

खण्ड 43
Volume 43

संख्या 1
Number 1

जनवरी से मार्च 2020
January - March 2020

आई.एस.एस.एन.-0253-6803
ISSN- 0253-6803

स्वास्थ्य एवं जनसंख्या:
परिप्रेक्ष्य एवं मुद्दे

**Health and Population:
Perspectives and Issues**



आरोग्यं सुखसम्पदा

राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान

स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार के अंतर्गत एक स्वायत्तशासी निकाय

The National Institute of Health and Family Welfare

An autonomous organization, under the Ministry of health and Family Welfare, Government of India

बाबा गंगनाथ मार्ग, मुनीरका, नई दिल्ली—110067

Baba Gangnath Marg, Munirka, New Delhi –110067

Editorial Board

<i>Editor-in- Chief</i>	<i>Editor</i>	<i>Assistant Editor</i>
Prof. Harshad Thakur	Prof. S. Vivek Adhish	Dr. Bishnu Charan Patro

Associate Editors

Prof. Gajanan D Velhal

Seth GS Medical College and
KEM Hospital, Mumbai,
Maharashtra

Prof. Jawaaid Hasan

Varun Arjun Medical College
Shahjahanpur, Uttar Pradesh

Prof. M. Athar Ansari

J.N. Medical College
Aligarh Muslim University, Uttar Pradesh

Dr. Meerambika Mahapatro

Associate Professor,
The NIHFWS, New Delhi

Prof. Mihir Kumar Mallick

The NIHFWS, New Delhi

Dr. Neelam Anupama Toppo

Associate Professor
NSCB Jabalpur, Madhya Pradesh

Dr. Nilesh Gawde

Assistant Professor,
Tata Institute of Social Sciences
(TISS), Mumbai, Maharashtra

Prof. N. Nakkeeran

Center of Research Methods
Ambedkar University, New Delhi

Dr. Pawan Kumar

Kasturba Medical College, Manipal,
Karnataka

Prof. Ramila Bisht

Jawaharlal Nehru University, New Delhi

Dr. Renu Shahrawat

Assistant Professor, The NIHFWS, New Delhi

Dr. Sanjeev Kumar Khichi

Associate Professor
SHKM Government Medical College
Nalhar, Haryana

Dr. S.R. Rao

Reader, The NIHFWS, New Delhi

Dr. Srinivas Patnaik

Associate Professor
KIIT Deemed to be University, Bhubaneswar, Odisha

Dr. Varun Arora

Associate Professor
PGIMS, Rohtak, Haryana

Subscription

	In India	In India
Annual:	Rs. 200.00	\$200 (US)
Single Copy:	Rs. 50.00	air-mail postage
Individual Life Membership:	Rs. 2000.00	

Bank Drafts may be drawn in favour of the

Director, The National Institute of Health and Family Welfare, New Delhi

Papers published in the Journal-HPPI, represent the opinion of the respective author(s)
and do not reflect the views and policies of the Institute.

All editorial correspondences should be addressed to:

The Editor, Health and Population: Perspective and Issues

The National Institute of Health and Family Welfare,
Baba Gangnath Marg, Munirka, New Delhi-110067, INDIA

E. mail: editor@nihfw.org

Website: [www.nihfw.org\(link:http://WPublication.aspx?id=3\)](http://www.nihfw.org(link:http://WPublication.aspx?id=3))

August 2020/ 800 Copies

Design and Layout	Hindi Translation	Technical Support
Ms. Shashi Dhiman	Ms. Monika	Mr. Surender Prasad
Mr. Puranmal Meena		

खण्ड 43
Volume 43

संख्या 1
Number 1

जनवरी - मार्च, 2020
January - March , 2020

आईएसएसएन 0253-6803
ISSN 0253-6803

स्वास्थ्य एवं जनसंख्या: परिप्रेक्ष्य एवं मुद्दे

Health and Population: Perspectives and Issues



आरोग्यम् सुखसम्पदा

राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान

The National Institute of Health and Family Welfare

(स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार के अधीन एक स्वायत्त संस्थान)

(An autonomous organization under Ministry of Health and Family Welfare, Government of India)

बाबा गंगनाथ मार्ग, मुनीरका, नई दिल्ली-110067

Baba Gangnath Marg, Munirka, New Delhi – 110067

HEALTH AND POPULATION - PERSPECTIVES AND ISSUES
[INCORPORATING NIHAE BULLETIN (EST. 1968) AND THE JOURNAL OF POPULATION
RESEARCH (ESTD. 1974)]

VOLUME 43

NUMBER 1

January-March, 2020

S. No.	Contents	Page No.
	<i>Editorial</i> Corona Virus Disease (COVID-19) Pandemic S. Vivek Adhish and Sangeeta Gopal Saxena	1-4
1.	Sustainable Development of Health in India: Review of the Need for a Durable Local Collaborative Governance for Strengthening the Health System A. M. Elizabeth, J. P. Shivdasani, Vandana Bhattacharya, Parimal Parya, Kiran Rangari, Subhash Chand, Bacchu Singh, Ramesh Gandotra, Lakhan Lal Meena, Y. K. Singhal, Rita Rani, Manisha, Ghanshyam Karol, Vaishali Jaiswal, Rekha Meena, Sherin Raj T. P., S. P. Singh, Sangita Mishra, Bhawna Kathuria, Raj Narayan and Harshad Thakur	5-21
2.	Awareness and Utilization of ANC Services among Women of Urban Slum in Delhi: An Observational Study Anand Kumar Verma, Prakash Ranjan and V. K. Tiwari	22-32
3.	Evaluation of Training Facilities of Institutes Conducting Training of Nurses under Central Sector Scheme Nanthini Subbiah and C. N. Bhargavi	33-40
4.	Psychological Well Being and Physical Health of Spouses of Deployed Army Personnel: Rank Differentials Prachi Bisht and Lata Pande	41-50

Corona Virus Disease (COVID-19) Pandemic

*** S. Vivek Adhish and * * Sangeeta Gopal Saxena**

*Professor and Head, Department of CHA, The NIHF, New Delhi-110067.

**Dr. PH Scholar, Penn State University, PHS Department, 90, Hope Drive, Hershey PA 17033, USA;
E-mail: drsangeetasaxena@gmail.com

“If you value the life of the elderly in this country, please do Social Distancing”

----- Ramanan Laxminarayan

The planet earth is under lockdown with its 7.8 billion people practically brought down to their knees by one of the smallest living creatures. The virus, which probably originated in bats but passed on to people via an as yet unrecognized intermediary animal species, is believed to have started infecting people in Wuhan, China, in late November or early December 2019¹. Since then, the virus has raced around the globe¹. A cluster of cases of pneumonia of unknown cause was reported to WHO on 31 December 2019². The cause of the outbreak was identified as SARS-CoV-2, a new virus closely related to bat. Coronavirus³ is believed to have originated in horseshoe bats that had previously not been identified in humans; and the disease was later renamed as COVID-19 by WHO on 7 January 2020. Corona viruses (CoV) are zoonotic i.e. they transmit disease between animals and humans and in the past, they have caused outbreaks of Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV)⁴. Several known corona-viruses are circulating in animals that have fortunately not yet infected humans.

COVID-19 could have evolved to its current pathogenic state through natural selection in a non-human host and then jumped to humans with the source being linked to the Huanan Seafood Wholesale Market. Bats were the most likely reservoir as the virus is very similar to a bat corona-virus. No cases of direct bat-human transmission have been documented, however, suggesting that an intermediate host was likely involved between bats and humans⁵. The humans once infected could transmit it to others. Alternatively, a non-pathogenic version of the virus jumped from an animal host to humans and then evolved to its current pathogenic state within the human population. Though difficult to say at this stage what was the mode, if it was the first, then chances of future outbreaks remain as the virus is still in the animal reservoir.⁵

Human to human transmission was confirmed on 23 January 2020 when WHO declared the outbreak a public health emergency of international concern, raising it to very high on 28 February 2020 and COVID-19 a pandemic on 11 March 2020. However, unverified reports suggested that the first person contracting the disease could be on 17 November 2019⁶ and a person diagnosed with symptoms on 1 December 2019 which had no connection with the sea food market cluster and a few cases came to the fore in Dec 2019^{7,8}. The first case of human transmission was in early January 2020^{9,10}. On 19th March 2020, the cases of COVID-19 surpassed 200,000 globally. It took over three months to reach the first 100,000 confirmed cases and just 12 days to reach the next 100,000¹¹. The third 100,000 took only three days. By the morning of 22 March 2020, there were 308594 cases with 13069 deaths globally while India had 332 cases and 5 deaths¹¹. Most of the western countries like Italy, France, Spain, US and West Asian like Iran were on the same trajectory and the cases doubling in 2-3 days. In India, they were doubling in a week. Hong Kong and Singapore had limited the spread while South Korea and Japan had slowed it. Some fear that COVID-19 could follow a similar path

to that of the 1918–1919 flu pandemic, in which the second and third waves caused most of the fatalities¹². However, as COVID-19 is a new disease, future trajectory may only be estimated¹². Droplets of COVID-19 remain air-borne after someone sneezes or coughs; and those particles can travel short distance and infect people close by. The droplets can become suspended in air as an aerosol for at least three hours. The virus-infused droplets can also fall on surfaces and infect people who touch those surfaces for as long as nine days at room temperature. High temperature and high relative humidity may significantly reduce the spread of COVID-19¹³.

Covering mouth and nose when coughing and sneezing, washing hands, avoiding close contact with people with respiratory illness, maintaining distance -- at least six feet reduces the spread of infection. People suspected to be infected should monitor and self-isolate themselves. Social distancing is advocated and the elderly should maintain distance from the young.

The time between exposure and symptom onset is typically around five days but may range from one to fourteen days¹⁴. The majority of the cases are mild. Fever, cough, and shortness of breath are the common symptoms¹⁵. Complications may include pneumonia and respiratory failure, septic shock, and/or multiple organ dysfunction or failure necessitating intubation and assisted ventilation in an intensive care unit. The early death cases of COVID-19 outbreak occurred primarily in elderly people, possibly due to a weak immune system that permits faster progression of viral infection¹⁵. There is no vaccine or specific anti-viral treatment; treatment is symptomatic and supportive therapy.

China adopted the mode of suppression to control the epidemic. Suppression requires more extreme measures so as to reverse the pandemic by reducing the basic reproduction number to less than one¹⁶. Wuhan was placed under effective quarantine on January 23 as air and rail departures were suspended¹⁷. China on 19 March 2020 marked a major milestone in its battle against the corona virus pandemic as it recorded zero domestic infections for the first time since the outbreak emerged; and on 16 March 2020, for the first time since the beginning of the outbreak, infections and deaths outside China surpassed those within China. Suppression requires meticulous surveillance as there is a possibility of recurrence.

Part of managing an infectious disease outbreak is trying to decrease the epidemic peak, known as flattening the epidemic curve¹⁸. This decreases the risk of health services being overwhelmed and provides more time for vaccines and treatments to be developed. Optimal mitigation policies reduce peak healthcare demand by 2/3rd and deaths by half. Containing imported cases, containment by identifying and isolating cases are very crucial. This helps the health systems not being overwhelmed and mortality coming down to less than one per cent. These measures reduce the peak ICU admissions which are especially important for countries like India which has 2.4 ICU beds per 100000 population. Social distancing, effective governance and quality of health care are also equally important. Countries adopted a variety of measures aimed at limiting the spread of the virus¹⁶. South Korea introduced mass screening, localized quarantines, and issuing alerts on the movements of affected individuals¹⁶. Singapore provided financial support for those infected who quarantine themselves, and imposed large fines for those who failed to do so¹⁶. Both the countries have flattened the curve with the cases doubling in more than a week in Singapore and around a week in South Korea.

India has taken urgent steps to strengthen community surveillance, quarantine facilities, isolation wards, and ensure availability of adequate personal protective equipment (PPE), trained manpower and rapid response teams for management of COVID-19. The first case in

India occurred on 30 January 2020. By 21 March 2020, the cases were doubling in about a week. Community transmission has not yet started. If we can increase this rate of doubling to about 18 -20 days we will flatten the epidemic curve and prevent a situation which overwhelms the health system and takes a heavy toll. The average age in India is 28; one of the lowest in the world will be a favourable factor. Surveillance will be needed for may be a year and mitigation efforts continued. Clusters may come up off and on and if efficiently managed and hopefully we will be following the path of Singapore, and we'll win the war against COVID-19.

References

1. <https://www.fredhutch.org/en/news/center-news/2020/03/tracking-covid-19-trevor-bedford.html>. <https://www.statnews.com/2020/03/11/who-declares-the-coronavirus-outbreak-a-pandemic/>
2. Novel Corona virus. World Health Organization. Archived from the original on 2 February 2020; retrieved on 6 February 2020.
3. Perlman S. Another Decade, Another Corona virus. *The New England Journal of Medicine*; February 2020, 382 (8): 760–762. doi:10.1056/NEJMe2001126. PMID 31978944.
4. <https://www.who.int/health-topics/coronavirus>.
5. <https://www.scienceboard.net/index.aspx?sec=ser&sub=def&pag=dis&ItemID=570>
<https://www.sciencedaily.com/releases/2020/03/200317175442.htm>.
6. Jump up to Walker J. China traces corona virus to first confirmed case, nearly identifying 'Patient Zero'. 14 March 2020, Newsweek.
7. A Du Toit. Outbreak of a novel corona virus *Nat. Rev. microbiol.* (123) (2020), 10.1038/s41579-020-0332-0.
8. L Ren, YM Wang, ZQ Wu, ZC Xiang, L Guo, T Xu, et al. Identification of a novel corona virus causing severe pneumonia in human: A descriptive study. *Chinese Med J* (2020), 10.1097/CM9.0000000000000722.
9. Jump up to. The Novel Corona virus Pneumonia Emergency Response Epidemiology Team (17 February 2020). "The Epidemiological Characteristics of an Outbreak of 2019 Novel Corona virus Diseases (COVID-19) — China, 2020". *China CDC Weekly*. 2 (8): 113–122. Retrieved 18 March 2020.
10. Heymann DL & Shindo N. COVID-19: what is next for public health?. *Lancet*, February 2020, 395 (10224): 542–45. doi:10.1016/S0140-6736(20)30374-3. PMID 32061313.
11. <https://www.devex.com/news/covid-19-a-timeline-of-the-coronavirus-outbreak-96396> <https://www.worldometers.info/coronavirus/#countries>.
12. [https://independentist-world.fandom.com/fr/wiki/\(COVID-19\)_Coronavirus_pandemic_in_independentist_territories](https://independentist-world.fandom.com/fr/wiki/(COVID-19)_Coronavirus_pandemic_in_independentist_territories) Li Ruiyun, Pei Sen, Chen Bin, Song Yimeng, Zhang Tao, Yang Wan, & Shaman Jeffrey. Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus(COVID-19). *MedRxiv* (Preprint),2020.02.14.20023127. doi:10.1101/2020.02.14.20023127.
13. <https://www.accuweather.com/en/health-wellness/new-study-says-high-temperature-and-high-relative-humidity-significantly-reduce-spread-of-covid-19/703418>.
14. WHO COVID-19 situation report 29 (PDF). World Health Organization, 19 February 2020.
15. <https://www.latimes.com/science/story/2020-03-25/covid-19-symptoms-how-can-i-tell-if-ive-got-the-coronavirus> W Wang, J Tang & F Wei. Updated understanding of the outbreak of 2019 novel corona virus (2019-nCoV) in Wuhan, China *J. Med. Virol.*, 2020, 92 (4): 441-447, 10.1002/jmv.25689.

-
16. <https://justquarantine.com/covid-19-coronavirus/management-outbreak-treatment/>
 17. <https://www.bignewsnetwork.com/news/264144826/timeline--how-chinas-new-coronavirus- spread.>
 18. https://en.wikipedia.org/wiki/2019%E2%80%9320_coronavirus_pandemic#cite_note-ImpCollege16mar2020-311.

Sustainable Development of Health in India: A Review of the Need for a Durable Local Collaborative Governance for Strengthening the Health System

***A. M. Elizabeth, *J. P. Shivdasani, *Vandana Bhattacharya, *Parimal Parya, *Kiran Rangari, **Subhash Chand, **Bacchu Singh, **Ramesh Gandotra, **Lakhan Lal Meena, **Y. K. Singhal, **Rita Rani, **Manisha, **Ghanshyam Karol, **Vaishali Jaiswal, **Rekha Meena, **Sherin Raj T.P., **S. P. Singh, **Sangita Mishra, **Bhawna Kathuria, **Raj Narayan and ***Harshad Thakur**

* Research Officers, The NIHF, Munirka, New Delhi-110067

** Assistant Research Officers, The NIHF, Munirka, New Delhi- 110067

*** Director, The NIHF, Munirka, New Delhi- 110067

Reviewers:

Dr. Lam Khan Piang, Department of Statistics, JNU, New Delhi-110067.

Dr. DK Yadav, Department of Statistics and Demography, The NIHF, Munirka, New Delhi-110067.

Dr. Meerambika Mahapatro, Department of Social Sciences, The NIHF, Munirka, New Delhi-110067.

Abstract

The significant achievement in public health in India during the past few decades is visualized by a decrease in demographic indicators for health like IMR, MMR, TFR and doubling of life expectancy. But grading people's health and the health care system across the states visage a kind of disagreement of an emerging disconnect between the complexity and iniquitous nature of problems as well as the competence to address it meaningfully. The health outcomes still remain depleted when the country is compared with other countries with similar economic stages of development. Health policies and programmes highlight the need of governance in health for distribution of responsibilities and resources, maintaining accountability between centre and state, strengthening institutional mechanism for consultative decision-making and coordinated implementation to achieve it. Thus, the objective of this paper is to explore the level of collaboration within and between various players for health based on the survey of literature of the last one decade. Content analysis of various literatures available in the areas was done for deeper understanding of multi-sectoral collaboration at all stages for health emphasizing the local governance. Identify the strength, weakness and disparity which need to be addressed for improving and suggest evidence-based strategies for the sustainable development of health in India. There has been a general improvement in the provision of health care infrastructure, human resource development but more pro-action was needed considering the country's failure to achieve many of the targets, and the status of health of the people still stays way below the world average. This raises questions about the strategic implementation mechanism at different stages of the programmes focusing on removing the regional and gender disparities. Studies have shown that various socio-economic factors influence people in reaching out to health care facilities in the rural areas particularly by the most vulnerable sections of the population; and it needs to be addressed specifically. Considering the diversifying nature of the problem, its quantum and differential stage of development between regions; calls for local-specific strategies and programmes with very pro-active community participation. Without active involvement of the communities, achievement of primary health target is going to be very difficult. Therefore, it visualizes the strengthening of local collaborative governance for strengthening the health system by capacity building of the local self-governance. This, in turn, will enhance their role at different levels of health governance, in addressing the social determinants of health,

making community-based planning and mandatory monitoring in order to place people at the centre of the health system and development process for effective monitoring of services and accountability in the management and delivery of healthcare services.

Key words: Sustainable development, Collaborative governance, Health system, Socio-economic factors, Poverty.

Introduction

Health is a vital component for the well-being with quality of life and a crucial indicator to meet the criteria of human development. However, in India, the achievement of optimum health status is interlinked with other social and distal determinants of life. There has been a significant achievement in public health in the country during the past few decades, often visualized by improvement in demographic indicators for health like IMR, MMR, TFR and increasing life expectancy. But, grading peoples' health and the health care system across the states features division between the complexity and inequitable nature of problems, lack of means and the competence to address it meaningfully across geographical, social, gender, income and educational strata in different states. The health outcomes always remain low when the country is compared with other countries with similar economic stages of development. This is due to the coexistence of high prevalence of preventable diseases, reproductive and child health problem, nutritional deficiencies, chronic diseases, accidents, violence and injuries, disabilities, unbalanced health care services lacking equity and affordability, lack of public accountability, poor access to health information, lack of synergy between health research outcome and its application for development, low government expenditure on public health though enhanced recently, and large quantum of out of pocket expenses for health by the individuals which is again pushing the families into more poverty.

