

Perceived Challenges and Their Influence on Performance Motivation among Fieldworkers in Sindh's Expanded Programme on Immunization

Hanna Khair Tunio¹, Fyezah Jahan², Riaz Ahmed Bhutto³, Riaz Ullah Riaz³, Tahreeb Siddique⁴, Aftab Ahmed⁵

Abstract

Background: Pakistan's Expanded Programme on Immunization (EPI), launched in 1978, aims to provide routine immunization to all children under one year of age. However, multiple challenges persist, including vaccine stock-outs, inadequate cold-chain management, weak microplanning, insufficient social mobilization, and poor documentation. This study aimed to assess the current level of performance motivation among vaccinators and Lady Health Workers (LHWs) involved in immunization delivery, and to identify factors influencing their motivation.

Methodology: A cross-sectional study design was employed. Drawing on prior research highlighting the multifaceted determinants of motivation at individual, organizational, and societal levels, structured data collection tools were used to evaluate performance motivation and identify existing gaps.

Results: Among vaccine providers, 87.91% were female and 12.09% were male vaccinators engaged in routine immunization. The highest levels of motivation were associated with the nature of responsibilities and autonomy (mean score: 4.76). Training was identified as a key contributor to capacity building (mean: 4.69), followed by peer support (mean: 4.66) and supportive supervision (mean: 4.64). Conversely, dissatisfaction with salaries and incentives, along with limited recognition, were major factors contributing to reduced motivation.

Conclusion: Performance motivation among vaccine providers is strongly influenced by supportive supervision, peer support, and the nature of their responsibilities. However, inadequate salaries and incentives significantly undermine motivation. Strengthening financial and non-financial incentives is essential to enhance workforce motivation and improve immunization service delivery.

Keywords: Health worker motivation; vaccinators; Lady Health Workers (LHWs); routine immunization

How to cite this article: Tunio HK, Jahan F, Bhutto RA, Riaz RU, Siddique T, Ahmed A. Perceived challenges and their influence on performance motivation among fieldworkers in Sindh's Expanded Programme on Immunization. Pak J Public Health. 2026;16(1):12-6.
DOI: <https://doi.org/10.32413/pjph.v16i1.1150>

Copyright © 2026 The Author(s). Published by Health Services Academy. This is an Open Access article under the CC BY-NC 4.0 license.

Introduction

Infectious diseases cause childhood disability, morbidity and even mortality which can be most effectively prevented by Immunization (1). Globally under five year deaths due to preventable diseases are 11 million per year. This can be prevented by available resources and interventions that are low in cost in low middle income countries (2). The advancement in vaccination is remarkable. Despite these efforts immunization is not up to mark (3). It is estimated that around 18.7 million infants globally have not received basic services of immunization (1). Expanded Program on Immunization(EPI) in Pakistan shields children from twelve diseases of childhood. Initial program provided vaccine for six preventable diseases. This is the result of additions of hepatitis B vaccine in 2002, Haemophilus Influenza B vaccine in 2009, pneumococcal conjugate vaccine in 2012 and more recently the rotavirus vaccine in 2017. Further typhoid and Rubella were also introduced in EPI (4).

The UN figure reflects around three million lives are saved each year. EPI is considered a cost-effective and one of the most successful program among the public health interventions till now (5). Despite its success, the program has faced many challenges in the delivery of service. During the past years, the national Expanded program on Immunization has come to a point of more complexity due to the inclusion of more than 20 diseases preventive agents. Further the instability within the political, economic and societal environment further has increased the uncertainty within the program (6).



¹ Peoples University of Medical Health Sciences for Women Nawabshah

² Aga Khan University Hospital

³ Al-Tibri Medical College, Karachi

⁴ Al-Khidmat Hospital

⁵ Public Health Specialist

Correspondence:

Hanna Khair Tunio
drhanna.khair@yahoo.com

Submitted: 15-12-2022

Revised: 15-01-2023,
07-12-2025

Accepted: 25-12-2025

Published: 28-03-2026

The achievement of high coverage of immunization rates and an overall reduction in the disease occurrence are the main goal of EPI. To achieve this goal, Pakistan's health system requires a potent vaccine to be delivered to the target population. For the potency of the vaccine one parameter that is required to be maintained is the cold chain of the vaccine at all its levels (7). The maintenance of the vaccine cold chain requires the strong field force that ensures vaccine is delivered with its full potency. The health system framework suggested by World Health Organization (WHO) contains a dynamic component that is its health workforce (8). The Health system frame work strongly advocate the importance of motivation among the health workforce. Demotivation among the vaccinators, insufficient funding, inappropriate and disruptive transportation system, lack of accountability all are the challenges that can hinder the success of the program (9)

