

STATUS OF WOMEN AND VALUE OF CHILDREN IN KURNOOL: ANDHRA PRADESH

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ABSTRACT

This study determines the influence of value of children change in roles of women in slum areas of Kurnool, Andhra Pradesh. The study reveals that most of the respondents are in favour of inter-caste marriage to their daughters. Family planning adoption is found to be more among those who have modern outlook and have positive attitude towards changes in day-to-day roles of women. The adoption of family planning will be more among the slum areas where the value of son is least

The status of women in any society is the index of the standard of its social organisation. It is a multi-dimensional concept referring to women's access to and control over valued material and social resources. Recent studies revealed that low status of women is one of the major causes for rapid population growth in developing countries like India. The fertility performance of a woman is greatly determined by the social status that she enjoys in the society by virtue of her educational, economical and occupational position and freedom in decisionmaking. Another important factor favouring large family size in India is the highest value for son. Many of the Indian couples feel to have at least one son to satisfy certain social, cultural and economic obligations. Thus, the lower status of women and high value for son are thought to be the major reasons for high fertility in India.

Hence, in the present study an attempt is made to assess the level of status of women and value of children by seeking relevant information from the respondents. Since the level of status of women and value of children are based on multiple factors, separate indices have been developed to study their impact on family planning behaviour.

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OBJECTIVE

The main objective of this study is to determine the influence of value of children and change in day-to-day roles of women.

METHODOLOGY

The present study is carried out in slum areas of Kurnool, the district headquarter. Five slum localities have been selected following random sampling* technique, namely; Sanjeev Nagar, L.B. Nagar, Saibaba Nagar, Nagappa Street and S.S. Nagar. From the selected slum areas, 300 currently married couples who have at least one child were further selected to know the impact of value of children and change in the roles of women regarding contraceptives. Husbands were the respondents for the study. Adopters include both husband and wife.

RESULTS AND DISCUSSION

Perceived Status of Women

The status of women is indirectly assessed in the present study based on the perception of husband on related aspects. For this purpose, the respondents were asked to express their opinion in regard to: (a) inter-caste marriage of their daughters; (b) political freedom to women; (c) freedom in decision-making; (d) education of women; and (e) changes in day-to-day roles of women. It is assumed that the status of women will be high, if their husbands perceive modern roles for women and vice-versa. The opinion regarding inter-caste marriage and political freedom were separately presented and the remaining aspects were covered in the index on roles of women.

Traditionally in India, marriage is possible within the framework of the caste only. Today, the attitude of men and women towards inter-caste marriage has changed due to improvement in education and level of modernisation. In the sample nearly three-fifths of respondents (59 per cent) stated that they approve of their daughter going for inter-caste marriage. The remaining 41 per cent have disapproved it .Thus, majority of the respondents were in favour of inter-caste marriage to their daughters, which may be due to the impact of urban residence and modernisation (Table 1)

Attitude Towards Political Freedom to Spouse

In order to ascertain the attitude of the respondents regarding freedom to their wives in casting their votes in the elections, they were asked; what do you do, if your wife casts her vote to a party when you don't like and the response is as given in Table 2.

TABLE 1
OPINION OF THE RESPONDENTS REGARDING INTER-CASTE MARRIAGE OF THEIR DAUGHTERS

Agree	Number of Respondents	Per cent
Yes	178	59.3
No	122	40.7
Total	300	100.0

TABLE 2
OPINION OF THE RESPONDENTS WHEN THEIR WIVES CASTE THEIR VOTES AGAINST THEIR WISH IN ELECTIONS

Opinion	No. of Respondents	Per cent
Wife has freedom to vote as she like	105	35.0
Quarrel with wife	52	17.3
Feeling sad	92	30.7
Try to educate the wife	51	17.0
Total	300	100.0

There is a significant difference in opinion expressed by the respondents in this regard. More than one-third of the sample (35 per cent) felt that their women have freedom to vote as they like, and around 30 per cent expressed 'sad feeling because of political differences between husband and wife. It is interesting to note that, around 17 per cent of the sample respondents were not allowing their wives to caste vote as they like. The remaining of the respondents have expressed that the women lack complete freedom to caste their votes according to their wish which indicate the lower political status of women.

Index on Role of Women

In the present study an attempt is made to indirectly estimate the status of women by analysing the role of women as perceived by their husbands. If the husbands perceive modern roles, it indicates high status for women. The index on the opinion of the husbands regarding roles of women is developed including

issues like: (a) girls going for higher/professional education; (b) working of women in the offices along with men; (c) remarriage of young widows; (d) consultation with wife in taking important decisions; (e) active participation of women in political activities; (f) equal property rights for females along with males; (g) reservation of 30 per cent of seats for women in employment and political fields; (h) postponement of marriage of women upto 20 years and above; (i) women going alone for shopping/film/women's clubs; and (i) husband helping wife in household work.

All the positive responses were given the highest score of 'three' the intermediary 'two' and negative responses the least score of 'one'. Thus, the range of scores will be in between '10 and 30'. Based on the cumulative scores, the respondents were divided into three groups, (*viz.*) to those having a modern perception of roles (24 to 30), moderately modern perception (17-24), and traditional perception (10-16). This aspect was correlated with the contraceptive behaviour of the sample population to ascertain its influence on family planning adoption.

Significant difference in adoption of family planning methods exists, according, to the difference in opinion of the respondents regarding 'roles of women'. The adoption of family planning is the highest (70%) among those who perceive modern roles for women, followed by 68 per cent with modern out look, as against only 45 per cent of those perceiving traditional roles for women. Thus, the family planning adoption is found to be more among those who have modern out look and have positive attitude towards changes in day-to-day roles of women (Table 3)

TABLE 3
INDEX ON ROLE OF WOMEN AND ADOPTION OF FAMILY PLANNING METHODS

Perception regarding roles of women	Adopters	Non-adopters	Total
Traditional	44.5 (49)	55.5 (61)	100.0 (110)
Moderately modern	68.9 (60)	31.1 (27)	100.0 (87)
Modern perception	70.9 (73)	29.1 (30)	100.0 (103)
Total	60.67 (182)	39.33 (118)	100.0 (300)

$\chi^2 = 19.636$. Significant at 4% level.

Index on Value of Children

The extent of value of children and preference for son depend upon various factors. The extent of value of children in the study area is presented by developing an index based on (a) extent of desire to have at least one son; (b) continue to produce children until to get a son; (c) favouritism towards 'son' in providing basic necessities; (d) expected old age security from children; (e) opinion on children's help to parents in old age; and (f) opinion regarding control of family size, if Government provides old age security. Accepting with the above statements was given the highest score - (3); disagree the least score - (1), and the intermediary score - (2) for those who were uncertain. Thus, the range of scores will be in between 6 and 18. Based on the scores, the respondents are categorized into three groups namely respondents with high value for children (scorer 15 and above), moderate value for children (11 to 14) and least value for children (6-10). This has been correlated with the family planning behaviour of the respondents to ascertain relationship between the two.

From the analysis, it is evident that the number of adopters and non-adopters differ significantly in relation to the value of children. The adoption of family planning methods is the highest among those who expressed least and moderate value for sons (63% and 67% respectively) as against only 49.5 per cent who expressed the highest value for son. thus, the adoption of family planning will be more among the societies where the value for son is least (Table 4).

TABLE 4
INDEX ON VALUE OF CHILDREN AND FAMILY PLANNING BEHAVIOUR

Value of son	Adopters	Non-adopters	Total
Least value	63.0 (41)	370 (24)	21.7 (65)
Moderate value	67.2 (94)	328 (46)	46.6 (140)
Highest value	49.5 (47)	59.5 (48)	31.7 (95)
Total	60.67 (182)	39.33 (118)	100.0 (300)

$\chi^2 = 8.033$. Significant at 4% level

Benefits of Having Children

The theories of fertility suggest that people want to have children because

they contribute to the family in many ways, both economically and socially. There may be many strong reasons behind the wish to produce the desired number of children. In order to know this aspect, the respondents were asked to express the benefits of having children (Table 5)

TABLE 5
BENEFITS OF HAVING CHILDREN AS PERCEIVED BY THE RESPONDENTS

Benefits of children	Number of Respondents	Per cent
Old age security	99	33.0
Help in household	63	21.00
Respect/prestige in the society	57	19.00
Help in farm/business	36	12.00
Inheritance of property	30	10.00
Companionship	15	05.00
Total	300	100.0

Around one-third of the respondents have reported that 'old age security' was the major motive for wanting for children. Slightly more than one-fifth (21 per cent) of the respondents expected help from children to carry out household work. Around 19 per cent felt that respect or prestige in the society was the major motive for having children. About 12 per cent of the sample expected help from children to do their farm work/business. It is interesting to note that only a negligible proportion of the respondents opined that children are needed to get companionship.

Dislike for Female Children

It is a general phenomenon in India, that sons are preferred more as compared to girls, in provision of basic needs of life. The respondents were probed to express the response for dislike and discrimination of girls (Table 6).

Regarding the reasons for dislike of female children the majority of the respondents (32 per cent) have expressed 'increasing marriage cost' followed by 'dowry' (27 per cent). The other reasons expressed were not useful in 'economic activity' (26 per cent) and lack of security (13 per cent).

TABLE 6
REASONS FOR DISLIKING OF FEMALE CHILDREN

Reasons	Number of Respondents	Per cent
Increasing marriage cost	98	32.7
Dowry	82	27.3
Not useful in economic activity	79	26.3
Lack of security	41	13.7
Total	300	100.0

Reasons to Have at Least One Son

Generally parents think that the birth of a male child will enhance the prestige and economic position of the family .There may be many other reasons behind the strong desire to have at least one male child and an attempt has been made in this study to identify them (Table 7).

