IJBPAS, December, Special Issue, 2023, 12(12): 261-273
ISSN: 2277–4998

International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)
'A Bridge Between Laboratory and Reader'
www.ijbpas.com

ATTITUDE OF INHABITANTS ON COMMUNITY HEALTH OFFICER ROLES AND RESPONSIBILITIES - A MIXED METHOD STUDY

ADITHYA S[1*] AND MACWAN A[2]

1: Professor, Department of Community Health Nursing, Sumandeep Nursing College, Sumandeep Vidyapeeth an Institution Deemed to be University, Piparia, Vadodara, Gujarat, India

2: M.Sc. Nursing, Sumandeep Nursing College, Sumandeep Vidyapeeth an Institution, deemed to be University, Piparia, Vadodara, Gujarat, India

[*]**Corresponding Author: Mr. Adithya S: E Mail: adithyaayush2017@gmail.com**

Received 15th July 2023; Revised 19th Aug. 2023; Accepted 22nd Nov. 2023; Available online 15th Dec. 2023

https://doi.org/10.31032/IJBPAS/2023/12.12.1032

ABSTRACT

Background: Under the Ayushman Bharat initiative, Community Health Officers (CHOs) represent a novel group of non-physician healthcare workers. These CHOs are set to play a crucial role in delivering an expanded range of essential healthcare services as part of Comprehensive Primary Health Care. **Aim:** To evaluate the perceptions of residents regarding the roles and responsibilities of Community Health Officers. Additionally, the study aims to establish any potential links between residents' attitudes towards these roles and selected socio-demographic factors. Lastly, the research seeks to gain insights into how residents perceive the roles and responsibilities of Community Health Officers. **Methodology**: This study employed a mixed-method research approach using the Convergent Parallel Variant research design. A total of 400 residents were chosen through non-probability purposive sampling. The quantitative aspect of the research gathered data on residents' attitudes towards the roles and responsibilities of Community Health Officers using a five-point Likert scale. The collected data were organized and analyzed using both descriptive and inferential statistics. In addition, a self-structured questionnaire was utilized to qualitatively explore the roles and responsibilities of Community Health Officers through a

thematic analysis, the qualitative data were refined and evaluated. **Findings:** The study findings revealed that a significant majority of subjects (49%) agreed with the roles and responsibilities of Community Health Officers, while a smaller percentage (9%) strongly agreed. The mean and standard deviation for this attitude were 3.66 and 0.36, respectively. Moreover, approximately 35% of the surveyed residents expressed satisfaction with the services provided by the Community Health Officer. Around 25% acknowledged her helpfulness in times of need, and 30% reported her effectiveness in conducting diverse health awareness programs. However, 45% of respondents found her communication skills lacking. Only 10% felt that she maintained good relations with the community. In terms of specific services, 25% noted the provision of antenatal care, and 25% praised her for organizing various awareness programs and providing training to health workers on topics like immunization, maternal, and child healthcare. **Conclusion:** In conclusion, the study highlighted that a significant proportion of residents endorse the role of Community Health Officers in promoting environmental health through measures like ensuring clean water and safe sanitation. Additionally, these officers are perceived as valuable assets for delivering health education to villagers. The study further emphasized their role in mobilizing communities for childhood immunization and antenatal care, as well as their capacity to offer treatment for minor ailments.

Keywords: Community Health Officer, Inhabitants, Attitude, Roles and responsibilities

INTRODUCTION

Over the past few decades, our nation has experienced significant shifts in the burden of diseases. It is widely acknowledged that India has made notable strides in reducing maternal and child mortality in the last fifteen years[1]. A decade or two ago, communicable diseases, along with maternal and nutritional disorders, were the primary contributors to the overall disease burden. However, there has been a noticeable transformation in this disease landscape **[1, 2]**.

