

# Exploring How Cognitive Skills, Experience, and Motivation Drive Resilience in Community Health Volunteers Implementing Post-Pandemic Posyandu in Rural Indonesia

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**Abstract:** Posyandu is a community-based health program managed by and for the community, aiming to strengthen local health systems and facilitate access to essential health services. The temporary disruption of Posyandu services during the COVID-19 pandemic has had adverse effects on vulnerable populations such as pregnant women and toddlers, highlighting the importance of resilient volunteer performance post-pandemic. This study aims to examine the correlation between post-pandemic competence and the implementation of the five main activities by Posyandu volunteers in Malang, Indonesia. Utilizing a quantitative correlational research design, the study involved a total sample of 123 Posyandu volunteers from two villages in Malang. Data collection was conducted over July to August 2023. The findings indicate a statistically significant but weak positive correlation between volunteer knowledge and motivation, with a p-value of 0.007 and a correlation coefficient of 0.242. This suggests that while increased knowledge is associated with higher motivation levels, the strength of this relationship is limited. Further analysis assessed the relationship between length of service and volunteer motivation, revealing no significant correlation ( $p = 0.675$ ,  $r = -0.038$ ). These results imply that the duration of volunteer service does not influence motivational levels among Posyandu volunteers. Given these findings, enhancing volunteers' knowledge through regular training and refresher programs is essential to maintain motivation and improve service delivery. The study recommends continuous capacity-building efforts to empower Posyandu volunteers, thereby ensuring effective implementation of health activities post-pandemic. Future research should investigate additional factors that may affect volunteer motivation, such as social support, recognition, and workload. Understanding these dimensions can further strengthen Posyandu programs and support the vulnerable community members they serve.

**Keywords:** Knowledge; Motivation; Primary care; Volunteers; Working period

## 1. Introduction

Posyandu represents a specific manifestation of Community-Sourced Health Efforts (UKBM), characterized by its community-centric management and organization. This approach is community-driven, involving community members in the active implementation of health development initiatives with the overarching objective of empowering the community and enhancing accessibility to fundamental health services. The strategic implementation of Posyandu aims to contribute to the acceleration of the reduction of maternal, infant, and toddler mortality rates within the community. Integrated Posyandu represents a fundamental social activity within the community, with a primary focus on the monitoring of child growth and development. Posyandu, a community-based health activity, is managed by the community, for the community, and from the community. The primary objective of Posyandu is to enhance community resilience and enable access to fundamental health services (Purwandari & Huda, 2022). The implementation of health efforts by the state

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is intended to be a right of citizens and as an investment that needs to be pursued by every individual and group in society to realize an optimal degree of public health (Dinas Kesehatan Provinsi Jambi, 2020).

Posyandu volunteers have a very important role as the frontline for public health services through Posyandu activities. However, until now there are still many Posyandu volunteers who do not have the understanding or skills to carry out their duties (Muliawati, 2013). Posyandu volunteers have a very important role, it can be seen from the active participation of Posyandu volunteers in the implementation of Posyandu activities (2019).

The efficacy of health volunteers from the community in enhancing the health status of communities has been demonstrated. The deployment of dedicated, efficient, and well-resourced health volunteers has been demonstrated to engender improved health, sanitation, and sustainable development outcomes. The efficacy of the volunteers performance is evident in their active involvement in the management of the posyandu, encompassing the periods before, during, and after the posyandu's operational activities (Marimbun et al., 2016). According to the posyandu volunteers guidebook, published by the Indonesian Ministry of Health in 2019, volunteers must possess sufficient knowledge of posyandu, particularly the 5-step system, which encompasses registration, weighing, the completion of the Towards Health Card (KMS), counseling, and the provision of basic health services. The guidebook also emphasizes the importance of volunteers performance in carrying out their duties (Kementerian Kesehatan RI, 2019).

