ISSN: 2091-2749 (Print)
2091-2757 (Online)

Submitted on: 2025 Sep 7
Accepted on: 2026 Jun 23

https://doi.org/10.3126/jpahs.v13i1.96097

Knowledge and practice of female community health volunteers on maternal and child health services

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Abstract

Introduction: Female Community Health Volunteers are the major backbone of the Female Community Health Volunteer program who work in the field of maternal and child health in community. They have been contributing to improvement of maternal and child health in Nepal since the introduction of this program. This study aimed to assess the knowledge and practice of FCHVs on maternal and child health services.

Method: Study was conducted among Female Community Health Volunteers of randomly selected wards of Pokhara Metropolitan City. Data was collected via self-administered questionnaire in Nepali language. Statistical Package of Social Sciences version 16.0 was used for data analysis. Descriptive statistics was used to find out knowledge and practice; and inferential statistics (chi-square) was used for finding out association between background characteristics and level of knowledge and also with level of practice. Association between level of knowledge and level of practice was also sought by chi-square test.

Result: Fifty percent of Female Community Health Volunteers had good level of knowledge and practice. There was significant association between ethnicity (p=0.001) and level of practice and also between level of knowledge and level of practice (p=0.037). However, none of the background variables had significant association with level of knowledge.

Conclusion: Half of the female community health volunteers had good level of knowledge and satisfactory level of practice. There was significant association between ethnicity and level of practice. There was significant association between knowledge and practice.

Keywords: Female community health volunteers; Knowledge; Maternal and child health services; Practice

How to Cite: Dwa N, Sharma P. Knowledge and practice of female community health volunteers on maternal and child health services. J Patan Acad Health Sci. 2026 Jun;13(1):55-59.

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Introduction

The very first Community Health Worker (CHW) program was started in Ding Xian, China, in the 1920s.[1] During the mid-1980s, CHW programs began to emerge in different countries among which, Nepal was one. Female Community Health Volunteer (FCHV) program was implemented in Nepal in the late 1980s after the failure of CHW program in early 1980s due to lack of funding.[2] There are 50,396 FCHVs in the country altogether according to annual report 2080/81.[3] Active involvements of FCHVs has contributed to gradual improvement in health status of people, mainly in the sector of maternal and child health (MCH) by reducing maternal; infant; and child mortality rate.[4]

The roles and responsibilities of FCHVs has been increasing as they are providing health services, especially identifying and treating childhood diseases and delivering antenatal and postpartum care along with working as health promoters and dispensers of health commodities.[2,5,6] With these increasing responsibilities, it is necessary to assess the knowledge and practice of FCHVs in these additional sectors of maternal and child health services. And also, health workers reported that lack of education in FCHVs presented a challenge in reporting health activities.[7] A study conducted in Dhanusha district, Nepal assessing the knowledge and performance of FCHVs on MCH services showed that 52.17% of FCHVs had good level of knowledge and 36.23% of FCHVs had satisfactory level of performance.[8]

Though having a major role in providing MCH services to community people, very few research studies have been conducted in this area and also low level of knowledge and performance was found in the districts where the study was carried out. So, this study aims to assess the knowledge and practice of FCHVs on maternal and child health services in Pokhara.

Method

This cross sectional study was conducted among Female Community Health Volunteers (FCHVs) of Pokhara Metropolitan City, situated in Kaski district, Gandaki province from May 2022 to August 2023. Ethical clearance was taken from Institutional Review Committee, TU IOM, (Reference number: 160(6-11) E2 and permission from Health Division, Pokhara Metropolitan City (Reference number: 671) was taken for the data collection. There were total 656 FCHVs during the time of study and the list was obtained from Health division of Pokhara Metropolitan City. Sample size was estimated using 52.17% as prevalence rate of good level of knowledge found in a study conducted in Nepal.[8] Sample size of 266 FCHVs was estimated applying finite population correction factor and 10% non-response rate. Seventeen wards (1, 2, 7, 8, 9, 10, 12, 13, 15, 16, 17, 21, 22, 25, 30) were selected by simple random sampling using lottery method until the desired sample size was met and all FCHVs of the selected wards willing to participate in the study were taken as the sample.