Presently, the leading causes of mortality are non-communicable diseases (NCDs), specifically Cancer, Cardiovascular Diseases (CVD), Diabetes, and respiratory diseases, accounting for approximately 62% of all male deaths and 52% of female deaths, with 56% occurring prematurely **[2, 3]**. Despite this evolving disease pattern, the public healthcare system has primarily focused on reproductive, maternal, newborn, and child health, along with a limited emphasis on certain communicable diseases as part of disease control initiatives. Collectively, these conditions constitute only about 15% of the total morbidities **[1]**.

Studies have indicated that approximately 11.5% of households in rural areas and only around 4% in urban areas do not receive any form of outpatient care at sub-centers, primary health centers, and community health centers **[4]**. These points to a low utilization of primary healthcare services for minor health issues potentially attributed to ineffective healthcare services or a lack of available healthcare providers **[5]**.

Moreover, the majority of healthcare services are sought from District Hospitals, as Primary Health Centers and sub-centers offer a limited range of services **[6]**. As a result, people often turn to the private sector for their healthcare needs, resulting in substantial Out of Pocket Expenditure (OOPE) on medical treatment. This has led to a concerning situation where around 15-17% of households in India are pushed into impoverishment due to healthcare expenses **[2, 4]**.

To enhance the accessibility of comprehensive primary healthcare (CPHC), the Government of India introduced the Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PMJAY) in September 2018. PMJAY, a centrally sponsored scheme, aims to strengthen health and wellness centers (HWCs), sub-health centers (SHCs), and primary health centers (PHCs) as comprehensive health and wellness centers. These centers will provide services through mid-level health care providers (MLHPs) or community health officers (CHOs) stationed at HWCs, alongside medical officers at PHCs in both rural and urban areas **[7]**.

A Community Health Officer (CHO) serves as the initial point of contact and source of health-related information for the local community through Health and Wellness Centers (HWCs), which are strategically located in proximity to the population they serve. Therefore, it is crucial for a CHO to have a deep understanding of the needs of the community in their service area and to establish trust and credibility with the local population **[1, 2]**.

To address these healthcare challenges, the Government of India introduced the Bridge Programs in Community Health under the National Health Mission[5]. As part of this initiative, a CHO is a pivotal addition to the Primary Health Care Team at Sub Health Centre-HWCs. States have deployed individuals with diverse professional backgrounds, such as those with a B.Sc. in Community Health, nursing qualifications (B.Sc or P.B. B.Sc.), or Ayurveda practitioners who have received training and certification from institutions like IGNOU or other State Public Health/Medical Universities **[1, 4]**.

The Public Medical Commission has outlined a framework that allows qualified individuals, meeting specific criteria, to

practice limited medicine in essential and preventive healthcare roles. Upon meeting the specified guidelines, these candidates can serve as mid-level healthcare providers or Community Health Officers (CHOs) within the context of Ayushman Bharat in India. This step aims to enhance healthcare accessibility and provision in the country **[8]**.

Anggi Dwi Putra JS and Rahmania Ambarika (2022) conducted an observational quantitative investigation aimed at analyzing the impact of rewards, work coordination, and punishments on the work discipline of health workers at the Batang-Batang District Public Health Centre in Sumenep Regency. The study encompassed a total population of 135 respondents, and a sample of 101 respondents was selected using the simple random sampling technique. The study's findings revealed that a majority of respondents, totaling 53 individuals (52%), were categorized as having good awards. Approximately half of the respondents, 55 individuals (54%), were categorized as having good coordination. Similarly, most respondents, constituting 52 individuals (51%), fell under the good category for punishments. The study's overall conclusion highlighted a simultaneous influence of rewards, coordination, and punishment on the work discipline of health workers at the Batang-Batang District Public Health Centre in Sumenep Regency, accounting for a substantial 83.8% influence **[10]**.