In spite of efforts made, significant gaps persist in the program in vaccine supply, maintenance and uptake by the population. An extensive body of work exists on these gaps, including published studies detailing problems with program structure, governance, quality of services and policy environment (10,11). There has been less focus on challenges faced by the frontline workers in EPI. Multiple health workforces are utilized in the delivery of EPI in Pakistan (12). This include vaccinators, LHS, LHWs, trained midwife and Health Technicians. Vaccinators are skilled immunization staff for routine immunization, and are affiliated with static vaccination points and out-reach mobile activities. During the National Immunization Days (NIDs) vaccinators are involved in polio NID duties. Vaccinators are kept engaged before and after NIDs Apart from vaccinating, vaccinators are bound to maintain registers, logistics, vaccine and cold chain equipment (10).

Vaccinators and LHWs face many constraints that may affect the program quality like poor maintenance of cold chain and inadequate resources. Insufficient accountability system, absence of performance based appraisal mechanisms, lack of salary increments and frequent transfers contribute to ineffective performance by frontline workers. There is no systematic feedback given to the vaccinators/lady health workers for improving their performance (11). While the environmental or extrinsic obstacles have been described frequently in literature, it is not known how these obstacles are contextualized by frontline workers. These extrinsic factors impact the fieldworkers intrinsically, and contribute to their performance viz a viz job satisfaction and motivation. This motivation, called performance motivation, reflects the interaction between health professionals and their work environment. This study aims to assess the performance motivation's current status among vaccinators and lady health workers involved in delivery of immunization services in Sindh's Expanded Programme of Immunization and to assess factors those affect the level of motivation in vaccine providers.

Kanfer et al outlined the complex interplay of influencers of motivation at the individual, organizational and societal level (13). This has been adapted by Franco *et al* (14), who extended the model to provide a clearer understanding of the various factors that affect workers' motivation before designing interventions that explicitly or implicitly affect

motivation (13). Based on Kanfer et al and Franco et al, work, a framework is proposed for this study mentioned in Figure 1.

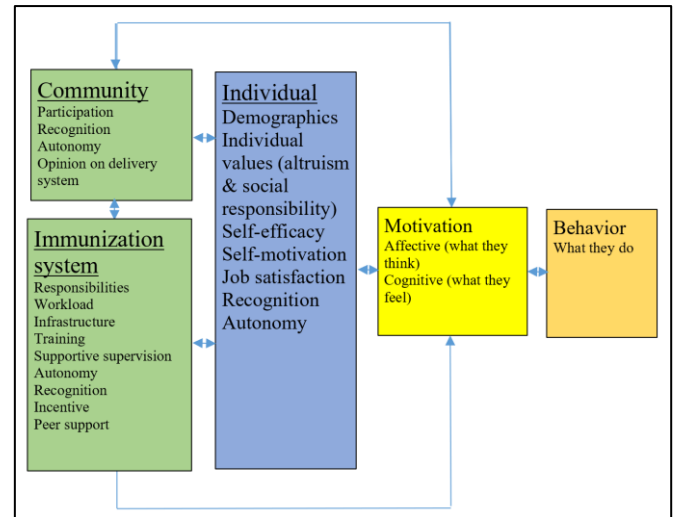


Figure 1: Fieldworker's performance motivation assessment framework

Methodology

The study was cross-sectional descriptive. Study was conducted in district Tando Allah Yar, division Hyderabad. Study participants were vaccinators and lady health worker working in Tando Allah Yar. Sampling technique for the selection of vaccine providers was purposive. There were 160 lady health workers 22 vaccinators involved in Expanded Program on Immunization in district Tando Allah Yar. All the vaccinators and LHWs were included in this study. A total of 182 participants were interviewed. A structured Questionnaire was adopted from the previously conducted study on CHWs understanding of the various factors that affect workers' motivation (15). 16 elements were to explore under each set of questions evaluating level of motivation on a Likert scale of 1 (strongly disagree) to 5 (strongly agree). The study was conducted from July to Sept 2018.