The country's development initiatives commenced upshot in the economic growth for the past two decades. But this economic development does not seem to shape substantial improvement in the peoples' health, rather fail to synergise proportionate investments in health gain bringing equality and equity among all the segments of the population across states and below level. At one extreme where best possible health care are provided to those who can afford to pay for the services including to the people from other countries under medical tourism; on the other extreme, even the basic or essential service and technologies are unaffordable or lacking for a large proportion of people who are poor. India ranks 130 among the 189 countries in the latest Human Development Index (HDI) report. Ranking of India's quality of life is 49 out of 66 with Quality of Life Index (QLI) of 121.61, health care ratio is 68.04, and the Cost of Living Index (CLI) is 23.81 (Human Development report 2019).

Further, National Health policy (2017) and NHM (2017) visualize to attain universal access to equitable, affordable and quality health care services by creating a fully functional, decentralized and community owned system with greater inter-sectoral coordination so that wider social determinants affecting health are also equally addressed. Amongst the pool of strategies designed, it emphasises weightage on decentralized planning with autonomy for local action, inter-sectoral district health plan including drinking water, sanitation, hygiene, nutrition; capacity building of Panchayati Raj Institutions, capacity building for preventive health care at all levels, Health plan for each village through VHNSC, risk pulling and social health insurance, promoting the non-profit sector and PPP, and mainstreaming AYUSH and local health traditions.

Objectives

The objectives of this paper were to:

explore the level of collaboration within and between various players for optimum health;
deeper understanding of current level of inter-sectoral and multi-sectoral collaboration for health at the local level;
identifying the strength, weakness and disparity which need to be addressed for improving the sustainable development of health in India; and
suggest evidence-based strategies.

Methodology

The literatures used in this article are from relevant secondary data sources like published journal articles, government reports, reference papers, etc. published in the decade at the national and international level. Data particularly focusing on India and developing countries were selected and down loaded from google.com, pubmed, etc. for review. Further, the content analysis of various literatures available in the areas was done based on eight broad thematic areas which is mentioned in the findings.

Findings

Multi-level Governance, Convergence of Sectoral Programmes and Collaborations for Health within the Local Health Systems

Over the years, lots of research initiatives have been undertaken to understand the dynamics of inter-sectoral and multi-sectoral collaboration in the country. PHC governance in Nigeria illustrates how the multi-level governance framework offers a people-centric lens on the governance in low- and middle-income countries (LMICs)¹. This Nigerian study focuses on relations among health system actors within and between the levels of governance. The study demonstrated the potential impact of health system actors functioning at different levels of governance on PHC delivery, and how governance failure at one level can be assuaged by governance at another level.

Schneider et al. in their study found collaborations, coordinated action in the community health system (Zambia), partnership between governmental, non-governmental and academic actors (India), joint planning and delivery across political and sectoral boundaries (Sweden and South Africa)². In this study, four countries' cases were presented and analyzed using a common framework of collaborative governance focusing on the dynamics of the collaboration itself. This collaboration covered principled engagement, collective motivation and joint capacity. The four cases, despite their differences, illustrated the considerable challenges and the specific dynamics involved in developing collaborative action in local health systems. These included the co-construction of solutions (and in some instances, the problem itself) through engagement, the value of trust, both interpersonal and institutional as a condition for collaborative arrangements and the role of openly accessible information in building shared understanding. Eventually, collaborative action takes time; and difficulty needs to be anticipated. If discovery, joint learning and developing shared perspectives are presented as goals in themselves, these may offset internal and external expectations of collaborations.

Kim et al.³ reported that convergence of sectoral programmes is significant for scaling up essential maternal and child health, and nutrition interventions. These interventions are implemented by two government programmes designed to work together i.e. Integrated Child Development Services (ICDS) and National Rural Health Mission (NRHM). But it was found that there is limited understanding of the nature and extent of coordination in place which was needed at the various administrative levels. Examining how inter-sectoral convergence and the factors influencing convergence in policy in nutrition programming is operationalized between ICDS and NRHM from the state to village levels in Odisha. It was observed that there was close collaboration at the state level in developing guidelines, planning, and reviewing programmes facilitated by a shared motivation and recognized leadership for coordination. However, the health department was perceived to drive the agenda but different priorities and little data sharing presented challenges. At the district level, there was joint planning and review meetings, trainings, and data sharing but poor participation in the inter-sectoral meetings and limited supervision. While the block level is the hub for planning and supervision, cooperation is limited by the lack of guidelines for coordination, heavy workload, inadequate resources, and poor communication. Strong collaboration can be materialized by close interpersonal communication and mutual understanding of roles and responsibilities. The study suggested that congruent or shared priorities and regularity of actions between sectors across all levels will improve the quality of coordination, clarity of roles and leadership, and accountability. As convergence is a means to achieve effective coverage and delivery of services for improved maternal and child health and nutrition, focus should be on delivering all the essential services to the mother-child dyads through mechanisms that facilitate a continuum of care approach, rather than sectorally-driven, service-specific delivery processes.

A study by Bossert and Mitchell⁴ demonstrated that decentralization is a varied experience, with some district-level officials making greater use of decision space than others; and that those who do so, also tend to have more capacity to make decisions and are held more accountable to elected local officials for such choices. These findings suggest that decentralization policy should focus on synergies among dimensions of decentralization to encourage more use of de jure decision space, work towards more uniform institutional capacity, and encourage greater accountability to local elected officials.

Health Research, Information and Communication Technologies for Local Health System Reform

A study on Global research partnerships in advancing public health in India⁵ reported that Collaborative research is integral to medicine. Multi-national and multi-institutional research partnerships produce advances in medicine and public health that have a significant societal impact. Developing nations can gain from such collaborative partnerships in achieving progress in sustainable development goals. However, it is important that the research agenda is relevant to the region where studies are conducted. Funding of research by the national government and regional organisations will ensure that the research is appropriate for the region, and ethically rigorous.

Ward et al.⁶ examined the extent to which provisions of international health research guidance promote capacity building and equitable partnerships in global health research. The evaluation found that governance of collaborative research partnerships, and in particular capacity building, in resource-constrained settings were limited but had improved with the implementation

guidance of the International Ethical Guidelines for Health-related Research Involving Humans by the Council for International Organizations of Medical Sciences (CIOMS, 2016). However, more clarity was needed in national legislation, industry and ethics guidelines, and regulatory provisions to address the structural inequities and power imbalances inherent in international health research partnerships. Further, ethical partnership governance was not supported by the principal industry ethics guidelines. It concluded that governance should stipulate the minimal requirements for creating an equitable environment of inclusion, mutual learning, transparency and accountability. Procedurally, this should be supported by (i) shared research agenda setting with local leadership, (ii) capacity assessments and (iii) construction of a memorandum of understanding (MoU). Moreover, the requirement of capacity building needs to be coordinated amongst partners to support good collaborative practice and deliver on the public health goals of the research enterprise; improving local conditions of health and reducing global health inequality. It suggested greater commitment, and support should be given to co-ordinate, strengthen and enforce local laws requiring equitable research partnerships and health system strengthening.

Borgström⁷ reported that transformation towards sustainable development was about findings new ways of thinking, organising and doing to navigate wicked challenges such as climate change and urbanization. Such challenges call for new governance modes that match the complexity of the systems where multi-level governance and collaborative approaches have been suggested to contribute to such transformative capacity building and decentralized governance of the Stockholm region. Such a collaboration hosts a great potential in supporting city wide transformation which was hampered by disconnect between actors, levels and sectors, and the short-term funding structure. The suggested interventions highlight the tension between enabling collaborations while safeguarding a high local diversity of initiatives and flexibility to ensure sustained space for innovation and learning.

Cash-Gibson et al.⁸ reported that the effective triangulation of S-N-S partnerships can be of high value in building sustainable research capacity in LMICs. If designed appropriately, these multicultural, multi-institutional, and multi-disciplinary collaborations can enable southern and northern academics to contextualize global research according to their national realities.

Scott et al.⁹ reported that by re-framing the conflict as organizational, they were able to create opportunities for the staff to understand their context and participate in negotiating principles for communication and collaborative work. The result reduced conflict between the staff in the two organizations, leading to improved implementation of programme and support. The study suggested that strengthening relationships among those working at the local level by building collaborative norms and values is an important part of local health system governance for improved service delivery by multiple actors.

Nyström et al.¹⁰ reported that collaborative approaches were important in the study of complex phenomena. Collaborative approaches were achieved by designing action research or by involving practitioners from several levels of the healthcare system in various parts of the research process. Study showed that allocated time, arenas for interactions, skills in project management and communication are needed during research collaboration to ensure support, build trust and understanding with involved practitioners at several levels in the healthcare system. For researchers, dealing with this complexity takes time and energy from the scientific process. For practitioners, this puts demands on understanding a research process and how it fits with the on-going organisational agendas and activities, and allocating time. Some of the

identified factors may be overlooked by funders and stakeholders when designing, performing and evaluating interdisciplinary, collaborative and partnership research.

Study carried out by Scott and Gilson¹¹ reported that Central governance is shaped by the information and knowledge generated, and used at the lower system levels. Formal health information is generated in the district-based HIS; therefore, attracts management attention across the levels of the health system in terms of design, funding and implementation. Hence, strengthening the local level managers' ability to create enabling environments is an important leverage point in local decision-making which in turn, translates national policies and priorities including equity goals into appropriate service delivery practices. Ramaswamy et al.¹² reported the need for multi-country partnerships to achieve sustainable outcomes in global health but only a few literature describes how this could be achieved in practice. A strong leadership, support and engagement of stakeholders, co-creation of solutions with partners, and involvement of partners in the delivery of solutions are all required for successful and sustained partnerships.

Chandrasekhar and Ghosh¹³ reported that information and communication technologies (ICTs) can improve the delivery of health and disaster management services in poor and remote locations. It can increase the transparency and efficiency of governance, and would improve the availability and delivery of public health services. Educating health professionals in the possible uses of ICTs, and providing them with access and 'connectivity' would give dividends and also reduce the digital divide.

Surveillance Mechanisms for Health and New Emerging Diseases (Antimicrobial Resistance)

Dahal et al.¹⁴ reported that most of the 'One Health' activities in South Asia are determined by donor preferences. Bangladesh and India did considerable work in advancing 'One Health' with limited support from the government agencies. Weak surveillance mechanisms, uncertain cost-effectiveness of One Health compared with the existing approach, human resources and laboratory capacity are some of the factors hindering the implementation of the One Health concept. Implementation of One Health is growing in the South Asian region with limited or no government acceptance. To institutionalize it, there is a need for leadership, government support and funding.

A study by Kumar et al.¹⁵ reported that Antimicrobial Resistance accounts for the greatest threat to the health system. The most appropriate path to mitigate this menace was a collaborative, multidisciplinary approach combining antimicrobial stewardship with infection prevention. Sustainable efforts to overcome this global problem would require awareness, learning and coordination at various levels in the health system. Government policies, national guidelines, collaborative functioning in research, online training modules, and media has an important role in combating the threat. A multipronged approach involving the infection control specialist as well as various cadres of health-care providers including pharmacists, nurses and community-level health workers are needed. All health-care professionals prescribing antibiotics take responsibility and understand the adverse consequences of inappropriate and suboptimal antibiotic usage. Certain countries in the world have already in place the antimicrobial stewardship programme with multi-disciplinary approach. India needs to have a strengthened anti-microbial stewardship programme involving all cadres of health-care providers. Brucellosis control will be challenging in India but with collaboration it could be possible to address these priority areas¹⁶.

Strengthening Government Management Capacity

Health Facility Management Strengthening Programme was quite successful in strengthening the local health governance in the health facilities¹⁷. The level of community engagement in governance improved i.e. an increase in the number of effective HFOMC meetings, expansion of the inclusion of dalit/women members in the decision-making process, facilitation of resource mobilization, and community accountability, increase in health facility opening days. Furthermore, health services became more inclusive as there is an increase in the availability of technical staff, supervision and monitoring, and display of the citizen charter. Functioning of HFOMCs is largely dependent on the process of selecting members, the staff and community's support, and a sense of volunteerism and team spirit among the members. Correspondingly, to ensure the effective participation of dalit/woman members, the educational and livelihood empowerment of the members is very necessary. Furthermore, capacity building and giving authority to HFOMCs should go hand-in-hand. Local governance of health facilities was fostered through the local people's active engagement in HFOMCs and capacity building of the HFOMC members.

A study on Strengthening Government Management Capacity to Scale up HIV Prevention Programmes through the Use of Technical Support Units in Karnataka State¹⁸ reported that scaling up HIV prevention programmes among key populations (female sex workers and men who have sex with men) has been a central strategy of the Government of India. However, state governments have lacked the technical and managerial capacity to oversee and scale up interventions or to absorb donor-funded programmes. In response, the national government contracted Technical Support Units (TSUs), teams with expertise from the private and non-governmental sectors, to collaborate with and assist state governments. In 2008, a TSU was established in Karnataka, one of six Indian states with the highest HIV prevalence in the country where monitoring showed that its prevention programmes were reaching only five per cent of the key populations. The TSU provided support to the state in five key areas: assisting in strategic planning, rolling out a comprehensive monitoring and evaluation system, providing supportive supervision to intervention units, facilitating training, and assisting with information, education, and communication activities. This collaborative management model helped to increase capacity of the state, enabling it to take over funding and oversight of HIV prevention programmes previously funded through donors. With the combined efforts of the TSU and the state government, the number of intervention units statewide increased from 40 to 126 between 2009 and 2013. Monthly contacts with female sex workers and homosexuals increased. There were also increases in the proportion of both populations who visited HIV testing and counseling centers, and sexually transmitted infection clinics and also changes in sexual behaviours among the key populations were also documented. The Karnataka experience suggests that TSUs can help governments enhance managerial and technical resources, and leverage funds more effectively. With careful management of the working and reporting relationships between the TSU and the state government, this additional capacity can pave the way for the government to improve and scale up programs and to absorb previously donor-funded programmes.

Community participation, Social accountability & Decision making within local health system for Health:

A study has reported that community participation is a complex process which is strongly

influenced by the context in which it occurs, and social factors such as power relations must be carefully considered¹⁹. Further, it stated that there is a need for more robustly designed studies to improve the theorization of community participation, and to draw out a better understanding of how tangible and intangible elements such as power, influence community participation and its outcomes.

George et al.²⁰ tried to explore the extent, nature and quality of community participation in health systems intervention research in LMICs. The study highlights that despite positive examples, community participation in health systems interventions was variable, with few being truly community-directed. It suggested that future research should more thoroughly engage with community participation theory, recognize the power relations inherent in community participation, and be more realistic as to how much community can participate and cognizant of who decides that. Another study reports that in order to realize the benefits of this approach it is vital to provide adequate investment in the ‘people’ component of health systems and understand the multi-level factors that influence their participation.

A study²¹ has reported on accountability mechanisms for implementing a health financing option through the case of the basic health care provision fund (BHCPF) in Nigeria. The study reports that the Nigerian National Health Act proposes a radical shift in health financing in Nigeria through the establishment of a fund i.e. Basic Health Care Provision Fund (BHCPF). The strategies for accountability encompass planning mechanisms, strong and transparent monitoring and supervision systems, and systematic reporting at different levels of the health care system. Further, it highlighted that non-state actors, particularly communities, must be empowered and engaged as instruments for ensuring external accountability at lower levels of implementation. New accountability strategies such as result-based or performance-based financing could be very valuable. The key challenges to accountability identified are- trust, transparency and corruption in the health system, political interference at higher levels of government, poor data management, lack of political commitment from the State in relation to release of funds for health activities, poor motivation, mentorship, monitoring and supervision, weak financial management and accountability systems, and weak capacity to implement the suggested accountability mechanisms due to political interference.

A Tanzanian study²² reported that almost all the stakeholders viewed Accountability for Reasonableness as an important and feasible approach for improving priority-setting and health service delivery in their context. However, a few aspects of Accountability for Reasonableness were seen as too difficult to implement, given the socio-political conditions and traditions in Tanzania. The highlights of the study are budget ceilings and guidelines, low level of public awareness, unreliable and untimely funding, as well as the limited capacity of the district to generate local resources as the major contextual factors which hampered the full implementation of the framework. The study suggested that Accountability for Reasonableness framework could be an important tool for improving priority-setting processes in the contexts of poor-resource settings. However, the full implementation of Accountability for Reasonableness would require a proper capacity-building plan, involving all relevant stakeholders, particularly members of the community as public accountability is the ultimate aim, and it is the community that will live with the consequences of priority-setting decisions.

A study in Gujarat²³ on how social accountability contributes to better maternal health outcomes with government and civil society actors, showed an improved interaction between communities and the health system led to better access to and use of maternal health services. However, the

influence of social accountability found to be limited to the local/district level and also was lack of capacity and ownership of the government structures.

A study by Panda and Thakur²⁴ reported that the robustness of a health system in achieving the desirable outcomes depends upon the width and depth of ‘decision space’ at the local level. However, lack of consensus on an acceptable framework followed by notion of ‘trust’, ‘convenience’ and ‘mutual benefits’ to explain, define and measure components of governance in health is significant in determining its quantum and quality. Further, for the ‘continuum of health services’ model, the challenge often lies in identifying variables of performance (fiscal allocation, autonomy at local level, perception of key stakeholders, service delivery outputs, etc.). Compartmentalizing the local decision making and its effect on health system performance revealed that there is scanty evidence about innovations attributable to decentralization and limited evaluative study on the subject. It is also difficult to quantify characteristics of governance at institutional, system and individual levels except through proxy means. There is a need to sensitize the governments and academia about how best more objective evaluation of ‘shared governance’ can be undertaken focusing on context-specific evidence; and its effect on the entire spectrum of health system placing due emphasis on efficiency, community participation, human resource management and quality of services to benefit policy making.

Administrative Decentralization, Local Self-Governance and Leadership for Health

Rogi Kalyan Samiti (RKS)

George et al.²⁵ reports that more focus is placed on strong local leadership but no attention is given to conflict resolution strategies and skills. More access to information and opportunities to develop skills were crucial for community participation, critical thinking, problem solving and ownership. There are many quantitative scales for measuring community capability but health systems research engaged with community participation rarely made use of these tools or the concepts informing community. Thus, strengthening community capability becomes critical for ensuring community participation which leads to genuine empowerment.

A study of the functioning of the local self governance in health reports that poor knowledge/ expectation of RKS members was weakening the decision making process at peripheral decision making health units (DMHUs)²⁶. Thus, a locally-monitored and time-bound capacity building plan to improve their knowledge, understanding and expertise in the areas of governance and management practices is required. Further, specific eligibility criteria based on experience and qualification may be fixed for RKS membership. Additional research focusing on identifying the differences underlying individual and systemic factors between Priority District (PD) and Non-Priority District (NPD) needs to be initiated.

According to Kwamie et al.²⁷, administrative decentralization followed by incomplete political and fiscal decentralization has ensured that the balance of power remained at national level with strong vertical accountabilities and dependence of the district on national level. Thus, it demonstrates that the expression of decentralization does not always mirror the actual implementation, and neither it empowers the lower level authorities. A study conducted in the Philippines in 2019²⁸, reported that at institutional levels, these desired capacities should include having a multi-stakeholder approach, generating revenues from local sources,

partnering with the private sector and facilitating cooperation between local health facilities. On the other hand, adjustments in accountability should focus on the various mechanisms that can be enforced by the central level not only to build the desired capacities and augment the inadequacies at local levels but also to incentivize success; and regulate failure by the local governments in performing the functions transferred to them. The study concluded that to optimize decentralization in the health sector, widening decision spaces for local decision-makers must be accompanied by the corresponding adjustments in capacities, and accountability for promoting good decision-making at lower levels. Further, analyzing the health system for its synergy is useful for exploring concrete policy adjustments in the Philippines as well as in other settings.

