



A STUDY ON BIOSOCIAL CHARACTERISTICS & NUTRITIONAL STATUS OF RECENTLY DELIVERED MIGRANT WOMEN LIVING IN REWA CITY OF M.P.

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ABSTRACT Migration is an integral part of population dynamics. According to the National Sample Survey 2007-08, the number of migrant households per 1000 households in India was 33 in urban areas. Two-thirds of the households migrated for employment-related reasons. Migrant population is a disadvantaged section of society. They have low access to government food-security scheme due to nonavailability of their local identity cards. WHO 30 Cluster sampling technique, which is a kind of two stage sampling technique, was used to select the representative population of migrants of Rewa city. Mean age of RDW was found to be 25.62 years. About one-third (29.8%) of RDWs delivered their last child at age less than 21 years which includes about two percent of RDWs who delivered at the age even less than 18 years. Around 10% had weight below 70% of reference value. In the present study, majority of RDWs(68.2%) were in the normal range of BMI ,i.e, 18.5-24.9, while almost a quarter of them were in the range less than 18.5. About one-third of RDWs delivered their last child at age less than 21 years which includes about two percent of RDWs who delivered at the age even less than 18 years.

KEYWORDS : RDW, Migration ,Employment

Introduction

Migration is an integral part of population dynamics. According to the National Sample Survey 2007-08, the number of migrant households per 1000 households in India was 33 in urban areas. [1] Two-thirds of the households migrated for employment-related reasons. Another 21% of the households migrated for study purposes. Other reasons for migration of households include forced migration (natural disaster, social/political problem, and displacement by development projects), acquisition of own flat/house, housing problems, health care, postretirement, marriage, and so on. [1]

In spite of such high level of deprivation to access government health facilities and high vulnerability to various forms of morbidities, migrant strata of urban poor remains the most ignored group most of whom are not notified & recognized by government. This also excludes them from the economic benefits provided to the mothers undergoing institutional deliveries under JSY (Janani Suraksha Yojna). Migration to urban areas not only affects the health of adults, but also the health of children in an adverse manner. This fact is evident from the relation between migration and child mortality, and this has been shown in a study which has used data from the National Family Health Survey-3. [2]

Undernutrition and low immunization coverage is also responsible for child mortality. Under nutrition is a major problem among migrant population, especially among women and children as was shown in a study done in Mumbai. Migrant population is a disadvantaged section of society. They have low access to government food-security scheme due to nonavailability of their local identity cards. [3]

Methodology

Study area: Rewa city ,M.P.

Study population: Recent rural to urban migrant families living in Rewa city.

Study unit: Recently Delivered Migrant Women (RDW) living in Urban slums/Construction sites etc. of Rewa city.

Migrants are defined as population coming from rural areas of other districts and residing in urban area since past 6 months to 10 years. *Recently Delivered Women* (RDW) is defined as women who has delivered within past 2 years.

Sampling:

Sample size: The required sample size was calculated by using following formula:

$$N = (Z_{1-\alpha/2})^2 P(1-P) / d^2$$

P=prevalence of anemia among women (15-49 yrs) in India (NFHS-4) is 53%. [4]

N = 400 Recently Delivered Women (RDW).

Sampling technique: WHO 30 Cluster sampling technique, which is a kind of two stage sampling technique, was used to select the representative population of migrants of Rewa city.

Inclusion criteria:

1. Families from rural areas of other districts/states living in urban areas of Rewa for the period more than 6 months and less than 10 years.
2. Migrant Families with at least one RDW living in Rewa city.
3. Families giving consent.

Exclusion criteria:

1. Currently pregnant females were excluded from the study.
 2. RDWs with stillbirth were excluded.
- Study period was One Year.

Ethical Clearance

The study is commenced after approval from institutional ethical committee. Invasive procedure and active interventions were not done in the study so only informed verbal consent was taken. They were assured that their responses would be kept anonymous and confidentiality maintained.

Study design: Cross-sectional descriptive study. Data were collected using a semi-structured, pre-designed and pretested interview schedule.