The disruption to essential services at Posyandu has significant ramifications for the health and well-being of vulnerable populations, including pregnant women and toddlers. Consequently, the monitoring of toddler development was postponed (Afatin et al., 2024). The provision of health services to toddlers and pregnant women through Posyandu activities is in accordance with President Joko Widodo's directive issued during the Limited Meeting on August 5, 2020. The directive indicates that Posyandu should be reopened, contingent upon the adherence to health protocols at the national level (Khatimah & Suryaningsi, 2024). According to data collected at 2019, there were 298,058 Posyandu, of which a mere 65.42% were found to be active. This figure falls significantly below the national target (80%). In 2020, a decline in coverage is anticipated, as Posyandu activities were predominantly suspended during the pandemic. The development of health promotion media for Posyandu services to adapt to new habits during the pandemic can provide knowledge to health workers, health volunteers, and the community to safely reopen Posyandu services (KemenkesRI, 2020).

Posyandu volunteers play a crucial role in providing public health services through Posyandu activities. However, many Posyandu volunteers still had lack understanding and skills necessary to carry out their duties (Muliawati, 2013). The active participation of Posyandu volunteers in Posyandu activities demonstrates their important role (Dahlan et al., 2022). Health volunteers who come from the community have been shown to improve

community health. Dedicated, efficient, and well-resourced health volunteers contribute to improved health, sanitation, and sustainable development outcomes. Good volunteers performance is evident in their role in running Posyandu activities before, during, and after the events (Marimbun et al., 2016). According to the Posyandu volunteers Guidebook published by the Indonesian Ministry of Health in 2019, volunteers should have sufficient knowledge of the Posyandu, especially the five-step system. This includes registration, weighing, filling out the Health Card (KMS), counseling, and providing basic health services. They should also perform well in carrying out their duties (RI, 2004). The aim of this study are to determine the correlation between post-pandemic competence and the implementation of the five steps of the main activities among Posyandu volunteers in Malang.

## **2. Preliminaries or Related Work or Literature Review**

### **2.1 Resilience, Cognitive Capacity, and Experience of Health Workers**

Research shows that the psychological resilience of health workers is greatly influenced by their cognitive capacity, work experience, and social support. Cadres with more experience and adequate training tend to be more adaptable and able to continue Posyandu services amid post-pandemic constraints (Mukarromah et al., 2022; Mulyani et al., 2023). Training that emphasizes critical thinking, interpersonal communication, and empathy can improve the effectiveness of cadres in assisting mothers and infants.

### **2.2 Motivation and Implementation of Posyandu Services**

Intrinsic motivation such as a sense of social responsibility and a desire to help the community are the main drivers of Posyandu cadres. However, barriers such as lack of incentives, fear of health risks, and limited training during the pandemic hinder service implementation (Setiawan et al., 2021; WHO, 2021). Previous research emphasizes the importance of structural support, recognition, and system strengthening as key factors in revitalizing the enthusiasm of cadres in implementing health programs in the community.

## **3. Proposed Method**

This research employs a quantitative approach, utilizing a correlational design. Correlational research constitutes a non-experimental research method, comprising the measurement of two variables and the assessment of their statistical relationships, excluding the influence of extraneous variables. The variables under study encompass competence and implementation of the five primary steps of Primary health integrated service center (Posyandu/Pos Pelayanan Terpadu) volunteers activities.

Total sampling method was utilized in this study. Total sampling is a sampling technique in which the number of samples is equivalent to the population. The total population of the study was 123 Posyandu volunteers. Research was conducted in Ketawang and Sukorejo village at Gondanglegi sub-district, and Kasri village at Bululawang sub-district, Malang. Research was conducted during the summer months of 2023, specifically from July to August.

The instruments utilized in this study encompassed a posyandu volunteers competency questionnaire, a questionnaire concerning the implementation of the five primary steps of Posyandu activities, and a skills observation sheet. Analysis of the data will be executed in a sequential manner, employing the statistical software SPSS. The analysis encompasses univariate and bivariate with Pearson correlation test was performed.

#### 4. Results and Discussion

As illustrated in Table 1, the general data characteristics of the respondents are hereby presented. The demographic composition of the sample is noteworthy. The majority of respondents, 49.59% (61 individuals), are classified as late adults, defined as individuals between the ages of 36 and 45. A significant proportion of the respondents, constituting 31.71% of the sample (39 individuals), have attained a high school or vocational high school education. A total of 18 individuals, constituting 14.63% of the sample, have received an elementary school education. The data indicates that almost half of the respondents had two children, with a proportion of 46.34% (57 individuals). Furthermore, the results show that nearly all volunteers had a role as a toddler volunteers, with a proportion of 92.68% (114 people).