Andrea L. Hartzler, Leah Tuzzio, *et al* . (2018) conducted a study focusing on the roles and functions of community health workers (CHWs) in primary care settings. The study identified three core roles that CHWs fulfill in primary care, expanding upon previous work conducted in both community and global contexts. These roles enhance patient care and understanding of patients' unique situations and needs. The integration of CHW-primary care practices has the potential to improve care quality while considering patient needs, clinical workflows, financial feasibility, and the alleviation of practice burdens. The study underscored the importance of training, clinical integration, certification, health information technology, and clinical oversight to effectively integrate CHWs into primary care settings and fully utilize the breadth of their contributions **[11-13]**.

METHODOLOGY

Utilizing a mixed-methods research approach, the study employed a Convergent Parallel Variant design. The research sample comprised 400 residents from a selected rural area in Vadodara, Gujarat. The sampling technique used was non-probability convenient sampling. The study employed a self-structured five-point Likert

scale to assess attitudes towards the roles and responsibilities of Community Health Officers. Additionally, a self-structured questionnaire was employed to gauge the attitudes of inhabitants regarding Community Health Officer roles and responsibilities. Informed written consent was obtained from participants, and the researcher personally explained the study's purpose, ensuring the confidentiality of their information.

The collected data underwent analysis and interpretation in line with the research objectives. Descriptive and inferential statistics were applied, and the resulting findings were interpreted in alignment with the study's objectives. The outcomes were presented in tabular and graphical formats.

RESULTS:

The gathered data underwent suitable statistical analysis, and the resulting analyzed data is structured and displayed in the following sections:

- **Section A:** Displays the frequency and percentage distribution of subjects based on their socio-demographic variables.
- **Section B:** Presents the frequency, percentage, mean, and standard deviation of the attitudes of residents regarding the roles and responsibilities of Community Health Officers.
- **Section C:** Investigates the connection between the attitudes of residents towards Community Health Officer Roles and responsibilities and their selected socio-demographic variables.
- **Section D:** Explores the view points of inhabitants concerning the roles and responsibilities of Community Health Officers.

Table 1 Illustrates that the predominant age group among the participants is 31-40 years, comprising 137 individuals (34%), while those aged 61 years and above constitute 37 individuals (9%). In terms of gender, 213 individuals (53%) are male, and 134 individuals (47%) are female. Regarding religious affiliation, 202 participants (51%) identify as Hindu, while a minority of 8 participants (2%) belong to other religions.

When considering educational attainment, 106 subjects (27%) possess primary education, and 45 subjects (11%) have graduated. Concerning occupation, 100 participants (25%) are housewives, farmers, or self-employed, whereas 50 participants (13%) are engaged as daily wage workers or private employees. Marital status reveals that 239 individuals (60%) are married, while 20 individuals (5%) are single.

In relation to family structure, 253 subjects (63%) come from joint families, and 42 subjects (11%) belong to extended families.

With respect to proximity to Primary Health Centers (PHCs), 230 subjects (58%) live within 0-10 kilometers, and 170 subjects (42%) reside 11-20 kilometers away. Regarding the distance to sub-centers, a majority of 330 subjects (83%) are situated within 0-1 kilometer, whereas 70 subjects (17%) reside beyond 1 kilometer.

In terms of awareness about Community Health Officers at sub-centers, 257 subjects (64%) are informed, while 143 subjects (36%) lack awareness. Among those acquainted with Community Health Officers, the primary source of information for 64 subjects (16%) is health personnel, whereas 6 subjects (2%) receive information from alternative sources.

Table 2 presents the distribution of attitudes among residents towards Community Health Officer roles and responsibilities. A substantial portion, 197 individuals (49%), expressed agreement, while a smaller group, 35 individuals (9%), strongly agreed with the specified roles and responsibilities. The mean and standard deviation for these responses were calculated as 3.66 and 0.63, respectively.

Table 3: It shows that the computed chi-square (χ^2) value was found to be lower than the critical table value in terms of selected demographic variables. Therefore, the research hypothesis $\mathbf{H_1}$, stated that there will be significant association between Community Health Officer roles and responsibilities with selected socio-demographic variables was rejected in these cases. However, this rejection does not apply to occupational status of inhabitants and the distance between the Primary Health Center and participants' villages, where the hypothesis remains valid.

