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MATERNAL AND CHILD HEALTH SERVICES: ROLE OF MULTIPURPOSE FEMALE HEALTH WORKERS : A STUDY IN CHITTOOR DISTRICT OF ANDHRA PRADESH

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ABSTRACT:

Universal Health Coverage is one of the most powerful equalizers among all policy options. To materialize this qualified and motivated human resources are essential to provide adequate health services. Multipurpose Female Health Workers are regarded as the first contact persons between people and organizations, between needs and services and between consumers and providers. Their services are considered essential to provide safe and effective care and as a vital resource to achieve the health-related targets (Malik, G. 2009). Multipurpose Health Workers are the key functionaries in Sub Centers. The Sub Center is the peripheral outpost of the existing health delivery system in rural areas. The functions of Sub Centers and work performance of Multipurpose Female Health Workers are inseparable for delivery of Primary Health Care services among rural population.



KEYWORDS: Motivated Human Resources, Performance, Stressors, Maternal and Child , Health Services, Multi Purpose Female Health Workers.

INTRODUCTION

Multipurpose Female Health Worker should cover a population of 5,000 (3,000 in tribal and hilly areas) which includes 350-550 families providing services on Maternal Child Health such as Antenatal care, Intra Natal care, Postnatal care and Child care, Immunization, etc. One trained Dai- for each village; one Accredited Social Health Activist for every 1000 population will work in the supervision of a Multipurpose Female Health Worker. Job description of a Multipurpose Female Health

Worker is mainly categorized as maternal services, child health services, family planning services, immunization, record keeping, health education and team activities which are specific to the Maternal Child Health services. Pregnancy requires specialized care, generally agreed to be a preventive activity. Therefore the concept of **Healthy Mother** and **Healthy Baby** is an important aspect of Maternal and Child Health. (Park, 2019) Maternal and Child Health Services (MCH) are the promotive, preventive, curative and rehabilitative health care directed to mothers and children. It

includes the sub areas of Maternal Health, Family planning, School health, Handicapped children, Adolescence and Children in special settings such as Day care. The objectives of MCH includes reduction of maternal, prenatal, infant and childhood mortality, morbidity and promotion of reproductive health, promotion of physical and psychological development of the child and adolescents within the family. The ultimate objective of Maternal and Child Health Services is providing lifelong health services. From time to time, Government of India has suggested MCH goals with quantifiable time bound

targets for achievement. The Government of India launched 'Reproductive and Child Health (RCH) Programme-I and II, to reduce Maternal and Infant Mortality Rates, additional Auxiliary Nurse Midwife (ANM) services were also provided to Sub Centers to ensure better coverage.

On 5th April 2005, the Government of India launched National Rural Health Mission (NRHM), aiming to provide primary health care and bridging the gap in rural health care through creation of a new cadre called ASHA (Accredited Social Health Activist) to strengthen Sub Centers and Primary Health Centers.

The programs like "**Janani Surksha Yozana**" (JSY) and "**Janani Shishu Suraksha Karyakram**" (JSSK) increase institutional deliveries and reduced Maternal and Neonatal Mortality rates.

Over the past 15 years Millennium Development Goals (MDGs) have provided a set of goals and targets to monitor the progress towards health. After MDGs, a new set of 17 Inclusive and Universal Sustainable Developmental Goals (SDGs) have been adopted by the United Nations General Assembly in September 2015, among which four are directly related to Maternal and Child Health Services. They are Maternal Mortality, Infant Mortality, Deliveries conducted by Skilled Birth Attendants and Prevention of Malnutrition.