TABLE 7
REASONS TO HAVE AT LEAST ONE MALE CHILD

Reasons	Yes	No	Total
To perform death rituals	93.0 (279)	7.0 (21)	100.0 (300)
To inherit family property	90.0 (270)	10.0 (30)	100.0 (300)
For extension of family social relations	67.7 (203)	32.3 (97)	100.0 (300)
For security in old age	67.0 (201)	33.0 (99)	100.0 (300)
To get status in society	52.3 (157)	47.7 (143)	100.0 (300)
To get dowry	45.0 (135)	55.0 (165)	100.0 (300)

The major reasons to have at least one male child as given by most of the

respondents are to perform death rituals (93 per cent) followed by to inherit family property (90 per cent). All these show that in the study area also, the degree of son preference was at a higher level.

CONCLUSION

Family planning adoption is found to be more among those, who have modern out look and have positive attitude towards changes in day-to-day roles of women. The adoption of family planning will be more among the societies where the value for son is least. Thus, the husband's attitude towards roles and status of women and value for son are proved to have considerable influence on the family planning behaviour of the people.

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प्रस्तुत अध्ययन आन्ध्र प्रदेश राज्य के करनूल के स्लम क्षेत्रों के बच्चों के महत्व और महिलाओं की भूमिका में होने वाले परिवर्तनों के प्रभावों का आंकलन करने के लिए किया गया था। अध्ययन से पता चलता है कि अधिकांश उत्तरदाता अपनी लड़कियों के लिए अन्तरजातीय विवाह के पक्ष में थे। आधुनिक विचारधारा वाले तथा महिलाओं की दिन-प्रतिदिन की भूमिका में होने वाले परिवर्तन के बारे में सकारात्मक दृष्टिकोण रखने वाले अधिकतर व्यक्तियों द्वारा ही परिवार नियोजन को अपनाया गया था। जहां पुत्र को अधिक महत्व नहीं दिया जाता उन स्लम क्षेत्रों में परिवार नियोजन को अपनाया जाएगा।

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**A STUDY OF HEALTH CARE PROVIDERS AND
THEIR FUNCTIONING IN A RURAL AREA OF HARYANA**

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ABSTRACT

This study attempts to identify the tasks and training needs of the existing categories of health care providers in a rural area in order to involve them in the ongoing national health and family welfare programmes. The knowledge and skills of health care providers were found to be deficient in certain tasks like proper method of antenatal check-up, referral of high risk pregnancy and obstetrical emergencies management of diarrhoea and dehydration, diagnosis of ARI on the basis of rate of respiration and management of pneumonia; drug regimens for management of tuberculosis, diagnosis and treatment of leprosy screening factors and side-effects of oral pills and IUD and indications for MTP.

India is a signatory to the Alma Ata declaration of 1978 and committed to ensure a level of health that enables them to participate actively in the social and economic life of the community in which they live. To attain this objective, the existing health care delivery systems must be redirected to achieve equitable reallocation of resources for health, i.e. total coverage, increased accessibility to primary health care services, effective referral system and community participation.

The present study was carried out to identify the existing health care providers in the government as well as in non-government sectors in a rural area under a PHC and assess their knowledge and skills in various tasks performed by them so as to involve them in the national health and family welfare programmes.

MATERIALS AND METHOD

The present study was undertaken in a rural area in Gurgaon district in the State of Haryana. Out of twenty five PHCs functioning in Gurgaon district, PHC

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Bhangrola in Farukkh Nagar Community Development Block was selected for the present study. Under PHC Bhangrola, there are six sub-centres, catering to twenty-two villages. Out of these, three villages were selected for the present study, the PHC village (Bhangrola), a sub-centre village (Wazirpur) and a remote village (Tatarpur). Purposive selection of village Wazirpur was done as this village has a Government Ayurvedic Dispensary in addition to the sub-centre. Village Tatarpur was selected as it is the farthest village from PHC and has no government health care facility within the village.

In the villages under study, all those individuals providing health care were identified from retrospective study of the sub-centre register containing the village information and also with the help of male and female health workers of the PHC, panchayat members, mahila swasthya sangh members, private practitioners and the villagers.

Forty-six health care providers were identified, including fifteen from government sector and thirty-one from non-government sector. They were interviewed with the help of semi-structured interview schedules and direct non-participant observation of these providers while performing the tasks was also done using a checklist to assess their skills. The checklists were made up largely of lists of tasks that the providers were expected to carry out in clinical assessment, treatment and health education. After service delivery, exit interview with the clients was also conducted to assess the provider's performance from the patient's or client's perspective. Record study of the various registers in the PHC and its sub-centres was undertaken to assess the skills of health care providers in ensuring adequate service coverage and maintenance of records. Data so collected were manually processed and analysed to identify the tasks and the training needs of these health care providers so as to involve them in the national health and family welfare programmes.

FINDINGS

Medical Officers PHC

Medical officers in the PHC were providing only the outpatient services, their average daily attendance being twenty. There was gross under registration of antenatal mothers (52%) and infants (63%) for antenatal and immunization services but registration of eligible couples was adequate (100%) for family planning services. There was no organised referral system in the PHC.

Both the medical officers were aware of the need for early registration, frequency of antenatal visits, five or more high risk factors during pregnancy, normal blood loss after delivery and a few important symptoms of postpartum

sepsis. However, male medical officers did not know the symptoms and signs of rupture uterus, precautions to be observed while referring a patient with an obstetrical emergency, management of low birth weight (LBW) babies and criteria for their referral.

Though they had knowledge of diarrhoea and various signs of dehydration and symptoms of acute respiratory infection; they had no knowledge about the management of diarrhoea, the diagnosis of pneumonia at different ages on the basis of rate of respiration and criteria for referral. They had good knowledge about the various components of national immunization schedule but they did not know that defrosting of the ILR is to be done if layer of ice is more than 6 mm.

Both medical officers did not know the screening checklists for oral pills and IUD, side-effects of oral pills and indications for MTP even though they had knowledge of the instructions to be given regarding usage and follow-up to the family planning acceptors.

Both the medical officers had adequate knowledge about the diagnosis and presumptive treatment of malaria; common symptoms and investigations to be advised in tuberculosis and symptoms of leprosy but their knowledge about the radical treatment of malaria; short course chemotherapy regimens, selection of patients for various treatment regimens and side effects of drugs used in treatment of tuberculosis; and sites from where skin smears are to be taken in leprosy, treatment regimens, side effect of anti-leprosy drugs, droplet infection as one of the modes of spread in certain types of the disease was deficient.

Monthly meetings were not properly conducted as agenda for the meeting was not prepared in advance and a few members dominated the meetings. Though the reports were collected, they were not checked from the registers. During the supervisory visits, the workers were helped in their work and explained how to improve upon their mistakes but no checklists were prepared for supervision.

The female medical officer examined only one woman out of three attending the antenatal clinic. The antenatal woman was advised only regarding her diet and date of next visit but the height measurement, counting of pulse, breast examination and examination of blood and urine were not done.

None of the medical officers specifically looked for signs of dehydration while managing children with diarrhoea although they did take the relevant history. The exact amount of ORS to be given after each stool and the danger signs that indicate severe dehydration were also not explained to the mothers who were only told about the method of preparation of ORS. Both medical officers did not count the respiratory rate in children with ARI. Cotrimoxazole in the correct dose was

prescribed by both of them after inquiring about history of cough and fever.

The maintenance of the cold chain equipment at the PHC was not upto the mark. On one occasion "T" vials were found frozen because the temperature was less than zero. However, unlabelled or partially used vials were not found on any occasion.

Even though IUD insertion was correctly done by the female medical officer after per speculum and per vaginal examination, she did not use any checklist for screening and the physical examination was restricted to examination of conjunctiva and tongue for pallor.

While examining a follow-up case of tuberculosis the medical officer in-charge assessed the client's progress and correctly verified whether the client was taking medicine but he did not conduct physical examination properly and referred the patient to the district T.B. centre for necessary investigations without preparing a referral slip.

Health Assistants/Health Workers

Health assistants were not fully aware of the objectives and components of supervision and lacked the necessary skills of supportive supervision. Provision of services by the health workers was limited to out patient services and home visits.

Knowledge of male workers regarding antenatal care was deficient and none of them knew about the utilization of baseline survey data for scheduling MCH activities. Although the knowledge of female workers regarding the procedures for conducting a delivery was satisfactory, a few of them lacked knowledge regarding signs of placental separation and procedure for sterilisation of instruments.

The exact amount of ORS to be given to a child after each stool to prevent dehydration was not known to any of the health assistants/workers although all of them knew about the method of preparation of ORS and the important signs of dehydration. Their knowledge regarding the management of ARI was also deficient and they were not aware of the respiratory rate according to age and criteria for referral.

All the health functionaries had knowledge about the national immunization schedule and names of the six vaccine preventable diseases but they did not know about the side effects of these vaccines. The male functionaries had inadequate knowledge regarding measles and BCG vaccine and method of

sterilization of syringes and needles.

Health assistants and the health workers were not aware of the checklists for screening of oral pills and IUD acceptors, side effects of oral pills and indications for MTP. But they knew about the instructions for oral pill acceptors and criteria for selection of clients for sterilization.

