ORIGINAL ARITICLE

# Role of ASHA in improvement of maternal health status in northern India: an urban rural comparison

Padda P[1], Devgun S[2], Gupta V[3], Chaudhari S[4], Singh G[5]

[1]Associate Professor; [2,3,4,5] Assistant Professor, Department of Community Medicine, Guru Gobind Singh Medical College, Faridkot.

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## Article Cycle

**Address for Correspondence:** Preeti Padda, Associate Professor, Department of Community Medicine, Guru Gobind Singh Medical College, Faridkot, Punjab, India
E Mail ID: drpreetipadda@gmail.com

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## Abstract

**Background:** In spite of extensive network of health care facilities areas of concern in the state of Punjab are alarming rate of children suffering from anemia, high prevalence of anemia among women, particularly pregnant ones, low consumption of IFA tablets and poor post natal care, proportion of children exclusively breastfed is very low, delay in initiation of breastfeeding and use of supplementary foods. To combat this NRHM was launched and ASHA is the most important link between the community and health care. **Objectives**: to evaluate the role of ASHA workers in rural areas of district Faridkot using the maternal health indicators by making urban rural comparison. **Methods:** A house to house survey was conducted in selected urban and rural areas of Malwa region of Punjab to select the cohorts of pregnant females. These pregnant females were registered and followed till 42 days after delivery. All the information regarding ante natal, natal and post natal care of the pregnant female was recorded on the self-structured and pretested questionnaire and an urban rural comparison was made to evaluate the role of ASHA. **Results:** Out of 2841 pregnant women of urban area, 900 (31.7%) had an abortion whereas out of 5088 of pregnant women of rural area 1063 (20.9%) ended in an abortion. The females whose pregnancy ended in an abortion were not included in the study. Therefore, 1941 and 4025 pregnant women formed the sample for the analysis to avoid bias. 92.6% of pregnant women living in urban area had an institutional delivery and 7.4% delivered at home. The pregnant women of urban had a higher still birth rate (40.8 per 1000 live births) than pregnant women of rural (11.1 per 1000 live births). Sex ratio of the newborns was also more skewed in urban (866 females per 1000 males) than rural area (995 females per 1000 males). **Conclusion:** This can be concluded from the present study that the maternal and child health services delivery definitely improves after inception of ASHA worker in rural community.

## Key Words

ASHA, IFA, Maternal Health

## Introduction

Punjab is unarguably one of the most wonderful states in India with regards to the climate. The state has fabulous weather throughout the year which is also conducive for the growth of a variety of crops. The state has seen a lot of ups and downs during the years of freedom struggle and has developed to be one of the strongest states in India with respect to the economic conditions.(1)

The Population of Punjab according to the 2011 census stands at about 27 million, making it the 15th most populated state in India. 62.51% of the state's population still resides in rural region whereas 37.49% in urban region. The state is spread over an area of about 50000 sq. km. making it the 19th largest state in the country in terms of area. The state has a growth rate of about 13% which is below the national average of 17%. The population of the state is rising considerably due to rapid efforts towards development and progress. The literacy rate in the state is about 73% a figure that has improved tremendously in the last few years due to the consistent efforts of the government. The sex ratio in Punjab leaves a lot to be desired as it lags behind the national average by a lot of points.(1)

Our study is focused on Malwa region which is located in south-eastern region of Punjab consisting of 11 districts one of which is Faridkot.

On the happy front, the state has some avenues of satisfaction according to NFHS-III i.e. Fertility level now below the replacement level, rise in the use of family planning methods, spacing methods of family planning becoming more popular, children suffering from diseases (diarrhea and ARI) making greater use of health facility, proportion of undernourished children on decline.(2)

While in spite of extensive network of health care facilities areas of concern are alarming rate of children suffering from anemia, high prevalence of anemia among women, particularly pregnant ones, low consumption of IFA tablets and poor post natal care, proportion of children exclusively breastfed is very low, delay in initiation of breastfeeding and use of supplementary foods.(2)

To combat all these concerns Government of India have launched a National Rural Health Mission to address the health needs of rural population, especially the vulnerable sections of the society. ASHA is most important link proposed by this mission between the community and the health care provider and supposed to act as change agent who will bring the reforms in improving the health status of oppressed community of India.

## Aims & Objectives

The present study was conducted to evaluate the role of ASHA workers in rural areas of district Faridkot using the maternal health indicators by making urban rural comparison.