**Table 1.** This is a table. Tables should be placed in the main text near to the first time they are cited

Variable	n	%
Age		
Late Adolescence (17-25)	1	0,81
Early Adulthood (26-35)	29	23,58
Late Adulthood (36-45)	61	49,59
Early Older Adulthood (45-55)	55	44,72
Late Older Adulthood (56-65)	3	2,44
Seniors (65 and up)	0	0,00
Education		
SD	18	14,63
SMP	33	26,83
SMA/SMK	39	31,71
PT	33	26,83
Number of children		
1	27	21,95
2	57	46,34
3	36	29,27
4	3	2,44
The role of cadres		
Teenagers	114	92,68
Teenagers	6	4,88
Elderly	3	2,44
Total	123	100

(Source: Primary data, 2023)

As illustrated in Table 2, the distribution of special data is presented, including the minimum, maximum, mean, and standard deviation. In the knowledge variable, the lowest score recorded among respondents was 12, while the highest score was 17. The mean knowledge score was documented as 15.15, with a standard deviation of 1.32. The length of employment variable indicates that the shortest duration of employment among the respondents was one year, while the longest recorded duration of employment was 30 years. The mean length of employment for respondents was 10.78 years, with a standard deviation of 6.14. The range of scores on the work motivation scale was from 43 to 67. The mean motivation score was 57.75, with a standard deviation of 7.33.

**Table 2.** This is a table. Tables should be placed in the main text near to the first time they are cited

Variable	Min	Max	Mean	SD
Knowledge	12	17	15.15	1.32
Length of working	1	30	10.78	6.14
Motivation	43	67	57.75	7.33

(Source: datar primer, 2023)

**Table 3.** This is a table. Tables should be placed in the main text near to the first time they are cited

Variable indep	<i>n</i>	<i>P Value</i>	<i>r</i>	Variable dep
Knowledge	123	0.007*	0.242*	Motivasi
Length of Work	123	0.675	-0.038	Motivasi

Pearson

(Source: datar primer, 2023)

The findings of the correlative analysis between the variables can be discerned in Table 3. The data analysis table shows that there is a significant relationship between knowledge and motivation among volunteers. The existence of a weak correlation between the two is indicated by a P value of 0.007 ( $<0.05$ ) and a correlation coefficient of 0.242. Analysis of length of service and motivation showed no correlation between the two variables. The relationship between these two variables showed a p-value of 0.675 ( $>0.05$ ) and an r-value of -0.038.

#### 4.1 Knowledge

The lowest recorded value for respondents was 12, and the highest was 17. The mean knowledge value was 15.15, with a deviation of 1.32. The general data also shows that 31.71% (39 people) of the respondents have a high school/vocational high school education background, which is almost half. Knowledge is the result of understanding a subject after perceiving it. Behavior based on knowledge is more lasting than behavior based on perception (Notoatmodjo, 2018). Volunteers' knowledge and skills will improve if they have a basic or higher education, attend courses, learn the five basic modules, actively participate in coaching,

and attend coaching frequently (RI, 2004) (Depkes RI, 2003). The high value of volunteers' knowledge and skills is influenced by a variety of factors, including formal education, participation in volunteers courses, frequency of attending coaching, volunteers' activity in Posyandu, and length of time as volunteers. The development of volunteers' knowledge and skills is achieved through the periodic attendance of courses and training in various sectors, in accordance with their respective fields (RI, 2004). As indicated by the data and extant theory, the respondent demonstrates a satisfactory level of knowledge. This may be attributable to the respondent's educational background. Preliminary assessments indicate that the standard deviation value is minimal, as evidenced by the observed value of standard deviation. It is evident that as the standard deviation decreases, the values on the items become more uniform, and the mean approaches precision.

#### **4.2 Working period**

The length of time that the respondents worked is shown in the "Working period" variable. The shortest amount of time that they worked is one year, and the longest amount of time that they worked is 30 years. The average length of service was 10.78 years, with a standard deviation of 6.14 years. According to research, the length of work as a volunteers significantly improves performance because volunteers with longer tenures can further develop their abilities and skills, thereby affecting performance (Yanti & Hasballah, 2016). This study found that the length of service varied greatly among volunteers. This may be related to the diverse age range of the volunteers. The high standard deviation indicates significant variation in length of work among respondents.