A study conducted in 2016²⁹ reported that Rogi Kalyan Samiti (RKS) was established at every health unit as the local decision making institution to improve the efficiency and quality of services. However, understanding on quality improvement strategies was found to be very poor among the health workers. Customized capacity building measures at the district and sub-district levels could be critical to equip the peripheral health units to achieve the universal health coverage goals. Work environment, systemic factors and accountability must be addressed on priority for retention of the health workforce. The presumption to link between efficient local decision making, perception of health workers about efficiency of health units and the health status of population needs intense analysis.

Adsul and Kar³⁰ have reported that RKS has yet to bring out quality component to the health services being provided through facilities by bridging the structural and managerial weakness in the system. The progress of the RKS needs to be enhanced by giving due priority to the critical areas. Furthermore, the results should emphasize an urgent need for devising strategies and actions to overcome significant systemic constraints, if any, emerged.

Rawat et al.³¹ reported that the main functions performed by the RKS included infrastructural strengthening of the CHCs, improvement in basic facilities, ensuring provision of emergency medical care, free medicines, basic laboratory and radiological investigation, transport facilities and hospital waste management. The flow of the central grant was found to be smooth. However, the expenditure is below the mark in the absence of predefined protocols and most of the community members were not aware of the existence, objectives and the activities of RKS. The innovations applied by the best performing districts need to be incorporated in the national guidelines. Additionally, targeted capacity building activities for the district health managers may improve their decision-making abilities which will contribute to improve health system performance.

Resource Management (Manpower and Finance)

Singh et al.³² have reported that the decision on expenditure of untied funds of CHCs and PHCs was taken in the meeting of Rogi Kalyan Samiti (RKS) but the members from other sectors such as PRI, education, revenue department, etc. usually did not attend the meeting. Most of the Medical Officers-in-charges (MOICs) were unaware of the availability of untied fund. About 50 per cent of the ANMs stated that they were unable to expend the money due to non co-operation of the Pradhan. In majority of the cases, the decision on the utilization of untied fund was taken by the ANM herself instead of VHSC meeting. The study suggested regular updating and orientation to the service providers about the untied fund and its efficient

utilization, strict monitoring of utilization of the untied fund at each and every level are needed.

Sheikh et al.³³ have reported that proper deployment or posting and transfer (P&T) of health workers- placing the right people in the right positions at the right time is vital for fostering communities' faith in the government health services and fixing the role of the health system as a principal social institution. P&T is an unsettled issue in many low and middle-income countries which requires strong political commitment for improving the public sector services coupled with new thinking and research for inter-disciplinary collaboration and implementation. This can further strengthen other areas in HRH and health systems. Further, innovative social science and management theorizing, iterative, and locally-driven interventions that focus on establishing transparent professional norms and building the credibility of government administration, including the health services, are likely the way forward.

Seshadri et al.³⁴ reported that Karnataka had devolution of all 29 functions prescribed by the 73rd Amendment by the late 1990s. An evaluation of the impact of decentralization in the health sector found virtually no change in the health system performance. No improvement was also found on access to health services in terms of availability of health personnel or in various health indicators such as IMR or MMR. However, there has been a conscious effort under the National Rural Health Mission (NRHM) to promote decentralization of funds, functions to the lower levels of government. Overall, the data indicate substantial gap between the NRHM guidelines on decentralization and the actual implementation. Thus, there is a need for capacity building at all levels of the health system to fully empower the functionaries, particularly at the district level, in order to translate the benefits of decentralization into reality.

Using community-based evidence for Health reform:

A study has been conducted on using community-based evidence for decentralized health planning in Maharashtra³⁵. A project on capacity building for decentralized health planning was implemented in selected districts of Maharashtra, India during 2010-'13. This process developed on the platform of officially supported community-based monitoring and planning, a process for community feedback and participation towards health system change. The evaluation of the project included in-depth interviews of various participants and analysis of change in local health planning processes. The study revealed positive changes in intervention areas, increase in capacity of key stakeholders leading to preparation of evidence-based innovative planning proposals, significant community-oriented changes in utilization of health facility funds, and inclusion of community-based proposals in village, health facility-based block and district plans. Further, transparency related to planning increased along with responsiveness of health providers to community suggestions. The key lesson was that active facilitation of decentralized health planning and influencing the health system to expand participation is essential to ensure changes in planning. Further, capacity building of diverse stakeholders in the local health planning and advocacy to enable participation of community in the planning process is essential. This combination of strategies emphasizes on the framework of 'empowered participatory governance' which combines a degree of 'countervailing power' and acceptance of participation by the system for new forms of governance to emerge.

Discussion

The health policy and programmes highlight the need of governance in health for distribution

of responsibility and accountability between the centre and the state. These policies recommend equity, sensitive resource allocation, strengthening the institutional mechanism for consultative decision-making as well as coordinated implementation as mechanisms to achieve it. It visualizes strengthening Panchayati Raj Institutions to enhance their role at different levels of health governance including social determinant of health making community-based monitoring and planning mandatory. Thus, it places people at the centre of the health system and development process for effective monitoring of quality of services and for better accountability in management and delivery of healthcare services. It focuses to increase both horizontal and vertical accountability of the health system by providing a greater role and participation of local bodies, encouraging community monitoring and programme evaluation along with ensuring grievance redressal systems effective. The policy recognizes the essential of Sustainable Development Goals by highlighting the quantitative indicators with target-specific goals linked to the ongoing national efforts as well as the global strategic directions. Intervention to address malnutrition and micro-nutrient deficiencies calls for synergetic actions from departments like Women and Child Development, Education, WASH, Agricultural and Food and Civil Supplies with MoHFW in the role of convener to monitor and ensure effective integration of both nutrition-sensitive and nutrition-specific interventions for coordinated optimal outcomes.

The current review projected various challenges and dynamics involved in developing collaborative action in the local health systems. These involve finding out solutions of problems through engagement, building trust both interpersonal and institutional for collaborative arrangements and making information accessible in building shared understanding. Eventually, collaborative action takes time, and difficulty needs to be anticipated. Under the convergence of sectoral programmes for health, the health department was perceived to drive the agenda but different priorities and lack of data sharing poses challenges. Additionally, the members from other sectors such as PRI, education, revenue department etc. usually did not actively participate in the meeting highlighting the lack of wiliness to coordinate at the local level. Further, the sub-district level and below level are the junctions for planning and supervision but face challenges due to lack of clear guidelines for coordination, cooperation, heavy workload, lack of resources and communication. It requires more synergies among the various dimensions to work towards more uniform institutional capacity, encouraging greater accountability to local governance. There is a need to congregate health research with local issues for suggesting evidence-based solution. Moreover, the capacity building needs to be coordinated amongst partners to support good collaborative research practice and deliver on the public health goals of the research activity initiated for improving local conditions for optimum health and reducing the health inequality.

Innovation of new dimensions of service provisions like people-centric integrated models of services, community-based delivery, community accountability, quality improvement, and e-health technologies have been conceptualized as a practical solution to hit the millstone. However, these reforms to revamp the health system are often characterized with inarticulate state in organizational fragmentations and functioning. It resulted in variety of forces impacting the health system and proliferation of donor aid and vertical health programme particularly during the period of Millennium Development Goals. The latest Public Health management reforms, the splitting of consumer and provider functions, decentralization, growth of profit and nonprofit health sector, the exiting institutional norms and incentives in the health systems are to compete rather than collaborate. Hitherto, addressing these complex health needs requires

new and better coordination between levels and players within the health system as well as between the health and other sectors especially at local level.

To ensure active community participation, educational and livelihood empowerment of the community is very necessary. Local governance of health facilities needs to be promoted through the local people's active engagement in the health programme. It requires capacity building of the local health professionals and community members for strengthening the local government management capacity for health. Ensuring quality of community participation in health is vital to provide adequate investment in the 'people', accountability of health systems and understand the multi-level factors that influence their full participation. Overall, there is a substantial gap between the NRHM/NHM guidelines on decentralization and the actual implementation. Thus, there is a need for capacity building at all levels of the health system to fully empower the functionaries, particularly at the district and below levels. These reforms will translate the benefits of decentralization into reality and strengthen the local governance for health system strengthening.

Conclusion

There has been an overall improvement in the provision of health care infrastructure, human resource development but more pro-action was needed considering the country's failure to achieve many of the targets. The status of health of the people still stays way below the world average. This raises questions about the strategic implementation mechanism at different stages of the programmes on removing the regional and gender disparities. The diversifying nature of the problem, quantum and differential stages of development between regions call for local-specific strategies. Programmes must enhance pro-active community participation. Without active involvement of the communities, achievement of primary health target is going to be very difficult. Therefore, it visualizes strengthening local collaborative governance for health system strengthening by capacity building of the local self-governance institutions like Panchayati Raj Institutions to enhance their role at different levels of health governance. This will address issues such as the social determinants of health, community-based planning and monitoring in order to place people at the centre of the health system and development process. For effective monitoring of quality of services and better accountability in management of healthcare services, active involvement of local bodies is a must. Further, the study concludes that harmonious or shared priorities and regularity of actions between sectors across all levels will likely to improve the quality of coordination. Focus on leadership and accountability is imperative to achieve these goals. Without active involvement of communities achievement of primary health target is going to be very difficult.

References

1. Abimbola S, Negin J, Jan S & Martiniuk A. Towards people-centred health systems: A multi-level framework for analysing primary health care governance in low- and middle-income countries. *Health Policy Plan*. Sep 2014; 29 Suppl 2: ii29-39. doi: 10.1093/heapol/czu069.
2. Schneider H, Zulu JM, Mathias K, Cloete K & Hurtig AK. The governance of local health systems in the era of Sustainable Development Goals: Reflections on collaborative action to address complex health needs in four country contexts. *BMJ Glob Health*. 6 June 2019; 4(3): e001645. doi: 10.1136/bmjgh-2019-001645. E-Collection 2019.

3. Kim SS, Avula R, Ved R, Kohli N, Singh K, van den Bold M, Kadiyala S & Menon P. Understanding the role of inter-sectoral convergence in the delivery of essential maternal and child nutrition interventions in Odisha, India: A qualitative study. *BMC Public Health*. 2017 Feb 2; 17(1): 161. doi: 10.1186/s12889-017-4088-z.
4. Bossert TJ & Mitchell. Health sector decentralization and local decision-making: Decision space, institutional capacities and accountability in Pakistan. *AD. Soc Sci Med*. Jan 2011; 72(1): 39-48. doi: 10.1016/j.socscimed.2010.10.019. Epub 11Nov 2010.
5. Mathew A: Global research partnerships in advancing public health: A case study on India. *Indian J Med Ethics*. Oct-Dec. 2018; 3(4): 343-344. doi: 10.20529/IJME.2018.044. Epub 2 Jun 2018.
6. Ward CL, Shaw D, Sprumont D, Sankoh O, Tanner M & Elger B. Good collaborative practice: Reforming capacity building governance of international health research partnerships. *Global Health*. 8 Jan 2018; 14(1): 1. doi: 10.1186/s12992-017-0319-4.
7. Borgström S. Balancing diversity and connectivity in multi-level governance settings for urban transformative capacity. *Ambio*. May 2019; 48(5): 463-477. doi: 10.1007/s13280-018-01142-1. Epub 2019 Feb 15.
8. Cash-Gibson L, Guerra G & Salgado-de-Snyder VN. A South-North-South collaboration to build sustainable research capacities on social determinants of health in low and middle-income countries. *Health Res Policy Syst*. 22 Oct 2015; 13: 45. doi: 10.1186/s12961-015-0048-1. SDH-NET:
9. Scott V, Schaay N, Olckers P, Nqana N, Lehmann U & Gilson L. Exploring the nature of governance at the level of implementation for health system strengthening: The DIALHS experience. *Health Policy Plan*. Sep 2014; 29 Suppl 2:ii59-70. doi: 10.1093/heapol/czu073.E.
10. Nyström ME, Karlun J, Keller C & Andersson Gäre B. Collaborative and partnership research for improvement of health and social services: researcher's experiences from 20 projects. *Health Res Policy Syst*. 30 May 2018; 16(1): 46. doi: 10.1186/s12961-018-0322-0.
11. Scott V & Gilson L. Exploring how different modes of governance act across health system levels to influence primary healthcare facility managers' use of information in decision-making: Experience from Cape Town, South Africa. *Int J Equity Health*. 15 Sep 2017; 16(1): 159. doi: 10.1186/s12939-017-0660-5.
12. Ramaswamy R, Kallam B, Kopic D, Pujic B & Owen MD. Global health partnerships: Building multi-national collaborations to achieve lasting improvements in maternal and neonatal health. *Global Health*. 20 May 2016; 12(1): 22. doi: 10.1186/s12992-016-0159-7.
13. Chandrasekhar CP & Ghosh J. Information and communication technologies and health in low income countries: The potential and the constraints. *Bull World Health Organ*. 2001; 79(9): 850-5. Epub 2001 Oct 23.
14. Dahal R, Upadhyay A & Ewald B. One Health in South Asia and its challenges in implementation from stakeholder perspective. *Vet Rec*. Dec 2017; 181(23): 626. doi: 10.1136/vr.104189. Epub 2017 Oct 30.
15. Kumar A, Sahu M, Sahoo PR & Wig N: Under-explored dimensions of anti-microbial stewardship in India. *J Assoc Physicians India*. Dec 2018; 66(12): 69-71.
16. Lindahl JF, Vrentas CE, Deka RP, Hazarika RA, Rahman H, Bambal RG, Bedi JS, Bhattacharya C, Chaduhuri P, Fairoze NM, Gandhi RS, Gill JPS, Gupta NK, Kumar M, Londhe S, Rahi M, Sharma PK, Shome R, Singh R, Srinivas K

-
- & Swain BB. Brucellosis in India: Results of a collaborative workshop to define One Health priorities. *Trop Anim Health Prod.* 15 Oct 2019. doi: 10.1007/s11250-019-02029-3. [Epub ahead of print].
17. Gurung G & Tuladhar S. Fostering good governance at peripheral public health facilities: An experience from Nepal. *Rural Remote Health.* Apr-Jun 2013; 13(2): 2042. Epub 25 Mar 2013.
 18. Sgaier SK, Anthony J, Bhattacharjee P, Baer J, Malve V, Bhalla A & Hugar VS. Strengthening government management capacity to scale up HIV prevention programs through the use of Technical Support Units: Lessons from Karnataka state, India. *Glob Health Sci Pract.* 25 Nov 2014; 2(4): 444-58. doi: 10.9745/GHSP-D-14-00141.
 19. Hoon Chuah FL, Srivastava A, Singh SR, Haldane V, Huat Koh GC, Seng CK, McCoy D, Legido-Quigley H. Community participation in general health initiatives in high and upper-middle income countries: A systematic review exploring the nature of participation, use of theories, contextual drivers and power relations in community participation. *Soc Sci Med.* Sep 2018; 213: 106-122. doi: 10.1016/j.socscimed.2018.07.019. Epub 2018 Jul 31.
 20. George AS, Mehra V, Scott K & Sriram V. Community participation in health systems research: A systematic review assessing the state of research, the nature of interventions involved and the features of engagement with communities. *PLoS One.* 23 Oct 2015; 10(10): e0141091. doi: 10.1371/journal.pone.0141091. eCollection 2015.
 21. Uzochukwu B, Onwujekwe E, Mbachu C, Okeke C, Molyneux S & Gilson L. Accountability mechanisms for implementing a health financing option: the case of the basic health care provision fund (BHCPF) in Nigeria. *Int J Equity Health.* 11 Jul 2018; 17(1): 100. doi: 10.1186/s12939-018-0807-z.
 22. Maluka S, Kamuzora P, San Sebastián M, Byskov J, Ndawi B & Hurtig AK. Improving district level health planning and priority setting in Tanzania through implementing accountability for reasonableness framework: Perceptions of stakeholders. *BMC Health Serv Res.* 1 Dec 2010; 10: 322. doi: 10.1186/1472-6963-10-322.
 23. Hamal Mde, Cock Buning T, De Brouwere V, Bardaji A & Dieleman M. How does social accountability contribute to better maternal health outcomes? A qualitative study on perceived changes with government and civil society actors in Gujarat, India. *BMC Health Serv Res.* 22 Aug 2018; 18(1): 653. doi: 10.1186/s12913-018-3453-7.
 24. Panda B & Thakur HP. Decentralization and health system performance- A focused review of dimensions, difficulties, and derivatives in India. *BMC Health Serv Res.* 31 Oct 2016; 16(Suppl 6): 561. doi: 10.1186/s12913-016-1784-9.
 25. George AS, Scott K, Mehra V & Sriram V. Synergies, strengths and challenges: findings on community capability from a systematic health systems research literature review. *BMC Health Serv Res.* 15 Nov 2016; 16(Suppl 7): 623. doi: 10.1186/s12913-016-1860-1.
 26. Panda B, Zodpey SP & Thakur HP. Local self governance in health- A study of its functioning in Odisha, India. *BMC Health Serv Res.* 31 Oct 2016; 16(Suppl 6): 554. doi: 10.1186/s12913-016-1785-8.
 27. Kwamie A, van Dijk H, Ansah EK & Agyepong IA. The path dependence of district manager decision-space in Ghana. *Health Policy Plan.* Apr 2016; 31(3): 356-66. doi: 10.1093/heapol/czv069. Epub 2015 Aug 28.
 28. Liwanag HJ & Wyss K. Optimising decentralisation for the health sector by exploring the synergy of decision space, capacity and accountability: Insights from the Philippines. *Health Res Policy Syst.* 10 Jan 2019; 17(1): 4. doi: 10.1186/s12961-018-0402-1.
-

-
29. Panda B, Thakur HP & Zodpey SP. Does decentralization influence efficiency of health units? A study of opinion and perception of health workers in Odisha. *BMC Health Serv Res.* 31 Oct 2016; 16 (Suppl 6): 550. doi: 10.1186/s12913-016-1786-7.
 30. Adsul N & Kar M. Study of Rogi Kalyan Samitis in strengthening health systems under National Rural Health Mission, district Pune, Maharashtra. *Indian J Community Med.* Oct 2013; 38(4): 223-8. doi: 10.4103/0970-0218.120157.
 31. Rawat CM, Pandey S, Awasthi S, Tekhre YL, Kumar R & Nandan D. A rapid appraisal of functioning of Rogi Kalyan Samitis in Uttarakhand. *Indian J Public Health.* Jul-Sep 2009; 53(3): 171-6.
 32. Singh CM, Jain PK, Nair KS, Kumar P, Dhar N & Nandan D. Assessment of utilization of untied fund provided under the National Rural Health Mission in Uttar Pradesh. *Indian J Public Health.* Jul-Sep 2009; 53(3): 137-42.
 33. Sheikh K, Freedman L, Ghaffar A, Marchal B, el-Jardali F, McCaffery J, de Sardan JP, Dal Poz M, Flores W, Garimella S & Schaaf M. Posting and transfer: Key to fostering trust in government health services. *Hum Resour Health.* 13 Oct 2015; 13: 82. doi: 10.1186/s12960-015-0080-9.
 34. Seshadri SR, Parab S, Kotte S, Latha N & Subbiah K. Decentralization and decision space in the health sector: A case study from Karnataka, India. *Health Policy Plan.* Mar 2016; 31(2): 171-81. doi: 10.1093/heapol/czv034. Epub 12 May 2015.
 35. Shukla A, Khanna R & Jadhav N. Using community-based evidence for decentralized health planning: Insights from Maharashtra, India. *Health Policy Plan.* 1 Jan 2018; 33(1): e34-e45. doi: 10.1093/heapol/czu099.

