in technical guidance for cadres in training, then health workers assess cadres' skills in implementing posyandu services, followed by the awarding of Cadre Proficiency Marks (TKK). Cadres who have a sufficient number of TKKs can participate in tiered competitions starting from the sub-district level, provincial level and national level. Winners at

the district/city level become participants in the National Cadre Jamboree. In this case, it is important to have a common perception between health workers and cadres in implementing posyandu. Based on the results of preliminary research conducted on health workers in 10 community health centers in Medan City, it shows that their average knowledge score about posyandu is 63.5 (target ≥ 70). Therefore, it is necessary to conduct research on the Effect of Posyandu Basic Skills Training on Knowledge: A Quasi-Experimental Study on Health Workers at the Medan City Health Office in 2024.

Experimental Section

Research Design

This research design used a quasi-experimental design with a one-group pretest and posttest without control. The pretest was administered before training was given to respondents, followed by a posttest after training (Sarwono, 2006).

Sample

The sample size was taken using the total sampling technique, a sampling technique that uses all members of the population [9]. A total of 30 health workers participated in the Basic Competency Training for Integrated Health Service Posts (Posyandu) at the Medan City Health Office..

Data Collection

Interviews were conducted by the researcher, lasting 2 minutes for each respondent. Questions included: name, health center of origin, age, gender, work unit, length of service, and type of healthcare worker. A pretest was conducted by the researcher and the Training Team using a 30-minute questionnaire. The questionnaire was obtained from the Ministry of Health's training program guidelines [4]. The posttest was conducted by the researcher and the Training Team using the same questionnaire as the pretest.

Validity and Reliability Testing

The instruments used in this study were the same as the pretest and posttest instruments used in the Integrated Health Service Post (Posyandu) Basic Competency training. The training was conducted by the North Sumatra Provincial Health Office's Health Training Center, which has been nationally accredited by the Indonesian Ministry of Health. Therefore, no further validity and reliability testing was necessary.

Data Processing

The data processing stages include collecting data from the questionnaire; checking the completeness of the questionnaire responses or observation sheets; data entry using SPSS version 20; and data cleaning, which displays the frequency distribution to identify extreme values (values that differ significantly from the usual values).

Data Analysis

Data analysis in this study was conducted in two stages, namely univariate and bivariate analyses. Univariate analysis was used to describe each measured variable, with numerical data presented as the mean, median, and standard deviation, while categorical data were presented as percentages. Bivariate analysis was then performed to examine the effect of training on the knowledge level of health workers regarding integrated health posts (Posyandu). A Shapiro-Wilk normality test was carried out to assess data distribution. Since the results indicated that the data were not normally distributed, a non-parametric Wilcoxon test was applied. In addition, a Chi-square test was conducted to determine the effect of training based on respondents' characteristics, including age, gender, work unit, education level, and length of service before and after the training.

Results and Discussion

Description of Research Location.

Medan City is one of 33 regencies/cities in North Sumatra, with an area of approximately 281.99 km². Number of Health Facilities and Number of Health Workers in Medan City, 2023: There are 70 hospitals, consisting of 13 public hospitals and 57 private hospitals. There are 41 community health centers (Puskesmas) and 1,274 integrated health posts (Posyandu). There are 1,509 specialist doctors, while there are 852 general practitioners, including 111 in community health centers and 104 in hospitals. There are 7,124 nursing staff and 2,092 midwifery staff [1].

The Medan City Health Office is the implementing element of the health sector under the Medan City Government. The Health Office, through the Health Resources Division of the Health Human Resources Division, provides training activities to improve the quality and competence of medical and health personnel to provide reliable human resources in the health sector to address health problems in Medan City. The Health Office, through community health centers (Puskesmas), collaborates with village community organizations (Lembaga Masyarakat Desa) to develop integrated health service posts (Posyandu) within the community. Posyandu activities in Medan include weighing, height/length measurements, mid-upper arm circumference measurements, head circumference measurements, immunizations, supplementation, prenatal and postpartum checkups, nutritional enhancement services, and TT immunization for pregnant women.