Data was tabulated and analyzed by using the SPSS, version 17.0 statistically software. Chi-square test, t-test, and Multiple logistic Regression was used to analyse data wherever applicable. P<0.05 is taken as statistically significant.

Results

Table-1 Biosocial Characteristics of migrant RDWs (n=400)

Biosocial characteristics	MP & Chhattisgarh n (%)	Assam & WB n (%)	Bihar n (%)	Uttar Pradesh n (%)	Total N (%)
Current age of RDWs					
< 18 years	0(0) [0]	2(66.7) [2.3]	0(0) [0]	1(33.3) [0.5]	3(100) [1.7]
18-25 years	66(25.7) [76.7]	58(22.6) [67.4]	6(2.3) [54.5]	127(49.4) [58.5]	257(100) [64.3]
25-35 years	18(13.7) [20.9]	25(19.1) [29.1]	4(3.1) [36.4]	84(64.1) [38.7]	131(100) [32.7]
35-45 years	2(22.2) [2.3]	1(11.1) [1.2]	1(11.1) [9]	5(55.6) [2.3]	9(100) [2.3]
Mean age + SD	24.86 +1.2	26.64 +0.9	23.63 +1.1	25.26 +1.3	25.62 +1.45
Age of RDW at last delivery					
<18 years	1[1.2]	2[2.3]	0[0]	5[2.3]	8[2.0]
18-21 years	32[37.2]	24[27.9]	2[18.2]	53[24.4]	111[27.8]
21-35 years	51[59.3]	59[68.6]	8[72.7]	154[71.0]	272[68.0]
>35 years	2[2.3]	1[1.2]	1[9.1]	5[2.3]	9[2.2]
Mean age + SD	23.1 + 4.08	23.6 +4.1	26.5 + 5.92	24.5 +4.7	24.1 +4.52
Educational Status of RDW					
Illiterate	63(18.0) [73.3]	80(22.9) [93]	11(3.1) [100]	196(56.0) [90.3]	350(100) [87.5]
Primary School	18(51.4) [20.9]	4(11.4) [4.7]	0(0) [0]	13(37.1) [6]	35(100) [8.7]
Middle School	3(37.5) [3.5]	1(12.5) [1.2]	0(0) [0]	4(50.0) [1.8]	8 (100) [4]
High School	2(33.3) [2.3]	1(16.7) [1.2]	0(0) [0]	3(50.0) [1.4]	6 (100) [1.5]
Intermediate & Above	0(0) [0]	0(0) [0]	0(0) [0]	1(100) [0.5]	1(100) [0.3]
Occupation of RDW					
Not Working	14(9.1) [16.3]	12(7.8) [14]	5(3.2) [45.5]	123(79.9) [56.7]	154(100) [38.5]
Small Business/Shop	0(0) [0]	0(0) [0]	1(10.0) [9]	9(90.0) [4.1]	10(100) [2.5]
Daily Wage Worker	61(64.9) [70.9]	3(3.2) [3.5]	3(3.2) [27.3]	27(28.7) [12.4]	94(100) [23.5]
Maid/Domestic Help	11(14.7) [12.8]	4(5.3) [4.7]	2(2.7) [18]	58(77.3) [26.7]	75(100) [18.7]
Garbage collection	0(0)	67(100)	0(0)	0(0)	67(100)

Table -1 shows Majority (64.3%) of RDWs fell under the age category of 18-25 years. Mean age of RDW was found to be 25.62 years. About one-third (29.8%) of RDWs delivered their last child at age less than 21 years which includes about two percent of RDWs who delivered at the age even less than 18 years. Those who delivered their child at age less than 18 years were from Assam (2.3%) and UP (2.3%). Mean age of RDW for delivery of child was found to be 24.1 years among migrants. Majority of RDWs (87.5%) were illiterate, while around 8.7% were found to be educated up to Primary level. Inter-state comparison of educational status shows that around 93% RDWs from Assam, 73.3% from MP, 90.3% from UP & almost all cases from Bihar were found to be illiterate. Overall more than one-third (38.5%) of RDWs were found to be not working while others were involved in some or the other occupation. Interstate comparison shows that majority of RDWs from