Table 1: Frequency and percentage of subject according to their socio-demographic variables (n= 400)

Sr. No.	Socio-demographic Variables	Frequency	Percentage
1.	**Age**		
	a. 31-40 year	**137**	**34%**
	b. 41-50 year	**134**	**34%**
	c. 51-60 year	**92**	**23%**
	d. 61 and Above	**37**	**9%**
2.	**Gender**		
	a. Male	**213**	**53%**
	b. Female	**187**	**47%**
3.	**Religion**		
	a. **Hindu**	**202**	**51%**
	b. **Muslim**	**174**	**43%**
	c. **Christian**	**16**	**4%**
	d. **Other**	**8**	**2%**
4.	**Educational status**		
	a. **No formal education**	**4**	**1%**
	b. **Primary education**	**106**	**27%**
	c. **Secondary education**	**152**	**38%**
	d. **Higher Secondary education**	**93**	**23%**
	e. **Graduate**	**45**	**11%**
	f. **Post – graduate**	**00**	**00%**
	g. **Any other**	**00**	**00%**
5.	**Occupational status**		
	a. House wife	**100**	**25%**
	b. Daily wage workers	**50**	**13%**
	c. Farmer	**100**	**25%**
	d. Self-employee	**100**	**25%**
	e. Private employee	**50**	**12%**
	f. Government employee	**00**	**00%**
	g. Any other	**00**	**00%**
6.	**Marital status**		
	a. Single	**20**	**5%**
	b. Widow	**00**	**00%**
	c. Widower	**80**	**20%**
	d. Married	**239**	**60%**
	e. Divorced	**61**	**15%**
	f. Separated	**00**	**00%**
7.	**Type of family**		
	a. Nuclear family	**105**	**26%**
	b. Joint family	**253**	**63%**
	c. Extended family	**42**	**11%**
8.	**Distance between the health centre and your village in kilometre**		
i.	**PHC**		
	a. 0-10 kms.	**230**	**58%**
	b. 11-20 kms.	**170**	**42%**
ii.	**Sub-Centre**		
	a. 0-1 kms.	**330**	**83%**
	b. More than 1 kms.	**70**	**17%**
9.	**Are you aware about existing of Community Health Officer at sub-centre**		
	a. Yes	**257**	**64%**
	b. No	**143**	**36%**
	If yes specify the source of information		
	a. Health personnel	**64**	**16%**
	b. Family members	**58**	**14%**
	c. Relatives	**45**	**11%**
	d. Neighbours	**36**	**9%**
	e. Mass media	**48**	**12%**
	f. Any other	**06**	**2%**

Table 2: Frequency, percentage, mean and standard deviation of level of attitude of inhabitant on Community Health Officer roles and responsibilities (n=400)

Sr. No.	Score	Interpretation	Frequency	Percentage	Mean and Standard Deviation
1	1-40	Strongly disagree	0	0%	3.66 &0.63
2	41-80	Disagree	0	0%	
3	81-120	Neutral	168	42%	
4	121-160	Agree	197	49%	
5	161-200	Strongly agree	35	9%	

Table 3: Association of attitude of inhabitant on Community Health Officer roles and responsibilities with their socio-demographic variables (n=400)