Data collected from the participants could have an adverse effect on program. In order to lessen this issue, questions were phrases thematically with the aim of benefitting the program. Participants of the study were the employees of program and full confidentiality was kept to avoid undue harm from leadership. The study was only conducted after full ethical approval from ERC (5476-Ped-ERC-18) and district approval.

The information was analyzed through STATA version 15.0. Frequency distributions were made. Categorical variables such as education, income level was presented as proportions while continuous variables were presented as means, medians. Under each parameter, mean score of 3 was considered motivated. Fieldworker was considered motivated on a particular parameter if mean score was above 3. Further motivation was categorized as highly motivated (4.6-5 Mean), least motivated which was below (4.25 Mean) and moderately motivated (4.26-4.5 Mean). These narrow boundaries were determined at the time of analysis due to lack of variation in

motivation levels. Multivariate analysis and stepwise forward logistic regression explored the associations between level of performance motivation. P-value of <0.05 was considered to be significant

Results

Survey enrolled 182 (Table 1) participants working in district on routine immunization completely or partially. 48% (n=88) participants were in age group 30-40. 36% (n=65) have completed their secondary education. Household income was less than twenty thousand in 52% (n=95). Number of financial dependents was 54% (n=95).

Table 1: Background characteristics of participants

	N	%
Designation		
Lady Health Worker	160	87.91%
Vaccinator	22	12.09%
Gender		
Male	22	12.09%
Female	160	87.91%
Age		
20-30	24	13.19%
30-40	88	48.35%
40-50	55	30.22%
50-60	15	8.24%
Years of Education		
<= 8 years	32	17.58%
9-10 years	65	35.71%
11-12 years	52	28.57%
13-16 years	33	18.13%
Years of Service		
3-10 years	43	23.63%
11-20 years	97	53.30%
21-30 years	35	19.23%
31-35 years	7	3.85%
Monthly Household income per month		
<=20,000 PKR	95	52.20%
21,000-40,000 PKR	64	35.16%
41,000-65,000 PKR	23	12.64%
Number of people financially dependent on participant		
<=5 person	63	34.62%
6-10 person	97	53.30%
11-25 person	22	12.09%
Trainings		
<=15 Trainings	72	39.56%
>16 Trainings	110	60.44%

Table 3: Predictors of performance motivation on individual level

Variables	Predictors	Beta Coefficient	P value	95% CI	R2
Recognition	Workload	0.12	0.124	(-0.03 - 0.27)	18.0%
	Salary and incentive	-0.09	0.031	(-0.18 - -0.01)	
	Supportive supervision	0.16	0.041	(0.01 - 0.31)	
	Peer support	0.17	0.032	(0.01 - 0.32)	
Autonomy	Workload	0.04	0.534	(-0.09 - 0.17)	22.4%
	Salary and incentive	0.00	0.902	(-0.07 - 0.08)	
	Supportive supervision	0.16	0.023	(0.02 - 0.29)	
	Peer support	0.27	<0.05	(0.14 - 0.41)	
Intrinsic job satisfaction	Workload	0.24	0.001	(0.11 - 0.38)	19.8%
	Salary and incentive	0.04	0.323	(-0.04 - 0.12)	
	Supportive supervision	-0.06	0.389	(-0.2 - 0.08)	
	Peer support	0.17	0.02	(0.03 - 0.3)	
Self-efficacy	Workload	0.07	0.308	(-0.07 - 0.21)	17.5%
	Salary and incentive	0.02	0.687	(-0.06 - 0.1)	
	Supportive supervision	0.23	0.002	(0.08 - 0.37)	
	Peer support	0.16	0.028	(0.02 - 0.3)	

Performance Motivation

Vaccine providers highly motivating factors included their nature of responsibility with mean score 4.76, quality trainings 4.69. *Supportive supervision* and *peer support* 4.64 and 4.66 motivate the vaccine providers. Salary and incentive score least in health system with a mean score 3.46. Autonomy, self-efficacy and recognition keeps frontline workers motivated as mean scored 4.76, 4.59 and 4.57 respectively (table 2)

