Empowerment of ASHA Workers: A Study from Rural Bengal

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Abstract. Accredited Social Health Activists (ASHAs) are the frontline workers and backbone of the primary health care system under the National Health Mission. ASHA workers serve to bridge administrative health officials with the citizens of their community through community involvement. This study inspects the status of empowerment level conceived by ASHA workers using primary information on six different domains. Further, this paper runs a comparative socioeconomic analysis to explore various factors affecting empowerment level of ASHAs. This study uses primary data (complete enumeration) collected through a detailed questionnaire survey from the best-performing block, Onda in Bankura and the worst-performing block, Khargram in Murshidabad of West Bengal, in between 2019-2020. A total of 88 variables is examined in this study. This paper uses Principal Component Analysis (PCA) for both domain-specific and overall empowerment indices and Chi-squared tests for the comparison of socioeconomic variables affecting empowerment of ASHAs. Results from PCA clearly show that despite being the best performing block, ASHAs of Onda possess an average empowerment value of 0.32, while Khargram is lacking empowerment of ASHA workers with an average value of only 0.11. Also, presence of positive skewness in Khargram implies existence of higher portion of ASHAs below mean empowerment. Onda has relatively higher level of empowerment in domains like 'Resources' and 'Income and Incentive' compared to Khargram. Results from Chi-squared tests validate the difference between empowerment level of ASHA workers in Onda and Khargram across various socioeconomic factors. Availability of better resources and satisfactory incentives has motivated ASHAs of Onda to work more efficiently. Khargram lags in almost all fields like supply of better resources, more useful, frequent, effective training, and an improved incentive system.

Keywords: ASHAs, Empowerment, PCA.

Abbreviation:

ASHA: Accredited Social Health Activists
NRHM: National Rural Health Mission
NHM: National Health Mission
WHO: World Health Organization
PRI: Panchayati Raj Institution

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ANC: Antenatal Care
PNC: Postnatal Care
JSY: Janani Suraksha Yojana
BPL: Below Poverty Level
PCA: Principal Component Analysis
SC: Sub Center
PHC: Primary Health Center
CHC: Community Health Center
MO: Medical Officer
NGO: Non-Government Organization

1 Introduction

The National Health Mission was first introduced in India in 2005 (formerly known as the National Rural Health Mission) to address the devastating public health condition, especially in rural areas. It emphasized greatly on the betterment of primary health service delivery by directly bridging health officials with even the remotest citizens. Community involvement in providing primary health services was one of the major goals of this scheme. And to bring this into practice, the Government of India introduced Accredited Social Health Activists (ASHAs) into the picture as the frontline workers and first contact facilitators of Primary Health Service Delivery [1]. ASHA workers are local women who are either married or divorced or widow, aged from 25 to 45, with a minimum formal education up to class eight. Their selection process directly involves village Panchayati Raj Institutions (PRI) to decentralize the procedure. ASHAs are voluntary workers also referred to as interface workers for keeping direct linkage between health care delivery and the community [2]. In foreign countries like Ethiopia and Brazil, community health workers have a significant contribution in transforming the healthcare delivery system in different communities [3],[4].

ASHA workers, teaming up with Panchayati Raj Institutions (PRIs), health officials, and other stakeholders of the community, can play a crucial role in mobilizing the village health plan. However, their efforts are restricted by several disputes in the system [5]. By law, the selection process is fully decentralized. It includes both district and block nodal officers in the process, along with some senior health officials. But these norms are not always followed properly. A group of researchers have found that in Murshidabad, West Bengal the government norms are not being followed properly in their recruitment process [6]. On the other hand, a study in Karnataka, India showed that recruitment process is mostly done according to the preset rules in that state [7]. Another study in Orissa has found that ASHAs are nominated by the ANMs of the health centers so involvement of Panchayat and local government bodies in recruitment process of ASHA is very limited [8].

ASHAs are responsible majorly for monitoring health and nutrition of pregnant mothers, guiding people of their community to plan for a healthy family and nurturing the new-born. Services like universal vaccination, Antenatal Care (ANC), Postnatal Care (PNC), Sanitation, and immunization are regarded as the basic deeds of ASHA