Univariate Analysis

a. Frequency Distribution of Respondent Characteristics

Table 1. Frequency Distribution of Respondent Characteristics of Basic Skills Training at Integrated Health Posts (Posyandu) in Medan City in 2024

Characteristics of Training Participants	Frequency	Percentage (%)
1. Age (years)		
≤ 40	7	23.3
> 40	23	76.7
Total	30	100.0
2. Gender		
Male	2	6.7
Female	28	93.3
Total	30	100.0
3. Education		
Non-public health	15	50.0
public health	15	50.0
Total	30	100.0
4. Work unit		
Clinical	14	46.7
Non-clinical	16	53.3
Total	30	100.0
5. Length of service (years)		
< 5 years	15	50.0
≥ 5 years	15	50.0
Total	30	100.0

Based on table 1, the majority of respondents were in the > 40 years category, 23 people (76.7%), while the minority were in the ≤ 40 years category, 7 people (23.3%). The majority of respondents were female, 28 people (93.3%), while the minority were male, 2 people (6.7%). Respondents' education in the field of public health (SKM) was 15 people (50.0%) and non-health (SKM) was 15 respondents (50.0%). Most of the participants, 16 people (53.3%) worked in non-clinical units and in clinical units, 14 people (46.7%), with the length of service at the health center being more than the same as 15 respondents (50.0%).

b. Distribution of Respondents' Pretest and Posttest Scores

Based on Table 2, the average pretest score for training participants was 72.52, with the highest score being 89.92 and the lowest score being 57.14. Meanwhile, the average posttest score was 92.55, with the highest score being 100 and the lowest score being 71.43. The average increase in participants' posttest scores compared to their pretest scores was 29.81, with the highest being 68.75 and the lowest being 5.26.

Table 2. Pretest and Posttest Scores of Respondents for Basic Skills Training at Integrated Health Posts (Posyandu) in Medan City in 2024

Participant (n=30)	Pre-test*		Post-test*		Increase (%)
	Number of correct answers	Scores	Number of correct answers	Scores	
1	22	78,57	26	92,86	18,18
2	18	64,29	24	85,71	33,33
3	24	85,71	28	100	16,67
4	16	57,14	27	96,43	68,75
5	19	67,86	28	100,00	47,37
6	19	67,86	27	96,43	42,11
7	25	89,29	27	96,43	8,00
8	19	67,86	20	71,43	5,26
9	24	85,71	28	100	16,67
10	18	64,29	27	96,43	50,00
11	23	82,14	28	100	21,74
12	23	82,14	28	100	21,74
13	17	60,71	23	82,14	35,29
14	18	64,29	27	96,43	50,00
15	19	67,86	24	85,71	26,32
16	22	73,33	24	80,00	9,09
17	21	70,00	30	100	42,86
18	20	66,67	29	96,67	45,00
19	24	80,00	28	93,33	16,67
20	20	66,67	24	80,00	20,00
21	22	73,33	26	86,67	18,18
22	18	60,00	23	76,67	27,78
23	23	76,67	27	90,00	17,39
24	19	63,33	28	93,33	47,37
25	22	73,33	26	86,67	18,18
26	21	70,00	29	96,67	38,10
27	24	80,00	30	100	25,00
28	25	83,33	29	96,67	16,00
29	21	70,00	30	100	42,86
30	25	83,33	30	100	20,00
Mean		72,52		92,55	29,81

Bivariate Analysis

a. Tabulation of Data Normality Test

Table 3. Data Normality Using the Shapiro-Wilk Test

Pretest/posttest	n	Df	P
Pretest	30	30	0,234
Posttest	30	30	< 0,001

Based on Table 3, the results of the Shapiro-Wilk normality test show that the data are not normally distributed, with one of the p-values from the pretest and posttest being >0.05. Therefore, further analysis (bivariate analysis) used non-parametric statistics, namely the Wilcoxon test.

b. Tabulation of the Impact of Basic Skills Training at Integrated Health Posts (Posyandu)

Table 4. Impact of Basic Skills Training at Integrated Health Posts (Posyandu) on Health Worker Knowledge about Integrated Health Posts (Posyandu) in Medan City in 2024