## Methods

The present study was conducted in Faridkot district of Malwa region of Punjab which has two rural developmental blocks and three towns with a total population of 618008. Out of these, one rural block and one town were randomly selected for the present study as ASHA caters to the rural population only. With the help of peripheral health workers, base line information on the population was obtained. All the women found to be pregnant during the house to house baseline survey conducted in the month of January 2012 were registered for the study. The demographic information was collected on self-structured and pretested questionnaire. The registered pregnant females were followed till 42 days after delivery and information was recorded for ante natal care, natal care and post natal care and urban (area with no ASHA) rural (area covered by ASHA) comparison was made. The data was compiled and analyzed using SPSS version 20.

## Result

The total population of the selected rural block was 2, 24,357 and that of urban area was 80,768. The literacy rate was 70.7% & 58.8% of

urban and rural areas respectively with an overall literacy rate of 63%, the figures are slightly less than the figures of census 2011 according to which the Literacy rate in Punjab is 83.18% & 71.42% of urban and rural areas respectively with an overall literacy rate of 75.84%.[1] Similarly the female literacy rate was lower in rural area (59.9%) as compared to urban area (73.9%).

During the baseline house to house survey, the total numbers of pregnant females registered were 2841 and 5088 from urban and rural areas, respectively. Pregnant females formed 3.5% of the total population in urban area and 2.3% in rural area, showing that although the literacy rate among rural population of Malwa region is low but pregnancy rate was higher in urban area. Out of 2841 pregnant women of urban area, 900 (31.7%) had an abortion whereas out of 5088 of pregnant women of rural area 1063 (20.9%) ended in an abortion. The females whose pregnancy ended in an abortion were not included in the study. Therefore, 1941 and 4025 pregnant women formed the sample for the analysis to avoid bias.

Surprisingly, a higher percentage of pregnant women got registered in the first trimester in rural area (85.5%) as compared to urban areas (54.6%). Similarly the proportion of women who received at least three ante natal checkups was higher among those who resided in rural areas (90.1%) in comparison to those residing in the urban area (81.6%) (Table 1).

As far as tetanus toxoid immunization status is concerned, coverage was higher in rural area and dropout rates were also lower in the same. 68.9% & 68.1% of pregnant women received TT first dose and TT second dose or booster in urban area whereas 85.9% & 85.8% received TT first dose and TT second dose or booster in rural area (Table 1).

Proportion of pregnant women who received 100+ Iron & Folic acid (IFA) tablets was higher among those residing in selected rural block (63.7%) as compared to those residing in urban area (46.3%) received it for three months (Table 1).

In spite of the higher coverage of IFA tablets the prevalence of anemia (Hb < 11gm/dl) was higher in rural (84.5%) than urban (52.9%) population. But in contrast to the above findings, severe anemia cases were higher among the pregnant women of urban (2.6%) as compared to those belonging to rural area (0.3%).

Table 2 shows the comparison of delivery indicators in urban and rural areas. 92.6% of pregnant women living in urban area had an institutional delivery and 7.4% delivered at home. We were not surprised to find that none of the home delivery was attended by the trained Traditional Birth Attendant (TBA). Whereas, 14.3% of women residing in rural area delivered their babies at home and 85.7% delivered at an institute. In case of home deliveries, 28.3% were assisted by Trained TBA's. Almost equal proportion of pregnant women from urban (60.0%) and rural (61.9%) area who delivered at an institute, were discharged within 48 hours of delivery.

Only 50.3% of newborns born at home to pregnant mothers living in urban area were visited within 24 hours of delivery in comparison to 83.5% of those born to pregnant women of rural area.

Normal delivery was the most common mode of delivery in urban (70.0%) as well as rural (90.5%) area.

Table 3 shows the pregnancy outcome among urban and rural area. The pregnant women of urban had a higher still birth rate (40.8 per 1000 live births) than pregnant women of rural (11.1 per 1000 live births). Sex ratio of the

newborns was also more skewed in urban (866 females per 1000 males) than rural area (995 females per 1000 males).

8.2% and 11.8% of females had obstetric complications during deliveries among pregnant women residing in rural & urban area, respectively.

As far as Post Natal Care is concerned, higher proportion of post natal mothers were visited for checkup within 48 hours of delivery among those residing in urban area (68.2%) than those of rural area (36.7%). Post natal complications were also higher among those of rural area (Table 4).

Maternal mortality was higher i.e., 7 maternal deaths occurred in urban area as compared to 5 maternal deaths among rural population.