#### **4.3 Motivation**

The minimum score required to indicate adequate work motivation is 43, while the maximum attainable score is 67. The mean score of motivation is 57.75, with a standard deviation of 7.33. One component of the health system in Indonesia is community empowerment, especially posyandu, whose successful activities depend on the participation of volunteers and the community. The involvement of volunteers and the community is significantly impacted by the motivational factors they possess. A cross-sectional explanatory survey research design was employed, utilizing questionnaires as the data collection instrument. A total of 300 respondents were included in the study. The results indicated that motivational factors significantly influence the participation of volunteers and communities in Posyandu (Djuhaeni et al., 2010). According to Tendelilin (2010), motivation can be defined as the desire to strive to achieve goals that are determined by the ability of effort to meet individual needs. The mean motivation score indicates that the majority of respondents are highly motivated. It is hypothesized that an increase in the motivation of the respondents will have a positive impact on the quality of Posyandu services (Tendelilin, 2010). The volunteers will be better equipped to provide services based on the respondents' increased motivation.

#### 4.4 Knowledge and motivation

Bivariate analysis of knowledge and motivation variables showed that there was a significant relationship between knowledge and motivation in volunteers. This is indicated by a P value of 0.007 ( $<0.05$ ) and a correlation coefficient of  $r=0.242$  which means that there is a weak correlation between the two. In a study mentioned, the relationship between the level of knowledge and the skills of volunteers in assessing the growth curve of toddlers is positive (0.537), meaning that the higher the level of knowledge of volunteers in the posyandu, the better the level of volunteers skills in assessing the growth curve of toddlers. the better the level of knowledge of volunteers, it is expected that volunteers can apply this knowledge better so that skills (Afifa, 2019). A lack of knowledge is often an important factor in the utilization problem of extension tables due to health volunteers' lack of confidence in applying their knowledge and inability to apply extension information to everyday life. According to (Siregar, 2019), the higher the knowledge of counseling, the better the utilization of the counseling table. As people age, they become more mature and absorb more information. Productive-aged respondents can influence others and serve as a source of information for all posyandu activities. Rewards are another significant factor in internal motivation (Djuhaeni et al., 2010). Knowledge appears to contribute positively to volunteers motivation. The higher the level of knowledge, the higher the self-confidence and service motivation of the respondents.

#### 4.5 Working period and Motivation

An analysis of length of service and motivation showed no correlation between the two variables. The relationship between these two variables had a p-value of 0.675 ( $>0.05$ ) and an r-value of 0.038. This finding is consistent with previous research indicating that the absence of a relationship between length of service as a volunteers and volunteers skills in assessing the growth curve of toddlers may be due to other influential factors. One such factor is the knowledge of posyandu volunteers (Afifa, 2019). Another study involved two health centers and 705 volunteers. A sample of 125 volunteers from each health center was taken using proportional cluster random sampling. The respondent criteria were posyandu volunteers actively working in the Pagelaran or Gedangan Puskesmas areas. The results of the path analysis showed that volunteers knowledge and motivation did not mediate the relationship between length of service and volunteers performance, and length of service did not affect volunteers performance in either region (Hamariyana et al., 2013). The present study employed analytical descriptive research with a cross-sectional approach, encompassing a total of 35 subjects who were sampled consecutively. The findings of the analysis indicated an absence of correlation between the duration of volunteers membership and the frequency of training with respect to the dissemination of information concerning PUGS (Sandiyani, 2021). In consideration of the aforementioned facts and theoretical framework, it can be posited that the duration of service does not appear to be associated with the level of

motivation exhibited by the respondents. The prevailing hypothesis suggests that the knowledge factor plays a more predominant role in this phenomenon.

## 5. Conclusions

It can be concluded that a relationship exists between knowledge and motivation among Posyandu volunteers in Kasri Bululawang village, Malang district. Furthermore, the findings indicate an absence of a significant relationship between length of service and motivation among Posyandu volunteers in Kasri Bululawang village, Malang district. Therefore, it is essential to augment the volunteers members' understanding through periodic training and refresher sessions. Subsequent studies should aim to explore the impact of additional factors that may contribute to the motivation of Posyandu volunteers..

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