The female health assistants as well as the workers were not performing the expected tasks like monitoring of pulse and B.P., abdominal examination, haemoglobin estimation and urine test while providing antenatal services. During the home visits, the situation was a little better though still it was not satisfactory. Interviews with antenatal mothers revealed that none of the mothers was planning to get the delivery conducted by HW(F) as they were not available most of the time (Table 1). The main aim of postnatal visits by female health assistants/workers seemed to be the motivation of the mother for family planning and immunization of the child. Neonatal care was limited to noting the general appearance, and alertness of the child and examination of the cord.

The sessions conducted by the health workers for immunization, certain deficiencies were observed such as improper sterilization, re-use of syringes, injection site not being cleaned with spirit and vaccines were not kept properly. Thus, these sessions were not conducted properly, although vaccines were brought in cold boxes and the labels were checked for expiry date.

Although selection of women for IUD insertion was done properly by the female health functionaries but no checklist was used for screening. Proper examination was not done and technique of insertion was incorrect in majority of the cases.

A class IV employee (ward attendant) was also routinely distributing medicines, giving injections to the patients and doing the dressings in the PHC. Although he knew correctly the sites for giving intramuscular injections but the administration of the injections was far from satisfactory.

Staff of Government Ayurvedic Dispensary

The medical officer (GAMS) in Government Ayurvedic dispensary had inadequate knowledge regarding the diagnosis and treatment of diarrhoea with dehydration and pneumonia in children though he had knowledge regarding the national immunization schedule. His skills in examination of children with diarrhoea and pneumonia were also found to be deficient though he prescribed ORS and gave appropriate feeding advice. The pharmacist also attended the patients on the days when the medical officer was not available.

TABLE 1
OBSERVATION OF ANTENATAL VISITS CONDUCTED BY FEMALE HEALTH ASSISTANTS
AND HEALTH WORKERS

TASKS PERFORMED	OBSERVED TASKS CORRECTLY		
	ANC CLINIC N=9	HOME VISIT N=6	TOTAL N=15
History Taking			
Review of obstetric record	-	-	-
Her age	9	6	15
Last menstrual period	9	6	15
Calculation of expected date of delivery	9	6	15
Number of living children	9	6	15
Complications during previous pregnancies	-	3	3
Current or past breast feeding	-	4	4
High risk factors			
Spotting/bleeding during pregnancy	-	3	3
Burning on urination	-	-	-
Foul smelling vaginal discharge	-	-	-
Any systemic disease	-	-	-
TT Immunization	9	6	15
Plans for delivery	-	3	3
Physical Examination			
Pulse	-	-	-
Blood pressure	-	-	-
Height	-	-	-
Weight	-	-	-
Pallor	-	4	4
Oedema feet	-	4	4
Breast examination	-	-	-
Systemic examination	-	-	-
Abdominal Examination			
Fundal Height	-	4	4
Position and presentation	-	4	4
Fetal Heart	-	-	-
Services Provided			
TT Immunization	9	-	9
Sterile syringe and needle used	4	-	-
Technique proper	9	-	-
Iron supplements	9	6	15
How to take the tablets explained	9	6	15
Urine for albumin and sugar	-	-	-
Haemoglobin estimation (Tallquist scale)	-	-	-
Health Education			
Diet	2	6	8
Personal hygiene	-	6	6
Physical activity	-	3	3
Danger signs	-	-	-
Breast care and breast feeding	-	4	4
Family planning	4	6	10

The trained Dai in this dispensary had insufficient knowledge about the danger signals in labour and resuscitation of a newborn baby who does not cry after birth though her knowledge regarding the various components of antenatal care and management of normal labour was good.

Anganwadi Workers

None of the anganwadi workers knew how to select the beneficiaries for supplementary nutrition and only one of them knew correctly the ideal weight of six months old and two years old child. Growth monitoring of the children by regularly weighing them and maintaining their growth charts was not being done by any of the anganwadi workers. Observation of one anganwadi worker while weighing showed that it was not done properly with the scale touching the wall, pointer not adjusted to zero before weighing, children being weighed with the clothes on and while crying.

Private Practitioners

Out of fifteen male private practitioners practising in the study villages, only four were professionally qualified - one in allopathy, two in ayurveda and one in homoeopathy but all of them were practising allopathy either exclusively (qualified MBBS doctor) or in combination with other systems of medicines (qualified ISM as well as unqualified practitioners).

The knowledge of all the practitioners regarding antenatal care was found to be inadequate. Five unqualified practitioners reported that they administered intramuscular injection of syntocinon during labour even though they had no knowledge about the indications, method of administration and its adverse effects. The procedure for resuscitation of the newborn baby who does not cry after birth was also not known to them.

All the practitioners knew the correct definition of diarrhoea but majority of them (barring the MBBS and one ISM practitioner) had deficient knowledge regarding diagnosis, prevention and treatment of dehydration. The knowledge of all the practitioners regarding the diagnosis and management of pneumonia in children was found to be deficient. Majority of the unqualified practitioners were giving cough mixtures, antibiotics and even steroids without indication (Table 2).

Antibiotics were indiscriminately used by one ISM and five unqualified practitioners. Even steroids were given for common cough and cold by two unqualified practitioners. The unqualified practitioners misguided the patients regarding the duration of treatment of tuberculosis. Sterilization of syringes and technique of giving intramuscular injection was also faulty while administering

streptomycin injection.

TABLE 2

KNOWLEDGE OF PRIVATE PRACTITIONERS REGARDING DIARRHOEA AND ARI

INDICATORS OF KNOWLEDGE	NO. OF RESPONSES			
	MBBS	ISM	UNQUALIFIED	TOTAL
	N=1	N=3	N=11	N=15
DIARRHOEA				
1. Definition of Diarrhoea	1	3	11	15
2. Signs of dehydration				
Increased thirst	1	2	6	9
Decreased skin turgor	1	1	4	6
Dry mouth and tongue	1	3	6	10
Sunken eyes	1	1	4	6
Lethargic or unconscious	-	1	2	3
3. Preparation of ORS	1	1	-	2
4. Management of case with diarrhoea				
a. ORS	1	1	1	3
b. Antibiotics	-	-	4	4
c. Metrogy	1	1	-	34
d. Furoxone	1	-	-	3
e. I/V Fluids	-	-	4	4
f. Indigenous medicine	-	2	3	5
ARI				
1. Symptoms and signs of pneumonia				
a. Cough and fever	1	3	11	15
b. Increased respiratory rate	-	-	-	-
c. Chest indrawing	1	2	9	12
2. Treatment for common cold and cough				
a. Antihistaminics+antipyretic	1	2	2	5
b. Cough mixtures	-	-	5	5
c. Cotrimoxazole	-	-	5	5
d. Other antibiotics	-	-	5	5
e. Steroids	-	-	2	2
f. Indigenous medicine	-	1	3	4
3. Treatment of pneumonia (agewise)	-	-	-	-
4. Criteria for referral	-	-	-	-

Although aware of family planning methods, private practitioners were not dispensing any contraceptives. Two practitioners were advising indigenous

methods of birth control.

DAIS

Dais conducted 90 per cent of the deliveries in Bhangrola, 85 per cent in Wazirpur and almost all the deliveries in village Tatarpur. However, majority of the Dais did not know the frequency of antenatal visits, tetanus immunization schedule, high risk factors and advice during pregnancy. They also lacked the knowledge regarding danger signals in labour and resuscitation of a newborn who does not cry after birth. Although majority of the Dais were aware of the various contraceptive methods, none of them knew the correct indications for medical termination of pregnancy and the place where these services can be obtained. A Dai in the remote village mentioned that she was treating women with infertility by correcting the position of the uterus or giving a *kadha* to drink.

Observation of a Dai while conducting a home delivery shows that cleanliness and asepsis were not maintained. The woman in labour was given syntocinon injection unnecessarily by a local practitioner who had been called by the family members. Observation of five Dais during two postnatal visits each revealed that they did not examine the mothers though they did inquire about the minor complaints during puerperium (Table 3). Interview with postnatal mothers revealed that only three of them knew the weight of newborn and four knew due date for vaccination. All of them were aware of family planning methods.

Other Health Care Providers

Magico-religious healers were treating women with history of stillbirths and infertility, children affected by *Nazar*, *Sukhiya Rog* and *Jhapta* and even patients of tuberculosis. The bone setter claimed that he was managing fractures of upper and lower limbs and dislocations of elbow but his knowledge regarding the technique of reduction of these fractures and period of immobilization required was found to be deficient.

DISCUSSION

No deficiency of either medical officers or health assistants in position was noted in the present study. On the contrary, the ratio between in-position and sanctioned posts of medical officers was found to be 0.53 and the status with regard to LHV was also found to be unsatisfactory in the State of Haryana in the ICMR study. As in earlier study the situation regarding the staff nurse, pharmacist, laboratory technician and health workers in position was found to be unsatisfactory in the present study also. One male and one female health workers per sub-centre norm was not observed in sub-centre Wazirpur and sub-centre Banslambi

TABLE 3

OBSERVATION OF POSTNATAL VISITS CONDUCTED BY DAIS

Tasks observed	Task performed correctly n=10
History taking	
1.Amount and characteristics of lochia	3
2.Pain abdomen	7
3.Pain in breasts	-
4.Fever	-
5.Any medications	7
Physical examination of the mother	
1.General physical	-
2.Vital signs	-
3.Per Abdomen	-
4.Condition of perineum	-
5.Breast	-
6.Record the above findings	-
Health Education	
1.Exclusive breast feeding for the first 4-6 months	-
2.Extra food during lactation	8
3.Recommend locally available protein-rich foods	8
4.Family planning	10
5.Postnatal exercises	-
6.Personal hygiene	2
7.Time and place of immunizations	-
NEWBORN CARE	
History taking	
1.Breast feeding	4
2.Urine and stools	5
3.Discharge from eyes	no
4.Discharge from cord	5
Examination	
5.Wash hands before examination	no
6.General appearance and alertness	10
7.Vital signs	-
8.Weight	3
9.Height and head circumference	-
10.Head and fontanelle	-
11.Eyes (for opacities, jaundice, infection)	-
12.Umbilicus	5
13.Extremities and skeletal system	-

(covering village Tatarpur).