## Discussion

In order to decrease the gap between the urban and rural, health government of India has made great efforts in relation to provision and utilization of primary health care. One step in this direction was launch of National Rural Health Mission (NRHM) in year 2005. ASHA (Accredited Social Health Activist) was introduced as a link worker at village level for provision of Health care.(3) After eight years of launch we have been able to achieve a better maternal health in rural areas as compared to the urban area at least in our study area.(4)

In the present study we can observed that around 85.5% pregnant women got registered in the first trimester in rural area as compared to urban areas where the registrations are only 54.6%. The study conducted by Ranjan Das et al shows 57.2% registration whereas it was 95% in a study by Sunder Lal et al both these studies are conducted in rural areas. (3,5)

Our study shows that the 90.1% antenatal women in rural area received at least three ante natal checkups in comparison to those residing in the urban area i.e. 81.6%, while according to NFHS-2 which was done before the launch of NRHM only 43.8% of the women received at least three antenatal checkups.(6) Study conducted by Ranjan Das et al in year 2001 reported three or more antenatal visits in 62% of the registered cases whereas it was 27.7% in a study by Sunder Lal et al in same year.(4,5)

As far as tetanus toxoid immunization status is concerned, present study depict more coverage in rural area. Coverage of TT first dose and TT second dose or booster in urban area are only 68.9% & 68.1% as compare to 85.9% & 85.8% in rural area respectively. Slightly less coverage was observed in study conducted in urban area of delhi by R.Talwar i.e 54.6% while studies conducted by Sunder Lal and Ranjan Das et al in rural areas shows 94.8% and 93.2% coverage of two doses of tetanus toxoid in registered antenatal cases respectively which is higher than the present study.(7,4,5)

The proportion of pregnant women who received 100+ Iron & Folic acid (IFA) tablets in the present study is 63.7% in rural area in comparison to urban area i.e. 46.3% and the results are higher than the NFHS –2 in which 47.5% of the mothers received 100 IFA tablets in three months. While studies conducted by Sunder Lal and Ranjan Das et al conducted in 2001 showed IFA consumption of 5.8% and 1.7% for more than 100 tablets respectively. (6,4,5)

92.6% of pregnant women living in urban area had an institutional delivery and 7.4% delivered at home. Whereas, 14.3% of women residing in rural area delivered their babies at home and 85.7% delivered at an institute which is much higher than in the studies conducted by Sunder Lal et al and Ranjan Das et al who reported institutional deliveries in

14.2% and 10.7% respectively. The findings of both of these studies are similar to those in NFHS- 2 data.(6,4,5)

We were not surprised to find that none of the home delivery in urban area was attended by the Traditional Birth Attendant (TBA) and only 50.3% of the newborns were visited within 24 hours of home delivery while in rural area 28.3% of home deliveries were assisted by Trained TBA's. Study conducted by Ranjan Das et al shows trained birth attendants (TBAs) delivered 40% of the ANC cases, while the national figures were 35.1% for rural areas.(6,4)

In present study as we know that 83.5% of newborns born at home to pregnant mothers living in rural area were visited within 24 hours of delivery in comparison to 50.3% of those born to pregnant women of urban area. The results were slightly higher that the study conducted in a village near Chandigarh by Aggarwal N et al which shows that about three-fourth (74%) of non-institutional births were followed by a check-up within two months of delivery . Among births that were followed by a check-up, around 80% check-ups took place shortly after birth (72% within two days & 7% within a week).(8)

In the present study Normal delivery was the most common mode of delivery in urban (70.0%) as well as rural (90.5%) area. According to NFHS -2 data based on mothers' reports, 7 percent of children born in India in the past three years were delivered by caesarian section. The proportion of deliveries by caesarian section was three times as high in urban areas (15 percent) as in rural areas (5 percent).(6)

The pregnant women of urban had a higher still birth rate (40.8 per 1000 live births) than pregnant women of rural (11.1 per 1000 live births). Sex ratio of the newborns was also more skewed in urban (866 females per 1000 males) than rural area (995 females per 1000 males).

8.2% and 11.8% of females had obstetric complications during deliveries among pregnant women residing in rural & urban area, respectively.

As far as Post Natal Care is concerned, higher proportion of post natal mothers were visited for checkup within 48 hours of delivery among those residing in urban area (68.2%) than those of rural area (36.7%). Post natal complications were also higher among those of rural area which is in conjunction with NFHS- 2 data according to which mothers in India reported massive vaginal bleeding for 11 percent of births and a very high fever in the postpartum period for 13 percent of births. Both complications were slightly more common among rural than urban mothers.(6)

Maternal mortality was higher i.e., 7 maternal deaths occurred in urban area as compared to 5 maternal deaths among rural population.

## Conclusion

This can be concluded from the present study that the maternal and child health services delivery definitely improves after inception of ASHA worker in rural community. There is an urgent need for such a change in urban area for proper coverage of urban population. Such remedial social action is highly warranted especially in urban area. As MCH coverage by no means was satisfactory and the state health sector service delivery has a long way to go to meet the set targets. This can only be done by ensuring accountability at all levels. The information collected at various levels, must also be utilized at the same level for giving inputs to improve the services. For bringing about a quantitative and qualitative change in the coverage of reproductive health

programme, support should be obtained from local NGOs.