Questionnaire was prepared after detailed literature review. There were 3 sections in the questionnaire: Part I background characteristics of FCHVs, Part II Questions related to knowledge on MCH services and Part III Questions related to practice on MCH services. There were total 42 items in knowledge questionnaire and 108 was maximum possible total score while practice questionnaire had 22 items with maximum possible total score of 22. Knowledge was categorized into Good level of knowledge (≥ median score i.e., ≥91.50) and Poor level of knowledge (< median score i.e., <91.50) and Practice was categorized into Satisfactory level of practice (≥ median score i.e., ≥ 19.50) and Unsatisfactory level of practice (< median score i.e., <19.50).[8]

Data was collected using self-administered questionnaire in Nepali version and Statistical Package for Social Sciences version 16.0 was used for data analysis. Descriptive statistics (frequency, percentage, median, interquartile range) were used to assess knowledge and practice of FCHVs on Maternal and Child Health services and inferential statistics (chi-square) was used to find out the association of background characteristics with knowledge and practice and also between knowledge and practice.

Content validity was maintained by extensive literature review and based on the training module developed by Nursing and Social Security Division, Ministry of Health.[9] Items were revised based on expert feedback until consensus was reached. Face validity was assessed by administering the tool to three FCHVs outside the study sample for clarity and comprehensibility of language, and necessary modifications were made prior to finalisation. Tool was developed in English language then translated to Nepali language and back translation was done. Reliability was maintained by pre-testing of instrument among 10% of total sample size (27) among FCHVs of ward number 3 and 11 (not selected in random selection for sample). The Cronbach's alpha of Nepali version of knowledge questionnaire was 0.906 and of practice questionnaire was 0.902, indicating internal consistency.

Result

Among 266 FCHVs, 88(33.08%) belonged to age group 30 – 39 years with median ± IQR of 42.00 ± 15 years. Most 181(68.05%) were Brahmin/Chettri and 246(92.48%) followed Hinduism. The majority

173(65.04%) lived in joint family and majority 249(93.61%) were married, Table 1.

Table 1. Socio-demographic characteristics of female community health volunteers (n=266)

Characteristics	*f* (%)
Age in years	
20 – 29	25(9.40%)
30 – 39	88(33.08%)
40 – 49	80(30.08%)
50 – 59	72(27.07%)
60 - 69	1(0.37%)
Median±IQR	42.00±15
Ethnicity	
Brahmin/Chettri	181(68.05%)
Janajati	47(17.67%)
Dalit	27(10.20%)
Muslim	3(1.13%)
Others	8(3.01%)
Religion	
Hinduism	246(92.48%)
Buddhist	18(6.80%)
Islam	1(0.37%)
Christian	1(0.37%)
Type of Family	
Nuclear	92(34.59%)
Joint	173(65.04)
Extended	1(0.37%)
Marital Status	
Single	9(3.38%)
Married	249(93.61%)
Separated/Divorced	2(0.75%)
Widow	6(2.26%)

The majority 111(41.73%) had completed School Leaving Certificate examination and 227(85.34%) were homemaker. Regarding their experience working as FCHV, 135(50.80%) had experience of 10 or less years, Table 2.

Table 2. Socio-economic characteristics of female community health volunteers (n=266)

Characteristics	*f* (%)
Educational Level	
Below SLC	78(29.33%)
SLC	111(41.73%)
10+2	51(19.17%)
Bachelor	21(7.89%)
Master	5(1.88%)
Occupation	
Homemaker	227(85.34%)
Agriculture	18(6.77%)
Business	15(5.64%)
Social Worker	4(1.50%)
Health Insurance enrolment assistant	2(0.75%)
Experience as FCHV (in years)	
≤ 10	135(50.80%)
>10	131(49.20%)
Median ± IQR	10.00±11
Range	1 month – 34 years

Half 133(50%) had good level of knowledge and satisfactory level of practice. The median knowledge score was 91.50 (IQR: 78–100) out of 108 and the median practice score was 19.50 (IQR: 18–22) out of 22.