The total number of health care providers in the non- government sector is more than double the number of providers in government sector implying thereby that the private health sector in rural India is both large and varied².

Medical Officers in the PHC

Gross under-registration of pregnant women (52%) and infants (63%) for antenatal and immunization services was observed in the present study which is in consistent with the findings of ICMR task force study¹. The deficient knowledge of medical officers about the estimation of target beneficiaries in the PHC area may be one of the reasons for under-registration.

The inadequate knowledge of the medical officers regarding diagnosis and referral of obstetrical emergencies and management and referral of low birth weight babies was found in the present study³. Observation of the female medical officer reveals that skills of history taking especially inquiring about the high risk factors, proper physical examination and health education need to be improved.

The present study also shows the deficient knowledge and skills of both the medical officer in the management of diarrhoea and acute respiratory infections in children which are two major intervention under the child survival and safe motherhood programme for the reduction of infant and child mortality rates. The incomplete entries in the temperature chart, non-working stabilizer, unlocked ILR and improperly kept vaccines indicate the carelessness and lack of motivation of the medical officers⁴. Observation of technical skills of female medical officer while inserting IUD also shows that she did not use any checklist for screening and did not do a proper physical examination. Though the technique of insertion was correct, she did not ensure maintenance of asepsis as per the required procedure. Proper advice regarding follow-up was also not given. It is, therefore, desirable that medical officer be supplied with checklists for screening of acceptors of oral pills and IUD and lady medical officers be given skill-oriented training in family planning services.

Health Assistants and Health Workers

The two components that can be considered as weak areas are firstly ensuring availability of persons in position and secondly checking and monitoring during the sub-centre visits.

The success of the child survival and safe motherhood programme depends on whether the field functionaries are performing the work assigned to

them properly. If tasks are not done or if they are not done well, these can have an adverse impact on not only the achievement of targets but also on the credibility of the programme. Observation of the female health assistant and health workers reveals that they are not performing the expected tasks while providing the MCH services^{5,6,7}. The knowledge of the health workers about acute respiratory infections was found to be inadequate and the immunisation services provided at the sub-centres or at outreach sessions were not upto the desired level in the present study.

An important revelation of the present study is that in order to prepare the recommended number of blood slides (at least 1 per cent of the the population/ month) by active surveillance, health workers resort to unfair means like preparing the blood films from a group of healthy school children. This incident also underscores the important role that the health workers play in malaria surveillance and shows the fallacies of reporting.

Health Care Service Providers in the Government Ayurvedic Dispensary

The knowledge of the medical officer in the Government Ayurvedic Dispensary about immunization and family planning methods was found to be adequate in the present study which could be due to that he had recently attended a refresher training course in MCH care and family planning at the District Training Centre in contrast to the findings of the other study⁸.

However, their skills in management of children with diarrhoea and acute respiratory infection need to be improved. An important observation was that he prescribed ORS as well as cereal based ORT to all the children with diarrhoea, a practice that needs to be encouraged.

The knowledge of the trained Dai as compared to other Dais in the study area was found to be better.

The findings,therefore, clearly indicate that training has a definite role in improving the knowledge of the health functionaries.

ANGANWADI WORKERS

It was reported that a large number of anganwadi workers do not weigh the babies^{9,10}. The findings of the present study also corroborate this viewpoint. While one worker did not weigh the children at all, the other one did so irregularly. Also, despite the knowledge the worker did not locate the weight of these children on the growth charts provided to her and no attempts were made to educate the mothers of the children weighed using the growth chart by the anganwadi worker.

Lack of the motivation on the part of anganwadi worker to provide good quality services is also reflected in the exit interview conducted with the mothers who mentioned that no weight recording of the children was done in the last six months by the anganwadi worker.

Private Practitioners

Results of present study indicated strong preference for allopathy¹¹. The rural doctors had crucial role in diarrhoea management practices among rural women¹².

Five unqualified practitioners admitted that they give injection syntocinon during labour though they had *no* knowledge about the indications, method of administration and the adverse effect of this drug on either the mother or the baby. Observation of the delivery conducted by village Dai also revealed that the local unqualified practitioner gave this injection without any indication. The practice of giving syntocinon injection in labour is dangerous and needs to be discouraged.

Majority of private practitioners had knowledge about the symptoms to be inquired from patients with history of fever. But only the qualified MBBS and one ISM doctors mentioned the need for peripheral blood smear examination for confirmation of diagnosis of malaria. Majority of the private practitioners did not know the correct presumptive treatment and none of them knew the radical treatment in parasite positive cases. These deficiencies in the knowledge of private practitioners call for corrective measure keeping in mind the high prevalence of malaria in our country¹³.

Majority of private practitioners had knowledge regarding the common symptoms of tuberculosis indicating thereby that there is considerable scope of utilizing their services for early detection of tuberculosis cases. However, none of the unqualified practitioners except one mentioned the need for sputum smear examination in suspected cases. Observations in the present study revealed that unqualified practitioners were misguiding the patients regarding the duration of treatment who went to them for daily injections of streptomycin. Since it may not be possible for all the patients of tuberculosis to go to a government health care facility for daily injections of streptomycin, it would be desirable to train a few selected qualified practitioners in the management of such patients.

DAIS

Dais are the main providers of intranatal and postnatal care in the study villages but majority of Dais had poor knowledge in case of antenatal, intranatal

and postnatal care. Observation of a Dai while conducting delivery revealed that she did not wash her hands before conducting delivery and did not prepare a clean birth place¹⁴.

Dais were aware of vaccine preventable diseases but their awareness of the family planning methods was better in the present study. However, none of them could tell the correct indications for MTP and only two of them were aware of the government institutions where these facilities may be obtained. Thus, there is a need to inform them of the services available for MTP so that unnecessary deaths or disability from illegal abortions can be reduced.

Other Health Care Providers

As noted in the earlier study that the knowledge of the bone setter regarding the anatomy, technique of reduction of fractures and period of immobilization required for treating fractures was found to be deficient in the present study also¹⁵.

RECOMMENDATIONS

1. Regular training programmes should be organized for the staff of PHC in order to upgrade their knowledge and skills in the tasks performed by them.
2. Anganwadi workers should be trained at the PHC level with the help of medical officers of PHC in order to improve their knowledge of the growth chart and skills of weighing and health education.
3. Selected practitioners of allopathic system of medicine as well as indigenous systems of medicines, practising in rural areas should be trained at the district level to update their knowledge and skills in the management of diseases like ARI, diarrhoea, malaria and tuberculosis.
4. Periodic review of the knowledge and skills of Dais who receive training should be undertaken in order to see the impact of training and identify potential problem areas which require retraining.
5. Magico-religious healers should be encouraged to refer cases of mental illness, infertility and chronic fever to the PHC.

Lkkjk'k

प्रस्तुत अध्ययन के माध्यम से ग्रामीण क्षेत्रों में कार्यरत स्वास्थ्य परिचर्या सेवा प्रदाताओं के कार्यों तथा उनकी प्रशिक्षण संबंधी आवश्यकताओं का अध्ययन करने का प्रयास किया गया था, ताकि उन्हें इस समय चल रहे राष्ट्रीय स्वास्थ्य एवं परिवार कल्याण कार्यक्रम में सक्रिय रूप से शामिल किया जा सके। विभिन्न विषय-क्षेत्रों के बारे में इन स्वास्थ्य परिचर्या प्रदाताओं के ज्ञान तथा कौशल में कमी पायी गई थी जैसे प्रसव-पूर्व जांच के तरीके, उच्च जोखिम वाले प्रसव केसों को तैयार करना, प्रसूति संबंधी आपातकालीन सेवाएं, अतिसार और निर्जलीकरण (डीहाइड्रेशन) श्वसन दर के आधार पर गंभीर श्वसन संक्रमण रोग का निदान और निमोनिया का उपचार, क्षयरोग के उपचार के लिए औषध-व्यवस्था, कुष्ठरोग का निदान और उपचार, खाने की गर्भनिरोधक गोलियों और आईयूडी संबंधी विभिन्न घटकों तथा दुष्प्रभावों की जांच करना, और चिकित्सकीय गर्भ समापन के लिए उपयुक्त लक्षणों का अनुमान लगाना।

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**STATUS OF UNIVERSAL IODISATION OF SALT
PROGRAMME IN THE SELECTED DISTRICTS OF
MADHYA PRADESH STATE**

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ABSTRACT

This study determines the iodine content of salt as ensured under the National Iodine Deficiency Disorders Control Programme in 10 districts of the State of Madhya Pradesh. Salt samples were collected from 1992 rural families through schools and analysed using the standard iodometric titration method. It was found that 35.3 per cent of the families were consuming salt with less than 15 ppm of iodine which is the stipulated level of iodisation of salt as per the State Government notification. Results of the present study indicate a need for strengthening of the monitoring system of the quality of iodised salt being procured and distributed in the 10 districts.

Iodine Deficiency Disorders (IDD) are a major public health problem in the State of Madhya Pradesh. A goitre survey conducted in 16 of the 45 districts in Madhya Pradesh found all the surveyed districts to be endemic for IDD¹.