Table 2: Level of performance motivation among participants

	Mean	95% CI
Health system level		
A: Nature of responsibilities	4.76	(4.7 - 4.82)
B: Workload	4.43	(4.34 - 4.51)
C: Salary and incentive	3.46	(3.32 - 3.6)
D: Infrastructure	4.22	(4.09 - 4.35)
E: Work modality	4.53	(4.44 - 4.62)
F: Training	4.69	(4.6 - 4.77)
G: Supportive supervision	4.64	(4.56 - 4.73)
H: Peer support	4.66	(4.57 - 4.74)
Community level		
I: Community participation	4.52	(4.41 - 4.62)
Individual Level		
J: Social responsibility and	4.45	(4.35 - 4.55)
K: Intrinsic job satisfaction	4.30	(4.22 - 4.37)
L: Self-efficacy	4.59	(4.52 - 4.67)
M: Self-motivation	4.05	(3.92 - 4.17)
N: Recognition	4.57	(4.49 - 4.65)
O: Autonomy	4.76	(4.69 - 4.84)

Predictors Of Performance Motivation On Individual Level

Higher satisfaction level if the vaccine provider has *peer support* at β -coefficient 0.17 and P-value=0.032 (95% CI 0.01 – 0.32) and worker perceived recognition at work and community. Peer support have association with perceived autonomous with b-coefficient 0.27, p-value < 0.05 at 95% CI (0.14 – 0.41), self-efficient and has intrinsic job satisfaction is more associated with *Supportive supervision* and its plays the important role in recognition, autonomy and self-efficacy. Dissatisfaction in salaries and incentives demotivates the vaccine providers and they feel lesser recognition at individual level. But there is no association of Incentives and salary demotivation at community level (table 3).

Discussion

This study has explored some of the important factors that are affecting the performance of vaccine providers. There is vast experience of all vaccine providers in the field of vaccination. Adequate trainings and precision of self-efficacy has motivated them to perform in field despite of the health system challenges they face. In our study we have found the quality of trainings and an adequate number of trainings can increase the performance of the vaccinators. Vaccinators are more confident in their work and can interact better with the parents to guide them regarding the adverse events of the vaccines. In a study conducted by Girdwichai and others to examine the level of motivation and its impact on the employee performance. According to the trainings had the positive relationship with employee performance which is similar to the finding of our study (16). Another study conducted on health workers to see value of training on workers' motivation. According to the results training was scored high, which was very similar to the results of our study which showed a high score. In our study training as found to have no predictive relationship with motivation which is contrary to this study which has shown a positive predictive relationship in motivation and training (17). A study conducted on the community health workers to see the variables that are mobilizing the performance of the workers is a very similar work to our study. They had assessed the parameters of self-efficacy, autonomy, peer support and supportive supervision to see its relationship with the performance. According to their study, positive feedback and role of the peers had importance in improving the work performance of the health workers (18), which is very similar to our study when asked about their peer role in their performance and their supervisors support during various task.

Financial and non-financial incentives play a crucial role in making vaccine providers feel recognized and valued for their work. These incentives help maintain high levels of motivation among workers in the field (19). However, recognition and rewards for good performance have been reported as minimal within the immunization program. Many providers shared that while they are often criticized for not meeting targets, their achievements and hard work rarely receive acknowledgment. Increasing salaries and offering top-up payments have been identified as effective ways to boost the morale and self-esteem of vaccine providers (20).

The routine immunization (RI) program requires the identification of key motivators, both social and individual that can drive community participation. Engaging non-health workers to support community mobilization and training community volunteers to educate people about the benefits of immunization can significantly improve vaccine coverage (21). Involving these trained volunteers during vaccination sessions enhances community engagement and trust. Community leaders, including religious, civil, and traditional figures can play a vital role in mobilizing support through their established social structures (22). To increase demand at the community level, it is essential to prioritize the health needs of the population and

clearly communicate the role and benefits of vaccines. In this study, vaccine providers have expressed concern about the limited involvement of doctors in community outreach, which has left a gap in addressing vaccine-related misconceptions and safety concerns. As a result, vaccine providers often feel undervalued within the communities they serve (23). They dedicate substantial effort to building trust and encouraging vaccination but frequently face resistance and misinformation. Despite their best efforts in the field, the lack of community response and unmet expectations contribute to gaps in immunization coverage (24).