भारत में स्वास्थ्य के क्षेत्र में सतत विकास: स्वास्थ्य प्रणाली को सुदृढ़ करने हेतु एक स्थिर स्थानीय सहयोगात्मक शासन की आवश्यकता की समीक्षा

ए. एम. एलिजाबेथ,* जे. पी. शिवदासानी, * वंदना भट्टाचार्य,* परिमल पार्या, * किरण रंगारी, ** सुभाष चंद, ** बच्चू सिंह, ** रमेश गंडोत्रा, ** लखन लाल मीणा, ** वाई. के. सिंघल, ** रीता रानी, **मनीषा, ** घनश्याम करोल, ** वैशाली जायसवाल, ** रेखा मीणा, ** षेरिन राज टी.पी., ** एस. पी. सिंह, ** संगीता मिश्रा, ** भावना कथुरिया, ** राज नारायण और *** हर्षद ठाकुर

* अनुसंधान अधिकारी, रास्वापक. संस्थान, मुनिरका, नई दिल्ली —110067

** सहायक अनुसंधान अधिकारी, रास्वापक. संस्थान, मुनिरका, नई दिल्ली— 110067

*** निदेशक, एनआईएचएफडब्ल्यू, मुनिरका, नई दिल्ली— 110067

समीक्षक:

डॉ. लाम खान पियांग, सांख्यिकी विभाग, जेएनयू, नई दिल्ली —110067।

डॉ. डी.के. यादव, सांख्यिकी और जनसांख्यिकी विभाग रास्वापक. संस्थान, मुनिरका, नई दिल्ली —110067।

डॉ. मीराबिका महापात्रो, सामाजिक विज्ञान विभाग, रास्वापक. संस्थान, मुनिरका, नई दिल्ली —110067।

सारांश

पिछले कुछ दशकों में भारत में जन स्वास्थ्य में महत्वपूर्ण उपलब्धि को स्वास्थ्य के जनसांख्यिकीय संकेतकों जैसे आईएमआर, एमएमआर, टीएफआर में कमी तथा जीवन प्रत्याशा दोगुनी हो जाने के रूप में देखा जाता है। किन्तु लोगों के स्वास्थ्य तथा स्वास्थ्य देखभाल प्रणाली की ग्रेडिंग में समस्याओं की जटिलता और विपरीत स्वरूप के बीच उभरते टकराव तथा उसका सार्थक ढंग से समाधान करने की क्षमता में राज्यों के बीच उत्पन्न असहमति का ध्यान में रखना होगा। जब देश की तुलना विकास की समान आर्थिक स्थितियों वाले अन्य देशों से की जाती है, तब देश में स्वास्थ्य संबंधी परिणाम क्षीण प्रतीत होते हैं। स्वास्थ्य नीतियों और कार्यक्रमों में उत्तरदायित्व तथा संसाधनों के वितरण, केन्द्र और राज्य के बीच जवाबदेही बनाए रखने, परामर्श निर्णयन हेतु संस्थागत व्यवस्था को सुदृढ़ करने के लिए स्वास्थ्य के क्षेत्र में शासन की आवश्यकता पर बल दिया गया है। इस प्रकार इस शोध-पत्र का उद्देश्य पिछले एक दशक के साहित्य सर्वेक्षण पर आधारित स्वास्थ्य के विभिन्न भागीदारों के बीच एक सहयोगपूर्ण वातावरण स्थापित करना है। स्वास्थ्य पर बल देने के लिए स्थानीय शासन सभी चरणों पर बहु-क्षेत्रीय सहयोग की गहरी समझ स्थापित करने हेतु विभिन्न क्षेत्रों में उपलब्ध साहित्य का अंतर्लक्ष्य विश्लेषण किया गया। भारत में स्वास्थ्य के क्षेत्र में सतत विकास के लिए सबलता, अशक्तता, और असमानता को पहचान कर पता लगाना होगा, जिससे साक्ष्य-आधारित रणनीतियों का सुझाव प्रदान किया जा सके। स्वास्थ्य देखभाल अवसंरचना, मानव संसाधन विकास के प्रावधान में सामान्य सुधार हुआ है। किन्तु अनेक लक्ष्यों की प्राप्ति में असफलता तथा देश में स्वास्थ्य स्थिति में अब भी विश्व औसत से कम होने को देखते हुए अधिक सार्थक कार्यवाही एवं प्रयास करने की आवश्यकता है। इससे क्षेत्रीय और लैंगिक विषमताओं को दूर करने पर केंद्रित कार्यक्रमों के विभिन्न स्तरों पर सामरिक कार्यान्वयन तंत्र के संबंध में प्रश्न उत्पन्न होते हैं। अध्ययनों से पता चला है कि विभिन्न सामाजिक-आर्थिक कारक ग्रामीण क्षेत्रों में स्वास्थ्य देखभाल सुविधाओं तक पहुँचने में लोगों को प्रभावित करते हैं, विशेष रूप से सामान्य जनो के सबसे असुरक्षित वर्गों द्वारा तथा इसे विशेष रूप से संबोधित करने की आवश्यकता है। समस्या की विविध प्रकृति, इसकी मात्रा और क्षेत्रों के बीच विकास के विभेदक चरण पर विचार करना सक्रिय समुदाय के हित में स्थानीय-विशिष्ट रणनीतियों और कार्यक्रमों की एक अभिन्न आवश्यकता है। समुदायों के सक्रिय सहयोग के बिना प्राथमिक स्वास्थ्य लक्ष्य की प्राप्ति बहुत कठिन होगी। इसलिए, इसमें स्थानीय स्वशासन के क्षमता निर्माण द्वारा स्वास्थ्य प्रणाली को सुदृढ़ व सशक्त बनाने के लिए स्थानीय सहयोगात्मक प्रशासन की सुदृढ़ता की परिकल्पना की गई है। इसके परिणामस्वरूप, स्वास्थ्य के सामाजिक निर्धारकों को संबोधित करने में, समुदाय आधारित योजना बनाने तथा स्वास्थ्य प्रणाली के केन्द्र में लोगों को बनाए रखने, स्वास्थ्य देखभाल सेवाओं के प्रबंधन तथा सेवाओं की प्रभावी निगरानी और प्रबंधन और स्वास्थ्य सेवाओं के वितरण में जवाबदेही के लिए विकास प्रक्रिया में स्वास्थ्य शासन के विभिन्न स्तरों पर उनकी भूमिका में वृद्धि हो सकेगी।

प्रमुख शब्द: सतत विकास, सहयोगात्मक शासन, स्वास्थ्य प्रणाली, सामाजिक-आर्थिक कारक, गरीबी

Awareness and Utilization of ANC Services among Women of Urban Slum in Delhi: An Observational Study

***Anand Kumar Verma, *Prakash Ranjan and **V. K. Tiwari**

*Junior Resident, Department of Community Health Administration, The NIHF, New Delhi, India;

E-mail: drprakash@nihf.org.

**Head, Department of Planning and Evaluation, The NIHF, New Delhi, India.

Reviewers:

Dr. Nihar Ranjan Mishra, Asst. Prof., Deptt. of Paediatrics, Burla Medical College, Odisha.

Dr. Nanthini Subbaiah, Department of CHA, The NIHF, Munirka, New Delhi-110067.

Abstract

Under the National Health Mission (NHM), both supply side and demand side interventions are implemented to improve the accessibility and utilization of RCH services by the urban and rural population. These interventions have contributed in improving utilization of RCH services. However, awareness and utilization of RCH services which include birth preparedness and complication among the slum dwellers remains a cause of concern. This study aims to find out the awareness and utilization pattern of RCH services which include birth preparedness and complication readiness (BPACR). The study finding revealed that 80 per cent of the respondents knew BPACR is awareness of the transport, out of pocket expenditure, birth companion and health facility. There was no awareness about blood donor. Among the study population, 90.5 per cent of them got ANC registration in which 82.9 per cent in government hospitals and 7.6 per cent in private hospitals. Similarly, 33 per cent got ANC registration in the first trimester and 48 per cent in the second trimester; 90.3 per cent mother got two T.T. injections, 68.6 per cent of mothers got regular iron and folic acid tablets, and 1.2 per cent of the mothers had undergone four or more USGs. The study finding reveals that awareness level on antenatal care in the study area was 90.5 per cent. The most important indicators which need to be focused for reducing the maternal and infant mortality are pregnant women receiving full ANC, institutional delivery and PNC. Specific intervention programme needs to be planned and conducted to improve the maternal health practices and eventually improve the health status.

Key words: Awareness of RCH services, Utilization of RCH Services, Birth preparedness and complication readiness (BPACR).

Introduction

In India, maternal mortality ratio (MMR) has remained at a higher level for a long time. It was reported that among the Indian women, the national average MMR is 122 per 100,000 live births¹ (SRS2015-17) which is very high as compared to the international scenario. Promotion of maternal and child health concerns must be addressed through antenatal care (ANC) and postnatal care (PNC). ANC refers to pregnancy-related health care that includes a basic professional care of minimum four ANC visits which is recommended to monitor signs of complications, detect and treat pre-existing and concurrent problems, provide advice and counseling on preventive care, diet during pregnancy, delivery care, PNC and related issues. Slums have been recognized as neglected areas characterized by deteriorated housing, overcrowded, poor environmental management with wide spectrum of adverse health conditions such as under nutrition, delivery-related complications, post-partum morbidity, and limited access to health care services. In Delhi, one in every five lives in slums. A study by Hazarika revealed that 74 per cent of non-slum women receive three or more ANC check-ups as compared to only 55 per cent in slum women².

Reproductive and Child Health (RCH) programme is a comprehensive sector-wide flagship programme under the umbrella of the Government of India's (GOI) National Health Mission (NHM) to deliver the RCH targets for reduction of maternal and infant mortality and total fertility rates³. The Government of India, in accordance with the recommendation of ICPD Cairo Conference, initiated the RCH programme aimed at providing integrated health and family welfare services⁴. During 1997-98, the Government of India launched the RCH Programme by integrating the Child Survival and Safe Motherhood (CSSM) programme with other Reproductive and Child Health (RCH) services. The main aim of the RCH programme was to reduce infant, child and maternal mortality rates. Second phase of the RCH programme was launched on 1 April 2005. The Government of India launched the National Rural Health Mission (NRHM) in April 2005 which sought to provide accessible, affordable and quality health care to the rural population, especially the vulnerable sections. Prior to the start of RCH services, in 1990, some RCH indicators at the global level were: IMR-63, MMR-380, TFR-3.5 while in India, IMR was 80, MMR-437 and TFR-3.8. Thus, RCH indicators improved in India after the implementation of RCH services⁵. Under the NHM/NRHM, both supply side and demand side interventions are implemented to improve awareness, accessibility and utilization of RCH services by the urban and rural population. These interventions have contributed in improving the utilization of RCH services. However, utilization of RCH services and adverse health outcomes among the slum population remains a cause of concern. This is evident from the available data which indicates lower awareness and utilization of services like ANC, institutional delivery and immunization services in the slum population.

Every pregnancy is a joyful moment for all mothers who dream of a safe pregnancy and a healthy baby. However, every pregnant woman faces the risk of sudden, unpredictable complications that could lead to death or injury to herself or to her infant. Birth preparedness and complication readiness (BPACR) is a strategy that encourages pregnant women, their families, and communities to effectively plan for births and deal with emergencies, if any. It is a key component of globally accepted safe motherhood programme. This study aims at finding out the awareness and utilization pattern of RCH services which include birth preparedness and complication readiness.

Methodology

The present research work is a descriptive and cross-sectional type of study done in three selected slums of Delhi. Data were collected over a period of three months from October to December 2018. The sample size consisted of 421 women living in slums having child of aged 0 - 6 months. The sample size was calculated as 381 considering a recent study by Devasenapathy et al. where they found 46 per cent of women got themselves registered during the first trimester. Considering 10 per cent non-responsive, a total sample of 421 mothers were interviewed during the data collection⁶.

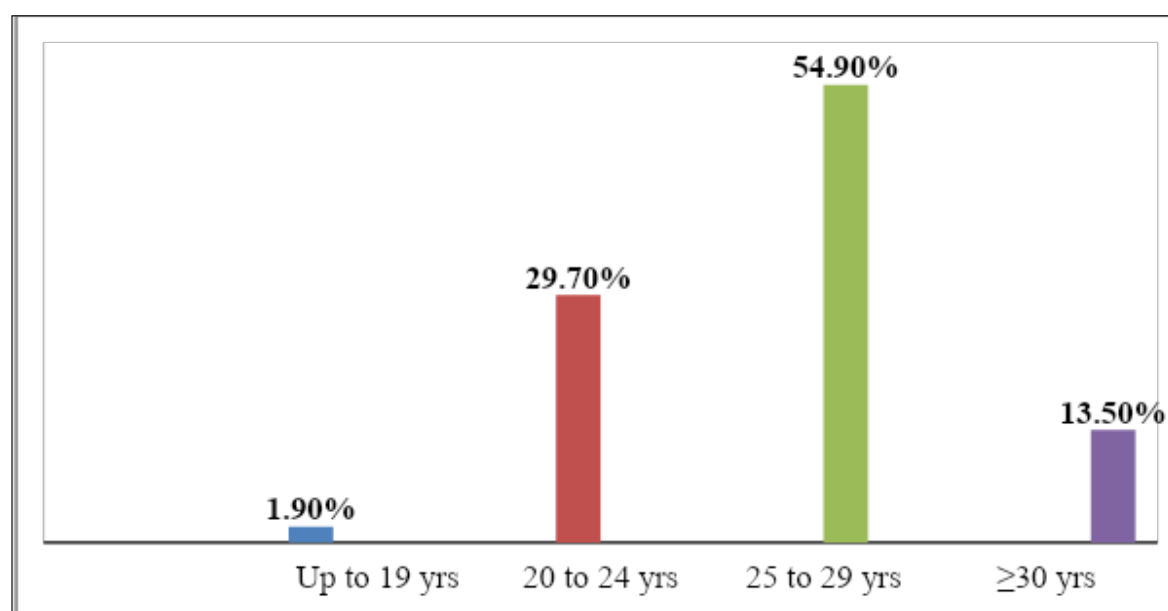
Probability sample was used for selection of slums as this is the only sampling method that allows drawing valid conclusion about population. A Multi-stage random sampling design was used to select the mothers from the selected slums in Delhi as this is the most feasible approach for a large population. Out of the total 11 Districts in Delhi, in the first stage, 25 per cent i.e. three districts were randomly selected for this study. In the second stage, from each selected district, list of slums published by the Delhi Government was compiled and from the list, one slum of approximately 5000 population was randomly selected from the three selected districts. Two

remaining slums were also selected using the same process. The selected slums for the study were Rangpuri Pahari from West Delhi, Kusumpur Pahari from South Delhi and Govindpuri from South-East Delhi. In the third stage, from each selected slum, list of households having recently delivered mothers (within 6 months) was prepared. From that list, households were randomly selected for the interview of mothers regarding awareness and utilization of selected RCH services. Thus, the study covered 421 mothers from three different slums of Delhi by using the inclusion criteria of mother who delivered the baby within six months and exclusion criteria of mothers who were severely ill. Primary data were collected using the interview schedules developed for mothers using USAID tool⁷ which was first pre-tested in a different slum of Delhi; and based on the finding of pre-testing, the tool was modified appropriately. USAID tool⁷ was used during the RCH services evaluation in Uttar Pradesh. Data collected from mothers were analyzed using descriptive and analytical techniques with the help of the statistical software- SPSS version 20.

Findings

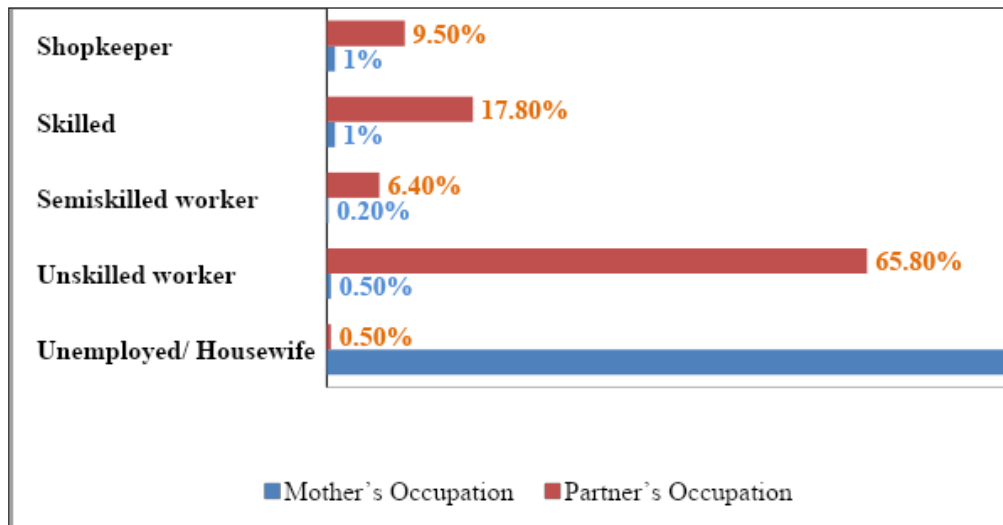
The finding of the study shows that among the 421 mothers, 92 per cent belonged to Hindu religion, and 91 per cent of them belonged to schedule caste. It was found that 36 per cent of the mothers were just literate, 27 per cent had education up to primary level, nearly one-third (33 %) of them were educated up to primary school, and almost same (34 %) were educated up to junior high school level. The age distribution of mother shows that only 1.9 per cent was aged less than 19 years whereas 54.9 per cent were in the age group of 25 to 29 years (Figure 1).

Figure 1
Age Distribution of Mothers



In the present study population, most of the mothers (97.4 %) were housewives and most of them (65.8 %) worked as unskilled workers (Figure 2).

Figure 2
Distribution of Occupation of Mother and Spouse



The distribution of monthly family income shows that most of the families (56.5 %) had a monthly income between Rs. 3000/- and 8000/- while only 10.9 per cent had an income of more than Rs. 12000/- per month.

Awareness level of the present study population about RCH services reveals that most of them (98.8 %) were aware of the of pregnancy test kits, 90.5 per cent was aware of ANC registration, 89.3 per cent was aware of IFA tablets and 95.9 per cent was aware of the importance of colostrum for the newborn (Table 1).

Table 1
Awareness of Selected RCH Services

Awareness of RCH Services	Response	Frequency	Percentage
Pregnancy Kit	Yes	416	98.8
	No	05	1.2
ANC Registration	Yes	381	90.5
	No	40	9.5
Iron and Folic Acid Tablets	Yes	376	89.3
	No	45	10.7
Domestic Responsibility during Delivery	Yes	421	100
	No	00	0
Colostrum	Yes	404	95.96
	No	17	4.04

Data presented in Table 2 show that all mothers were aware of the health facility, mode of transportation, birth companion; and saved money for delivery to pay for expenses whereas none of them was aware of blood donors. Awareness of birth preparedness and complication readiness (BPACR) score of the study population was found to be 80 per cent.

Table 2
Awareness of Birth Preparedness and Complication Readiness (BPACR)

Awareness about BPACR	Response	Frequency	Percentage
Health Facility	Yes	421	100
	No	0	0
Identified mode of transportation during	Yes	421	100
	No	0	0
Blood Donor during Delivery	Yes	0	0
	No	421	100
Birth Companion during Delivery	Yes	421	100
	No	0	0
Saved money to pay for Expenses	Yes	421	100
	No	0	0

The utilization pattern of selected RCH services in the study population revealed that 90.5 per cent of the mothers registered for ANC (82.9 % in government hospitals and 7.6 % in private hospitals), 33 per cent mothers got registered for ANC in the first trimester and 48 per cent in the second trimester, 90.3 per cent of the mothers had taken two T.T. injections, 68.6 per cent of the mothers received regular iron and folic acid tablets and 1.2 per cent of them had four or more USG investigations (Table 3).