A successful measure for the prevention of IDD is iodisation of salt. It is an effective vehicle because it is consumed universally by all the socio-economic groups². Salt with an iodine content of 15 ppm at the consumer level can meet the iodine requirement of the human body.

The Government of Madhya Pradesh under the National Iodine Deficiency Disorder Control Programme (NIDDCP) has adopted a policy of universal salt iodisation since 1984 under which the entire population of the State is to receive edible salt with a minimum of 15 ppm of iodine³. However, a recent survey

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conducted by a National Goitre Team reported goitre prevalence rates of 55.6 per cent in Shahdol, 41.1 per cent in Surguja, 37.8 per cent in Sidhi and 34.8 per cent in Raigarh districts of the State, respectively⁴.

In view of the continuation of the high prevalence of IDD, the present study was undertaken to determine the iodine content of salt ensured under the NIDDCP and consumed by the population residing in the rural areas of the selected districts in Madhya Pradesh. The aim of the present study was to assess the status of salt iodisation in the 10 selected districts of the State and to strengthen the NIDDCP activities, if required.

MATERIALS AND METHOD

The present study was undertaken in the State of Madhya Pradesh. The survey was conducted from October 1995 to April 1996 in 10 districts of the State.

Recently WHO-UNICEF-ICCIDD has recommended that for a rapid assessment of status of salt iodisation in a district, 100 salt samples should be collected from 10 remote villages in order to assess the trend⁵. In the present study this approach was modified and utilised.

In each district one remote rural block was selected. In each block, one high school was selected. In the rural areas of India one high school caters to 25-30 villages within the radius of 5-10 kilometers, as there is paucity of educational institutions in the country.

In each school, the children of the eighth and ninth standards were included for the study. These school children were briefed about the study objectives and were given autoseal polythene pouches with an identification slip. They were asked to bring about 20 g of salt from their family kitchen. The iodine content of the salt samples collected was analysed using the standard iodometric titration method⁶.

RESULTS

A total of 1992 salt samples were collected from the 10 districts in the State (Table 1). It was observed that 1597 (80.2%) and 395 (19.8%) of the families were consuming powdered and crystalline salt, respectively.

Amongst the families consuming powdered salt 1.1 per cent, had nil iodine and 27.6 per cent of the families consumed salt with an iodine content of less than 15 ppm. It was observed that in the districts, Indore and Vidisha 43.9 per cent and 39.5 per cent were consuming salt with less than 15 ppm iodine. In Gwalior, 85.2

per cent of the families consumed salt with more than 15 ppm iodine (Table 2).

TABLE 1
IODINE CONTENT OF SALT IN DIFFERENT DISTRICTS*

Name of District	Total number of salt samples		Iodine content of salt	
	(n)	Nil	< 15 ppm	15 ppm and more
Bastar	201	0	58(28.9)	143 (71.1)
Dhar	168	0	47 (28.0)	121 (72.0)
Gwalior	321	3(0.9)	59(18.4)	259 (80.7)
Indore	212	1 (0.5)	95(44.8)	116(54.7)
Morena	185	14 (7.6)	74 (40.0)	57 (52.4)
Ratlam	199	0	75 (37.7)	124 (62.3)
Shahdol	153	1(0.7)	36 (23.5)	116(75.8)
Sidhi	168	3(1.8)	79 (47.0)	86 (51.2)
Sihore	216	2(0.9)	75 (34.7)	139(64.4)
Vidisha	169	1 (0.6)	78 (46.2)	90 (53.2)
Total	1992	25 (1.3)	676 (33.9)	1291 (63.8)

Figures in parentheses denote percentages.

Of the families consuming crystalline salt, it was found that 1.8 per cent consumed salt with nil iodine and 59.5 per cent with an iodine content of less than 15 ppm. In all the districts, except Ratlam, Shahdol and Indore more than 50 per cent of the families consumed crystalline salt with an iodine content of less than 15 ppm. District Morena had the lowest number of families (32.4%) consuming salt with more than 15 ppm of iodine (Table 3).

DISCUSSION

The Government of Madhya Pradesh has banned the sale of non-iodised edible salt since 1984⁷. However, in the present study nearly 35 per cent of total families surveyed were consuming salt with less than 15 ppm of iodine. This

finding revealed that although the salt was being iodised but either an inadequate quantity of iodine was added to it at the production level or there were losses of iodine during different points of distribution. Evaluation studies conducted earlier on NIDDCP have also revealed the weakness in the existing monitoring system of the quality of iodised salt^{8,9,10}.

TABLE 2
IODINE CONTENT OF POWDERED SALT IN TEN DISTRICTS OF MADHYA PRADESH

Name of district and total number of salt samples	Powdered Salt Iodine Contents ppm		
	<i>Nil</i>	<15	15 and more
Bastar n = 158	0 (0.0)	30 (18.9)	128 (81.1)
Dhar n= 147	0 (0.0)	34 (23.1)	113 (76.9)
Gwalior n= 285	3 (1.1)	39 (13.7)	243 (85.2)
Indore n= 166	1 (0.6)	73 (43.9)	92 (55.5)
Morena n = 114	11 (9.6)	29 (25.5)	74 (64.9)
Ratlam n= 162	0 (0.0)	60 (37.9)	102 (63.0)
Shahdol n = 144	1 (0.7)	33 (23.6)	109 (75.7)
Sidhi n= 105	0 (0.0)	32 (30.5)	73 (69.5)
Sihore n= 187	2 (1.1)	59 (31.5)	126 (67.4)
Vidhisha n= 129	0 (0.0)	51 (39.5)	78 (60.5)
Total = 1597	18 (1.1)	441 (27.6)	1138 (71.3)

Figures in parentheses denote percentages.

TABLE 3

IODINE CONTENT OF CRYSTALLINE SALT IN TEN DISTRICTS OF MADHYA PRADESH

Name of district and total number of salt samples	Powdered Salt iodine Contents ppm		
	Nil	<15	15 and more
Bastar n = 43	0 (0.0)	8 (65.1)	15 (34.9)
Dhar n = 21	0 (0.0)	13 (61.9)	8 (38.1)
Gwalior n = 36	0 (0.0)	20 (55.5)	16 (44.5)
Indore n=46	0 (0.0)	22 (47.8)	24 (52.2)
Morena n = 71	3 (4.2)	45 (63.4)	23 (32.4)
Rat lam n = 37	0 (0.0)	15 (40.5)	22 (59.5)
Shahdol n = 9	0 (0.0)	2 (22.2)	70 (77.8)
Sidhi n = 63	3 (4.8)	47 (74.6)	13 (20.6)
Sihore n = 29	0 (0.0)	16 (55.2)	13 (44.8)
Vidhisha n = 40	1 (2.5)	27 (67.5)	12 (30.0)
Total = 395	7 (1.8)	235 (59.5)	153 (38.7)

Figures in parentheses denote percentages.

A higher percentage of crystalline salt samples (59.5%) as compared to the powdered salt samples (27.6%) had an iodine content of less than 15 ppm. The possible reasons for this observation could be that in India crystalline salt is about 50 per cent cheaper as compared to the powdered salt and is often stored outside the shops where it is exposed directly to sunlight and rain which could lead

to loss of iodine. Similar findings have been reported earlier⁸

The findings of the present study indicate that a vigilant monitoring of the quality of iodised salt is required in the State of Madhya Pradesh. Results also highlight a need for strict enforcement on the ban of iodised salt with less than 15 ppm of iodine.

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सारांश

प्रस्तुत अध्ययन नमक में आयोडीन की कमी से होने वाले विकारों पर नियन्त्रण करने संबंधी राष्ट्रीय कार्यक्रम के अर्न्तगत मध्य प्रदेश राज्य के दस जिलों में नमक में आयोडीन की निर्धारित मात्रा का पता लगाने के लिए किया गया था। स्कूलों के माध्यम से 1992 ग्रामीण परिवारों से नमक के सैम्पल एकत्र किए गये थे और स्टैन्डर्ड आयोडोमीट्रिक टाइट्रेशन विधि के अनुसार उनका विश्लेषण किया गया था। अध्ययन से पता चलता है कि 35.3% परिवारों द्वारा प्रयोग में लाए जा रहे नमक में आयोडीन की मात्रा, राज्य सरकार द्वारा जारी की गई अधिसूचना में निर्धारित 15 पीपीएम आयोडीन की मात्रा से कम पायी गई थी। इस अध्ययन से प्राप्त निष्कर्षों से पता चलता है कि उपरोक्त दस जिलों में उपलब्ध कराये जा रहे आयोडीन युक्त नमक की क्वालिटी संबंधी प्रबोधन प्रणाली को सुदृढ़ करने की आवश्यकता है।

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**IMPACT OF MATERNAL LABOUR FORCE
PARTICIPATION ON NUTRITIONAL
STATUS OF MOTHERS**

K. Sheela* and G. Jyothi**

ABSTRACT

This article presents the impact of maternal labour force participation on nutritional status of mothers. A sample size consisting of 300 mothers belonging to 100 each of working group (WG), partially' working group (PWG) and non-working group (NWG) was selected. Their nutritional status was assessed by their dietary intake, morbidity status, clinical examination, and anthropometry and haemoglobin level. The study reveals that most of the mothers in WG had calorie and protein deficit as compared to NWG and PWG. The mothers with no signs of nutritional deficiency were more in NWG and PWG as compared to WG. When mothers nutritional status was classified according to weight for height percentage and weight/height, higher percentage of mothers were found to be normal in PWG and NWG and least in WG². Haemoglobin levels also showed that higher percentage of mothers had acceptable level in NWG followed by PWG and least in WG.

