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Dietary practices of recently delivered women during pregnancy in Uttar Pradesh, India

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Abstract
The word nutrition comes from the Latin word 'nutrire' which means to breast feed or nurse (Davidson,1992). Nutrition is a cross cutting issue across all stages of life and pregnancy is the only physiological stage where the issue addresses two lives, one that of the expectant mother and the other that of the unborn child. There are actually three types of nutrition in public health for pregnancy. One type is the supplementary nutrition (Take Home Ration given by ICDS, Iron & Calcium tablets), the other is dietary (eating meals or snacks at home) and the third is the therapeutic nutrition (prescription of protein-based preparations by doctors) (NHM, 2020). The current study explores some of the crucial variables on dietary nutrition during pregnancy as part of the Ante Natal Care (ANC) status of RDWs. As intestinal parasites are linked to nutritional up take in the body, the current study also mentions about de-worming medicines for RDWs as part of the ANC components.
The relevance of the study assumes significance as data on the details of dietary practices like frequency before and after pregnancy along with de-worming medicines as part of ANCs of recently delivered mothers are not available even in large scale surveys like National Family Health Survey 4 done in 2015-16. The current study also gives the reasons of not eating enough during pregnancy as told by RDWs of UP.
A total of four districts of Uttar Pradesh were selected purposively for the study and the data collection was conducted in the villages of the respective districts with the help of a pre-tested structured interview schedule with both close-ended and open-ended questions. In addition, in-depth interviews were also conducted amongst the RDWs and a total 500 respondents had participated in the study.
The results showed that in Gonda district, only 51% of RDWs and in Barabanki 67% of RDWs received deworming medicines but 96% in Banda and 93% in Saharanpur received deworming medicines. RDWs of Gonda and Saharanpur ate three times a day and very few RDWs ate four times a day among the four districts. In Barabanki district, all the RDWs ate the same number of times before and during pregnancy. Across the 4 districts, all the RDWs were not covered in disseminating the message of maternal nutrition and followed up to ensure compliance through home visits.

Keywords: RDW, ASHA, nutrition, THR, deworming

Introduction
As RDWs were selected from the catchment area of the ASHAs in the four districts, the following section briefs out the emergence of ASHAs in UP.
Like India, UP also went through the CHW scheme in 1970s through the introduction of Village Health Guide in 1977 (5th Plan GOI, 1974-79) and the concept was ratified further in the Alma Ata conference of 1978 on primary health care. On the other hand, with the introduction of Integrated Child Development Services in 1975 (5th Plan GOI, 1974-79) the Angan Wadi Workers were in place as CHWs in phases. Simultaneously, local Traditional Birth Attendants were in place since 1977 as CHWs (5th plan, GOI, 1974-79). Thereafter, the multipurpose male and female health workers came in to place through the Child survival and Safe Motherhood program in 1992 (Yearly Plan, GOI, 1992). Besides the sporadic efforts of NGOs putting in place CHWs through their small efforts in definite geographic areas, the cadre of Basic Health Workers were put in by the health system from 1992 till 2005 (GOI, 2005). Gradually the CHWs came here to stay with the introduction of ASHAs in 2005 through the introduction of NRHM (GOI, 2005). As per GOUP, there were 1,50,000 ASHAs in UP in 2019. The selection of RDWs in this study is dependent on the ASHAs.
Similarly, on tracking the progress of India through its nutrition-based policies and programs, it is evident that Integrated Child Development Scheme (ICDS) was launched in 1975. Thereafter, the nation had its National Nutrition Policy in 1993. This was followed by Mid-Day Meal Scheme for school children in 1995 where through nutrition, attendance in school is linked to improve. Add to that, the National Food Security Act was passed in 2013 (Lancet, GBD report, 2019).
The National Nutrition Mission or the Poshan Abhiyan was launched in 2017 with more focus although the nation initiated the program in 1970 to prevent nutritional anaemia in Maternal and Child Health program beneficiaries (NIHFW, 2019). The mission aims to reduce anaemia in young children, women and adolescent girls by 3% per annum from 2017 to 2022. Similarly, the UNICEF targets is to reduce anaemia among 15-49 years of women by 50%

from 2012 to 2030 (Lancet, GBD report, 2019). To address the issue of anaemia, the National Nutritional Anaemia Prophylaxis Program was launched in 2014 at national level to achieve Anaemia Mukt Bharat (NIHFW, 2014). To reduce the impact of Soil Transmitted Helminths (STH) that causes anaemia, the National De-worming Day (NDD) was launched in 2015 at the national level that is celebrated every year on 10th February (GOI, 2015). The issue of de-worming is also discussed in this study through RDWs.

Studies on RDWs in UP have not covered on aspects like dietary practices, frequency of meals per day and reasons for not eating adequately during pregnancy. The current study reflects on these aspects in detail including the number of de-worming medicines by the RDWs.

Nutrition of RDWs in UP

The current study done in 2017 examines the profile of the responses of RDWs in the catchment area of ASHAs regarding their dietary practices and receipt of de-worming medicines. The study delves into their frequency of meals, reasons for eating less than required and their receipt of the de-worming medicines.