As per SDGs, targets to be achieved by 2030 are:

- To reduce Maternal Mortality Rate to less than 70/1,00,000 live births from the current status of 216 globally and 130 in India.
- To decrease Neonatal Mortality to as low as 12/1000 live births from the current rate of 18.6 globally and 25.4 in India.
- To end preventable deaths among under five children to 25/1000 live births from the current status of 40.8 globally and 47.7 in India.
- To ensure full coverage of birth attendants by skilled personnel from the current status of 73% globally and 81.4% in India.
- To ensure full immunization of children below 5 years of age.
- To eliminate all forms of malnutrition by focusing on stunting of growth and wasting of muscle among children, from present status of 48% of stunted growth, 42.5% of underweight and 19.8% of children with muscle wasting in India.
- To ensure universal access to Sexual and Reproductive Health Care Services which indicates to incorporate all the women in reproductive age between 15-49 years who need family planning.

In order to achieve the SDGs, Government of India launched **Pradhana Manthri Mathruthva Yozana (2017)** and **Pradhana Manthri Suraksha Mathruthva Abhiyan (2016)** with cash incentives for Antenatal Registration, Antenatal Checkups and for Immunization. According to the recent concept "**each one - catch one**", every Female Health Worker must tag one high risk pregnant mother and maintain safe delivery calendar. Every Health Worker supposed to upload all information in the "**App**" called "**ANM - digi**", in order to maintain proper Health Management Information System.

In Chittoor District Infant Mortality Rate (IMR) was 9.4 for 1000 live births as per District Survey Health Report (2017) and the Maternal Mortality Rate (MMR) was 79 for 1,00,000 live births as per District Survey Health Report (2017).

CURRENT STATUS OF MULTIPURPOSE FEMALE HEALTH WORKER

According to sustainable development indicators, health worker density and distribution is 25/10,000 population globally and it is 24.1/10,000 population in India. There is large disparity between urban (Doctors, 9.1 and Nurses 7.2 for 10,000 population) and rural areas (Doctors 0.8 and Nurses 1.3 for 10,000 population). Rural population relied more on a Nurse or Midwife for Primary Health Care.

As per global strategy and human resources for health work force, 43.5 million Health Workers, 20.7 million Nurses and Midwives were required globally by 2030 [WHO]. Nurses and Midwives

represent more than 50% of current short fall that is 9 million out of 17.4 millions. As per National Health Profile (2018), available trained Multipurpose Health Workers serving in India were 8,41,279 as on December 2016. In Andhra Pradesh total available Health Workers were 1,38,435.

As per Rural Health Statistics Bulletin of 31st March 2017 A.P is one of the top five states in terms of number of Female Health Workers. 12,073 Female Health Workers have been working in Sub Centers of Andhra Pradesh Though 1,362 Multipurpose Female Health Worker posts exist in Chittoor district, 470 are on regular basis, 675 are on contract basis and 217 posts are vacant. In 2005 NRHM made provision of two ANMs (one permanent and one contractual) for each sub centre against one ANM for each before NRHM.

The government has changed the curriculum of Multipurpose Female Health Workers training and extended the duration of Diploma programme from 18 months to 2 years, raising the admission criteria from 10th class to Intermediate from 2017-2018 academic year.

NEED AND SIGNIFICANCE OF THE STUDY

Every minute of every day, somewhere in the world, a woman dies because of complications arising during pregnancy and childbirth. The majority of these deaths are avoidable by accessing quality Maternal Health Services. Developing Countries account for ninety nine percent (99%) of global maternal deaths, of which sixteen percent (16%) occur in India. Forty five thousand women die in India every year due to maternal complications. Therefore the role of Nurses and Midwives is critical in the delivery of essential health services and are core in strengthening the health system. With initiative of White Ribbon Alliance of India (WRAI) the Government has rightly selected the theme for the year 2019 on the occasion of "Safe Motherhood Day" (April 11th) as "Midwives for Mothers", which clearly shows the importance of Midwives and Health workers in Maternal and Child care services.

The primary providers of health care are Health Workers through Sub Centers. While Government has under taken multiple initiatives to address the concern for service delivery and access to health care, there are still substantial gaps to be addressed for better health care access and its equity based distribution.