MP (70.9%) were involved as Daily wage manual while that of Assam (77.9%) were particularly involved in Garbage collection as their main occupation. Others were involved in mixed occupation. As far as parity of RDWs was concerned, around three-fifth (59.5%) were found to have single parity while around one-third (37.3%) had parity 2-5. Majority of RDWs (68.5%) stayed in this city during the Antenatal period while around 18 percent preferred to stay at their Native place during this period. About 13.5 percent of them stayed at both the places during the antenatal period. Majority (82.6%) of migrant RDWs from Assam stayed in the current city during the entire period of ANC followed by that of UP (76%). More than two-third (69.2%) of RDWs stayed in the current city during last delivery while almost a third (30.8%) stayed at their native place during the same period. All states show almost similar result in this regard.

Table-2 Distribution of migrant RDWs by their nutritional status

Nutritional variables	MP & Chhattisgarh n (%)	Assam & WB n (%)	Bihar n (%)	Uttar Pradesh n (%)	Total N (%)
Weight distribution of RDW (expressed as % of Indian reference female= 55 kg) (n=288)1					
>90 % (55kg)	7[11.1]	10[17.2]	2[28.6]	27[16.9]	46[16.0]
70-90% (55kg)	45[71.4]	45[77.6]	5[71.4]	121[75.6]	216[75.0]
<70% (55kg)	11[17.5]	3[5.2]	0[0]	12[7.5]	26[9.0]
TOTAL	63[100]	58[100]	7[100]	160[100]	288[100]
Height distribution of RDW (in cm) (n=400)					
< 141	4[4.6]	6[7.0]	0[0]	18[8.3]	28[7]
142-150	55[64.0]	50[58.1]	7[63.6]	118[54.4]	230[57.5]
>150	27[31.4]	30[34.9]	4[36.4]	81[37.3]	142[35.5]
TOTAL	86[100]	86[100]	11[100]	217[100]	400[100]
BMI of RDW (n=288)1					
<18.5	24[38.1]	16[27.6]	2[28.6]	29[18.1]	71[24.7]
18.5-24.9	37[58.7]	40[69.0]	4[57.1]	121[75.6]	202[70.1]
>24.9	2[3.2]	2[3.4]	1[14.3]	10[6.3]	15[5.2]
TOTAL	63[100]	58[100]	7[100]	160[100]	288[100]
Status Of Anaemia@ (n=400)					
Present	78[90.7]	72[83.7]	8[72.7]	176[81.1]	334[83.5]
Absent	8[9.3]	14[16.3]	3[27.3]	41[18.9]	66[16.5]
TOTAL	86[100]	86[100]	11[100]	217[100]	400[100]

Table -2 shows nutritional status of RDWs on four parameters. On expressing Weight of RDW as percentage of Indian Reference female, (i.e., 55kg), it was observed that around three-fourth (75.0%) fell in the 70-90% category, while 16 % had weight more than 90% of reference. Around 10% had weight below 70% of reference value. Among states, MP & Chhattisgarh had the maximum value of <70% category (17.5%) & minimum value for >90% category (11.1%) signifying the most ill-nourished group. Assessment of nutritional status by Height measurement shows that majority of migrant RDWs (57.5%) come in the category of 142-150cm while around 35.5% fall under the category with >150cm. A measure of 7% also shows height < 141 cm.

As far as assessment of nutritional status by BMI of RDWs is concerned, majority (70.1%) came in the normal category 18.5-24.9 while a quarter (24.7%) showed BMI<18.5. Remaining RDWs (5.2%) had BMI >24.9. On comparing among different states it was observed that BMI<18.5 was found in 44.2% of migrants from MP & Chhattisgarh followed by Assam & WB (34.9%), Bihar (27.3%) & UP (18.0%). This shows that most ill-nourished group was MP & Chhattisgarh in this regard. Clinical Anaemia was observed in **83.5%** of migrants as against 16.5 % who were normal. The pattern was almost equally distributed among all states.