None of the background variables (age, ethnicity, religion, type of family, marital status, level of

Table 3. Association between background variables and level of knowledge on MCH services (n=266)

Variables	Level of Knowledge		Chi-square(χ^2)	p–value
	Good *f* (%)	Poor *f* (%)		
Age in years				
≤ 42	66 (47.83%)	72 (52.17%)	0.54	0.46
>42	67 (52.34%)	61 (47.66%)		
Ethnicity				
Brahmin/Chettri	93 (51.38%)	88 (48.62%)	0.43	0.51
Others	40 (47.06%)	45 (52.94%)		
Religion				
Hindu	124 (50.41%)	122 (49.59%)	0.22	0.64
Others	9 (45.00%)	11 (55.00%)		
Type of Family				
Nuclear	43 (46.74%)	49 (53.26%)	0.59	0.44
Joint and Extended	90 (51.72%)	84 (48.28%)		
Marital Status				
Married	127 (51.00%)	122 (49.00%)	1.57	0.21
Others	6 (35.29%)	11 (64.71%)		
Level of Education				
SLC and below	98 (51.85%)	91 (48.15%)	0.89	0.34
Above SLC	35 (45.45%)	42 (54.55%)		
Occupation				
Homemaker	117 (51.54%)	110 (48.46%)	1.47	0.26
Others	16 (41.00)	23 (59.00)		
Experience as FCHV (in years)				
≤ 10	68 (50.40)	67 (49.60)	0.15	1
> 10	65 (49.60)	66 (50.40)		

Table 4. Association between background variables and level of practice on MCH services (n=266)

Variables	Level of Practice		Chi-square(χ^2)	p–value
	Satisfactory *f* (%)	Unsatisfactory *f* (%)		
Age in years				
≤ 42	65 (47.10%)	73 (52.90%)	0.96	0.33
>42	68 (53.13%)	60 (46.87%)		
Ethnicity				
Brahmin/Chettri	103 (56.91%)	78 (43.09%)	10.81	0.001
Others	30 (35.29%)	55 (64.71%)		
Religion				
Hindu	121 (49.19%)	125 (50.81%)	0.87	0.35
Others	12 (60.00%)	8 (40.00%)		
Type of Family				
Nuclear	48 (52.17%)	44 (47.83%)	0.27	0.61
Joint and Extended	85 (48.85%)	89 (51.15%)		
Marital Status				
Married	127 (51.00%)	122 (49.00%)	1.57	0.21
Others	6 (35.29%)	11 (64.71%)		
Level of Education				
SLC and below	91 (48.15%)	98 (51.85%)	0.89	0.34
Above SLC	42 (54.55%)	35 (45.45%)		
Occupation				
Homemaker	109 (48.00%)	118 (52.00%)	2.43	0.12
Others	21 (58.33%)	15 (41.67%)		
Experience as FCHV (in years)				
≤ 10	73 (54.10%)	62 (45.90%)	1.82	0.22
> 10	60 (45.80%)	71 (54.20%)		

Table 5. Association between level of knowledge and level of practice on maternal and child health services of female community health volunteers (n=266)

Variables	Level of Practice		Chi-square (χ^2)	p–value
	Satisfactory *f* (%)	Unsatisfactory *f* (%)		
Level of Knowledge				
Good	75 (56.40%)	58 (43.60%)	4.35	0.037
Poor	58 (43.60%)	75 (56.40%)		

education, occupation, experience as FCHV) were statistically significantly associated with level of knowledge, Table 3. There was significant association between ethnicity (p=0.001) and level of practice of female community health volunteers, Table 4. There was statistically significant association between level of knowledge and level of practice of female community health volunteers (p=0.037), Table 5.

Discussion

The findings of this study showed that 133(50%) of FCHVs had good level of knowledge. This finding is comparable to a study done in Dhanusha district, Nepal (n=138), which showed that 52.17% of FCHVs had good level of knowledge.[8] The findings of this study depicted that 133(50%) of FCHVs had satisfactory level of practice. This finding is different from the finding of a study done in Dhanusha district, Nepal (n=138), which showed that 36.23% of FCHVs had satisfactory level of practice.[8] It might be due to the difference in the area of study as the previous study was done in rural community.

The findings showed that none of the background variables had statistically significant association with level of knowledge. Contrasting evidence from a study done in Dhanusha district, Nepal (n=138), showed statistically significant association between age (p=0.048), ethnicity (p=0.043), level of education (p=<0.001), work experience (p=<0.0001) and level of knowledge.[8] There are differences in the level of education and work experience of the participants of two studies which may have contributed to the different results.