Table 3
Utilization Pattern of Selected RCH Services

Utilization of RCH services	Category of utilization	Frequency	Percent
Confirmation of Pregnancy	Did not test With purchased kit By private doctor By government staffs Total	4 281 5 131 421	1 66.7 1.2 31.1 100
Place of ANC registration	Not registered Private hospital Government hospital Total	40 32 349 421	9.5 7.6 82.9 100
Trimester of ANC registration	No Registration First trimester Second trimester Third trimester Total	40 126 183 72 421	9.50 29.94 43.46 17.10 100
Number of ANC	No ANC done 1 time 2 to 5 times 6 to 8 times 9 to 10 times Total	40 44 219 91 27 421	9.51 10.45 52.00 21.62 6.42 100
Use of Iron and Folic Acid Tablet	Yes No Total	289 132 421	68.6 31.4 100
T.T. inj. taken during pregnancy	≤ 1 T.T. 2 T.T. Total	41 381 421	9.7 90.3 100
USG done during ANC	No USG 1 USG 2 USG 3 USG ≥ 4 USG Total	63 154 123 76 5 421	15 36.6 29.2 18.1 1.2 100
Transport used during delivery	Own vehicle Private vehicle Government vehicle Total	4 269 77 350	1.1 76.9 22 100
Place of delivery	At home by non-SBA At home by SBA Government hospital Private hospital Total	5 66 312 38 421	1.2 15.7 74.1 9.0 100
Food during stay in hospital	Yes No Total	302 48 350	86.3 13.7 100
Scheduled vaccination completed	Yes No Total	335 86 421	79.6 20.4 100

Discussion

The present study was conducted to assess the awareness on RCH services including birth preparedness and complication readiness among women in some urban slums of Delhi. The present study finding shows that from the 421 women, 90.5 per cent were aware of the maternal health services which is in consistent with study findings of an earlier study that showed 91.7 per cent of women were aware of the maternal health services⁷. Another study by Shukla Mukesh et al. also shows similar findings⁸. A study by Rose N. M. Mpembeni et al.⁹ has reported that only one-third (34.4 %) of the studied women were aware of maternal health services which is opposite to the findings of the current study. This may be due to the study population of the present study where the slums are situated in the national capital. In the present study, awareness of iron and folic acid tablet among the study population was 89.3 per cent which is similar to the study findings of F. F. Alreshidi et al. who found the awareness level at 80.1 per cent¹⁰. The present study finding shows that 95.96 per cent of the women were aware of colostrum which is in consistent with the findings of an earlier study where 92 per cent of the women were aware that breast milk and colostrum is the ideal food for the new born¹¹. In the present study, all mothers were aware of the domestic responsibilities during delivery. A study by V Kamineni et al. also reports that 73 per cent of the respondent women made arrangements for during delivery¹².

In the present study, all of the mothers were aware of transport, out of pocket expenditure, birth companion and health facilities but no one was aware of blood donor needed during delivery in case of an emergency. A study by V. Kamineni et al. showed that 71.5 per cent of the women were prepared for the birth while 90.2 per cent of them had identified a place for delivery, 83 per cent had saved money, and 83.5 per cent were aware of purchasing materials needed for delivery¹². A similar study by M. Gebre et al. reports that 43.6 per cent of the respondent mothers identified a health facility for delivery and/or for obstetric emergencies, more than half (54.1%) of the families had saved money for incurring costs towards delivery and emergency, if needed. only three per cent had identified a potential blood donor in case of emergency¹³. No respondent in the current study was aware of her blood group or had made any arrangement of blood donors in comparison to other studies conducted in India^{15,16,19}, Nepal¹⁴, Ethiopia¹⁷ and Nigeria¹⁸. This may be due to the reason that most women think pregnancy is a normal condition and a critical situation such as blood transfusion is unlikely to occur during pregnancy or labour.

As per the current study findings, nearly 72 per cent of the mothers used to go to the nearby private doctors who were conveniently available, in case they felt sick; and only 10.5 per cent went to the nearby government health facility. A similar finding is reported by Madhura et al. who found that nearly 56 per cent of the sick people in the slums go to private doctors²⁰. The present study shows that 83 per cent of the mothers got themselves registered in government hospitals for ANC and 7.6 per cent of them got registered in private hospitals which are in consistent with the finding of a study by S. Gupta in which 90 per cent of the mothers got themselves registered in government hospitals for ANC²¹. The present study shows that 33 per cent of the mothers registered during first trimester, 48 per cent of them registered themselves for ANC during the second trimester, and 18.9 per cent of mothers got registered during third trimester which is in consistence with the study findings of Bayou YT et al. who found that 50.3 per cent of the women had started the first antenatal visit in the first trimester²². In the current study, 90.3 per cent of the respondent mothers got two TT injections and only 9.7 per cent of

the mothers either got one TT or no TT injections which is in consistence with the findings of Dadi L.S. et al²³. The present study finding shows that 74 per cent of the mothers delivered in government hospitals, 9 per cent in private hospitals, and about 17 per cent had delivered at home which is in consistence with the findings of a study by Divya V. Pai et al. who reported that majority (86.1%) of the mothers had institutional deliveries²⁴.

Conclusion and Recommendations

This descriptive and cross-sectional type of study was done to find out the awareness and utilization pattern of selected RCH services including birth preparedness and complication readiness among women having child aged 0 – 6 months. From this study findings, it can be concluded that awareness level of antenatal care (ANC) and postnatal (PNC) in the study area was more or less same amongst the slum women. The most important indicators which need to be taken care of for reducing the maternal and infant mortality rate are ANC, institutional delivery and PNC. The study findings show that most of them went to private doctors when they fell sick. All the mothers had RCH facility nearby their respective houses but those were providing only OPD services. There is a need of 24x7 facilities nearby the slums. Findings of this study suggest that 89.3 per cent of the mothers were aware of the benefits of iron and folic acid tablets. Among the mothers who had not taken regular iron and folic acid tablets; most of them felt that it was not necessary. So, there is a need to explain in detail about the consequences of such as the potential complication of not taking the tablets especially when mothers are anaemic. It is felt that mothers need to be explained on how to counter the side-effects of taking iron tablet. The present study shows that only 1.2 per cent of the mothers had undergone four or more USG which indicates that government should extend the USG facility in government dispensaries for the nearby slum populace.

It is recommended that periodical reorientation trainings of ASHAs and Anganwadi workers may be encouraged to improve their service delivery on reproductive health. Workshops for slum women on reproductive and child health should be enforced effectively by educating them with the involvement of their parents/family. It is, therefore, realized that while there is a need to set up specific education programmes for the slum women, there is also a necessity to develop forms of education that will sensitize people towards gender discrimination and will raise their acceptance of women's promotion.

Limitations of the Study

Although the current findings provide important insights into the role ANC, institutional delivery and PNC in reducing the maternal and infant mortality rate, there are several limitations related to the current study design. One limitation is that the data were collected solely from the selective urban slums of Delhi which are not representative of the country as a whole. So, the study results cannot be generalized for all the urban slums in India. It is also possible that biases related to self-reported data, including recall bias, may have affected the reliability of reports of RCH services receipt and utilization. The potential for such bias could have been reduced as the recall period from delivery to data collection was about 15 months or little less. Finally, the current analyses involve cross-sectional data; thus, causality cannot be inferred.

References

1. Office of Registrar General of India, Sample Registration System, MMR Bulletin. Ministry of Home Affairs, Govt. of India, 2015-17, Accessed on 2/8/2019.
2. Hazarika I. Women's reproductive health in slum populations in India: Evidence from NFHS-3. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 2010, Vol. 87(2), 264–277. <http://doi.org/10.1007/s11524-009-9421-0>; Accessed on 14/10/2019.
3. Reproductive, maternal, newborn, child and adolescent health <https://mohfw.gov.in/sites/default/files/5665895455663325.pdf>. Accessed on 24/10/2019.
4. Child health Programme in India: Major milestones in child health. <https://mohfw.gov.in/2156472494RTI%20Act%2C%202005%20for%20Child%20>. Accessed on 14/10/2019.
5. Reviewing reproductive and child health programme in India– Jstor. <https://www.jstor.org/stable/4419792>. Accessed on 18/10/2019
6. Devasenapathy N, Jerath SG, Allen E. et al. Reproductive healthcare utilization in urban poor settlements of Delhi: Baseline survey of ANCHUL (Ante Natal and Child Health care in Urban Slums) project. *BMC Pregnancy Childbirth* 15, 212 (2015). <https://doi.org/10.1186/s12884-015-0635-8>, Accessed on 14/10/2019.
7. Elizabeth AM, Khan AM, Rashid W. Reproductive health care seeking behavior among urban slum women of Delhi. *J Edu Health Promot*, 2015; 4: 87. Accessed on 2/11/2019.
8. Monica Agarwal, Imchen Tsusennaro, Rehman Hossain, Yadav Kriti, Singh Sujata, and Shukla Mukesh. 2015. Utilization of maternal health care services in slums of Lucknow, capital of Uttar Pradesh; Accessed on 4/12/2019.
9. Mpembeni, Rose NM et al. Realizing women's right to maternal health: A study of awareness of rights and utilization of maternal health services among reproductive age women in two rural districts in Tanzania. *PloS one* vol. 14, 5 e0216027. 9 May 2019, doi:10.1371/journal.pone.0216027 Accessed on 4/12/2018.
10. Alreshidi FF, Almujil AS & Malak AS. Awareness of folic acid use among Saudi women attending outpatient clinics at King Fahad Medical City. *J Family Med Prim Care*. 2018; 7(5): 957-962. doi:10.4103/jfmprc.jfmprc_174_18 Accessed on 20/1/2020.
11. Bharti R & Raj TPS. Awareness on ANC and PNC services among women of urban slum in Delhi. *Int J Health Sci Res*. 2019; 9(6): 223-233. Accessed on 4/1/2020.
12. Kamineni V, Murki AD & Kota VL. Birth preparedness and complication readiness in pregnant women attending urban tertiary care hospital. *J Family Med Prim Care*. 2017; 6(2): 297-300. doi:10.4103/2249-4863.220006, Accessed on 24/10/2019.
13. Merihun Gebre, Abebe Gebremariam & Tsedach Alemu Abebe. *PLoS One*, 2015; 10(9): e0137570. Published online, 17 Sep 2015. doi: 10.1371/journal.pone.0137570 PMID: PMC4574761. Accessed on 13/10/2019.
14. Nawal D & Goli S. Birth preparedness and its effect on place of delivery and post-natal check-ups in Nepal. *PLoS One*, 2013; 8:e60957. Accessed on 24/09/2019.
15. Kushwah SS, Dubey D, Singh G, Shivdasani JP, Adhish V & Nandan D. Status of birth preparedness and complication readiness in Rewa district of Madhya Pradesh. *Indian J Public Health*, 2009; 53:128–32. Accessed on 15/10/2018.
16. Agarwal S, Sethi V, Srivastava K, Jha PK & Baqui AH. Birth preparedness and complication readiness among slum women in Indore city, India. *J Health Popul Nutr.*, 2010; 28: 383–91. Accessed on 7/1/2019.
17. Gebre M, Gebremariam A & Abebe TA. Birth preparedness and complication readiness among pregnant women in Duguna Fango district, Wolayta Zone, Ethiopia. *PLoS One*, 2015; 10:e0137570. Accessed on 12/10/2018.

-
18. Ekabua JE, Ekabua KJ, Odusolu P, Agan TU, Iklaki CU & Etokidem AJ. Awareness of birth preparedness and complication readiness in Southeastern Nigeria. *ISRN Obstet Gynecol.* 2011; 2011: 560641. Accessed on 6/06/2019.
 19. Mukhopadhyay DK, Mukhopadhyay S, Bhattacharjee S, Nayak S, Biswas AK & Biswas AB. Status of birth preparedness and complication readiness in Uttar Dinajpur district, West Bengal. *Indian J Public Health*, 2013; 57: 147–54. Accessed on 05/10/2018.
 20. Mandlik MD et al. Study of health-care seeking behaviour of parents for child health problems in an urban slum area of Sholapur. *Int J Med Sci Public Health*, 2017; 6(10): 1503-1508. Accessed on 24/10/2019.
 21. Gupta S. Status of maternal and child health and services utilization patterns in the urban slums of Bhopal, India. *NJCM*, 2012; 3: 330-32. Accessed on 4/12/2019.
 22. Bayou YT, Mashalla YS & Thupayagale-Tshweneagae G. The adequacy of antenatal care services among slum residents in Addis Ababa, Ethiopia. *BMC Pregnancy Childbirth*, 2016; 16(1): 142; 15 Jun 2016. doi:10.1186/s12884-016-0930-z. Accessed on 9/3/2019.
 23. Dadi LS et al. Maternal and newborn health services utilization in Jimma Zone, Southwest Ethiopia: A community-based cross-sectional study. *BMC Pregnancy Childbirth*, 2019; 19: 178. <https://doi.org/10.1186/s12884-019-2335-2>. Accessed on 16/1/2020.
 24. Pai DV et al. Utilization of maternal and child health services among migratory/slum dwellers in Udupi Municipality area, Karnataka, India. *Int J Community Med Public Health*; 5: 3835-41. Accessed on 1/9/2018.

दिल्ली में शहरी मलिन बस्ती की महिलाओं के मध्य ए.एन.सी सेवाओं के संबंध में जागरूकता तथा ए.एन.सी सेवाओं की उपयोगिता : एक अवलोकन अध्ययन

आनंद कुमार वर्मा, * प्रकाश रंजन और वी. के. तिवारी**

* जूनियर रेजिडेंट, सामुदायिक स्वास्थ्य प्रशासन विभाग, रास्वापक. संस्थान, नई दिल्ली, भारत; ई-मेल: drprakash@nihfw-org

** प्रमुख, नियोजन और मूल्यांकन विभाग रास्वापक. संस्थान, नई दिल्ली, भारत।

समीक्षक:

डॉ. निहार रंजन मिश्रा, सहायक प्रोफेसर, विभाग पेडियाट्रिक्स, बुरला मेडिकल कॉलेज, ओडिशा।

डॉ. नंदिनी सुब्बाया, सीएचए विभाग, रास्वापक. संस्थान, मुनिरका, नई दिल्ली –110067।

सारांश

राष्ट्रीय स्वास्थ्य मिशन के अंतर्गत, शहरी और ग्रामीण जनसंख्या के लिए प्रजनन शिशु स्वास्थ्य सेवाओं की पहुंच तथा उपयोगिता में सुधार के लिए आपूर्ति पक्ष एवं मांग पक्ष दोनों के हस्तक्षेप से क्रियान्वित किया गया है। इन प्रयासों ने प्रजनन शिशु स्वास्थ्य सेवाओं की उपयोगिता में सुधार लाने में बहुत योगदान दिया है। तथापि भी झुग्गी-झोपड़ियों में प्रसव-पूर्व तैयारियों और संभावित जटिलता के बारे में जागरूकता और उपयोगिता चिंता का विषय बना हुआ है। इस अध्ययन का उद्देश्य प्रजनन शिशु स्वास्थ्य सेवाओं के बारे में जागरूकता तथा उपयोगिता का पता लगाना है जिसमें शिशु जन्म संबंधी तैयारियों और जटिलताओं के लिए तैयारी शामिल है। अध्ययन संबंधी निष्कर्ष से पता चला 80 प्रतिशत प्रत्यर्थी अवगत है कि बी.पी.ए.सी.आर. में परिवहन के प्रति जागरूकता, जेब खर्च, जन्म के समय सहयोगी और स्वास्थ्य सुविधा विद्यमान है। रक्त दाता के बारे में उन्हें कोई जानकारी नहीं थी। अध्ययनगत लोगों के अनुसार, एएनसी में 90.3 प्रतिशत लोगों का पंजीकरण हुआ, जिसमें 82.9 प्रतिशत सरकारी अस्पतालों में और 7.6 प्रतिशत निजी अस्पतालों में हुआ। इसी प्रकार 33 प्रतिशत माताओं ने अपना एएनसी पंजीकरण प्रथम तिमाही में कराया तथा 48 प्रतिशत माताओं ने अपना एएनसी पंजीकरण दूसरी तिमाही में कराया, 90.3 प्रतिशत माताओं को दो टी. टी. के इंजेक्शन लगाए गए, 68.6 प्रतिशत माताओं को नियमित रूप से आयरन तथा फोलिक एसिड की गोलियां दी गईं तथा 1.2 प्रतिशत माताओं की चार या अधिक बार अल्ट्रासाउंड जांच कराई गई। अध्ययन क्षेत्र में प्रसवपूर्व देखभाल के बारे में जागरूकता का स्तर 90.5 प्रतिशत था। अध्ययन का एक महत्वपूर्ण संकेत, माताओं तथा नवजात शिशुओं की मृत्युदर में कमी लाने तथा गर्भवती महिलाओं को प्रसवपूर्व पूर्ण सेवा प्राप्त होती है, संस्थागत प्रसव कराने और प्रसवोत्तर सेवाओं पर अधिक बल देने की आवश्यकता है मातृत्व स्वास्थ्य में सुधार लाने हेतु और अंततः स्वास्थ्य स्थिति में सुधार लाने हेतु विशिष्ट हस्तक्षेप कार्यक्रम की योजना बनाने और आयोजित करने की आवश्यकता है।

प्रमुख शब्द: प्रजनन शिशु स्वास्थ्य सेवाओं के संबंध में जागरूकता, प्रजनन शिशु स्वास्थ्य सेवाओं का उपयोग, जन्म तैयारियों और जटिलताओं हेतु तैयारी (बीपीएसीआर)।

Evaluation of Training Facilities of Institutes Conducting Training of Nurses under Central Sector Scheme

***Nanthini Subbiah and **C.N. Bhargavi**

*Asso. Professor, Department of CHA, The NIHF, Munirka, New Delhi-110067.

**Lecturer, College of Nursing, RML Hospital, New Delhi.

Reviewers:

Dr. Neerja Sood, Asst. Professor, School of Health Sciences, Indira Gandhi National Open University, Maidan Garhi, New Delhi-110068.

Prof. M.K. Mallick, Department of Management Sciences, The NIHF, Munirka, New Delhi-110067.

Prof. V.K. Tiwari, Department of Planning and Evaluation, The NIHF, Munirka, New Delhi-110067.

Abstract

Training of nurses is one of the sub-components of the scheme under the central scheme of development of nursing services. The scheme is intended to conduct short-term courses of 7-day duration to improve the quality of nursing in three different dimensions like service, education and administration. As no study has been undertaken to assess the quality in terms of facilities, guidelines, planning and conduct of training; the MoHFW desired NIHF to conduct a rapid assessment study to assess the training facilities available, determine adherence to the guidelines and to address the bottlenecks and solutions in the implementation of the scheme.

The MoHFW-funded study used a descriptive cross-sectional design. Nine training institutes of eight states- Delhi, Gujarat, Tamil Nadu, Puducherry, HP, Manipur, West Bengal and Jharkhand were selected randomly and data were collected with the help of a questionnaire and checklist. The data related to physical facility showed availability of separate class rooms, adequate AV Aids and other facilities as needed in all most all the institutions for conduction of training courses. All the nine institutions conducted courses for 7 days on the topics given in the guideline without a learning need assessment. Four out of the nine institutions prepared introductory documents showing the details of the course, with six sessions a day. Resource persons were chosen based on their qualification, expertise, availability, and external resource persons were given only one or two sessions a day. Six institutions deputed full time coordinators while three institutions deputed part time coordinators. Participants were nominated by all the institutions, and utilization certificate was submitted by seven institutions. Reducing the duration to 4-5 days was suggested by all the institutions due to the inability to spare nurses for seven days continuously. The scheme is implemented effectively by all the institutions and found to be useful. It was reported that shortage of nurses in service leads to difficulty in sparing nurses for seven days.

Key words: Training, Central Scheme, Resource persons, Participants, Nomination.

Introduction

Technology and modern life style have transformed the health profile of the Indian population. Based on their health profile, health needs are also fast changing. Government of India recognized the significance and role of nurses for achieving the Sustainable Development Goals (SDG) as nursing professionals constitute two-third of the workforce in the Indian healthcare set up. At all levels of health care, they play an important role in the delivery of quality health care to the people. In order to meet their changing health needs and to ensure universal health coverage, National Health Policy has emphasized the need for a well-trained health workforce with appropriate skill mix.