Women's participation in economically productive activities outside home is not a new phenomenon. Women since time immemorial have formed important organic component of working force in India. Twelve per cent of total population consist of working women and this trend is on an increase. Women work along with their menfolk in sowing seeds, weeding, transplanting, harvesting crops, etc. They do all this in addition to their normal domestic chores. This dual stress and conflicting demands of work in and outside the home have adverse effect on maternal health and nutritional status. The type of work a women does outside her home, availability of domestic help and the economic factors might determine the impact of such employment on her.

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On one side, a greater participation of women in income generation leads to a greater control over income which in turn leads to expenditure patterns favouring nutrition and increases women's status of decision-making power¹. Also working women have easier access to maternal and child health care and family welfare facilities with opportunities to utilize the same more effectively. On the other hand, it may increase women's workload to the extent that she may not be able to secure the basic needs of their family. In addition the physical labour involved may in itself be so heavy that it is detrimental to the women's health^{2,3}. Therefore, the present study attempts to assess the impact of maternal labour force participation on their nutritional status.

MATERIALS AND METHOD

A sample size of 100 women in each belonging to working group (WG -all women who work for cash or kind or who has taken up self-employment or who work in their own fields), partially working group (PWG - women who take up part time jobs some hours during the day) and non-working group (NWG - housewives who are not engaged in any type of employment) were selected randomly from selected villages of Devanahalli taluk of Bangalore district. Total number of mothers surveyed was 300.

Information regarding their type of occupation, distance of place of work, health and morbidity status were collected through a standard pre-tested interview schedule. Nutritional status was assessed by dietary survey, clinical examination, nutritional anthropometry and estimation of haemoglobin. The anthropometric measurements taken were height and weight of mothers and nutritional status was assessed using the classification weight for height (%) and weight/height (body mass index) recommended by Jelliffe (1966) and reported by Gopaldas and Seshadri (1987)^{2,4,5}. The per cent haemoglobin was estimated by filter paper technique⁶.

RESULTS AND DISCUSSION

Main occupation of mothers in WG was agriculture labour (72%) and in PWG majority of them work in their own fields (26%), some take up self-employment like sewing (24%) and petty business (18%). The average monthly income of family of three study groups was Rs.1122 (NWG), Rs.884 (WG) and Rs.995 (PWG). In both WG and PWG majority of them had an income of less than Rs.500 per month. Very few had an income ranging between Rs.500 and Rs.1000 and contribution was about 38 per cent of total income by working mothers and 25 per cent of total income by partially working mothers. This shows that if these women would not have contributed financially their economic situation would have been still worst. It was seen that the place of work was nearer for both the groups

and mothers go by walk to their place of employment.

The ICMR standards (1987) with cut off points of below 50 > 51-70, >71-80 and > 80 per cent of the recommended levels were used to compare the mothers nutrient intake⁷. From Table 1, it is clear that majority of mothers (64% NWG and 57% PWG) received 61-80 per cent adequacy of recommended dietary allowance (RDA) of calories, and in WG majority consumed less than 50-70 per cent of RDA (78%). Only a few mothers had consumed more than 80 per cent in WG (6%). Protein adequacy was less than 50-60 per cent of RDA in all three groups and very few had more than 80 per cent adequacy in WG as compared to other two groups (5%). The results of chi-square test revealed that there is a significant association regarding calorie and protein adequacy of RDA among the three groups. Regarding the fat intake there was not much difference among the three study groups. Majority consumed less than 50-70 per cent of RDA of iron in all these study groups. Thus the iron intake was less in all the three groups since their diets did not include any iron rich foods. It is also probable that data on deficiency of iron is underestimated as no attempt was made to adjust for losses during storage and preparation. If women did not meet at least 50 per cent of ICMR recommended levels for these nutrients and continue with low intake they would probably be at high risk for nutrient deficiencies.

TABLE 1

PER CENT ADEQUACY OF NUTRIENT INTAKE OF MOTHERS IN THREE STUDY GROUPS

Study group	Nutrient	Per cent adequacy					Chi-square value
		<50	51-60	61-70	71-80	>80	
WG	Calorie	21	29	28	16	6	23.16**
PWG		12	18	32	25	13	
NWG		9	11	35	29	16	
WG	Protein	28	30	27	10	5	17.42*
PWG		20	24	33	12	11	
NWG		16	19	30	25	10	
WG	Fat	13	32	26	18	11	7.5 ^{NS}
PWG		12	28	30	16	14	
NWG		8	21	29	24	18	
WG	Iron	42	36	12	10	-	9.04 ^{NS}
PWG		38	30	16	12	4	
NWG		36	27	17	14	6	

•Significant at 5 per cent level

••Significant at 1 per cent level

NS = Non-significant at 5 per cent level

An attempt was made to observe the incidence of sickness for month duration prior to survey. The type of illness among WG mothers were found to be mostly cold (20%), cough (23%), fever (24%) and tiredness and illness (27%) in case of mothers among PWG and NWG, the incidence of cold, fever and tiredness and illness were found to be less. More number of mothers (58) did not suffer from any illness in NWG as compared to 32 and 46 in WG and PWG respectively. Thus, the incidence of illness was higher in WG as compared to the other two groups.

Data regarding the deficiency signs of mothers are presented in Table 2. Higher percentage of mothers 36 from NWG had no signs of deficiency symptoms when compared to WG and PWG *i.e.* 12 and 23 respectively. Majority of mothers had shown signs of angular stomatitis, bleeding gums and koilonychia in all the three study groups.

TABLE 2
CUNICAL EXAMINATION OF MOTHERS

Clinical Sign	WG	PWG	NWG
Normal	12	23	36
Hair changes	24	12	8
Angular stomatitis/cheilosis	34	30	12
Red and raw tongue	5	6	-
Mottled enamel	16	11	11
Bleeding gums	17	14	13
Skin changes	5	9	8
Koilonychia	16	12	16

Because of multiple responses the total is not 100.

Somatic status reflects that the body size is influenced by several factors, most important being heredity, environment and diet. At the time of the survey most of them appeared to be on the 'thinner side' of the body build. Distribution of mothers according to weight for height percentage as seen in Table 3 that higher percentage of mothers (43) and (42) were found to be normal in PWG and NWG and least in WG (25). Relatively more percentage of mothers in WG (47%) had Grade I underweight whereas it was only 36 per cent each in NWG and PWG.

Even grade II underweight was also more in WG (26%) as compared to NWG (17%) and PWG (15%) and very less percentage of mothers were overweight and none of them was found to be obese (> 110%) in all three groups.

TABLE 3
PERCENTILE CLASSIFICATION OF MOTHERS BY WEIGHT FOR HEIGHT
PERCENTAGE AND BODY MASS INDEX

Class	Work status			Chi-square value
	WG	PWG	NWG	
Weight for height percentage				
Over weight (110%)	2	6	5	13.15*
Normal (80-110%)	25	43	42	
Underweight				
Grade I (80%)	47	36	36	11.53*
Grade II (60%)	26	15	17	
BMI				
0-16.0	12	5	5	11.53*
>16.0-17.0	20	18	13	
>17.0-18.5	28	26	18	
> 18.5-20.0	20	25	36	
>20.0-25.0	20	26	28	
n	100	100	100	

* - Significant at 5 per cent level

The distribution of mothers on the basis of BMI classification is also presented in Table 3. The data revealed that 40 to 64 per cent of mothers of different work status were in the normal range. Significant proportion of mothers -60 per cent (WG), 49 per cent (PWG) and only 36 per cent (NWG) had BMI between the range of 16-18.5 indicating undernutrition. As indicated the somatic status by using the indicators of both weight for height percentage and BMI was found to be influenced by the work status of the mother. This could be attributed to the heavy workload due to their involvement in both agricultural and household activities.

A comparison of the haemoglobin range in mothers in three selected groups is presented in Table 4. Mothers haemoglobin level selected from sub

sample (40 mothers from each group) was categorized as deficient, low and acceptable. More percentage of mothers in NWG and PWG (20 and 15) had acceptable level of haemoglobin compared to WG (5). Almost the same percentage of mothers had low level of haemoglobin in all the three groups. Majority of mothers 75 per cent in WG, 57 per cent in NWG and 65 per cent in PWG were found to have deficient haemoglobin level. From the above results it can be seen that overall/prevalence of anaemia was higher in all the groups and the percentage of mothers who were anaemic was more in WG (95) as compared to other two groups. The chi-square value revealed no significant association among three study groups in respect of their haemoglobin levels.

TABLE 4

HAEMOGLOBIN LEVEL OF MOTHERS IN THREE STUDY GROUPS (PERCENTAGE)

Class (g/100dl)	Work status			Chi-square value
	WG	PWG	NWG	
< 10 (Deficient)	75 (30)	65 (26)	57 (23)	4.44 ^{NS}
> 10-11.9 (Low)	20 (8)	20 (8)	23 (9)	
> 12 (Acceptable)	5(2)	15(6)	20 (8)	
n	40	40	40	

Figures in parentheses are the number of women, NS = Non-significant

SUMMARY AND DISCUSSION

Nutritional status of 300 mothers belonging to 100 each of working group, partially working group and non-working group was assessed. Most of the mothers were agricultural labourers in WG and in PWG most of them work in their own fields. Most of the mothers in WG had calorie and protein deficits as compared to NWG and PWG and there was not much difference in fat intake and all mothers had less adequacy of iron which was higher in WG than in NWG and PWG. The incidence of illness of mothers was more in WG when compared to other two groups. The prevalence of respiratory infection, fever, tiredness and illness was more compared to other diseases. The presence of angular stomatitis, cheilosis and koilonychia was more in WG mothers. The number of mothers with no signs deficiency was more in NWG and PWG as compared to WG. When mothers nutritional status was classified according to weight for height (%) more number of mothers were found to be normal in PWG and NWG and least in WG and when

categorized according to weight/height more number of mothers were normal in NWG followed by PWG and WG². Haemoglobin levels showed that higher percentage of mothers had acceptable level in NWG followed by PWG and least in WG.