In our study, staff morale within the immunization program is significantly low, largely due to insufficient human resources and the lack of locally trained personnel. The recruitment process is also notably slow, further delaying the achievement of program goals (25). This shortage of staff, combined with inadequate supplies and equipment, has placed a heavy burden on vaccine providers. Additionally, negative community attitudes and limited resources serve as major demotivating factors for those working in the field (26). Many providers report feeling exhausted by these persistent challenges. A key issue is the lack of supportive feedback and recognition. Unrealistic expectations from managers, especially when targets are not met, further discourage staff (27). In contrast, positive feedback from the community can greatly enhance vaccine providers' sense of value and motivation. Sharing such community feedback with frontline workers can inspire greater dedication and improve performance in the field (28). Investing in essential resources, such as improved infrastructure, rehabilitation of health facilities, adequate equipment, and reliable transportation and communication tools, can play a vital role in motivating vaccine providers. These improvements not only support operational efficiency but also enhance providers' communication and management skills when interacting with communities (27).

Conclusion

Vaccine providers' performance and motivation are substantially influenced by supportive supervision, peer support, and the nature of their responsibilities within the healthcare system. To enhance their motivation, there is a pressing need to revise existing policies, particularly to address the differential costs and challenges faced by vaccinators serving in hard-to-reach areas. Improvements in the healthcare delivery system as much as ensuring adequate staffing for routine immunization activities, maintaining a sufficient cold chain supply, and conducting large-scale community sensitization through health education officers are critical. Additionally, involving medical officers in community education sessions can help raise awareness and increase vaccine demand, which in turn positively impacts vaccine providers' motivation by improving community engagement and response. Enhancing recognition mechanisms, along with clearly defined roles, responsibilities, and accountability measures, can further

strengthen the motivation and performance of vaccine providers in the field.

Acknowledgment: We like to thank our department of Community Health Sciences AKUH, to support and encourage us to complete this research work.

Ethical Approval:

This study was approved by the Institutional Review Board of Pak International Medical College Peshawar.
Ref. No. PIMC/DMR/1 Dated: 11-01-2023

Data Availability: Data supporting the findings are available upon reasonable request.

Financial support and sponsorship: None

Conflict of interest: The authors declare that they have no conflict of interest.

Authors' Contribution:

HKT: Drafting of the manuscript.

FJ: Study design and conceptual framework.