Poor dietary practices lead to anaemia. The NFHS 4 report of UP mentions that 52% of women have anaemia where 39% have mild anaemia, 13% have moderate anaemia and 1% have severe anaemia. The report also mentions that the services of Integrated Child Development Scheme have been used by 49% of mothers of children who were weighed at an Angan Wadi Centre received counselling from an AWW or Auxilliary Nurse Midwife (ANM). (NFHS 4, 2015-16).

The evaluation report of Maternal Child Health Nutrition (MCHN) in UP done in 2006 says that less than a fifth of mothers (as compared to more than three fifths being aware) confirmed taking one additional meal every day during their index pregnancy. The reasons for this low coverage were loss of appetite as mentioned by 48% and 35% complained of heaviness and indigestion (MCHN, NIHFW, 2006).

Another study in UP brings out that on average, 18% pregnant women consumed at least five food groups. It also adds that maternal education and household socioeconomic status were positively associated with dietary diversity (Phuong et.al, 2019).

To reduce prevalence of anaemia among women, WHO and UNICEF have set a target of 24.1% as prevalence rate by 2030. The current prevalence of anaemia in UP is 54.6% (Lancet, GBD, 2019).

Research Methodology

Using purposive sampling technique, four districts were chosen from the four different economic regions of UP, namely Central, Eastern, Western and Bundelkhand. Further, the Government of UP in 2009 categorized the districts as per their development status using a composition of 36 indicators. Purposefully, the high developed district chosen for the study is Saharanpur from the western region, the medium developed district chosen for the study is Barabanki from the central region, the low developed district chosen for the study is Gonda from the eastern region and the very low developed district chosen for the study is Banda from the Bundelkhand region (GOUP, 2009).

In the next step, purposefully two blocks were selected from each of the district and all the ASHAs in these blocks were chosen as the universe for the study. From the list of all the ASHAs in each of the two blocks, 31 ASHAs were chosen randomly from each block for the study. In this way, 62 ASHAs were chosen for the study from each of the districts. In Gonda district, 64 ASHAs were selected to make the total number of ASHAs for the study to 250. From the catchment area of each ASHA, two Recently Delivered Women (RDW) were chosen who had a child in the age group of 3-6 months during the time of the data collection for the study. In this way, 124 RDWs from three districts and 128 RDWs from Gonda district were chosen thus a total of 500 RDWs were selected for the study.

The following figure shows the four districts of UP in the map of the state of UP.

Fig 1

Data Analysis

The data was analyzed using SPSS software to calculate the percentage and absolute values of responses given by RDWs. The dietary frequency and the de-worming medicine related data were derived in percentages as per the data collected from the RDWs in the four study districts. The quantitative data related to the profile of the responses was analyzed for RDWs of all the districts. All these modalities form the basis of the ensuing results and discussion section of this article.

Research tool

The RDWs were interviewed using an in-depth, open-ended interview schedule as the research tool which included a section on variables on ANC. This was the third section of the research tool. The current article deals with four questions of the tool that are represented through 4 tables in following section. These were question 317 to 320 of the research tool. The last question was dependent upon the responses in 318 and 319. The question number 318 was the frequency of their meals per day when they were not pregnant and question 319 was when they were pregnant. Responses in 320 were elicited only if the number of frequencies mentioned in responses for 319 was less than the frequency mentioned in 318. Five hundred research tools were used for the study to interview 500 RDW who had a child in the age group of 3 to 6 months during the survey. The following section details out the results and discussions related to the study.

Results and discussions

There are 4 tables in this section where the initial table is regarding receipt of de-worming medicines by RDWs, the second table is on the number of meals the RDWs took when they were not pregnant. Following this is the third table dealing with the number of meals that the RDWs took when they became pregnant. The last table is regarding the reasons given by RDWs for not taking an extra meal during pregnancy.

Table 1

Percentage of RDWs who received deworming medicines during pregnancy				
Names of districts & number of RDWs surveyed (n=500)	Banda (n=124)	Barabanki (n=124)	Gonda (n=128)	Saharanpur (n=124)
Received deworming medicines	95.9	66.9	50.7	92.7

The next part in the table was regarding the RDWs receiving deworming medicines during pregnancy. In Gonda only 51% of RDWs and in Barabanki 67% of RDWs received deworming medicines but 96% in Banda and 93% in Saharanpur received deworming medicines.

That meant even if in Gonda and Barabanki district the RDWs consumed IFA tablets, they would be in risk for having maternal anemia as all the RDWs were not consuming deworming medicines. The intestinal worms also contributed to poor maternal nutrition.

Table 2

Percentage of RDWs reporting on the number of meals per day they were taking before their pregnancy				
Names of districts & number of RDWs surveyed (n=500)	Banda (n-124)	Barabanki (n=124)	Gonda (n=128)	Saharanpur (n=124)
Once	1.6	100	2.3	3.2
Twice	92	0.0	53.1	77.4
Thrice	6.4	0.0	43.8	18.5
Four times	0.0	0.0	0.8	0.8

The aspect of maternal nutrition was the next part in this table. The RDWs were asked about the number of meals they were taking before pregnancy and during pregnancy. If they were taking less number of meals during pregnancy than the stage of before pregnancy, they were asked for the reasons.