This study shows that working mothers had lower nutritional status and clearly demonstrates that women participating in the paid labour force are overburdened with work which has resulted in poor nutritional status^{8,9,10}. However, it is not possible for them to refrain from working outside home because if they do, their families would have still lower economic status and purchasing capacity. Thus, any positive effort that could have been seen due to increased household income on nutrition is offset by high level of women's activity. Hence women's participation in economically productive activities may negate their own nutritional status. Therefore, ensuring fair wages for work done by women so that they can purchase adequate food for themselves and their families. Introduction of domestic time saving devices, encouraging women's health and nutrition programmes are all important ingredients suggested for successful female employment strategies.

सारांश

प्रस्तुत लेख में माताओं पोषणात्मक स्तर पर कामकाजी महिला श्रमिकों की भागीदारी से पड़ने वाले प्रभावों की विवेचना करने का प्रयास किया गया है। अध्ययन के लिए कामकाजी वर्ग की महिलाओं आंशिक रूप से कामकाजी वर्ग की महिलाओं और गैर-कामकाजी वर्ग की सौ-सौ महिलाओं को लेकर 300 महिलाओं के एक सैम्पल को चुना गया था। सैम्पल के रूप चुनी गई माताओं के पोषणात्मक स्तर का मूल्यांकन उनके द्वारा आहार ग्रहण करने की मात्रा, उनके रोग स्तर, उनके क्लिनिकल परीक्षण, उनके मानवमितीय और हीमोग्लोबिन स्तर के आधार पर किया गया था। अध्ययन से पता चलता है कि गैर कामकाजी वर्ग और आंशिक रूप से कामकाजी वर्ग की माताओं की तुलना में अधिकांश कामकाजी वर्ग की माताओं में कैलोरी और प्रोटीन की अधिक कमी पाई गई थी। कामकाजी वर्ग की माताओं की अपेक्षा गैर-कामकाजी और आंशिक रूप से काम-काजी वर्ग की माताओं के पोषणात्मक स्तर में कम से कम लक्षण पाये गये थे। जब इन महिलाओं के पोषणात्मक स्तर को ऊंचाई के अनुसार उनके शारीरिक भार प्रतिशतता तथा भार/ऊंचाई की प्रतिशतता के आधार पर वर्गीकृत किया गया था तो आंशिक रूप से कामकाजी तथा गैर-कामकाजी महिलाओं की यह प्रतिशतता अधिक पायी गई थी और कामकाजी वर्ग की यह प्रतिशतता न्यूनतम पाई गई थी। माताओं के हीमोग्लोबिन स्तर के विश्लेषण से पता चला था कि गैर-कामकाजी वर्ग की माताओं के साथ-साथ आंशिक रूप से कामकाजी वर्ग की माताओं में से अधिकतर का स्तर अनुकूल था, जबकि ऐसी कामकाजी वर्ग की माताओं की प्रतिशतता कम पाई गई थी।

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**STUDY ON MATERIALS MANAGEMENT SYSTEM
FOR PUBLIC HEALTH CARE AT JODHPUR DISTRICT
OF RAJASTHAN****

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ABSTRACT

The functioning of the materials management system as a supporting facility for providing health services at different levels in the departmental set-up in Rajasthan is analysed in this paper. The existing organisational set-up, purchasing policies and procedures, the internal operational problems, factors responsible for non-availability, overstocking, wastages and pilferage of the drugs and other materials are certain important areas discussed in this paper. In addition, the author precisely identifies areas for possible time and cost reduction and suggests specific measures to improve the functioning of the materials management system in Rajasthan.

The WHO has announced its central policy commitment to achieve the goal of health for all by 2000 AD. Most of the countries, including India have pledged to achieve the goal. The need of the time is that the existing health care system must be strengthened and redirected to attain equitable re-allocation of resources, as well as to develop new strategies for the implementation of various health programmes. This is likely to cause additional strain on the health care system and will require critical look at the total materials management system of public health care in India.

Unless scarce resources can be mobilised and used effectively and efficiently, the health for all by 2000 AD, will remain a vain attempt. The effective and efficient delivery of health services challenges the traditional inter-disciplinary systems approach in managing public health services. Operations research approach has good potential and scope to provide better solutions for a large number of problems arising in the management of drugs, vaccines, surgical instruments, dressing, contraceptives, laboratory appliances, chemicals and varied

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number of sundry items used in health care systems which play an important role in protecting, maintaining and restoring health. We have made considerable progress in the prevention of disease and medical therapies but in the absence of ensured optimum level of availability and maintaining an adequate supply of materials at various levels of health care system (especially at the districts and PHCs) it appears that the real fruits of the progress would be hardly achieved.

The non-availability of materials contributes towards the delays in implementing health programmes, non-achievement of targets and adversely affects operating services. Whereas the excess inventory of materials blocks the money invested therein, and may also add to wastage and obsolescence. Thus, management of materials is also a potential area of reducing material cost. It is very relevant to note here that material costs around 40 per cent of the total cost of health care services and drugs alone contribute to 18-20 per cent of the total material cost. On an average the wastage of drugs, chemicals and other materials is estimated to be around 10 per cent. Therefore, even 5-10 per cent reduction in the material costs would be quite significant to make the materials management system more cost effective.

The incidences of non-availability of some of the materials, overstocking of certain other items, irrational purchasing of some of the vital items in large quantity of sub-standard quality and heavy dependence on local purchasing for drugs etc. are common features to most of the State Health and Medical Department in India. The State Health and Medical Department of Rajasthan, appears to have become more prone to this chronic disease. Quite often the media provide coverage and the State Assembly witness noisy scenes on these issues and problems. The leading newspaper of the State of Rajasthan Patrika has been reporting it on the front pages from time to time. Committees have also been appointed by the State Government to probe into such affairs. Dr. Omkar Saxena Committee is the latest one in this context. Obviously, the districts in the desert and backward areas are worst affected than the districts which are around the capital of the State.

Thus, to strengthen the existing materials management supply systems of the public health care, the most appropriate approach would be that of integrating materials management functions through an operations research study. This may emphasize to have critical examination of the present organisational set-up., purchasing policies and procedures, the internal operational problems, factors responsible for non-availability, overstocking, wastages and pilferage of drugs and other materials. The other areas of concern are reduction in high cost of managing materials, this will necessitate the application of modern scientific inventory control principles.

Keeping the importance of materials management for public health care at Jodhpur district of Rajasthan, the study has been designed with the following objectives:

1. To analyse the existing organisational set-up responsible for materials management function at the State Medical and Health Department (HQ) and at the district level;
2. To examine the present policies and procedures for the procurement and supply of materials, delegation of powers and to identify variations accordingly in the working system and norms set-up by the State;
3. To identify and make a critical analysis of various operational problems in the management of materials;
4. To identify areas for possible time and cost reduction;
5. To review the existing information system for monitoring and controls of materials functions; and
6. To suggest specific measures to improve the functioning of materials management system.

In Rajasthan, broadly the set-up is, a referral hospital at the district level, a community health centre at each of the Panchayat Samities (Tahsil) and then a primary health centre for the population of around 30,000. Under a PHC around 25-30 sub-centres are working'. The study area includes four Panchayat Samities (Tahsil) in the district of Jodhpur preferably two in the backward/Tahsil population and two comparatively near the district headquarter. Under each of the community health centres at selected Tahsil, two primary health centres were selected. Under each of the primary health centres, two sub-centres were selected in consultation with the local authorities.

Also, to have feedback from the beneficiaries about the extent to which they are satisfied with health services provided to them with specific reference to supply of materials, the beneficiaries were also selected using multi-stage sampling method as detailed.

The detailed break-up of the beneficiaries is given in Table 1.

TABLE 1**BREAKUP OF THE BENEFICIARIES**

Levels	Numbers	No. of Beneficiaries
District Referral Hospital	1	25
Community Health Centres	4	25
Primary Health Centres	8	40
Sub-centres	10	30

So around 120 beneficiaries were selected as sample respondents.

Data Collection Techniques

Observation Technique: To observe and record the working situations as it is (State of the Art) at district hospital, community health centres, primary health centres and of the materials stores attached to them, the research team visited before the commencement and during the project study.

Personal Interviewing. This technique was utilised for ascertaining views about various operational problems from medical professional, nursing staff, administrators and beneficiaries at various levels. For the routine and general information schedule was also administered at all the levels.

Secondary Data: Secondary data from published/unpublished reports/records like annual action plans for the districts, guidelines and Government circulars about purchasing, stocking and distribution of materials, delegation of purchasing and financial powers at different levels of the departmental set-up were also collected.

Analysis

The primary and secondary data collected from time to time were entered into computer systems and classified into 'A' class items, essential drugs and critical items. Further, data were also classified districtwise, community health centres and primary health centreswise.

After preparing the draft report, a three-day seminar-cum-focus group discussion to have suggestions and comments of the participating medical professionals of Medical and Health Department of Rajasthan (working in all the

districts) for further improvement was organised. The participants of this seminar were Joint and Dy. Directors of Medical and Health Departments, Chief Medical and Health Officers of CHCs and PHCs, Statistical Officers attached with department; etc. representatives of WHO and National Institute of Health and Family Welfare.