Lack of facility for nurses to update their knowledge and skill were reported in the high power committee report. No substantial improvement is reported in the status due to lack of fund for nurses except their salary. No state has a scheme or provision for the nurses to undergo short-term courses while being in service to keep their knowledge up-dated. Facilities are available in the states to undergo higher education. However, sparing the nurses for one to two years is beyond the scope of their freedom. Therefore, nursing fraternity was devoid of scope for enhancement of their competency beyond their level of basic preparation.

The need for training of nurses in various dimensions of health care services has been recognized by the Government of India and initiated a Central Sector Scheme of Development of Nursing with cent per cent funding during the ninth plan period onwards. Training of Nurses is one of the sub-components of the scheme. The central ministry sanctioned fund to the institutions or to the authorities concerned for conducting short-term courses with stipulated guidelines.

Since the inception, for the sub-component of Development of Nursing, the MoHFW provided financial support to various state Government institutions. The short-term courses are conducted in various nursing specialties, clinical nursing practice areas, education technology and nursing administration for training clinical nurses, nurse educators and nurse managers respectively. The scheme of training of nurses rolled down in the 9th plan period with time-to-time financial modifications. However, no evaluation was done on other aspects like facilities available, conduct of training, materials and methods used, and challenges and problems in implementing the scheme. Hence, the MoHFW entrusted NIHFWS to conduct a rapid assessment to evaluate this sub-scheme of training of nurses implemented in the states under the scheme of Development of Nursing Services.

Objectives of the Study

The objectives of this study were to:

1. assess the training facilities available in various training institutions funded by the MoHFW for conducting training of nurses;
2. determine the extent to which the training institutes have adhered to the guidelines issued by the centre; and
3. find out the bottlenecks and suggestions for improvement in implementing the scheme.

Review of Literature

Success for achieving the national health objectives depend upon the effective delivery of health care services. Provision of quality health care services depends largely on the nature of education, training and appropriate orientation of all categories of health personnel. Among all the health professions, nursing constitutes majority (two-third) of the health work force in India. Nurses play multiple roles in the health care delivery to achieve the health targets. To take up multiple roles and responsibilities, nursing personnel need to be properly trained and supported during their pre-service and in-service period. Well-trained nurses can contribute towards strengthening systems to work efficiently in interdisciplinary teams. They can effectively participate and influence policies related to nursing at local, state and national levels. This has been reiterated in the report of Task Force (Planning Commission), National Task Force

on Development of Strategic Framework for Nursing for XII Plan, National Commission on Macroeconomics and Health, and in the National Health Policy 2017.

Continuing education (CE) is stated as important and vital for quality improvement in the health care. Janice Gaspard reported that the need for CE was rated as the highest priority¹. However, it is essential to assess the need for effectiveness of training. The study evidence suggested that nurses need training in communication skills, management, clinical skills, and research methods. FICCI report (2016) recognised the contributions, and suggested a number of strategies including strengthening nursing education and service, policy reforms, etc. The report illustrate various roles played by nurses such as providing nursing care, transition and continuity, coordination and integration, physical comfort, emotional support, patient safety, shared decision making, involvement of family and friends; and the need to strengthen the nursing cadre.

The National Task Force for strategic frame work for Nursing has suggested incorporating community nursing components and standard practices in nursing and midwifery. The sub-scheme Training of Nurses was started to strengthen the nursing services, education and administration under the central sector scheme of Development of Nursing in the identified areas of different Nursing Specialty for staff nurses, Educational Technology for teachers of schools and colleges of nursing and Management Techniques for nursing administrators. Each training programme is of seven days for thirty candidates. The funding pattern per training programme was Rs. 75000/- for 10-day duration for 30 participants during the X Plan period which was then revised to Rs. 1,65,300/ per course for 7-day duration for 30 participants in the 11th Plan period. A total of 149 courses were conducted during the XI plan period to train 4470 Nursing personnel in various areas. Under this Scheme of Training of Nurses, funds were released directly to the agency (i.e. State Govt., Central Govt. Hospitals, State Nursing Council and TNAI) through approved financial portal.

Methodology

The MoHFW-funded study adopted a descriptive cross-sectional design. Proportionate Random Sampling technique was used to select the nine training institutions as given in Table 1. Data were collected by using a structured questionnaire. Content validity was established by the experts. The questionnaire contains 67 items covering areas like general information of the institution, details on infrastructure of the training institutes/organisation, conduction of courses, financial details, and challenges faced while implementing the scheme. The investigators visited the institutions during the period December 2019 – January 2020. Institution Heads were interrogated. This included Principals of Government Colleges of Nursing; Registrars of State Nursing Councils; Nursing Superintendents; and In-Service Education Coordinators.

Table 1
Institutions Selected for Assessment of Training of Nurses

State	Names of Institutes	No. of Courses	Amount Sanctioned (Rs.)	Year of Release
Jharkhand	College of Nursing, RIMS, Ranchi	1	1,65,300	2017-18
Tamil Nadu	Tamil Nadu Nurses and Midwives Council, Chennai	4	6,61,200	2017-18
Manipur	Manipur Nursing Council, Medical Directorate, Lemphal	5	8,26,500	2016-17
Himachal Pradesh	H.P. Nurses Registration Council, Shimla	5	8,26,500	2016-17
West Bengal	Govt. College of Nursing, R.G Kar Medical College & Hospital, Kolkata	5	8,26,500	2016-17
Gujarat	Gujarat Nursing Council, Ahmedabad, Gujarat	5	8,26,500	2016-17
Puducherry	MTPG and Research Institute of Health Sciences, Govt of Puducherry	4	6,61,200	2016-17
Delhi	Safdarjung Hospital, New Delhi	4	6,61,200	2017-18
Delhi	Lady Hardinge Medical College and Suchita Kripalni Kalawati Saran Hospital, New Delhi	12	19,83,600	2018-19

Findings

The nine institutes included in the study were one each from the states of Gujarat, Jharkhand, Manipur, Tamil Nadu, West Bengal, Himachal Pradesh, Puducherry, and two from Delhi. Out of the nine institutions, five were government nursing training institutions and four were state nursing councils.

Conduct of Training Courses: It was found that five of the nine organisations including nursing councils and training institutions conducted the training at their associated institutions located in the same premises whereas two organisations (TN and Gujarat Nursing Councils) conducted the training in different institutions under them which were located in other districts. Two organisations in Delhi conducted the training in the classrooms allotted by the organisation for CNE. The class rooms where the trainings were conducted, were equipped with adequate AV Aids such as LCD with Over Head Projectors (OHP), whiteboard / blackboard, models, flipcharts, electricity back-up, drinking water, washroom/toilet etc. It was seen that electricity back-up problem existed in Jharkhand. Working lunch and snacks were being provided to all the training participants.

Couse Details: Eight organisations adopted 7-day duration course as per the guideline whereas one organisation in Delhi was found conducting the course of 3-4 day duration with break and rotation to prevent shortage of staff in the clinical area. Five organisations had fixed six

sessions per day, three had kept five to seven sessions a day, and one organisation had five sessions per day. All organisations maintained attendance of participants. It was observed that need assessment was not done by any organisation but topics were selected as per the MoHFW guideline.

With regard to preparation for training is concerned, institutes of Tamil Nadu, West Bengal, Himachal Pradesh and Delhi prepared introductory documents of the training courses containing objectives, content areas, programme schedule and teaching methods. Institutes of Gujarat, Jharkhand, Manipur, and Puducherry prepared only programme schedules with content areas and resource persons. Attendance was maintained by all the institutions twice a day. In Jharkhand and Manipur, the titles of the courses were not easy to comprehend because all the 30 topics as suggested by the funding agency were included in the training courses. The title of the course in Manipur and Jharkhand was Development of Nursing Services under Central Sector Scheme. Jharkhand, Manipur and Gujarat did not provide written course materials and training kits to the participants at the start of the training while the rest provided course materials.

Although lecture method with PPT presentation was the most used methods, group works and demonstrations and other AV aids like, charts, models, etc. were also utilised during the training programmes by all institutions. All the institutions are in receipt of the guidelines regarding utilisation of the fund. However, two institutions expressed that the amount allocated for the stationary is not sufficient to provide quality materials.

Resource persons: Findings indicated that the resource persons in all the institutions were chosen on the basis of qualification, expertise and availability. Total number of sessions planned for a day was six out of which one to two sessions were taken by external resource persons while three to six sessions were taken by internal resource persons. None of the training institutions faced any difficulty in arranging external resource persons. Coordinators were deputed on part time basis in three institutions whereas six institutions had fulltime coordinators for the trainings. Except West Bengal, coordinators did not receive any orientation for conducting the training courses.

Participants of the Training: Participants for the training were nominated on the basis of designation and areas of work in all the states while availability also taken into consideration in the state of Gujarat. Official information was given one week prior to the training courses in Gujarat, Jharkhand, West Bengal and Himachal Pradesh while the intimation was sent 3-4 weeks prior to the trainings in states of Manipur, Tamil Nadu, Puducherry and Delhi. Pre-test and post-test knowledge assessment forms were administered to the participants in all the states except Manipur. It was observed that the records of the participants who attended the training were maintained in all the institutions. Feedback about the training was taken by all the training institutes, and is utilized for planning of future trainings for further improvements in the states except Jharkhand where it was used for only writing the report. The certificate of attendance was given to all the participants who attended the training for the complete duration of 7 days.

Adequacy of Fund: Adequacy of fund is related to the honorarium for resource persons and coordinators, TA and DA to the participants, refreshment and other aspects for which the fund is utilized. All the states except Jharkhand and Delhi stated that the funding given for stationery was sufficient to meet the quality of training materials. The state of Delhi expressed that the

fund was insufficient for stationery as the expenditure included banner, souvenir and printing of training materials, etc. There is provision for the coordinator deputed for the training to get honorarium of Rs.1000/- per day. For taking sessions, external resource persons receive the honorarium of Rs.1000/- per session and internal resource persons receive Rs.600/- per session. Out of total 8 states selected, five states- Manipur, Tamil Nadu, West Bengal, Himachal Pradesh and Delhi found it difficult to arrange external resource persons for the amount given in the guidelines of training. At the end of the training course, participants were given Travelling Allowance of Rs.500/- per head for 7 days and Dearness Allowance of Rs.300/- per head per day for 7 days.

Status of Utilisation Certificate and Statement of Expenditure: Table 2 shows that all institutions have submitted the utilisation certificate except Gujarat and Manipur.

Table 2
Details on Fund Received, UC and SOE (in Rs.)

State	Year of fund received	Amount Received	Amount Spent	No. of trainings conducted	Amount Unspent	UC/SoE submitted (N-NO, Y-YES)	Unspent amount returned to MoHFW
Gujarat	2017-18	8,26,500/-	737967/	5	59936/-	N	N
Jharkhand	2017-18	165300/	158215/-	1	7085/-	Y	Y
Manipur	2016-17	8,26,500-	8,26,500-	5	-	Y	-
	2017-18	6,61,200/-	8,26,500-	4	-	Y	-
	2018-19	11,57,100/	6,61,200/-	-	- 11,57,100	N	N
Tamil Nadu	2015-16	8,26,500	7,88,923	5	52,069	Y	Y
	2016-17	6,61,200	7,88,923	5	37,577	Y	Y
	2017-18	7,74,431	6,31,908	4	34,714	Y	Y
West Bengal	2016-17	8,26,500/-	8,26,500/-	5	-	Y	-
	2017-18	8,26,500/-	8,26,500/-	5	-	Y	-
HP	2017-18	8,26,500	8,26,500	5	-	Y	-
Puducherry	2013-14	6,61,200	6,61,200	4	-	Y	-
	2016-17	14,87,200/	14,87,200	9	-	Y	-
	2017-18	8,26,500	8,26,500	5	-	Y	-
LHMC, Delhi	2016-17	8,26,500/	815100/-	5	11400/-	Y	Y
	2018-19	1983600/	1983600/-	12	50332/-	Y	Y
Safdarjung, Delhi	2016-17	495900/-	495900/-	4	-	Y	Y
	2017-18	661200/-	661200	8	16403/-	-	-

All the institutions have maintained separate files for each course containing copies of the proposals submitted to the MoHFW, copies of the sanction letter, copies of the written communications with the district hospitals/ health facilities for nomination, programme schedule with objectives, sessions, venue, duration, participants' attendance, copies of the UC and SOE, registration forms, feedback performa, etc.

Challenges Faced by the Institutions during Training: Almost all the training institutions expressed inadequate fund for remuneration for resource persons, refreshment to the participants, course materials and TA/DA to the participants. Another challenge was getting nomination for training which was found to be due to shortage of nurses and long duration of training courses.

Suggestions

The institutions advocated for the below given suggestions:

An increase in honorarium, TA/DA for the participants, travel allowance for external resource persons, an increased amount for stationeries (training kit and course materials, banner, posters, etc), and inclusion of lunch and snacks.

Reduction in the duration of training course from the existing seven days to five days as the hospital administrations find it difficult to spare the nurses for trainings due to shortage of nurses in the clinical areas.

MoHFW Guidelines to be made more specific and clear especially in selection of topic and conduction of training (teaching methodology).

Conclusion

The study attempted to comprehend the implementation of one of the components of Central Sector Scheme of Development of Nursing i.e. Training of Nurses. The scheme was formulated during the 9th five-year plan period considering the insensitive approach towards the State Government nursing training institutes. The scheme is well utilized by the states. A number of nursing personnel are benefitted from the scheme. However, the scheme needs time to time review and modifications.

Acknowledgement: The authors thank the Union Ministry of Health and Family Welfare for funding this evaluation study. They are also grateful to Dr. Nipun Vinaya, Joint Secretary, MoHFW, for his kind support.

Reference

1. Janice Gaspard & Che Ming Yang. Training needs assessment of health care professionals in a developing country: The example of Saint Lucia, BMC, Med Edu., 2016; 16: 112.

केंद्रीय क्षेत्र योजना के अंतर्गत नर्सों के लिए प्रशिक्षण संचालित करने वाले संस्थानों की प्रशिक्षण सुविधाओं का मूल्यांकन

*** नंदिनी सुब्बैया एवं सी.एन. भार्गव ****

* सह प्रोफेसर, सामुदायिक स्वास्थ्य प्रशासन विभाग, रास्वापक संस्थान, मुनिरका, नई दिल्ली -110067।

* * व्याख्याता, नर्सिंग कालेज, आरएमएल अस्पताल, नई दिल्ली।

समीक्षक:

डॉ. नीरजा सूद, सहायक प्रोफेसर, स्कूल ऑफ हेल्थ साइंसेज, इंदिरा गांधी नेशनल ओपन यूनिवर्सिटी, मैदान गढ़ी, नई दिल्ली -110068।

प्रो. एम.के. मल्लिक, प्रबंधन विज्ञान विभाग, रास्वापक. संस्थान, मुनिरका, नई दिल्ली -110067।

प्रो वी.के. तिवारी, योजना और मूल्यांकन विभाग, रास्वापक. संस्थान, मुनिरका, नई दिल्ली -110067।

सारांश

नर्सों का प्रशिक्षण नर्सिंग सेवाओं के विकास संबंधी केंद्रीय योजना के अंतर्गत निर्मित योजना के उप-घटकों में से एक है। यह योजना नर्सिंग सेवाओं की गुणवत्ता के तीन विभिन्न आयामों जैसे सेवा, शिक्षा तथा प्रशासन की गुणवत्ता को अधिक बेहतर बनाने के लिए 07-दिवसीय अवधि के अल्पकालिक पाठ्यक्रमों का संचालन करने के लिए अभिप्रेत है। चूंकि सुविधाओं, दिशानिर्देशों, नियोजन तथा प्रशिक्षण के संचालन पक्षों पर गुणवत्ता का आकलन करने के लिए कोई अध्ययन नहीं किया गया है। इसलिए स्वास्थ्य एवं परिवार कल्याण मंत्रालय द्वारा राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण संस्थान से योजना के क्रियान्वयन में उपलब्ध प्रशिक्षण सुविधाओं, दिशानिर्देशों का अनुपालन सुनिश्चित करने तथा योजना को क्रियान्वित करने में कठिनाइयां तथा उनके समाधान का पता लगाने के बारे में एक त्वरित आकलन अध्ययन संचालित करने के लिए आग्रह किया गया।

उक्त अध्ययन में विवरणात्मक क्रॉस-अनुभागीय डिजाइन का उपयोग किया गया। अध्ययन के अंतर्गत आठ राज्यों नामतः-दिल्ली, गुजरात, तमिलनाडु, पुडुचेरी, हिमाचल प्रदेश, मणिपुर, पश्चिम बंगाल और झारखंड का यादृच्छिक आधार पर चयन किया गया था और एक प्रश्नावली तथा चेकलिस्ट की सहायता से आंकड़े एकत्र किए गए। भौतिक सुविधा से संबंधित आंकड़ों में अलग कक्षा के कमरों की उपलब्धता पर्याप्त श्रव्य-दृश्य (ए.वी) उपकरणों एवं अन्य सुविधाओं जो कि प्रशिक्षण पाठ्यक्रमों के संचालन के लिए सभी अधिकांश संस्थानों में आवश्यक होते हैं, उपलब्ध पाई गई सभी नौ संस्थानों में दिशानिर्देश में दिए गए विषयों पर 7 दिनों के लिए बिना प्रशिक्षण आवश्यकता आकलन के पाठ्यक्रम संचालित किया गया। नौ में से चार संस्थानों ने पाठ्यक्रम के एक दिन में छह सत्रों के सहित पाठ्यक्रम संबंधी विवरण शामिल करके एक प्रस्तावना प्रलेख तैयार किया गया। स्रोत व्यक्तियों का चयन उनकी शैक्षिक योग्यता, विशेषज्ञता, उपलब्धता के आधार पर किया गया था, तथा बाह्य स्रोत व्यक्तियों को एक दिन में केवल एक अथवा दो सत्र दिए गए थे। छह संस्थानों ने पूरे समय के लिए समन्वयकर्ता नियुक्ति किए थे, जबकि तीन संस्थानों ने अंशकालिक समन्वयकों की नियुक्ति की थी। सभी संस्थानों द्वारा प्रतिभागियों की सहभागिता के लिए नामित किया गया था, तथा सात संस्थानों द्वारा उपयोगिता प्रमाण पत्र प्रस्तुत किए थे। सभी संस्थानों द्वारा लगातार सात दिनों की अवधि के लिए नर्सों को कार्यमुक्त करने की असमर्थता व्यक्त करते हुए पाठ्यक्रम की अवधि 4-5 दिन के बीच तक कम करने का सुझाव दिया गया था। उक्त योजना को सभी संस्थानों द्वारा प्रभावी ढंग से लागू किया गया है कि सेवाकालीन नर्सों की कमी होने के कारण नर्सों को सात दिनों के लिए छोड़ने में कठिनाई होती है।

प्रमुख शब्द: प्रशिक्षण, केंद्रीय योजना, स्रोत व्यक्ति, प्रतिभागी, नामांकन।

Psychological Well Being and Physical Health of Spouses of Deployed Army Personnel: Rank Differentials

***Prachi Bisht and **Lata Pande**

*Scientist, Department of Human Development, Punjab Agricultural University, Ludhiana, Punjab,
E-mail: bishtprachi@pau.edu.

**DSB Campus, Kumaon University, Nainital, Uttarakhand.

Reviewers:

Prof. Rajni Bagga, Department of Social Sciences, The NIHFW, Munirka, New Delhi-110067.

Prof. Manish Chaturvedi, Department of Planning and Evaluation, Munirka, New Delhi-110067.

Dr. Meerambika Mahapatro, Department of Social Sciences, The NIHFW, Munirka, New Delhi-110067.