Sr. No.	Socio-demographic variables	Level of attitude			Chi- square
		Neutral	Agree	Strongly agree	
1.	**Age**				
	a. 31-40 year	53	75	09	χ^2=7.89 df=6 (NS)
	b. 41-50 year	59	64	11	
	c. 51-60 year	35	45	12	
	d. 61 and Above	21	13	03	
2.	**Gender**				
	a. Male	86	110	17	χ^2=1.12 df=2 (NS)
	b. Female	82	87	18	
3.	**Religion**				
	a. Hindu	81	107	14	χ^2=7.17 df=6 (NS)
	b. Muslim	79	77	18	
	c. Christian	05	10	01	
	d. Other	03	03	02	
4.	**Educational status of the participants**				
	a. No formal education	02	01	01	χ^2=10.64 df=8 (NS)
	b. Primary education	52	49	05	
	c. Secondary education	57	79	16	
	d. Higher Secondary education	35	51	07	
	e. Graduate	22	17	06	
5.	**Occupational status**				
	a. House wife	43	51	06	χ^2=16.10 df=8 (S*)
	b. Daily wage workers	12	35	03	
	c. Farmer	49	38	13	
	d. Self-employee	42	48	10	
	e. Private employee	22	25	03	
6.	**Marital Status**				
	a. Single	07	11	02	χ^2=2.51 df=6 (NS)
	b. Widow	35	39	06	
	c. Widower	101	114	24	
	d. Married	25	33	03	
7.	**Type of Family**				
	a. Nuclear Family	46	49	10	χ^2=1.24 df=4 (NS)
	b. Joint Family	104	126	23	
	c. Extended Family	18	22	02	
8.	**Distance between the health centre and from your village in kilometres**				
i.	**PHC**				
	a. 0-10 kms	87	128	15	χ^2=9.82 df=2 (S*)
	b. 11-20 kms	81	69	20	
ii.	**Sub-Centre**				
	a. 0-1 km	134	168	28	χ^2=2.07 df=2 (NS)
	b. More than 1 km	34	29	07	
9.	**Are you aware about Community Health Officer at sub-centre**				
	a. Yes	102	137	18	χ^2=5.82

	b. No	66	60	17	df=2 (NS)
	If yes, specify the source of information				
	a. Health personnel	22	37	05	$\chi 2$=19.30 df=12 (NS)
	b. Family members	25	33	00	
	c. Relatives	13	26	06	
	d. Neighbours	14	20	02	
	e. Mass media	24	19	05	
	f. Any other	4	2	0	

NS- No Significance, S*- Significant, level of significance at P=0.05 level, df- degree of freedom

Explore the Community Health Officers roles and responsibilities among inhabitants.

1. **How do you feel about Community Health Officer rendering Primary Health Care services at Village level?**
   Within the inhabitants, 35% of individuals expressed satisfaction with the quality of service provided by the Community Health Officer. A smaller proportion, 10%, mentioned occasional unavailability due to her engagement in other duties. Conversely, 5% of inhabitants perceived the Community Health Officer as highly cooperative in diverse situations. In terms of responsibility, 10% acknowledged her diligence, while 5% deemed her irresponsible in her duties. Regarding potential delays in treatment, 10% of residents attributed them to staff shortages. A more substantial 15% of inhabitants praised her for assisting the entire community, and 10% admired her for her courteous nature.
2. **Are you satisfied with Community Health Officer health care services?**
   Among the inhabitants, a notable 20% expressed contentment with the services delivered by the Community Health Officer. A larger segment, comprising 25%, acknowledged her significant assistance when individuals required support. An equal proportion of 20% of inhabitants reported occasional unavailability of the Community Health Officer at the sub-center. Additionally, 20% of residents perceived her as lacking supportiveness towards all community members. Meanwhile, 15% of inhabitants recognized the Community Health Officer for possessing commendable communication skills.
3. **What is your opinion regarding Community Health Officer conducting awareness program activity?**
   Within the inhabitant, 15% of individuals noted that the Community Health Officer plays a role in motivating people toward health awareness. A larger segment, comprising 30%, commended her for

conducting effective and diverse health awareness programs. Meanwhile, 10% of inhabitants highlighted her involvement in organizing training programs. Additionally, 20% of residents reported that she provides various educational resources to the community. In contrast, 15% of inhabitants felt that she falls short in delivering awareness to the community. Lastly, 10% of inhabitants observed occasional gaps in her awareness about new updates related to health programs.