RAB: Data analysis and results writing

RUR & TS: Discussion and conclusion

AA: Data collection

References

- Siddiqi DA, Munir M, Shah MT, Khan AJ, Chandir S. Effect of vaccine reminder and tracker bracelets on routine childhood immunization coverage and timeliness in urban Pakistan: Protocol for a randomized controlled trial. *BMC Public Health*. 2019;19(1):1421.
- Wariri O, Okomo U, Kwarshak YK, Utazi CE, Murray K, Grundy C, et al. Timeliness of routine childhood vaccination in 103 low-and middle-income countries, 1978–2021: A scoping review to map measurement and methodological gaps. *PLOS Glob Public Health*. 2022;2(7):e0000325.
- Ogbonnaya LU, Okedo-Alex IN, Akamike IC, Azuogu B, Urochukwu H, Ogbu O, et al. Assessing the usefulness of policy brief and policy dialogue as knowledge translation tools towards contextualizing the accountability framework for routine immunization at a subnational level in Nigeria. *Health Res Policy Syst*. 2021;19(1):154.
- Saeed R, Hashmi I, Shaikh RS, Hashmi SM. Pakistan ranks third globally with the most unvaccinated children: is the impact of parental perception and attitude on immunization an essential contributing factor to an unsuccessful vaccination coverage? *Cureus*. 2021;13(11).
- Mantel C, Cherian T. New immunization strategies: adapting to global challenges. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz*. 2020;63(1):25-31.
- Pertwee E, Simas C, Larson HJ. An epidemic of uncertainty: rumors, conspiracy theories and vaccine hesitancy. *Nat Med*. 2022;28(3):456-9.
- Pambudi NA, Sarifudin A, Gandidi IM, Romadhon R. Vaccine cold chain management and cold storage technology to address the challenges of vaccination programs. *Energy Rep*. 2022;8:955-72.
- Ampomah IG, Devine S, Ampomah GA, Emeto TI. The 'STRICT' framework for promoting effective malaria control in Ghana. *Malar J*. 2024;23(1):338.
- Lugada E, Komakech H, Ochola I, Mwebaze S, Olowo Oteba M, Okidi Ladwar D. Health supply chain system in Uganda: current issues, structure, performance, and implications for systems strengthening. *J Pharm Policy Pract*. 2022;15(1):14.
- Butt M, Mohammed R, Butt E, Butt S, Xiang J. Why have immunization efforts in Pakistan failed to achieve global standards of vaccination uptake and infectious disease control? *Risk Manag Healthc Policy*. 2020;13:111-24.
- Ataullahjan A, Ahsan H, Soofi S, Habib MA, Bhutta ZA. Eradicating polio in Pakistan: a systematic review of programs and policies. *Expert Rev Vaccines*. 2021;20(6):661-78.
- Yazdani AT, Muhammad A, Nisar MI, Khan U, Shafiq Y. Unveiling and addressing implementation barriers to routine immunization in the peri-urban slums of Karachi, Pakistan: a mixed-methods study. *Health Res Policy Syst*. 2021;19:1-9.
- Alsadaan N, Salameh B, Reshia FA, Alruwaili RF, Alruwaili M, Awad Ali SA, et al. Impact of nurse leaders behaviors on nursing staff performance: a systematic review of literature. *Inquiry*. 2023;60:00469580231178528.
- Franco LM, Bennett S, Kanfer R. Health sector reform and public sector health worker motivation: a conceptual framework. *Soc Sci Med*. 2002;54(8):1255-66.
- Gopalan SS, Mohanty S, Das A. Assessing community health workers' performance motivation: a mixed-methods approach on India's Accredited Social Health Activists (ASHA) programme. *BMJ Open*. 2012;2(5):e001557.
- Girdwichei L, Sriviboon C. Employee motivation and performance: do the work environment and the training matter? *J Secur Sustain Issues*. 2020;9.
- Kim MK, Arsenault C, Atuyambe LM, Kruk ME. Predictors of job satisfaction and intention to stay in the job among health-care providers in Uganda and Zambia. *Int J Qual Health Care*. 2021;33(3):mzab128.
- Deussom R, Mwarey D, Bayu M, Abdullah SS, Marcus R. Systematic review of performance-enhancing health worker supervision approaches in low-and middle-income countries. *Hum Resour Health*. 2022;20(1):2.
- Wong J, Gill C, Abdo A, Eisa A. The Influence of Financial Incentives on Vaccination Hesitancy: A Narrative Review of Recent Research. *Vaccines*. 2025;13(3):256.
- Gage A, Bauhoff S. The effects of performance-based financing on neonatal health outcomes in Burundi, Lesotho, Senegal, Zambia and Zimbabwe. *Health Policy Plan*. 2021;36(3):332-40.
- Kaufman J, Overmars I, Fong J, Tudravu J, Devi R, Volavola L, et al. Training health workers and community influencers to be Vaccine Champions: a mixed-methods RE-AIM evaluation. *BMJ Glob Health*. 2024;9(9):e015433.
- Qodim H. Preserving Faith and Tradition: The Role of Traditional Leaders and Mosques in the Socio-Religious Life of Coastal Communities. *Khazanah Sosial*. 2023;5(1):104-12.
- Sadki R. AI podcast explores surprising insights from health workers about HPV vaccination. *Glob Health*. 2025.
- Deressa W, Kayembe P, Neel AH, Mafuta E, Seme A, Alonge O. Lessons learned from the polio eradication initiative in the Democratic Republic of Congo and Ethiopia: analysis of implementation barriers and strategies. *BMC Public Health*. 2020;20:1-5.
- Bangura JB, Xiao S, Qiu D, Ouyang F, Chen L. Barriers to childhood immunization in sub-Saharan Africa: A systematic review. *BMC Public Health*. 2020;20:1-5.
- Muthuri RN, Senkubuge F, Hongoro C. Determinants of motivation among healthcare workers in the East African community between 2009–2019: a systematic review. *Healthcare*. 2020;8(2):164.
- Koskinen K, Anderson K. Managerial mind-set and behaviours that shape effective relationship building in employee coaching: An integrative literature review. *Int J Evid Based Coach Mentor*. 2023;21(1).
- Meneses-La-Riva ME, Fernández-Bedoya VH, Suvo-Vega JA, Ocupa-Cabrera HG, Grijalva-Salazar RV, Ocupa-Meneses GD. Enhancing Healthcare Efficiency: The Relationship Between Effective Communication and Teamwork Among Nurses in Peru. *Nurs Rep*. 2025;15(2):59.