Ranks	n	Z	P
Negative ranks	0	-4,786	< 0,001
Positive ranks	30		
Ties	0		

Based on the Wilcoxon test results in Table 4, there is a significant effect of Posyandu basic skills training on participants' knowledge about Posyandu ($p < 0.001$).

c. Tabulation of Differences in Pretest Scores of Training Respondents

Table 5. Differences in Pretest Scores of Respondents to Basic Skills Training in Posyandu by Characteristics in Medan City, 2024

Characteristics	Pre-test scores		Total (%)	p
	Less* (%)	Good** (%)		
Knowledge by age (years)				
≤ 40	3 (42,9)	4 (57,1)	7 (100)	0,977
> 40	10 (43,5)	13 (42,9)	23 (100)	
Knowledge by gender				
Male	0 (0,0)	2 (100)	2 (100)	0,201
Female	13 (46,4)	15 (53,6)	28 (100)	
Knowledge by education				
Non- public health	7 (46,7)	8 (53,3)	15 (100)	0,713
public health	6 (40,0)	9 (60,0)	15 (100)	
Knowledge by work unit				
Clinical	7 (50,0)	7 (50,0)	14 (100)	0,491
Non-clinical	6 (37,5)	10 (62,5)	16 (100)	
Knowledge by length of service (years)				
< 5	6 (40,0)	9 (60,0)	15 (100)	0,713
≥ 5	7 (46,7)	8 (53,3)	15 (100)	

Based on the results presented in Table 5, several patterns were observed regarding the characteristics of training participants and their pretest scores. Participants aged ≤ 40 years showed a higher proportion of insufficient knowledge about integrated health services (Posyandu), with 43.5% scoring below 70; however, this difference was not statistically significant ($p > 0.05$). Similarly, a higher proportion of women (46.4%) demonstrated insufficient pretest scores compared to men, although this association was also not statistically significant ($p > 0.05$). Participants with an educational background in public health exhibited a higher proportion of insufficient pretest scores (46.7%) than those without such a background, but again, no statistically significant relationship was found ($p > 0.05$). The proportion of insufficient pretest scores was equal (50.0%) among participants working in both clinical and non-clinical units, with no statistically significant association ($p > 0.05$). In addition, participants who had served at Posyandu or health promotion centers for ≥ 5 years showed a higher proportion of pretest scores around 70 (46.7%) compared to those with < 5 years of service, but this difference did not reach statistical significance ($p > 0.05$).

Furthermore, posttest results indicated that none of the participants—across all categories of age, gender, education, work unit, and length of service—had scores below 70. As a result, bivariate analysis to assess the relationship between participant characteristics and posttest scores was not conducted. Multivariate analysis was also not performed because the bivariate analysis demonstrated that all independent variables had p-values greater than 0.25, indicating that they did not meet the criteria for inclusion in multivariate modeling.

Discussion

Analysis of the Effect of Basic Skills Training at the Integrated Health Post (Posyandu) on Knowledge of Health Workers at the Medan City Health Office in 2024

Based on the Wilcoxon test results in Table 4, there is a significant effect of basic skills training at the integrated health post (Posyandu) on participants' knowledge of Posyandu ($p < 0.001$). This indicates that the training has significantly improved the knowledge of health workers. This finding aligns with other studies showing that structured and ongoing training has the potential to improve the knowledge of health workers [10], [11]. A study by also found that intensive training can significantly improve the performance of community cadres. This increase in knowledge can be attributed to the interactive nature of the training and

the use of identical pretests and posttests[12]. Furthermore, research shows that implementing interactive learning methods in health worker training can improve participants' ability to retain knowledge and apply skills in real-world situations [13]. Other studies also emphasize the importance of ongoing training to ensure that health workers not only acquire new knowledge but also regularly update and sharpen their skills. Therefore, the findings of this study reinforce the urgency of designing effective and sustainable training to improve the competence of health workers in various community settings [13].

According to the researchers' assumption, training contributes to increasing health workers' knowledge about integrated health service posts (Posyandu), updating their knowledge, improving their ability to recall knowledge, and applying skills in field situations. Specifically, updating health workers' knowledge about ideal Posyandu management procedures and the concept of 25 basic Posyandu skills improves health workers' competence in managing Posyandu based on a life cycle in accordance with primary care integration. The training methods used in Posyandu basic competency training for health workers include interactive lectures, group discussions, role-playing, and field practice.