There are evidential gaps in the country and impeded informed action in Maternal, Newborn, Child Health and Nutrition themes to develop a National Research Agenda which should identify the areas for innovation and strategies to improve deliverability, efficiency, scalability and sustainability of existing interventions (Arora, 2017).

The current role played by Multipurpose Female Health Worker in providing health-care services to the community is vital and needs to be analyzed (Narayanaswamy, 2018). Hence the present study has been taken up on "MCH Services: Role of Multipurpose Female Health Workers" to study their profiles, levels of performance in Maternal and Child Health Services and also to find out the association between their profiles and performance.

OBJECTIVES

- To study the demographic, socio economic characteristics of multipurpose female health workers in Chittoor district.
- To find out the association between selected demographic variables of multipurpose female health workers with their level of performance in maternal and child health services.
- To analyze the extent of activities performed in maternal services, child health services, health education, sub center management and record maintenance by the multipurpose female health workers in the study area.
- To identify the stressors perceived by multipurpose female health workers and to find out the association between perceived stressors and their level of performance.

HYPOTHESES

1. There are higher levels of performance in over all activities of multipurpose female health workers in relation to maternal and child health services.

2. Demographic and socio economic variables would influence the performance of multipurpose female health workers.
3. There is significant association between perceived stressors and performed level of activities related to maternal and child health services by multipurpose female health workers.

RESEARCH METHODOLOGY

Descriptive survey design was used for the present study as intends to measure, analyze and interpret the facts as oral responses regarding performed activities of maternal and child health services. Chittoor district was purposively selected as a good number of i.e. 1145 multipurpose female health workers have been working in 638 sub centers of this district. Health care in rural areas of Chittoor district is delivered by 20 community health nodal centers and 94 primary health centers and 638 sub centers. Each sub center is equipped with two multipurpose female health workers who are mostly contract employees. Therefore a total of 1145 multipurpose female health workers, working in sub centers of Chittoor district were the population of this study. Stratified random sampling technique is used for the present study. The respondents of the study are multipurpose female health workers working in sub centers under three revenue divisions of Chittoor district namely Madanapalli division, Chittoor division, and Tirupati division. One third of the sub centers were selected from each division by using simple random sampling technique. Out of 638 sub centers 212 sub centers were selected for data collection. 98 sub centers out of 295 sub centers from Madanapalli division, 73 sub centers out of 220 sub centers from Chittoor division and 41 sub centers out of 123 sub centers from Tirupati division were selected from source list by adopting lottery method. Hence the total sub centers under the study were 212. The data was collected from one multipurpose female health worker from each sub center. Thus the total respondents were 212 multipurpose female health workers.

TOOLS AND TECHNIQUES

A semi structured interview schedule was constructed to collect the data of demographic, socio cultural profile of respondents, activities performed in relation to maternal and child health services and data related to stressors perceived by the health workers in their role performance. Observation check list was used to collect data on sub center facilities and data related to record maintenance. Personal interview technique was used to collect the data for major part of semi structured interview schedule. Data related to sub center facilities and records were collected through direct observation on the day of data collection.

PILOT STUDY

A small scale preliminary study was conducted before the main research in order to check the feasibility and the reliability of the tool in 2016 June.

VALIDITY: Content validity of the semi structured interview schedule was done by submitting the tool to 10 subject experts in the fields of medical, nursing and statistics to find out the completeness of the tool.

RELIABILITY: 30 multipurpose female health workers were selected at the rate of 10 from each revenue division Chittoor, Tirupati and Madanapalli. Data was statistically tested for reliability with Cronbach Alpha reliability test. The obtained reliability co efficient was 0.8781. Hence the tool was found statistically reliable for collection of data.