Prof. Neera Dhar, Department of Education and Training, The NIHFW, Munirka, New Delhi-110067.

Abstract

One of the very less talked about and less explored section of women in India are the spouses of the Armed Forces Personnel whose overall well-being is majorly influenced by their husbands' (military personnel) job due to situations like deployments, relocations, separations, dangerous operations, postings in operational areas, frequent postings, etc. These situations and conditions trigger depression, anxiety, decreased marital satisfaction and stress among the wives of the military personnel which may even lead to somatization. Spouses of military personnel are the 'Silent Ranks' that stand behind, and nurture the soldiers of our country. Therefore, they are regarded as an unseen gateway to protect the nation's security and its pride. So, it is very necessary on the part of the spouses to be psychologically sound and physically healthy in order to support the soldiers mentally, emotionally and physically; and to feel proud to be the part of the military life. The present paper elicits the psychological well-being and physical well-being of the spouses of the Indian military personnel. This study presents a comparative analysis between the spouses of different ranks as ranks decide the perks and privileges which could directly and indirectly influence the psychological well-being of army wives. The present study was carried out on 150 respondents consisting of 50 officers' spouses, 50 Junior Commissioned Officers' (JCOs') spouses and 50 ORs' spouses in Suratgrah military station Rajasthan. Psychological well-being scale developed by Sisodia and Chaudhary¹ was used to assess psychological wellbeing of the respondents and physical well-being scale (self-developed with the help of health record cards issued by the Army) was used to assess the physical health. Percentages and F test were used to used to analyze the data. It was found that there were statistically non-significant differences in the psychological well-being of the wives of the army personnel. However, significant differences in physical well-being across different ranks were reported amongst the spouses of the Indian Army personnel.

Key words: Physical well-being, Psychological well-being, Officers' spouses, JCO, OR.

Introduction

Jawaharlal Nehru said “You can tell the condition of a Nation by looking at the status of its Women².’ Status of the women symbolizes not only their independence, autonomy, and financial status but also reflects their overall quality of life. The Indian society has lots of societal barriers that lead to lack of autonomy, lack of decision-making, decreased self-concept and lack of satisfaction in the lives of most of the Indian women which impact their mental health, physical health and psychological well-being. Therefore, women still fall in the vulnerable group and still a lot needs to be done to uplift the status of women in India. A very less talked about and a less explored section of women in India are the spouses of Indian Military Personnel whose overall well-being is majorly influenced by their husbands’ (military personnel) job. Spouses of military personnel are the ‘Silent Ranks’ who stand behind and nurture the soldiers of our country. They are, therefore, regarded as an unseen gateway to protect the nation’s security and its pride.

An armed force is an organization where the process of deployment of soldiers or military personnel occurs very frequently. The soldiers are frequently deployed in active field/operational areas, high altitude areas or routine transfers because of which the families have to live in separation for short or long durations. This influences them emotionally, psychologically and mentally leading to stress responses such as anger, irritability, sleeplessness and anxiety, and significant levels of distress³.

Although deployments are an integral part of military services, there are potential negative effects caused by this separation. For instance, the length and location of these deployments make communication between couples sporadic, difficult terrains put limitations to contact one another due to the lack of communication. Additionally, separations create changes within the family dynamics and add stress to an already stressful situation. Therefore, it is very necessary on the part of the spouses to be in good state of psychological well-being and physically healthy in order to support the soldier and his family mentally, emotionally and physically sound.

Deployment cycle is categorized into different stages- the pre-deployment, deployment, reunion and post-deployment phases; and each presents unique circumstances and challenges⁴. The deployment experiences can be summarized with five stressors: worrying, waiting, going it alone, putting double duty and loneliness⁵. During the pre-deployment phase, service members and their families may suffer anxiety in anticipation of the deployment. Service members’ need to focus on the logistics of the upcoming deployment can result in spouses experiencing them as “physically present while psychologically absent⁶.” The deployment phase covers the period when the service member is physically absent from the family. During this period, spouses and children frequently undergo a period of emotional disorganization and destabilization^{4,7}. In particular, the service member’s spouse may experience multiple stressors related to the shift in family dynamics and roles including loneliness, role overload, role shifts, financial concerns, changes in community support, and increased parenting demands⁸. These stressors are intensified with fear for the safety of the deployed service member. The reunion phase during which the service member and family prepare for the service member’s return home, is frequently characterized by both excitement and apprehension. Returning service members are challenged by the adjustment to civilian life, and the service member’s family must again undergo a shift in family dynamics in a household where roles have inevitably changed⁹. Working through these issues represents the main challenge of the post-deployment phase¹⁰. Family roles and routines must be renegotiated and redefined in the post-deployment phase⁴ and spouses, service members, and their children alike may feel uncertain of their respective

positions in this reconfigured system. Thus, the sense of loneliness and isolation many spouses experience during deployment can extend into the post-deployment phase.

Physical health is important for the overall well-being and is the most visible dimension of health. Other dimensions are social, intellectual, emotional, spiritual and environmental health. Health and wellness play a vital role in encouraging individuals to engage with a wide range of activities that could contribute to the development and growth of individuals at every stage of life. Thus, health and wellness also provides internal and external resources to individuals involved and develop a healthy life¹¹. Therefore, if physical health is jeopardized, then it is ultimately going to hamper the overall well-being of the individual and ultimately its impact is seen in the society.

Wives of deployed troops discovered a spectrum of symptoms and diagnoses such as depression, anxiety, insomnia, adjustment disorder, nervousness, headaches, dysphoria and changes in eating habits¹²⁻¹⁴. Mental health of the spouses of combat veterans have high levels of distress, poorer physical and psychological health over a lifetime, and greater social isolation than partners of non-combat veterans who feel “As if they were on the verge of a nervous breakdown¹⁵.”

Socio-economic status and easy availability and accessibility of material and non-material resources are one of the important socio-demographic factors impacting physical health and psychological well-being of the spouses of military personnel. As per hierarchy, the soldiers are broadly divided into three categories i.e. Commissioned Officers, Junior Commissioned Officers (JCOs) and Other Ranks (ORs). In the organizational hierarchy, the top position holders are Commissioned Officers followed by JCOs and ORs. The perks and privileges are also given according to the soldier's ranks.

The spouses having a sound financial, material and non-material resources would be in a better position to cope up with the situation of husband's deployment to fields. But in a socio-economically stressful environment with limited resources, it would be harder to manage everything all alone leading to anxiety, depression, and stress that lead to poor mental and physical state of the wife as well as her family members. Therefore, differences in the levels of psychological well-being and physical health could be seen among the wives of the personnel belonging to different ranks i.e. Other Ranks (ORs), Junior Commissioned Officers (JCOs) and Army Officers who not only have differences in salary structure but also in privileges and perks they get as per their ranks.

It is correctly said, “Inside a healthy body, lives a healthy mind.” Therefore, it is imperative to study the states of well-being and the condition that influence the psychological and physical well-being of the Indian Military soldiers' spouses. The wives praise their husbands for going on their missions and defending the country while refraining from expressing their true opinions so as to not diminish their husbands' moral and are silently serving the armed forces by supporting their husbands who are soldiers of our country. Military wives are a vital part of military members' lives, and therefore, further exploration into the significance of the impact of frequent deployments on military families is necessary.

Objectives

The objectives of this study are to

1. assess the differences in psychological well-being among the spouses of deployed military personnel across different ranks; and

-
2. assess the differences in physical health among the spouses of deployed military personnel across different ranks.

There is a difference in psychological well-being and physical health of the spouses of different ranked deployed personnel of military forces.

Methodology

Location: The study was carried out in Suratgrah Military Station, Rajasthan, on the spouses of Indian military personnel belonging to five regiments (two Armoured Regiments, two Infantry Regiments and one Armed Supply Core Regiment). The sample comprised of 300 respondents out of which 150 (50 Officers' spouses, 50 JCOs' spouses and 50 ORs' spouses) were deployed and 150 (50 Officers' spouses, 50 JCOs' spouses and 50 ORs' spouses) were non-deployed.

Tools of Data Collection

Psychological Well-being of the respondents was assessed using psychological well-being scale developed by Sisodia and Choudhary¹. Five dimensions of psychological well being are Satisfaction, Efficiency, Sociability, Mental health and Interpersonal relationships.

Physical health was assessed using the health cards of the respondents and a self developed and pre-tested physical health scale. Four dimensions of physical health i.e. nutritional status, clinical signs and symptoms status, general physical health status, and lifestyle were taken to categorize the respondents across different levels of physical health.

Statistical Analysis: Mean, standard deviation and F test were used to find the association of psychological and physical wellbeing with rank.

Findings and Discussion

Differences (Mean scores \pm SD) in the Dimensions of Psychological Well-being among the Spouses of Deployed Military Personnel of Different Ranks

As described in Table 1 and Figure 1, the various dimensions of psychological well-being i.e. life-satisfaction, efficiency, sociability, mental health and interrelationship were compared between officers' spouses, JCOs' spouses and ORs' spouses whose husbands were 'deployed'. The results of the F-ratio indicate 'rank'-wise differences among the spouses of deployed military personnel were significant only in two dimensions i.e. efficiency and sociability whereas rest all the dimensions including the overall psychological well-being were non-significant across all the three ranks. The data further reveals that the mean score of 'life satisfaction' among officers' spouse was '22.16' which is comparatively more than the mean scores of JCOs' (17.50) and ORs' (20.50) spouses but the difference is non-significant. 'Efficiency' and 'sociability' were found to show significant differences with ($F=6.39$; $p<0.01$) and ($F=4.01$; $p<0.05$). Mean score of 'Efficiency' was also found to be greater among the officers as compared to JCOs' (25.96) and ORs (19.96). Higher mean score of 'Deployed' officers' spouses could possibly be because of the getting higher resources (time, money, labour, etc.) to officers' spouses even during deployment phases of their husbands. It was observed that spouses of Officers are more educated in comparison to others and are financially independent by engaging in full time or work from home jobs making them more efficient. However, the mean scores of 'Sociability' of

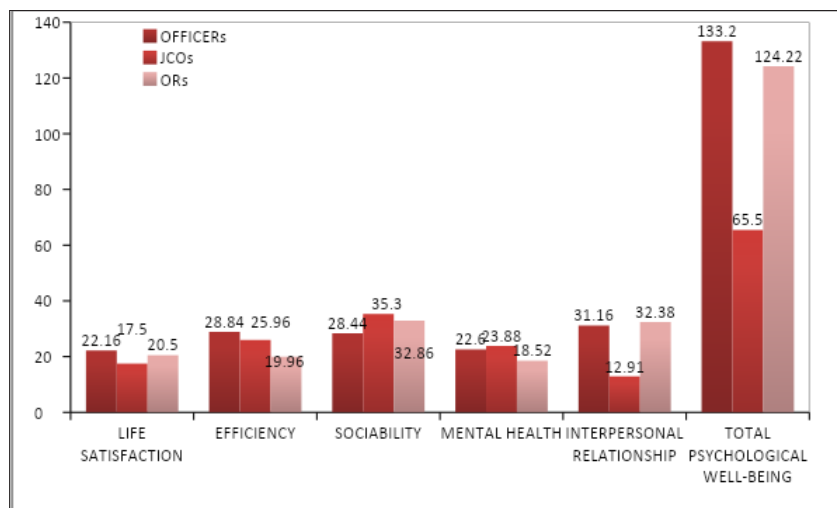
JCOs' was greater (35.30) than officers' wives (28.44). The explanation of this difference could probably be because the spouses of JCOs' mostly stay at home. Thus, they get ample time to make friendships and acquaintances with the fellow spouses and have a larger social circle that increases their sociability quotient. On the other hand, ORs' spouses are lesser sociability. By and large, the respondents felt that the hierarchical "class system" created by the military made it difficult to cross boundaries and form friendships.

Table 1
Differences (Mean scores \pm SD) in the Dimensions of Psychological Well-being among the Spouses of Deployed Military Personnel of Different Ranks

	Officers (n=50)		JCOs (n=50)		ORs (n=50)		F-ratio
	Mean	SD	Mean	SD	Mean	SD	
Life Satisfaction	22.16	15.65	17.50	11.96	20.50	14.69	1.39
Efficiency	28.84	11.92	25.96	14.20	19.96	11.75	6.39**
Sociability	28.44	12.88	35.30	12.16	32.86	11.79	4.01*
Mental Health	22.6	15.15	23.88	15.22	18.52	12.67	1.89
Interpersonal Relationship	31.16	12.91	31.30	15.01	32.38	12.93	0.12
Total PWB Score	133.2	65.50	133.9	56.97	124.2	48.08	0.45

*P < .05%, **P < 0.01%

Figure 1
Differences (Mean scores) in the Dimensions of Psychological Well-being among the Spouses of Deployed Military Personnel of Different Ranks



'Mental health' was found to be higher in the score among JCOs' (23.88) than officers' (22.6) and ORs' spouses (18.52) though the differences were non-significant. Similarly, 'Interpersonal relationship' showed almost equal values among spouses of all the three ranks with non-significant differences. The mean scores were 31.16 of officers' spouses, 31.30 of JCOs' spouses and 32.38 of ORs' spouses. The findings also reveal the overall differences of 'Psychological

well-being' of spouses of personnel of different ranks. It revealed that 'Rank'-wise differences in 'Total psychological well-being' were found to be non-significant. Though the individual mean scores differ as the mean score of 'Total psychological well-being' of JCOs' (133.94) and officers' (133.20) spouses were almost at par with each other and mean scores of ORs' spouse (124.22) were comparatively less than their counterpart ranks. The non-significant differences among all the categories of ranks reveal that deployment phase treats deployed soldiers' spouses in the same manner irrespective of the ranks of their spouses. Deployment is the common phase among wives irrespective of the rank and the trauma associated with deployment of husband impose similar kind of impact irrespective of the 'Rank' differences. Related research has shown that social support from friends contributes to heightened psychological well-being among military spouses¹⁶ and can buffer the effects of life stressors on spouses' depression¹⁷. As military spouses are frequently stationed far from their families of origin, establishing a "sense of community" wherever they are, can fulfill the needs for connection and belonging¹⁸. However, wives of ORs' spouses need an attention as the mean score of overall psychological well being which is quiet less as compared to officers' and JCOs' wives. Apart from all the challenges faced by spouses during deployment like separation and fear of husbands wellbeing, these challenges are compounded as the issue of military rank adds another layer to social barriers for military spouses in lower ranks. It was apparent from the focus group sessions that spouses of officers and spouses of enlisted soldiers rarely commingle, and additional research is needed to understand the extent to which these divisions are "necessary" based on the military hierarchy, or whether tensions could be alleviated by interventions that address stereotypes.

Differences (Mean scores \pm SD) in the Dimensions of Physical Health among the Spouses of Deployed Indian Military Personnel of Different Ranks

Table 2 and Figure 2 reveal the 'Rank'-wise differences of 'physical health' among the spouses of 'deployed' Indian military personnel. Significant 'Rank'-wise differences were found with regard to 'nutritional status', 'status of clinical signs', 'lifestyle' and 'total physical health' but Rank-wise differences were not significant among the spouses of different ranks as far as their 'general physical health is concerned. The mean score of 'nutritional status' was higher among spouses of ORs (13.60) which was above than the mean score of officers' spouses (12.00) and mean score of JCOs' spouses (8.70) with a significant difference ($F=4.17$; $p=0.05$). Thus, it can be interpreted that 'nutritional status' of spouses of ORs' and officers' spouses are almost equally better than JCOs' spouses because the spouses of JCOs' had higher cases of malnutrition in the form of 'overweight' and 'obesity' as compared to officers' and ORs' spouses. It was observed that the 'Rank'-wise differences in 'nutritional status' were non-significant among these respondents. Similarly, it was found that 'status of clinical signs' had a differences between ranks ($F=4.22$; $p=0.01$) with highest mean score among officers' spouses (14.12) followed by JCOs' spouses (12.80) and ORs' wives (9.36). 'General physical health' mean scores of officers' wives (11.10) and JCOs' wives (11.90) were higher as compared to ORs' spouses (12.70). It was also found that the 'lifestyle' mean score of officers' spouses were also significantly higher (17.50) followed by ORs' spouses (17.50) and ORs' spouses (16.20) and the least average score was of JCOs' spouses (11.40) with significant difference of $F=4.92$; $p=0.05$. 'Total physical health' of the spouses of the 'Deployed' military personnel also showed significant 'Rank'-wise differences ($F=3.73$; $p=0.01$) with higher mean scores among officers' wives (54.72) as compared to the mean scores of ORs' spouses (48.86) and JCOs' spouses (48.60). 'This could be explained by the fact that most of the JCOs' spouses are in middle adulthood phase of life as JCOs are senior officers commissioned after serving

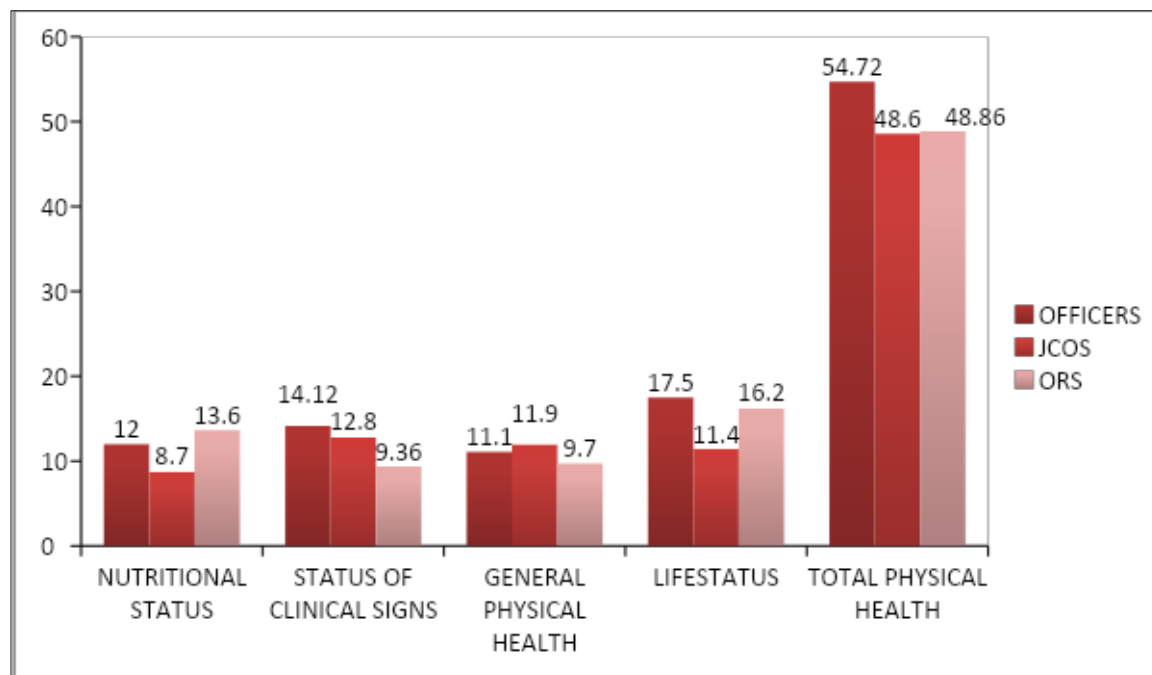
in an OR for several years. Hence, the wives of JCOs face related physical problems which account for the differences with the spouses other two 'Ranks.' As they are over indulged in family welfare and other regiment related priorities, they get minimum time to set health as a priority. This is in line with study conducted by Mailey et al.¹⁹ who stated that spouses have too many other things on their plate; so, that health behaviours like physical activity, healthy eating, and social connection did not feel like a priority. At times, feelings of depression and loneliness due to their spouse's absence suppressed their appetites and further exacerbated these motivational struggles. This provides evidence that military spouses are scarcely engaging in health behaviours.