Research conducted by Nurrahman & Armiyati (2017) showed an increase in knowledge and skills after training. Increasing knowledge and skills can improve the quality of adolescent health. This integrated health post (Posyandu) training is crucial because adolescent Posyandu activities in Pantangolemba Village have so far been limited to measuring weight, height, and height. Measurements of MUAC, BMI, and nutritional status have never been conducted [14]. Training is an effort to improve an individual's knowledge and skills to perform a specific task. Sinambela believes that training is a systematic process of changing employee behavior to achieve organizational goals related to employee skills and abilities to perform the job [15].

Analysis of the Effect of Integrated Health Service Post Basic Skills Training on the Knowledge of Health Workers by Age at the Medan City Health Office in 2024

Based on the results of the analysis using the Chi-Square test, the proportion of training participants with insufficient knowledge about integrated health services (posyandu), i.e., pretest scores of less than 70, was higher (43.5%) among participants aged ≤ 40 years compared to participants aged ≤ 40 years, but did not show a statistically significant relationship ($p > 0.05$). Individual knowledge can be demonstrated by an individual's ability to understand something and then present it to an object (Notoatmodjo, 2010). Knowledge acquired through the learning process is called learned knowledge, which fosters a person's belief in an object and influences the formation of actions [16].

According to Nyalindung (2022), the older the subject/respondent, the greater and more knowledge they will acquire. Similarly, the younger the age, the lower the knowledge. The older a person is, the greater their knowledge [17]. Research shows that individuals in their productive age range are more likely to actively participate in training and development activities because they are in a more energetic phase of life and open to new learning [18]. Other research indicates that participation in training programs tends to be higher among individuals of productive age because they have optimal cognitive and physical skills for participating in such programs [19]. The productive age group also has a higher motivation to improve their competencies to improve their work [18]. The training participants were mostly in the early and middle adulthood range. As a person ages, their maturity and strength increase in absorbing information, thinking, and working. In terms of public trust, a more mature person is more trustworthy than someone of higher maturity. Perception and thought patterns develop, and life experiences increase [20].

According to researchers, age is closely related to technical and psychological maturity. Technical maturity, in terms of skill in performing tasks, should increase with the length of time a person works. This is due to a person's experience in consistently performing certain tasks. Psychological maturity is a long process characterized by the maturation of the brain, emotions, and the ability to think clearly. A psychologically mature person is able to face the present, accept the past, and prepare for the future. This is related to the productivity and role of health workers, which will tend to increase. Assuming that a person's level of technical and psychological maturity increases, it can be seen that the older a person is, the more skilled they are in carrying out tasks and the lower their error rate. This occurs because one of the factors that makes humans superior to other creatures is the ability to learn from experience, especially experiences that result in mistakes. The older a person is, the more mature their thinking and working abilities become. This is a result of experience and mental maturity; the older a person is, the more conducive they are to using coping strategies to address the problems they face. After someone experiences a stimulus in a health object, then makes an assessment or opinion regarding what they know, the next process is expected to be able to implement or practice what they know and respond to. Health education, one of the training methods that

influences the change process, aims to transform individuals, groups, and communities toward positive things in a planned manner through the learning process. This change includes knowledge, attitudes, and skills.

Analysis of the Effect of Integrated Health Service Post Basic Skills Training on the Knowledge of Health Workers by Gender at the Medan City Health Office in 2024.

Based on the results of the analysis using the Chi-Square test, the proportion of training participants with pretest scores was slightly higher (46.4%) among women compared to men, but there was no statistically significant relationship ($p > 0.05$). According to Law No. 36 of 2014 concerning Health, health workers are individuals dedicated to the health sector and possess knowledge and skills through health education for specific community groups, capable of leading health efforts. Health workers play a crucial role in improving the quality of health services provided to the community, enabling them to increase their awareness and ability to live a healthy lifestyle, thus achieving a high level of health. This represents an investment in human resource development that generates social and economic benefits. Health workers act as supporters and trainers for cadres to improve the performance of Posyandu cadres, encouraging them to consistently participate in Posyandu implementation. Health workers must be able to encourage cadres to be active in every Posyandu implementation [8].