workers [2]. A cross-sectional study in Jaipur, Rajasthan reported satisfactory results in ASHA's role in immunization of children aged from 12 to 23 months, ANC services, and Intuitional deliveries. Same was for the services like Janani Suraksha Yojana (JSY) for mothers and weighing new-born. But contrasting results are seen in services like distributing ORS to children with diarrhea and receiving Chloroquine within first week [9]. Similar results were found by researchers in Karnataka where high achievement of ASHA workers was seen in providing services like home-visits, antenatal counseling, delivery escort services, breastfeeding advice, and immunization advice. Moderate performance was reported in drug provision for tuberculosis, caring of children with diarrhea or pneumonia, and organizing village meetings for health action. And very less targets were achieved in advising on contraceptive-use, obstetric danger sign assessment, and neonatal care [7]. Researchers in Murshidabad, West Bengal has pointed out some challenges in performing basic tasks of ASHAs. Non availability of transport for referring pregnant women for delivery, absence of services or staff at health facility were the main challenges faced by ASHAs while performing their work. ASHAs also felt that lack of/loss of/damaged BPL cards, late registration of pregnancy and lack of funds at the health facilities are some important barriers in providing JSY services to mothers [10]. Another study has found that ASHAs have been encountering problems like inadequate compensation, heavy workloads, and limited training opportunities [11]. Again, conservative societal norms and gender biases restrict ASHAs to work freely in communities. Also, the nominal incentives do not properly justify the significance of their work. A revised compensation structure and additional benefits like health insurance can boost their motivation and empowerment [12], [13].

Literatures have shown that motivation behind becoming an ASHA worker comes from two prominent dimensions. One is taking social responsibilities while another is getting financial stability. Some studies show that a portion of women joined as ASHA for their urge to contribute to the society and not for financial purpose [5], [14]. On the other hand, it is evident from previous studies that majority of women have chosen to become an ASHA due to financial support [15]. Some researchers have found out that a few women seek to work as ASHA to get experience so that they can pursue their career in health sector [16]. A significant number of ASHA workers come from a very poor family where their earnings are crucial for their household [5]. Other motivating factors pointed out by researchers in urban slums of Delhi are support from household to carry on their work, job satisfaction, improved self-identity etc. [17]. A study in Odissa showed that ASHAs' motivation to perform depends of several factors like monetary incentives, awards, support, and respect in community. On the other hand, dissatisfaction to work is driven by factors like underpayment, comparison with co-workers, financial instability after retirement, difficulty to read and write properly and unavailability of resources in health centers [18]. Another study in Maharashtra found that the respect and recognition gain from villagers bring happiness and job satisfaction to them that motivates them to take new responsibilities. ASHAs like to call themselves voluntary community health workers rather than health activists [19]. Contradicting this study some researchers found in several districts of Maharashtra that ASHA workers were not satisfied with their workload,

incentives, working condition and leave policy [20]. Very similar results are found in another study in West Bengal where ASHA workers face challenges like tremendous workload, delayed incentives, non-availability of transport for pregnant mothers and ill-equipped health centers [2]. While researching in areas of Purba Bardhhaman district of West Bengal, researchers have discovered that almost all ASHAs were satisfied with their work except incentive. Around four-fifth of them were dissatisfied with the incentive given [21].

Another dimension of this ASHA program under NRHM was to empower women of communities through financial backing and social recognition. ASHA workers feel confident when acknowledged for their contribution to the society. Many of them admire this as an inspiration to work for development of their community.

A group of researchers have stated that ASHAs face lack of empowerment as they get very low incentive and do not get proper rewards for efforts they put in [22]. Furthermore, a study in Murshidabad district of West Bengal compared the empowerment of ASHA workers between worst performing and best performing villages and concluded that ASHAs have reached a certain level of empowerment and are able to mobilize the community towards effective utilization of primary health service deliveries. But still, they face difficulties and limitations [23]. Another recent study showed that women empowerment of ASHAs is lagging due to lack of training, financial autonomy, and less power to influence the society [24].

The current paper approaches to examine the extent of empowerment of ASHA workers in West Bengal in delivering primary health service.

2 Research Gap

Previous literatures have extensively discussed about the training process and functioning of ASHA workers. Beside India, many countries worldwide have implemented this community based primary health care model and have gotten impressive results. India, however, experienced mixed responses in it. Researchers have thoroughly evaluated the efficiency of training process, tested the level of knowledge of ASHAs, and examined their service delivery through different aspects. Most of the literatures are based on field surveys and descriptive statistics so far. In West Bengal, the number of papers is even lesser than that of other states. Within those studies, only a few of them have focused on empowerment level of ASHA workers. Using insights from all those researches, the current study tends to explore the level of empowerment of ASHAs in West Bengal using different dimensions.

Also, methodically this paper paves its path in a different way. Taking inspiration from the paper by [25], this paper attempts to develop an empowerment index based on six distinguished domains.

3 Objective of the Study

This study aims to inspect the status of empowerment level conceived by ASHA workers using primary information from six different domains: 'Services,' 'Resources,' 'Household Livelihood,' 'Time,' 'Leadership' and 'Income and Incentive.'

Further, this study tries to explore a comparative socioeconomic analysis of empowerment level between ASHA workers in the worst performing block, Khargram of Murshidabad district, and the best performing block, Onda of Bankura district, West Bengal, India.