DATA COLLECTION PROCEDURE

After obtaining formal permission from authorities of Health Department of Chittoor District, the researcher personally conducted the interview of female health workers to collect the data with the help of semi structured interview schedule by visiting the selected sub Centers during May 2016 and May 2017. Sub centers were personally visited in order to check the facilities through observation check list. The data collected for pilot study was not included in the main study.

DATA ANALYSIS

Data was edited, manually coded and entered in master sheet of SPSS 20.0 version. Descriptive statistics like mean, frequency and percentages were used to describe the performed activities of health workers and depicted in one way and two way tables. Inferential statistics like Chi-square, t-test, Pearson Correlation tests were used to find out the significance of association between the variables.

FINDINGS OF THE STUDY

- Majority of respondents i.e. 98% belong to Madanapalli division as more number of sub centers is in Madanapalli division.
- Out of 212 samples only 46.2% fall in the age group of 30 to 40 years. Majority 69% belongs to Hindu religion.
- In relation to educational qualification 51.40% have passed Intermediate and technical qualification, 61.3% have undergone Multi Purpose Female Health Workers training.
- 85.40% were married, 52.40% have followed small family norm with two children, and 79.70% have expressed that husband as their social support.
- 60.80% belong to nuclear family and 53.30% reside in own houses.
- In relation to occupation of the spouse, 55.20% were working on daily wages.
- Income of the family has an equal distribution between < 50,000 to 1,00,000 per month.
- Half of the Health Workers i.e. 50% fall in pay scale category of below Rs.20,000.
- Regarding type of service 32.50% were permanent employees, 67.50% were working on contract basis.
- In relation to experience 75% were having <10 years of experience and remaining 25% were having >10 years.

KEY FINDINGS RELATED TO MATERNAL HEALTH SERVICES

Maternal health services performed by Health Workers were analyzed in the areas of Ante Natal Care, Intra Natal Care, Post Natal Care and Contraception, described in terms of mean values.

- In the area of Antenatal services it was found that for treatment of minor ailments mean distribution was highest i.e. 231, mean distribution for antenatal registration was 126, investigation such as Hb% was 118, and Urine test was 111. Low mean value 18.42 was found in the performance level for identification of high risk cases by health workers and Comprehensive Abortion Care was 7.55.
- Intra Natal Care was satisfactory as mean value of Institutional deliveries in the Government Hospitals was 59.49, Private Nursing Homes was 25.52. Mean outcome of deliveries as live births was 71.70, a still birth was 2.47 and Low Births Weights was 6.71. The mean value for home deliveries conducted by Trained Birth Attendants was as low as 6.86.
- Moderate level of performance was found in postnatal services. There was highest mean value of 73.65 for postnatal visits and mean value for breast feeding initiation within one hour after delivery was 75. Low mean value was found for post-natal complications like unhealed episiotomy wound as 13.98, breast abscess was 1.72 and utilization of Talli Bidda Express was 12.92.
- In the area of Contraception highest mean 153.69 was found for eligible couple acceptors. Mean distribution of JSY beneficiaries was 59.92. Lowest Mean value 3.21 was found in unmet need for spacing contraceptives. Mean responses related to male sterilization was 6.16, which was low compared to female sterilization mean value of 29.37.

KEY FINDINGS OF CHILD HEALTH SERVICES

- Mean performance in Child Health Services shows that Integrated Child Development Scheme beneficiaries were 50.46, growth charts maintenance was 53.24, immunization coverage was 37.95, vitamin A prophylaxis and school health program was 39.10. Vaccine reaction was 3.86, artificial

feedings was 1.03, failure to gain weight was 0.31, dropouts of immunization were 3.03 and child marriages were 6.60.

KEY FINDINGS OF SUB CENTER MANAGEMENT:

- The findings on availability of Sub Center facilities like, ANM Action Plan, Sub Center Map, Vaccine Carrier, Blood Pressure Monitoring apparatus got high range of 99% availability. Only 42.90% of the Sub Centers had 24 hour water, 54.70% of Sub Centers had electrical supply, 53.77% of the Sub Centers were having moderate facilities, 31.60% were having minimum facilities and only 14.63% Sub Centers were having adequate facilities. Overall performance in record keeping was high i.e. above 90% in all the sample centers.