The final report was prepared, incorporating suggestions and views emerged at the seminar.

FINDINGS

Organisational Structure

At the Directorate/HQ Lever. It is high time that the Government of Rajasthan should set-up at the Directorate of Medical and Health a fullfledged computer-based MIS cell, headed by a management/computer professional with adequate supporting personnel. This cell should function in general to monitor the progress of various national health programmes to provide a decision support system (DSS). Apart from this may develop a suitable MIS on materials management. Some MIS reports and exception reports suggested by the author for PHCs, CHC and district office (CMHO) may be taken as basic guidelines.

At CMHO Office of Each District. At every CMHO office in the districts of Rajasthan the study recommends slight modification in the set-up to professionalise materials management personnel.

A post of Manager MIS, may be created at each of the CMHO office and a computer facility should be installed and a post of Data Entry Operator should also be sanctioned. The qualification requirement are MCA/PG Diploma in Computer Application with minimum two years experience.

This mini MIS cell, based upon the basic formats of MIS reports suggested should further develop information support system for monitoring and control of materials management. Apart from it, the progress of various national health programmes and other schemes would also be monitored. It may further strengthen collection of various statistics from PHCs, CHCs and SHCs, and after filtration or condensing data, relevant periodic information on the suggested formats may be sent to Directorate of Medical and Health, Rajasthan.

Budgetary Allocations

Looking to the steep increase in the prices of the general medicines, the essential drugs and other materials, like linen, bandages, cotton, etc. few to be

mentioned, the budgetary allocations in general to the district of Jodhpur and in particular for the PHCs under the district are not adequate.

The other pertinent factor not seriously considered while allocation of budget is the population growth in Rajasthan. The population of Rajasthan was one crore and ten lakh in 1951, and now it is around four crore and forty lakh, a four-fold increase in the population. The average growth rate is around ten lakh per year which means every year Rajasthan is producing a city like Ajmer or Jodhpur having population of about ten lakh demanding an extra medical health care.

The budgetary allocation for the district for the year 1994-95 was reported to be Rs.60 lakh and the population of the district is about 32 lakh. The average per capita expenditure on medicine and drugs, etc. works out to be about Rs.2.00. Further coming to PHCs budget the amount is between Rs.50,000 and Rs.60,000, for the population varying from 30,000 to 40,000. This means again on an average not more than Rs.2.00 per person annually.

However, it may be argued that all the people are not availing of the facility of health care available at CHCs, PHCs or sub-centres. The argument has some substance in it, but even then assuming that only 20 per cent affluent population might be getting health care elsewhere, but still around 70-80 per cent of the population still depend upon the Government facilities at district/taluka level. So even as per the moderate estimate, 25 per cent of the population are deleted, the average per capita expenditure would be around Rs.2.50. Even we provide a further deduction that 50 per cent of the population may fall sick to avail of this facility, the sanctioned amount increases to Rs.5.00 per person per annum.

However, by no means this can be claimed as adequate provision for the health care and therefore the PHCs will continue to face the problems of scarcity of materials, drugs and medicines, etc. Further, by this provision even the demand of the essential drugs for child and mother programmes cannot be fulfilled.

Thus, there is urgent need to take alternative financial resources (funding agencies like World Bank, WHO, etc.) to have adequate supply of medicine and drugs for health care at PHCs.

Therefore, the study suggests that the annual budgetary allocations to the districts of Jodhpur is quite inadequate and it must hold true for other districts also. The proposed minimum budgetary allocation is given in Table 2.

TABLE 2
PROPOSED MINIMUM BUDGETARY ALLOCATION

S.No.	Category	Present Annual Budgetary Allocation	Proposed Minimum Annual Budgetary Allocation
01	H.S.C.	Rs.3000-5000	Rs. 8000-10000
02	P.H.C.	Rs. 30000-50000	Rs. 70000-100000
03	C.H.C.	Rs. 80000	1.20 lakhs
04	District	Rs.50-60 lakhs	*Must be worked out realistically based on the numbers of H.S.C., P.H.C. and C.H.C. under a district as per the proposed annual budget allocations

Logistic Systems and Operational Problems

The State Government should consider the suggestions of introducing Door Delivery System (DDS) of drugs to the PHCs after every three months (quarterly). This is suggested as most of the PHCs facing acute shortage of drugs and medicines and other materials.

The State Government should also reconsider the logistics of supply of drugs etc. to PHCs. The present system of logistic of supply need intervention using OR approach. At least four to six districts may be selected on experimental basis for such intervention studies.

The selected districts may be divided into two sets/groups:

Group I: Group I, may be covered under the policy of logistic supply of drugs, etc. under DDS to selected PHCs from the CMHO office on quarterly basis.

Group II: Group II, may be covered under the policy of logistic supply of drugs, etc. under DDS to these selected PHC directly from the supplies approved on rate contract.

Group III: All remaining PHCs will be covered under the existing policy and continues to follow the present system without any change.

The pre-conditions of this study are:

- i. The systems suggested for Group I and Group II must be tried at least for one year.
- ii. The organisational set-up at those selected PHCs must not be disturbed for one year. Therefore, the SMO/MO, SK II, Jr. Accountant and the key nursing staff would not be transferred during the period of the study.

At the end of one year the performance of the three systems should be evaluated and the best system may be adopted for future planning and implementation.

The personnel working at the PHC expressed about the operational problems faced in spending full duty time at PHCs due to long commuting time or belonging to far distant districts. To attract more young doctors to stay and work for longer period at PHCs or for that matter other para-medical staff, Government may consider of posting the personnel in their own districts or the nearest district to their native places.

Guidelines for Store-keeping

The following are some guidelines for proper store-keeping:

- i. In the store, materials must be properly labelled for easy and correct identification.
- ii. Adequate preventive measures should be taken to avoid damage of materials due to variation in temperature rain, etc. and due to poor handling.
- iii. While issuing materials for use, first-in-first out (FIFO) principle should be adopted. By following this principle, those materials which are received first will be issued first. This procedure will help in avoiding materials getting obsolete or crossing expiry dates.

Stores must be inspected periodically preferably weekly/fortnightly at PHCs and monthly at CMHO office to see whether stock register tallies with physical balances.

Maintenance of Records

Another important aspect of materials management process is record maintenance. Proper record maintenance will ensure accountability and avoid theft or pilferage of materials from the store. This will be quite helpful in reducing materials cost by avoiding damages or loss of materials. Some of the important registers which are to be maintained at the PHC level are: (a) Main Stock Register; (b) Medicines Indent Register; (c) Sub-centre Stock Register; Daily expenditure or drugs register; and (e) Register of expiry dates of drugs (also called watch register).

All the registers must be updated on a daily basis. This would facilitate physical stock verification on any given day without notice.

Inventory Control

The scientific inventory control technique like ABC and VED analysis and installing cardex system at central stores for effective review, monitor and control of the inventory and stock positions of various items is a must for the organisation. Further, there is no hard and fast rules for the consumption value for A, B and C class items. This can be properly adopted after going through the past records of data and may be revised accordingly.

Stock verification is another neglected area, there is no practice of performing periodic stock verification on quarterly/monthly basis for the expensive items (may be termed as 'A' class items) or the critical items (may be vital items). On many occasions the essentials drugs are not available at PHCs due to absence of weekly/bi-weekly/monthly periodic stock verifications.

One of the major advantages of performing periodic stock verification is that this can facilitate to categorise the various items as:

Fast Moving: Those stocked for less than three months.

Slow Moving: Those stocked for more than three months but less than six months.

Non-moving: All those items stocked for more than 12 months.

This is popularly known as FSN analysis. However, it has been observed that FSN analysis is not in practice.

Management Information System

A PHC is a very important fortress in the rural areas of India. Thousands of men, women and children look up for guidance and protection in all matters of health to fight for freedom from poverty, disease and malnutrition.

In this context/management information system is another neglected area in the medical department and need to be strengthened. This is high time that now the Government of Rajasthan should seriously consider computerisation of all the CMHO offices at the districts not only for materials management function but for all other management and administrative functions for effective planning, implementation and control of various programmes and health care facilities.

Training in Materials Management

It was observed that there is hardly any emphasis on imparting training in the area of materials management. So it is another neglected area. The management development programmes (MDPs) must be conducted for SMO/MO and SKI/SKII etc. to create awareness and then specific knowledge in the area of materials management should be imparted.

The DMH Rajasthan should try to exploit the suggested facilities of the agencies mentioned which are extending training without any nomination fees (free of co) and others with the adjustment/collaboration with reputed institutes like IPR, Hyderabad, NIHFV, New Delhi at nominal fees.

सारांश

प्रस्तुत लेख में राजस्थान के विभागीय ढांचे में विभिन्न स्तरों पर स्वास्थ्य संबंधी सेवाओं के समर्थन हेतु उपादान प्रणाली की कार्य पद्धति का विश्लेषण किया गया है। इस लेख में, वर्तमान संगठनात्मक ढांचे, सामग्री की क्रय संबंधी नीतियों एवं प्रक्रियाओं, प्रचालन संबंधी आन्तरिक समस्याओं, औषधियों आदि की अनुपलब्धता के लिए उत्तरदायी घटकों, स्टाफ की अधिकता, औषधियों तथा अन्य माल की बरबादी और छिटपुट चोरी आदि जैसे कुछ खास मुद्दों की विवेचना की गई है। इसके अतिरिक्त, और राजस्थान में उपादान प्रबन्धन प्रणाली की कार्य पद्धति को बेहतर बनाने के लिए कुछेक आवश्यक उपाय भी सुझाए गए हैं।