This research aligns with research conducted by Musmiler (2020), which found that all respondents were female because women are more interested in performing certain tasks than men, who are primarily interested in utilizing health services [21]. According to the researcher, the role of health workers' knowledge in assisting cadres in carrying out their duties is crucial. In providing information about the roles and responsibilities of cadres in carrying out their duties as Posyandu cadres, health workers also play a role in providing motivation and appreciation for the cadres' work. The majority of health workers in this study were female. The researcher assumed there was no significant influence of knowledge based on gender because this was the first time that health workers in both genders, male and female, had both participated in Posyandu training that met the Ministry of Health's standards. Therefore, the effect of increased knowledge was not based on the participant group but rather on the methods used during the training.

Analysis of the Effect of Integrated Health Service Post Basic Skills Training on the Knowledge of Health Workers According to Education Level at the Medan City Health Office in 2024.

Based on the results of the analysis using the Chi-Square test, the proportion of training participants with pretest scores was higher (46.7%) among participants with education in public health (kesmas) compared to those without, but this did not show a statistically significant relationship ($p > 0.05$). Well-designed training has the potential to benefit participants with diverse educational backgrounds [22]. Training that emphasizes the development of practical skills and adopts a variety of teaching methods can help address differences in participant education [23]. Inclusive and diverse competency-based training methods can improve the skills of participants from various educational backgrounds. This study revealed that the use of technology and visual aids in training can explain complex concepts in a way that is more easily understood by all participants, regardless of their educational level [18].

Several training programs have impacted the knowledge of these participants. However, some training programs fail to change participants' knowledge after pre- and post-intervention testing [24]. It is understood that knowledge, skills, and motivation are related to the performance of health workers. This is because social and psychological factors are related to health services. Therefore, efforts to address malnutrition require collaborative skills across health professions within a health care system. Furthermore, the presence of cadres is also important in health care, as they possess the knowledge and skills to convey information and motivate preconceptional women to access health services [25]

Health workers play a crucial role in the implementation of integrated health service posts (Posyandu) organized by each authorized agency, in this case the community health center (Puskesmas). They are able to determine the success of the program. If health workers no longer play a role in health management, all activities, including the Posyandu, cannot be carried out properly and efficiently. Without the role of health workers, the Posyandu cannot function normally and smoothly [21]. Training and orientation for cadres are carried out at Posyandu or Puskesmas. These activities are coordinated by the Health Promotion Program Manager from the Health Office or Puskesmas, in collaboration with various related programs and sectors, in accordance with the Posyandu Cadre Basic Skills Training curriculum. After completing the training and orientation, cadres will receive a proficiency badge. This badge is awarded based on an assessment conducted by health workers from the Puskesmas or the Health Office. This assessment was conducted while

accompanying cadres during service days at the integrated health post (Posyandu), during home visits, and while on duty at the Community Health Center (Pustu), using a provided checklist [5].

The researchers assumed that health workers play a role in influencing cadre performance. The educational background of health workers can be a source of health information for cadres in carrying out their duties and functions in Posyandu activities. Furthermore, health workers can provide regular training to improve cadre performance. Health workers who play a positive role in community health activities and fulfill their role as motivators will serve as role models for Posyandu health cadres, encouraging them to actively participate in improving public health, regardless of their educational background. This demonstrates that the training provided is accessible and effective for all health workers, regardless of educational background. The results of this study indicate that the impact of training is not determined by the initial educational level of the participants, but rather by the quality and methods implemented.

Analysis of the Impact of Integrated Health Service Post (Posyandu) Basic Skills Training on the Knowledge of Health Workers According to Health Work Units at the Medan City Health Office in 2024.

Based on the results of the analysis using the Chi-Square test, the proportion of training participants with pretest scores below 50.0% was similar for participants working in clinical and non-clinical units, and there was no statistically significant relationship ($p > 0.05$). Posyandu, as a form of community-based health care effort managed from, by, for, and with the community, plays a vital role in providing easy access to basic health services (Ministry of Health, 2012). To achieve this goal, Posyandu health workers play a significant role. Posyandu health workers must understand the main tasks and functions of running a Posyandu and possess the knowledge to support their work.