KEY FINDINGS OF INFORMATION AND HEALTH EDUCATION

- Health education given by health workers on the aspects of antenatal, post natal exercises were 72.20%, information on nutritional supplementation and weaning for children were 71.20%, advices on high risk pregnancies were 39.20% and advices on respiratory tract infections among children were 53.80%.

KEY FINDINGS OF PERCEIVED STRESSORS

- Stressors perceived by Female Health Workers were analyzed with item analysis and described in percentages. On job training and continuing educational programmes were 86.30%, lack of Co-operation among Co-Workers were 85.40%, heavy workload was 84.90%, Job insecurity was 83.50%, utilization of funds were 79.20%, accountability for monitory benefits of government was 76.40%; These were ranked as high stressors.
- One fourth i.e. 25.90% of Female Health Workers had low perception of stressors, 26.40% had high perception of stressors and 47.60% had moderate perception of stressors.

KEY FINDINGS OF ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND PERFORMANCE OF SERVICES

- Association between selected demographic variables like Age, technical qualifications, type of services, pay scale and income were significant at 0.01 level with performed Maternal Health Services by Health Workers.
- Association between variables like years of experience and type of services were significant at 0.01 level with performed Child Health Services by Health Workers.
- Association between variables like technical qualification, type of service, type of transport facilities was significant at 0.05 level with perceived stressors of Health Workers. Income of the family was significant at 0.01 level with perceived stressors.

CONCLUSION

- The study findings revealed that the overall performance of the Female Health Workers in ANC, INC, PNC , Contraceptive services and Child Health Services were moderate.
- Health Workers performance in giving health education was moderate. A strong correlation was found between perceived stressors and performance in the area of information and education. Health workers perceived stress to update with current information related to Maternal and Child Health Services which has to be communicated to the beneficiaries from time to time as per the changing Government schemes and programmes.
- Only 14.63% of Sub Centers had high facilities, 53.77% had adequate facilities and 31.60% had low facilities. A strong correlation between Maternal Health Services and Sub Center facilities were significant at 0.01 level, which concludes performance of Female Health Workers in Maternal Health Services was influenced by Sub Center facilities. Hence there is a need for improvement of Sub Center facilities.

- Performance level in record maintenance was high above 90% among majority of the items analysed.
- Based on study findings it was concluded that technical qualifications, type of services and pay scale had significant influence on performance of health workers. The qualification and knowledge of health workers need to be improved from time to time with continuous educational programmes, skilled training programmes especially in midwifery practices and risk assessment of mothers and children. The services of Multi Purpose Female Health Workers who were working on contract basis need to be regularized in order to achieve high performance from moderate performance in Chittoor District.
- Overall performance of Female Health Workers in Chittoor District in relation to Maternal and Child Health Services was moderate and it was influenced by socio demographic profile of the workers, availability of Sub Center facilities and perceived stressors. The primary role of Female Health Workers in MCH services was Skilled Birth Attendant. This primary role of conducting deliveries is very limited, as majority of deliveries are conducted at Government Hospitals or Nursing Homes, but not at Sub Center level. Now it is the time for readdressing and bringing back Female Health Workers role as Midwifery Practitioner by increasing their performance in Maternal Services. There is a need for shifting the role from **Multi Task Role** to **Midwifery Practitioner Role**, in order to increase the number of deliveries at Sub Centre level. Moderate performance could reach to high performance and these work forces could contribute in attaining global goals of achieving the Sustainable Development Goals. Strengthening the Sub Centers, conducting planned in service training programmes, improving working conditions and regularizing the services of contract workers can make a difference to achieve Universal Health Coverage through health workers in relation to Maternal and Child Health services.

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