Table 2
Differences (Mean scores \pm SD) in the Dimensions of Physical Health
among the Spouses of Deployed Indian Military Personnel of Different Ranks

Dimensions of Physical Health	Officers (n=50)		JCOs (n=50)		ORs (n=50)		F-ratio
	Mean	SD	Mean	SD	Mean	SD	
Nutritional Status	12.00	10.79	8.70	3.15	13.60	6.85	4.71**
Status of clinical signs	14.12	7.44	12.80	5.53	9.36	3.27	4.22**
General Physical Health	11.10	8.10	11.90	5.01	9.70	3.58	3.02
Lifestyle	17.50	9.75	11.40	6.96	16.20	6.11	4.92**
Total Physical Health	54.72	30.4	48.60	20.65	48.86	19.81	3.73**

*P < .05%, **P < 0.01%

Figure 2
Differences (Mean scores) in the Dimensions of Physical Health
among the Spouses of Deployed Indian Military Personnel of Different Ranks



Conclusion

‘Rank-wise’ differences in ‘Psychological well-being’ among spouses of ‘Deployed’ military personnel was non-significant though ‘Efficiency’ and ‘Sociability’ had significant ‘Rank-wise’ differences. Though ‘Total psychological well-being’ mean scores of officers’ wives was the highest followed by JCOs’ spouses whereas it was the least for ORs’ spouses. Among spouses of ‘Deployed’ military personnel, there was significant ‘Rank-wise differences’ in total Physical health, Nutritional status, clinical signs, symptoms status and Lifestyle. ‘Total physical health’ mean scores were the ‘highest’ among officers’ spouses followed by JCOs’ and ORs’ spouses.

The data reveal that the trend is similar in psychological well-being as well as physical where officers’ spouses showed the highest levels whereas the lowest levels were seen among ORs’ spouses. This reflects the fact that armed wives welfare association (AWWA) should concentrate more on the welfare and betterment of the spouses of ORs’ and separate counseling cells should be made to offer help and support especially during the phase of deployment when the husbands are away on field areas. The study findings indicate that due to lower mean scores of physical health among JCOs spouses, they should be sensitized about better lifestyle and nutritional related knowledge so that their physical health status could be uplifted. To achieve this, frequent lectures and nutrition consultation camps inside cantonment are required to be done from time to time and interventions should be designed to teach them coping strategies to deal with deployment effectively.

References

1. Sisodia DS & Chaudhary P. Psychological well-being scale. National Psychological Cooperation, Agra; 2005.
2. Vajpayee J. Mental health of women in India (Doctorate thesis, University of Delhi), 2016. Retrieved-from https://www.researchgate.net/publication/296327929_Mental_Health_of_Women_in_India.
3. Demers A. The war at home: Consequences of loving a veteran of the Iraq and Afghanistan wars. *Internet Journal of Mental Health*, 2009; 6(1). Retrieved from Psyc INFO database.
4. Pincus SH, House R, Christensen J & Adler LE. The emotional cycle of deployment: A Military Family Perspective, 2005. <http://www.hooah4health.com/deployment/familymatters/emotionalcycle.htm>. Retrieved on 22 January, 2016.
5. Lapp CA, Taft LB, Tollefson T, Hoepner A, Moore K & Divyak K. Stress and coping on the home front: Guard and reserve spouses searching for a new normal. *J Fam N*, 2010; 16(45): 227.
6. Weins TW & Boss P. Maintaining family resiliency before, during, and after military separation. In Castro CA, Adler AB, Britt TH (ed). *Military life: The psychology of serving in peace and combat. The military family*, 2006; p. 13-38 Westport, Bridgeport, CT: Praeger Security International.
7. Mac Dermid SM, Olson TM & Weiss H. (2002) Military Family Research Institute Supportingmilitaryfamiliesthroughoutdeployment.www.cfs.purdue.edu/mfri/pages/research/MFRI_Brief_Deployment_Support. Retrieved on 22nd January 2016.
8. Drummet AR, Coleman M and Cable S (2003). *Military Families Under Stress: Implications for Family Life Education*. *Family Relations* 52(3):279–287.

-
9. Segal MW (2006) Implications for military families of changes in the Armed Forces of the United States. In Caforio G (ed). *Handbook of the Sociology of the Military*. Pp 225 University Press, United states.
 10. Lincoln A, Swift E and Shorteno-Fraser M (2008) Psychological adjustment and treatment of children and families with parents deployed in military combat. *J Clinical Psycho* 64 (8):984–992.
 11. Donatelle RJ. *Health: The basics*. 4th ed. 2001, p 17-20. Boston: Allyn & Bacon.
 12. Frankel H, Snowden LR & Nelson LS. Wives' adjustment to military deployment: An empirical evaluation of a family stress model. *Inter J Soc Fam*, 1992, 22: 93-117.
 13. Milgram NA & Bar K. Stress on wives due to husbands' hazardous duty or absence. *Military Psychology*, 1993; 5(1): 21-39.
 14. Wood S, Scarville J & Gravino KS. Waiting wives: Separation and reunion among army wives. *Armed Forces Soc*, 1995; 26: 217-232.
 15. Beckham JC, Lytle BL & Feldman ME. Caregiver burden in partners of Vietnam war veterans with post-traumatic stress disorder. *J Consult Clin Psycho*, 1996; 64(5): 1068-72.
 16. Wang M, Nyutu PN, Tran KK & Spears A. Finding resilience: The mediation effect of sense of community on the psychological well-being of military spouses. *J Ment Health Couns*, 2015; 37(2): 164–74.
 17. Green S, Nurius PS & Lester P. Spouse psychological well-being: A keystone to military family health. *J Human Behav Soc Environ*, 2013; 23: 753–68.
 18. Bowen GL, Mancini JA, Martin JA, Ware WB, Nelson JP. Promoting the adaptation of military families: An empirical test of a community practice model. *Fam Relat*. 2003; 52(1): 33–44.
 19. Emily L. Mailey, Carrie Mershon, Jillian Joyce & Brandon C. Irwin. Everything else comes first: A mixed-methods analysis of barriers to health behaviours among military spouse .*BMC Public Health* volume, 2018; 18: 1032.

तैनात सेना के कार्मिकों की पत्नियों का मनोवैज्ञानिक शारीरिक स्वास्थ्य: रैंक विभेदक अध्ययन

प्राची बिष्ट* लता पांडे**

* वैज्ञानिक, मानव विकास विभाग, पंजाब कृषि विश्वविद्यालय, लुधियाना, पंजाब, ई-मेल: bishtprachi@pau-edu

** डीएसबी परिसर, कुमाऊं विश्वविद्यालय, नैनीताल, उत्तराखंड।

समीक्षक:

प्रो रजनी बग्गा, सामाजिक विज्ञान विभाग, रास्वापकसं., मुनिरका, नई दिल्ली -110067

मनीष चतुर्वेदी, योजन एवं मूल्यांकन विभाग, रास्वापकसं., मुनिरका, नई दिल्ली -110067

डॉ. मीरांबिका महापात्रो, सामाजिक विज्ञान विभाग, रास्वापकसं., मुनिरका, नई दिल्ली-110067

नीरा धर, शिक्षा एवं प्रशिक्षण विभाग, रास्वापकसं., मुनिरका, नई दिल्ली -110067

सारांश

भारत में महिलाओं के बारे में सबसे कम बात की जाती है तथा कम चिंता की जाती है। वह देश के सशस्त्र सेना बल कार्मिकों की पत्नी हैं, जिनका स्वास्थ्य उनके पतियों (सेना कार्मिकों) की कार्य संबंधी स्थितियों जैसे-तैनाती, स्थानांतरण, अलग होने, खतरनाक व जोखिम भरे आपरेशनों, आपरेशनल क्षेत्रों में तैनाती, लगातार तैनाती बदलने आदि के कारण अधिकांश प्रभावित रहता है। इन उपरोक्त परिस्थितियों का सेना सेना कार्मिकों की कुछ पत्नियों के अवसाद, उद्विग्नता, जीवन में कम होती वैवाहिक संतुष्टि तथा मानसिक तनाव पर प्रारंभिक प्रभाव पड़ता है। जिससे उनमें सोमेटाइजेशन विकार की स्थिति भी आ जाती है। सेना कार्मिकों की पत्नियां उनके पार्ष्व में उनके साथ खड़ी रहने वाले मूवा पद (आइलेंट रैंक) की भांति होती है तथा हमारे देख के सैनिकों का पालन-पोषण करती है। इसलिए, इनका राष्ट्र की सुरक्षा की रक्षा करने वाले एक अदृश्य द्वार के रूप में सम्मान किया जाता है तथा इन पर गौरव किया जाता है। अतः उनकी पत्नियों के लिए यह अत्यंत आवश्यक है कि वह मनोवैज्ञानिक रूप से तथा शारीरिक रूप से पूर्ण रूप से स्वस्थ रहें ताकि वे हमारे सैनिकों को मानसिक भावनात्मक तथा शारीरिक रूप से सहायता व समर्थन प्रदान कर सकें। और सैन्य जीवन का एक अभिन्न अंग होने पर गौरव अनुभव कर सकें। प्रस्तुत लेख में भारतीय सेना कार्मिकों की पत्नियों के मनोवैज्ञानिक स्वास्थ्य एवं शारीरिक स्वास्थ्य की स्थिति पर प्रकाश डाला गया है। इस अध्ययन में विभिन्न रैंकों की पत्नियों के बारे में विश्लेषणात्मक अध्ययन प्रस्तुत किया गया है, चूंकि रैंकों के क्रमानुसार ही भत्ते तथा उपलब्ध होने वाली सुविधाएं निर्धारित होती हैं और इनसे सेना कार्मिकों की पत्नियों का मनोवैज्ञानिक स्वास्थ्य प्रत्यक्ष अथवा अप्रत्यक्ष रूप से प्रभावित होता है। प्रस्तुत अध्ययन सूरतगढ़ सैन्य स्टेशन राजस्थान में 50 जेसीओ. अधिकारियों की पत्नियों तथा 50 कनिष्ठ कमीशन अधिकारियों की पत्नियों तथा 50 ओआर. की पत्नियों सहित कुल 150 उत्तरदाताओं को शामिल करके संचालित किया गया था। मनोवैज्ञानिक स्वास्थ्य स्केल को सिसोदिरल एवं चौधरी द्वारा विकसित किया गया, जिसे उत्तरदाताओं के मनोवैज्ञानिक स्वास्थ्य तथा शारीरिक स्वास्थ्य स्केल (सेना द्वारा जारी स्वास्थ्य रिकार्ड कार्डों की सहायता से स्वयं विकसित करके आकलन किया गया है। आंकड़ों का विश्लेषण करने प्रतिशतता तथा एफ परीक्षण का प्रयोग किया गया था। इसमें यह पाया गया कि सेना कार्मिकों की पत्नियों के मनोवैज्ञानिक स्वास्थ्य में सांख्यिकी रूप से गैर महत्वपूर्ण विभेदक उपस्थित हैं। किन्तु भारतीय सेना कार्मिकों की विभिन्न रैंकों की पत्नियों के शारीरिक स्वास्थ्य में महत्वपूर्ण विभेदकों के बारे में पता लगा था।

प्रमुख शब्द: शारीरिक स्वास्थ्य, मनोवैज्ञानिक स्वास्थ्य, अधिकारियों की पत्नियां, जेसीओ, ओ.आर

Journal Information

The Journal is indexed in Google Scholar. The abstracts of the papers published in the Journal are available on the Institute's website: www.nihfw.org.

**STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS ABOUT
“HEALTH AND POPULATION: PERSPECTIVES AND ISSUES”,
REQUIRED UNDER THE REGISTRATION OF NEWSPAPERS (CENTRAL RULES 8)**

**FORM – IV
(Rule 8)**

- | | | |
|----|--|---|
| 1. | Place of publication | National Institute of Health and Family Welfare, Baba Gang Nath Marg, Munirka,
New Delhi – 110 067 |
| 2. | Periodicity of the Publication | Quarterly |
| 3. | Printer's Name | Prof. Harshad Thakur |
| | Nationality | Indian |
| | Address | Director

National Institute of Health and Family Welfare, Baba Gang Nath Marg, Munirka,
New Delhi – 110 067 |
| 4. | Publisher's Name | Prof. Harshad P. Thakur |
| | Nationality | Indian |
| | Address | Director

National Institute of Health and Family Welfare, Baba Gang Nath Marg, Munirka,
New Delhi – 110 067 |
| 5. | Editor-in-Chief's Name | Prof. Harshad Thakur |
| | Nationality | Indian |
| | Address | Director

National Institute of Health and Family Welfare, Baba Gang Nath Marg, Munirka,
New Delhi – 110 067 |
| 6. | Editor's Name | Prof. S. Vivek Adhish |
| | Nationality | Indian |
| | Address | National Institute of Health and Family Welfare, Baba Gang Nath Marg, Munirka, New Delhi – 110 067 |
| 7. | Name and addresses of individuals who own the newspaper and partners or shareholders holding more than one per cent of the total capital | National Institute of Health and Family Welfare, Baba Gang Nath Marg, Munirka,
New Delhi – 110 067 |

I, Prof. Harshad Thakur, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Sd/
(Prof. Harshad Thakur)

GUIDELINES FOR AUTHORS

Health and Population: Perspectives and Issues (HPPI) is a peer reviewed Journal devoted to publishing papers of scientific and educational interest based on primary or secondary data as well as a review in the areas of Health, Family Welfare, and Population. The scope of the Journal covers original articles on the four dimensions of health-physical, mental, social and spiritual; and also population concerns, health services administration, family planning, demography, social and behavioural sciences, communication, bio-medical sciences in family planning and allied subjects with emphasis on hospital administration and community health management. Manuscripts are critically reviewed by experts in the relevant field. Authors are given the benefit of comments, whenever necessary. Acceptance of the paper for publication is based on the originality of the research work or ideas projected, and clarity of presentation. Published papers represent the opinion of the authors and do not reflect the views or the policy of the Institute. Materials (tables, figures, and content) published in HPPI can be reproduced with due acknowledgment.

How to submit the manuscript: A computer typed MS Word document with 12-point Arial Narrow font in double line spacing on A4 size paper should be submitted to Editor through E-mail editor@nihfw.org by addressing to The Editor- HPPI, The National Institute of Health and Family Welfare, Munirka, New Delhi-110067. The paper must accompany a declaration that it is an original work of the author/s; and has not been published, submitted, or under consideration for publication anywhere else. **The concerned author/s will be responsible for any kind of plagiarism or copyright violation in the published papers.** Any communication from the Editor-HPPI, to the author/s, will be done only through E-mail. The paper should not exceed 5000 words with an abstract of 200-300 words preceding the title and followed by a maximum of 7 keywords. The combined number of Tables, Graphs, Figures, Illustrations, and Charts must not go beyond 10. Tables, Graphs, Figures, Illustrations, Legends, and Charts must not appear at the end of the paper but these should be given at appropriate place amidst the text content in Black colour only.

The first page of the manuscript should contain the title, authors, affiliations, and corresponding author and his/her E-mail address. On the second page, Title, abstract and keywords of the manuscript should be provided. The paper should be precisely written following Vancouver style/format. The flow of the paper to be read as follows: Title, Abstract, Keywords, Introduction, Materials and Methods, Results, Discussion, Conclusion and Recommendations and at the end References. The title of the paper should be short and clear. Please ensure the figures and the tables included in the single file are placed next to the relevant text in the manuscript. The corresponding caption should be placed directly below the figure or above the Table. Each table should be referred to as e.g. Table 2 using an Arabic number. Figures and Tables must be appropriately cited in the text.

References: All the references should be cited in superscript in a numerical consecutive order in the text. The reference list should also be arranged in the same order. References not reflected in the text, must not be included in the list of references and vice-versa.

Example of References

Journal Article

1. Halpen SD, Ubel PA, Caplan AL. Solid-organ transplantation in HIV-infected patients. *N Engl J Med*. 2002 Jul 25;374(4):284-287

Journal article with more than 6 authors

2. Kawamura R, Miyazaki M, Shimizu K, Matsumoto Y, Silberberg YR, Ramachandra Rao S, et al. A new cell separation method based on Antibody-immobilized nanoneedle arrays for the detection of intracellular markers, *Nano Lett*. 2017 Nov 8;17(11):7117-7124

Book/Monograph Entry

3. Carlson BM. Human embryology and developmental biology. 3rd ed. St. Louis: Mosby; 2004.

Chapter in a Book

4. Yadav A, Sharma KKN. Awareness of reproductive and child health care programme among Rajgonds tribe of Sagar district, Madhya Pradesh. In: Sharma K.K.N., editor. Reproductive and child health problem in India. New Delhi: Academic Excellence; 2005, pp. 592-597.

Electronic material

5. World Health Organization (WHO). Mortality country fact sheet 2006 [internet]. Geneva: WHO; 2006. Available from: www.who.int/whosis/mort_emro_pak_pakistan.pdf (Accessed 27 August 2018)

Reports

6. Reddy, K, Srinath, and Gupta, Prakash C (ed). Tobacco Control in India. Ministry of Health and Family Welfare, Government of India, Centre for Disease Control and Prevention, USA and World Health Organization. Report, 2004.

THE NATIONAL INSTITUTE OF HEALTH AND FAMILY WELFARE

The National Institute of Health and Family Welfare (NIHFW) an autonomous organization, under the Ministry of health and Family Welfare, Government of India, acts as an 'apex technical institute' as well as 'think tank' for the promotion of Health and Family Welfare programmes in the country. The NIHFW is known for its Education, Training, Research, and Specialized advisory services.

Educational activities: The educational activities of the Institute contribute to Human resource development for better management of health and family welfare programmes in the country. The on campus courses are: Three-year Post-graduate Degree in Community Health Administration, a two-year Post-Graduate Diploma in health Administration, and a one year Post-Graduate Diploma in learning mode of one year duration each. These are: Health and Family Welfare management, Hospital management, health Promotion, health Communication, Public Health Nutrition and Applied Epidemiology. These courses are need based and multidisciplinary in nature. The Institute has also developed certificate courses through e-learning mode for enhancing the skills and competencies of in-service middle level health professionals in the areas of 'Professional Development in Public health and Health Sector Reforms' for Medical Officers, and "Programme Management for Public Health care for the Programme Managers working in national health Mission or in the health sector.

Training and Workshops: The training courses and workshops (intramural and extramural), numbering around 45-50 are organized by the Institute every year with an aim to familiarize the participants with the goals and the objectives of health and family welfare programmes; updating their knowledge and understanding of operational difficulties in implementation and suggesting remedial measures to overcome such constraints.

Research and Evaluation: The Institute gives priority attention to research in various aspects of health and family welfare. The Institute has an Academic Committee and a high level Programme Advisory Committee for ensuring the quality in academic endeavours. The Institute also conducts evaluation studies of National Health Programmes and various other related activities initiated by the Government of India.

Specialized Services: Specialized services of the Institute include Clinical services, National Cold Chain and Vaccine Resource management Centre (NCCVMRC), Centre for Health Informatics, Skill Lab, National Documentation Centre and publications. The ministry of health and Family Welfare (MoHFW) has entrusted the Institute to act as a "National Nodal Agency" to organize, coordinate and monitor the training programmes of Reproductive and Child health (RCH) in the country. The main objective of the Clinic is to render Mother and Child Health services. The clinical work in relation to infertility, reproductive disorders, especially endocrinology and sexual dysfunctions deserve special mention. NIHFW in partnership with UNICEF through the National Cold Chain Management Information System, is responsible for the overall maintenance, implantation and monitoring of NCCMIS across the country including providing support to the end users. The reference, referral, press clipping and bibliographic services of the National Documentation Centre; and the publication, art and projection services of the Department of Communication compliment the activities of the Institute.

Advisory and Consultancy Services: The Director and faculty members of the Institute provide advisory and consultancy services to various national, international and voluntary organizations in various capacities.

PRINTED AND PUBLISHED BY THE DIRECTOR,
The National Institute of Health and Family Welfare, Munirka, New Delhi-110067
Website: www.nihfw.org