Medical personnel possess a deep understanding of interprofessional collaboration. Collaboration is a term frequently used in research, clinical practice, and education in the health sector [26]. Interprofessional collaboration is nothing new. Professional literature, particularly in the health sector, highlights the numerous benefits and challenges that arise when integrating diverse workforces to learn from and appreciate the cultures of other professions. These skills can be applied across a wide range of fields, where individuals collaborate with other professionals to achieve common goals. Numerous training programs have been conducted, with significant impacts on participants' understanding. One example is a breast self-examination training session, which provides participants with increased knowledge after completing the program [27].

According to researchers, the general goal of health training is to change individual and community health behaviors. This goal is to establish health as something valued in society, helping individuals, either independently or in groups, engage in activities to achieve a healthy lifestyle. The principle of health training is not limited to classroom instruction, but rather to a collection of experiences, anytime and anywhere, that can influence knowledge, attitudes, and habits. Training has the important goal of improving knowledge and skills, which are key to the overall success of health programs. There was no significant difference in the relationship between work unit and knowledge improvement for healthcare workers in this integrated health post (Posyandu) training between those working in clinical and non-clinical units. This indicates that the training provided is effective for healthcare workers with various work backgrounds who work daily at the Posyandu. Therefore, they receive equal benefits from the training.

Analysis of the Effect of Integrated Health Service Post Basic Skills Training on the Knowledge of Health Workers According to Length of Service at the Medan City Health Office in 2024.

Based on the results of the analysis using the Chi-Square test, the proportion of training participants with pretest scores was higher (46.7%) among participants with service for ≥ 5 years compared to participants with service < 5 years. However, a specific relationship did not show a significant relationship ($p > 0.05$).

One way to improve cadre skills is through training. Training is expected to improve health knowledge, which can influence behavior. The more training received, the more skills are expected to be applied and disseminated to the surrounding environment and community [7]. Another factor influencing health cadre performance is length of service as a cadre. Length of service reflects the duration of an individual's role as a community-selected, volunteer-driven role at the integrated health service post (Posyandu), measured in years. Length of service as a cadre has the potential to significantly enrich cadre knowledge. Work experience can also influence individual behavior and can be considered a learning opportunity [28].

Research conducted by Smith et al. (2019) supports the findings, revealing that effectively designed and consistently implemented training programs can reduce the skill gap between new and experienced members. Factors such as experiential learning guidance and ongoing evaluation ensure all trainees experience

significant skill improvements [12]. A study by Adams, et.al (2012) emphasized the importance of tailoring training methods to individual needs, including understanding participants' backgrounds and experiences. They found that this adapted approach not only enhanced the training's impact but also increased participant satisfaction and engagement [19]. According to Brown & Duguid (1991), effective training should improve the competency of all trainees, regardless of their initial experience level. These results align with the findings of a study by Naimoli et al. (2012), which showed that ongoing training can strengthen the skills of all trainees, both new and experienced [29].

According to the researchers, experience is an event experienced by a person. Psychologically, training forms the basis for the formation of attitudes and personal experiences that leave a strong impression. Because attitude change is more easily formed when personal experiences involve emotion, appreciation, and deep, lasting memories. Long-term relationships with healthcare workers and their impact on increased knowledge among both veteran and new healthcare workers showed no significant difference. This indicates that the training provided was effective for healthcare workers with varying lengths of service at the integrated health post (posyandu). Therefore, they received the same benefits from the training.

Conclusion

Based on the results of the research study, basic skills training at integrated health posts (posyandu) had an effect on the knowledge of training participants about integrated health posts (posyandu), where there was an increase in the average value before and after training, namely from 72.52 before training to 92.55 after training. The results of the training posttest showed that all training participants obtained good scores according to the provisions of the Ministry of Health, namely more than 70. There was no significant difference in the pretest results of training participants according to age, gender, education, work unit, length of service so that in selecting prospective training participants it was not necessary to consider the above variables.

Conflict of Interest

The author declares no competing interests and asserts that the research was conducted autonomously, safeguarding the impartiality and validity of the results.

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