4. **What is your opinion regarding intra personal relation and communication about Community Health Officer?**

Among inhabitants, 10% of individuals perceived the Community Health Officer as possessing a kind and polite demeanor. A larger proportion, accounting for 35%, praised her excellent communication skills. In contrast, 45% of people expressed the view that her communication abilities were lacking. Additionally, 10% of inhabitants believed that she maintains positive relationships with the community members.

5. **Can you say about contribution of Community Health Officer toward the awareness programme, immunization activities and maternal and child health care?**

Among inhabitants, 25% of individuals acknowledged that the Community Health Officer offers antenatal care according to the requirement. A smaller 15% contingent noted her occasional unavailability at the sub-center. An additional 15% of inhabitants appreciated her provision of adequate newborn care. As for immunization activities, 10% of people observed her active involvement, while another 10% of residents expressed concern about her insufficient health education related to immunization and maternal care. Meanwhile, a notable 25% of inhabitants commended her active role in conducting various awareness programs and providing training to healthcare workers concerning immunization, maternal health, and child care.

DISCUSSION

The current investigation indicated that a majority of the subjects, 137 individuals (34%), fell within the age group of 31-40 years, while 37 individuals (9%) were aged 61 years and above. Regarding gender, 213 subjects (53%) were male, and 134 subjects (47%) were female. In terms of religious affiliation, 202 participants (51%) identified as Hindu, while 8 participants (2%) followed other religions. Educational status revealed that 106 subjects (27%) had attained primary education, and 45 subjects (11%) held graduate degrees. Marital status-wise, 239 subjects (60%) were married, whereas 20 subjects (5%) were single. Family type

statistics indicated that 253 subjects (63%) were from joint families, and 42 subjects (11%) were from extended families. As for the proximity to Primary Health Centers, 230 subjects (58%) resided within 0-10 kilometers, while 170 subjects (42%) lived 11-20 kilometers away. In relation to the distance from sub-centers, 330 subjects (83%) were located within 0-1 kilometer, and 70 subjects (17%) were situated over 1 kilometer away. Furthermore, awareness about the Community Health Officer at the sub-center was observed in 257 subjects (64%), while 143 subjects (36%) were not aware. Among those aware, 64 subjects (16%) received information from health personnel, and 6 subjects (2%) obtained it from other sources.

A study conducted by Tares Krassanairawiwong during the COVID-19 pandemic focused on the roles of sub-district health office personnel and village health volunteers in Thailand. Findings revealed that over 40,000 sub-district health center (SDHC) personnel and more than 1 million village health volunteers (VHVs) were responsible for primary healthcare across 23 million households in 75,032 villages. They underwent training, conducted household visits, provided hygiene advice, participated in the 'Big Cleaning Day' campaign, created cloth face masks, identified high-risk visitors, and monitored quarantined cases. The efforts resulted in 7.4 million Thais receiving basic hygiene education, 1.3 million villagers participating in the campaign, and production of 3.6 million handmade cloth face masks. In March 2020, 3.9 million households were visited, leading to the detection of 40,000 high-risk cases[12].

Within the community, 35% of inhabitants acknowledged receiving satisfactory service from the Community Health Officer, while 10% noted her occasional unavailability due to other duties. Additionally, 5% of inhabitants considered the Community Health Officer as very cooperative in diverse situations, while 10% perceived her as responsible, and 5% viewed her as irresponsible in her work. Concerns about treatment delays due to staff scarcity were voiced by 10% of residents. On a positive note, 15% of inhabitants appreciated her assistance to the entire community, while 10% praised her for her polite nature. Furthermore, 20% of inhabitants expressed satisfaction with the services provided by the Community Health Officer, and 25% recognized her as very helpful in times of need. Nonetheless, 20% of respondents reported occasional unavailability at the sub-center, and an equal percentage felt she lacked overall supportiveness. A considerable 15% of residents highlighted her commendable communication skills, and 15% noted her role in motivating health awareness.