The findings showed that ethnicity (p=0.001) had statistically significant association with level of practice while other variables didn't have any association. This finding is similar to the finding of a study conducted in Nepal (n=4302) which showed that there was significant association between ethnicity (p=0.008) and practice of child health service.[10] However, contrasting evidence is found in a study conducted in Dhanusha district, Nepal (n=138), which showed statistically significant association between age (p=0.002), level of education (p=<0.0001)[8], literacy status (p=0.001)[10] and level of practice while it showed no association between ethnicity and level of practice.[8] It may be due to the differences in the socio-demographic characteristics such as level of

education and years of experiences between the participants of these studies.

This study was conducted only in Pokhara Metropolitan City so; the findings may not be generalized to all the FCHVs of whole nation. As practice was assessed through questionnaire, the findings may not be accurate and observation techniques may be used for further studies to identify the practice more accurately. Researchers could conduct this type of research in larger scale.

Conclusion

Half of the female community health volunteers had good level of knowledge on MCH services. Half of them had satisfactory level of practice on MCH services. There was no any association between any of the variables and level of knowledge while there was significant association between ethnicity and level of practice. There was significant association between knowledge and practice.

Acknowledgement

All the participants. Grant Commission of Pokhara Nursing Campus: Grant. Health division of Pokhara Metropolitan City: Granting permission and providing list of FCHVs. In-charges and staffs of Primary Health Care Centers and Urban Health Clinics: For coordinating with FCHVs

Conflict of Interest

None

Funding

Grant Commission of Pokhara Nursing Campus

Author Contribution

Concept, design, planning: ND, PS; Literature review: ND, PS; Data collection: ND, PS; Data analysis: ND, PS; Draft manuscript: ND; Revision of draft: ND, PS; Final manuscript: ND, PS; Accountability of the work: ND, PS

References

1. Perry H, Crigler L. Developing and strengthening Community Health Worker programs at scale: a reference guide for program managers and policy makers. In: Perry H, Amieva S, editors. A brief history of CHW programs. 2013 September. Full Text
2. Perry HB, Zulliger R, Rogers MM. Community Health Workers in low-, middle-, and high – income countries: An overview of their history, recent evolution, and current effectiveness. Annu. Rev. Public Heath. 2014 Jan;35:399-421. DOI
3. Department of Health Services. Annual Health Report 2080/81. Kathmandu, Nepal: Department of Health Services, Ministry of Health and Population. 2025 Apr. Full Text
4. Nursing and Social Security Division. National Female Community Health Volunteer program strategy. Department of Health Services, Ministry of Health and Population, Government of Nepal. 2019. Full Text
5. Khatri RB, Mishra SR, Khanal V. Female Community Health Volunteers in community-based health programs of Nepal: Future perspective. Front. Public Health. 2017 July;5:18. DOI
6. Olaniran A, Madaj B, Bar-Zev S, van den Broek N. The roles of community health workers who provide maternal and newborn health services: case studies from Africa and Asia. BMJ Glob Health. 2019 Aug 10;4(4):e001388. DOI
7. Pandey S, Bissell P, Teijlingen EV, Simkhada P. The contribution of female community health volunteers (FCHVs) to maternity care in Nepal: A qualitative study. BMC Health Services Research. 2017 Sept;17:623. DOI
8. Acharya D, Singh JK, Adhikari S, Jain V. Association between sociodemographic characteristics of female community health volunteers and their knowledge and performance on maternal and child health services in rural Nepal. Journal of Multidisciplinary Healthcare. 2016 Mar;9:111-120. DOI
9. Nursing and Social Security Division. National Female Community Health Volunteer Continuous Capacity Building Module. Department of Health Services, Ministry of Health and Population, Government of Nepal. 2019 July 21. Full Text
10. Bhattarai HK, Khanal P, Khanal V, Regmi K, Paudel NR, Dhakal L, Singh S. Factors associated with child health service delivery by female community health volunteers in Nepal: findings from a national survey. BMC Health Services Research. 2020 Jun; 20(561). DOI