Discussion

Majority (64.3%) of RDWs fell under the age category of 18-25 years. About one-third (29.8%) of RDWs delivered their last child at age less than 21 years which includes about two percent of RDWs who delivered at the age even less than 18 years. **NFHS-3** data shows that around **50 percent** of women of urban poor gave birth to their first child in age **less than 18 years**. Delivering at such a tender age have far reaching consequences which in turn makes the female to prone to serious adversities owing to physical immaturity. This underlines the intense vulnerability and stringent social barriers prevalent in these communities. Worst being that of migrant RDWs of Assam who are the forerunners in such maternal and child health vulnerabilities. Majority of RDWs (87.5%) were illiterate. Majority of RDWs (68.5%) stayed in this city during the Antenatal period while around 18 percent preferred to stay at their Native place during this period. Staying at Native place proves advantageous in a way that, the inefficient urban health set-up which is not very well planned to reach people at the door-steps, it lacks special action plan and strategies to reach the ousted and the most vulnerable strata of the society, whereas rural areas have health workers reaching door-to-door to facilitate health care among masses. So, most of the time it benefits them in a positive way. Few RDWs also manage to stay at both places during antenatal period and thus it combines the of both city and the rural healthcare. Worst condition is of the RDWs coming from far off places as the Assamese who continue stay in the city throughout the pregnancy lacking all the care required. More than two-third (69.2%) of RDWs stayed in the current city during last delivery while almost a third (30.8%) stayed at their native place during the same period. Staying at current city for delivery also proves unhealthy as most of the RDWs resort to Home deliveries being unaware of the health facilities. This was supported by the findings of **Shaokang ,et. al., (2002)**^[5] who studied pregnant migrant females in China and concluded that the mothers underwent ANC infrequently when stayed in urban communities making them liable to adversities and complications arising out of improperly planned delivery. Also **Waterstone (2001)**^[6], found out that social exclusion among migrants had an important bearing upon maternal mortality rate.

In the present study, majority of RDWs (68.2%) were in the normal range of BMI ,i.e, 18.5-24.9, while almost a quarter of them were in the range less than 18.5. Most of the RDWs (57.5%) were found to be in the height range 142-150 cm while almost a third (**32.5%**) was in the category more than 150cm. Maternal anaemia was found in **83.5** percent of RDWs. **NFHS-3**^[7] shows that anaemia in ever married women among urban poor was found to be **55.3 percent**. Interstate comparison shows that around **90** percent of migrant RDWs from Madhya Pradesh and **83.7** percent of migrant RDWs from Assam were found to be anaemic. This was far above their state's **NFHS-3** data about anaemia which is **58.8** percent for **Assam Urban poor** and **60.5** percent for urban poor of **Madhya Pradesh**. This hereby underlines the noticeable effect of migration on the nutritional status of mothers.

Conclusion

Total of 400 Recently Delivered migrant Women (RDW) were interviewed in the study. Almost all belonged to the age group 20-35 years. About one-third of RDWs delivered their last child at age less

than 21 years which includes about two percent of RDWs who delivered at the age even less than 18 years. Around three-fifth were found to have single parity while remaining had parity 2-5. Majority of RDWs stayed in this city during the Antenatal period while around 18 percent preferred to stay at their Native place during this period. About 13.5 percent of them stayed at both the places. Majority of RDWs came in the normal category 18.5-24.9 while a quarter (24.7%) showed BMI<18.5. Remaining RDWs had BMI >24.9. On comparing among different states it was observed that BMI<18.5 was found in 44.2% of migrants from MP & Chhattisgarh followed by Assam & WB (34.9%), Bihar (27.3%) & UP (18.0%). This shows that most ill-nourished group was MP & Chhattisgarh in this regard. Clinical Anaemia was observed in **55** percent of migrants as against 16.5 % who were normal. The pattern was almost equally distributed among all states.

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