Additionally, 30% of inhabitants applauded her for conducting effective and diverse health awareness programs, and 10% acknowledged her involvement in training programs. Furthermore, 20% of inhabitants mentioned her provision of various educational resources to the community. However, 15% expressed concerns about her perceived lack of awareness in providing community education, and 10% noted occasional lapses in awareness regarding new health program updates. An appreciative 10% of respondents regarded the Community Health Officer as very kind and polite, while 35% commended her for excellent communication skills. In contrast, 45% of individuals indicated that she struggled with effective communication. Lastly, 10% of inhabitants believed she maintained positive relationships with the community.

Another study, conducted by Angkana Sommanustweechai, focused on community health workers' services in rural areas of Myanmar. Findings indicated that 95% of respondents reported advocating environmental health, including clean water and safe sanitation. Furthermore, 94% supported the provision of health education to villagers, 96% participated in community mobilization for child immunization under the age of 1, and 83% offered treatment for minor illnesses[13].

CONCLUSION

The research findings indicated that a significant proportion of the inhabitants emphasized the importance of environmental health aspects, including access to clean water and secure sanitation. Furthermore, they expressed endorsement for the delivery of health education within the village community. The governmental initiative in India aims to facilitate accessible and cost-effective healthcare services for the population, thereby contributing to improving overall health services. Additionally, the study highlighted their active engagement in promoting community mobilization for child immunization and antenatal care, along with the provision of treatment for minor ailments.

REFERENCES

[1] Induction Training Module for Community Health Officer. 1st ed. New Delhi: National Health Systems Resource Centre (NHSRC); 2019:Pp:1-100

[2] Kumar, Atul, Study about the identification of factors that affect the performance of Community Health Officers (CHO's) & services of Health and Wellness Centers (HWC's) in Community area of Madhya Pradesh, India.

[3] Desai S, Bishnoi RK, Punjot P. Community health officer: the concept

of mid-level health care providers. Int J Community Med Public Health 2020;7:1610-7.

[4] Mokholelana Margaret Ramukumba. Exploration of Community Health Workers' views about in their role and support in Primary Health Care in Northern Cape, South Africa. Journal of Community Health (2020) 45:55–62

[5] Mid-Level Healthcare Provides an Interim Measure: Govt - The Indian Practitioner, 19th February 2020.

[6] Kumar R, Pal R. India achieves WHO recommended doctor population ratio: A call for paradigm shift in public health discourse! J Family Med Prim Care. 2018 Sep-Oct;7(5):841-844.

[7] National Health Systems Resource Centre. Ayushman Bharat: comprehensive primary health care through health and wellness centres operational guidelines. 2019; 96.

[8] Committed to advancing the agenda of Universal Health Coverage through affordable and accessible healthcare for all. Press Information Bureau Government of India Ministry of Health and Family Welfare. 2017; 2-3.

[9] "NHM MP Recruitment 2019: Registration to fill 3450 vacancies of Community health officers closes soon". Hindustan Times. 2019:Pp11-10.

[10] JS RA, Ambarika R. Analysis Factors Affecting the Work Discipline of Health Officers at Public Health CenterBatang-Batang District, Sumenep. Journal for Quality in Public Health. 2022 May;5(2);Pp:107-16.

[11] Hartzler, Andrea L *et al*. "Roles and Functions of Community Health Workers in Primary Care." Annals of family medicine vol. 16,3 (2018);Pp:240-245.

[12] Krassanairawiwong, Tares, *et al*. "Roles of subdistrict health office personnel and village health volunteers in Thailand during the COVID-19 pandemic." BMJ Case Reports CP; 14(9) (2021).

[13] Sommanustweechai, Angkana, *et al*. "Community health worker in hard-to-reach rural areas of Myanmar: filling primary health care service gaps." Human resources for health 14.1 (2016): Pp:1-7.