Table 3

Percentage of RDWs reporting on the number of meals per day they took during pregnancy				
Names of districts & number of RDWs surveyed (n=500)	Banda (n=124)	Barabanki (n=124)	Gonda (n=128)	Saharanpur (n=124)
Once	0.0	100	7	28.2
Twice	87.1	0.0	38.3	43.8
Thrice	12.1	0.0	41.4	18.8
Four times	0.8	0.0	13.3	9.2

In Barabanki all the RDWs ate the same number of times before and during pregnancy. When asked for the reason of not taking an extra meal only 45% replied that they were not feeling hungry. Most of the RDWs in Banda ate twice as 87% RDWs ate twice during pregnancy in comparison to 92% eating twice before pregnancy.

There was an increase of 6% percentage of RDWs among those who ate thrice in Banda. There was a decrease in the percentage of RDWs eating twice and thrice in Gonda during pregnancy than before pregnancy but increase for RDWs eating once or four times. In Saharanpur, there was an increase in the percentage for all three categories of eating once, thrice and four times but decrease in the twice eating category.

Table 4

Percentage of RDWs (those eating less/same during pregnancy compared to before pregnancy) reporting on the reasons for not taking an extra meal during pregnancy				
Names of districts & number of RDWs surveyed (n=500)	Banda (n=124)	Barabanki (n=124)	Gonda (n=128)	Saharanpur (n=124)
Not feeling hungry	5.6	44.4	19.5	5.6
Not keeping well	0.8	0.0	0.0	0.0

It was seen that 5.6% of RDWs in Banda did not eat extra meal as they did not feel hungry and only 1% said that they did not eat extra meal as they did not keep well. 19.5% RDWs in Gonda and 5.6% RDWs in Saharanpur told that they did not eat extra meal as they did not feel hungry.

Hence, it was clear that the ASHAs of Gonda were not following up with the pregnant women regarding maternal nutrition. Across the 4 districts, all the RDWs were not covered in disseminating the message of maternal nutrition and followed up to ensure compliance through home visits.

Conclusions

The above results showed that the profile of the dietary practices of RDWs vary a lot across the districts. A study on evaluation of ASHA program in eight Indian states that included the state of UP in 2012 suggests that beyond provision of cash incentives, greater support be given to the provision of competency based training, health rights dimension, adequate supply of medicines, mentoring and motivation to the ASHAs (Sundararaman et.al,2012). The

process of mentoring and motivation should also focus on involving all the stake holders like the ASHA Sanginis. Involvement of the Sanginis, who are the supervisors of ASHAs would lead to effective home visits to follow up the RDWs during pregnancy. This will help improve the health of RDWs so that maternal health also get priority. Data should be collected in large scale surveys on these parameters of dietary practices and frequencies as they can give crucial information regarding maternal nutrition. The inclusion of role of ASHA, AWW, Sanginis and ANM regarding ANC services like maternal nutrition will help in designing better outreach services regarding maternal health and nutrition.

References

1. Bajpai N, Dholakia R. Improving the performance of ASHAs in India, working paper No.1, working paper series, globalcentres.columbia.edu/southasia, 2011.
2. GOI (2005, 2015). Ministry of Health and Family Welfare; Update on the ASHA Programme, April 2005, January, 2015.
3. Government of Uttar Pradesh. Planning Atlas of Uttar Pradesh; Area Planning Division, State Planning Institute, Planning Department, 2009.
4. National Family Health Survey, India, Uttar Pradesh, IIPS, Mumbai, MOHFW, GOI, 2015-16.
5. Sundarraman, *et al*., determinants of functionality and effectiveness of community health workers; results from evaluation of ASHA program in eight Indian states, BMC proc, 2012, 6 (Suppl 5), 030, published on line Sept, 2012.
6. Project Close-out report, Vistaar project, USAID, 2006-2012, Intrahealth, April, 2013, www.intrahealth.org.
7. GOUP, PIP, NHM, 2019.
8. GOI, planning document, 1974-79, yearly plan, 1992.
9. NIHFW, Community based Maternal & Child Health Nutrition (MCHN) project, Evaluation Report, ORG centre for social research, GOUP, 2006. www.ncbi.nlm.nih.gov.
10. Phuong H N, et.al, Maternal nutrition practices in UP, India- Role of key influential demand and supply factors, open access, Wiley online library, May 7, 2019. https://doi.org/10.1111/mcn.12839.
11. Lancet, Global burden of disease study, the burden of child and maternal nutrition and trends in its indicators in the states of India, 1990-2017, September 17, 2019.
12. NIHFW, NHP, NNAPP, 2014. www.nihfw.org/nhp/nnap.html.
13. GOI, NDD, operational guidelines, national de-worming day, MOHFW, 2015. www.mohfw.nic.in
14. Davidson, Principles & Practice of Medicine, 16th edition, ELBS, 1992, ISBN 0-443-04482-1.