## References


1. Censusinfo India 2011: Punjab Profile (Internet) [Cited on 22.5.2013] Available from: http://censusindia.gov.in/2011census/censusinfodashboard/stock/profiles/en/IND003_Punjab.pdf cited on 22.5.2013.
2. International Institute for Population Sciences (UPS) and ORS Marco. National Family Health Survey (NFHS-3) 2005-2006 Mumbai UPS 2000.
3. Das R, Ali A, Nath P. Utilization and coverage of services by women of Jawan Block in Aligarh. Indian Journal of Community Medicine 2001; 26(2): 94-100.
4. National Rural Health Mission. Ministry of health and family welfare. Government of India.[Internet] [Cited on: 1. 6. 2013]. Available from: http://mohfw.nic.in/NRHM.htm
5. Kapoor S L, Vashist BM, Punia MS. Coverage & Quality of Maternal & Child Health Services at Sub centre level. Indian Journal of Community Medicine 2001; 26(1): 16-20.
6. International Institute for Population Sciences (UPS) and ORS Marco. National Family Health Survey (NFHS-2), 1998-99 Mumbai UPS 2000.
7. Talwar R, Chitkara A, Khokhar A,Rasania SK, Sachdeva TR. Determinants of utilization of antenatal care services amongst attendees in a Public Sector Hospital in Delhi. Health and Population Perspectives and Issues 2005; 28 (3): 154-163.
8. Agarwal N, Galhotra A, Swami HM. A study on coverage utilization and quality of maternal care services. National journal of community medicine 2011; 2(1): 32-36


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## Tables

**TABLE 1: COMPARATIVE DISTRIBUTION OF SUBJECTS BY DIFFERENT COMPONENTS OF ANTE NATAL CARE RECEIVED**

| Indicator | Urban (%) | Rural (%) | P value |
|---|---|---|---|
| Total ANC registered | 1941 | 4025 | |
| Women registered in 1st Trimester | 1060 (54.6%) | 3441 (85.5%) | P<0.001 |
| Women who received 3 ANC checkups | 1584 (81.6%) | 3626 (90.1%) | P<0.01 |
| Received TT 1st dose | 1338 (68.9%) | 3460 (85.9%) | P<0.001 |
| Received TT 2nd dose/ Booster | 1323 (68.1%) | 3452 (85.8%) | P<0.001 |
| Women who received 100+ IFA tablets | 898 (46.3%) | 2563 (63.7%) | P<0.001 |

**TABLE 2: COMPARATIVE DISTRIBUTION OF VARIOUS DELIVERY INDICATORS IN THE STUDY**

| Indicator | Urban (%) | Rural (%) | P value |
|---|---|---|---|
| Institutional Delivery | 1796 (92.6%) | 3450 (85.7%) | P<0.001 |
| Home Delivery | 145 (7.4%) | 575 (14.3%) | |
| Home delivery assisted by trained TBA | Nil (0.0%) | 163 (28.3%) | P<0.001 |
| Non Trained TBA assisted home delivery | 145 (100.0%) | 412 (71.7%) | |
| Newborns visited within 24 hours of home delivery | 73 (50.3%) | 480 (83.5%) | P<0.001 |
| Mode of Delivery | | | |
| Caesarian Section | 539 (30.0%) | 328 (9.5%) | P<0.001 |
| Normal Vaginal Delivery | 1257 (70.0%) | 3122 (90.5%) | |
| Obstetric Complications during delivery | 230 (11.8%) | 332 (8.2%) | P<0.001 |

**TABLE 3: COMPARATIVE DISTRIBUTION OF VARIOUS PREGNANCY OUTCOMES IN THE STUDY**

| Indicator | Urban (%) | Rural (%) | Total (%) |
|---|---|---|---|
| Live Birth | 1865 (96.1%) | 3981 (98.9%) | P<0.001 |
| Still Birth | 76 (3.9%) | 44 (1.1%) | |
| Still Birth Rate | 40.8/1000 live birth | 11.1/1000 live birth | |
| Sex Newborn | | | |
| Male | 1040 (53.6%) | 2017 (50.1%) | P<0.05 |
| Female | 901 (46.4%) | 2008 (49.9%) | |
| Sex ratio at birth | 866 females/ 1000 males | 995 females/ 1000 males | |

**TABLE 4: COMPARATIVE DISTRIBUTION OF DIFFERENT POST NATAL CARE INDICATORS**

| Indicator | Urban (%) | Rural (%) | Total (%) |
|---|---|---|---|
| Checkups within 48 hours of delivery | 1324 (68.2%) | 1477 (36.7%) | P<0.001 |
| Post natal Maternal complications | Nil (0.0%) | 43 (1.1%) | P<0.001 |