4 Data and Variable Description

4.1 Collection of Data

This study uses primary data collected through detailed questionnaire survey from the best performing block, Onda, situated in Bankura district and the worst performing block, Khargram, situated in Murshidabad district of West Bengal, in between 2019-2020. To access the level of empowerment, 166 ASHAs are included from Onda and 182 ASHAs are included from Khargram. Sample size includes complete enumeration of ASHA workers in both places.

4.2 Selection of Study Area

Study area is selected according to the performance of ASHA workers in different blocks of West Bengal. To determine the relative performance of ASHAs in different blocks, the current study reviews a literature by [24] which has built a deprivation index using primary data in six domains prescribed by NHM: Service Delivery, Manpower, Laboratory, Community Involvement, Equipment available and Physical infrastructure. The paper, after analyzing the index, declared Onda block to be the best and Khargram block to be the worst performing block of ASHA scheme in West Bengal[1].

4.3 Variable Description

A total of 88 variables is examined in this study. Variables relate to the socioeconomic status, Selection process of ASHAs, Training of ASHAs, Resources available and Incentives given to ASHAs. Both Qualitative and Quantitative variables are collected through questionnaire survey.

[1] Onda comes under Bankura district which is the best performing district of West Bengal whereas Khargram comes under Murshidabad district which shows the worst performance in carrying out ASHA scheme (**Sarkar, 2023**).

For selecting variables, the current study considers six domains: 'Services,' 'Resources,' 'Household Livelihood,' 'Time,' 'Leadership' and 'Income and Incentive' to develop an empowerment index taking inspiration from a recent study by [25][2].

Table 1. Number of Variables in Each Domain

Domain Names	No. of variables
Services	12
Resources	24
Household Livelihood	5
Time	10
Leadership	26
Income and Incentive	8
Other socioeconomic variables	3
Total	**88**

Source: Authors' Calculation

Name of the Variables and their different categories specific to the domains are shown in Table A1 (See Appendix). Dataset includes numeric variables, categorical variables, and dummy variables.

5 Methodology

In this study, empirical analyses are perused in two parts, one is Principal Component Analysis and another is Chi-squared Test.

5.1 Principal Component Analysis

This paper uses Principal Component Analysis (PCA) to develop both domain specific and aggregate empowerment indices. All numeric and categorical variables are normalized prior to the analysis to keep all the variables in same range (from 0 to 1). PCA is carried out using STATA software (version 14) and all other operations are done in Microsoft Excel.

Formula used for normalization:

$$X_i^n = \frac{X_i - X_{min}}{X_{max} - X_{min}}$$

Where, X_i^n means normalized value of ith observation of X variable, X_{max} is the maximum observed value to X variable and X_{min} is the minimum observed value of the same.

[2] The first domain mentioned in the paper by **Kinkingninhoun Medagbe et al. (2023)** is deliberately changed from Production domain to Service domain as works of ASHA are considered more of a service to their specific community than a production.

After normalizing the values, numeric and categorical variables (including both binary and non-binary responses) are treated separately to get better results in PCA. Components are considered up to cumulative proportion of 80 per cent. Within each component, only those variables having eigen value above 0.3 are taken into consideration during development of empowerment indices.
After determining all the empowerment indices, line diagrams are used to compare average distribution of domain specific empowerments and overall empowerment between Onda and Khargram in quintiles. Also, bar diagrams are used to draw a comparison between percentages of ASHAs in those quintiles.

5.2 Chi-Squared Test

Next, this paper carries out Chi-squared tests to examine the difference between level of empowerment of ASHAs in Onda and Khargram with respect to selected socioeconomic variables across all six domains. Variables used in Chi-squared test are 'Age,' 'Levels of Education,' Years of Experience,' 'Marital Status,' 'Occupation of Spouse,' 'Religion,' Monthly Household Income,' and 'Household Type.'

Observed values of empowerment are taken from the results of PCA. Expected values are then calculated used the formula:

$$\boldsymbol{Expected\ Value} = \frac{\boldsymbol{Row\ Total} \times \boldsymbol{Column\ Total}}{\boldsymbol{Table\ Total}}$$

Thereafter, observed values and Expected values are used to develop Chi-squared statistic (χ^2) using the formula:

$$\boldsymbol{\chi^2} = \sum \frac{(\boldsymbol{Observed} - \boldsymbol{Expected})^2}{\boldsymbol{Expected}}$$

Finally, using these χ^2 values and their corresponding degrees of freedom[3], P values are calculated to check the level of significance of the test results.

6 Result and Discussion

Following the methodology, the result section is also divided into two parts.

6.1 Results from Principal Component Analysis

First part explains the findings of Principal Component Analysis. Levels of overall and domain specific empowerment of ASHAs are displayed both in tabular form and graphical form.

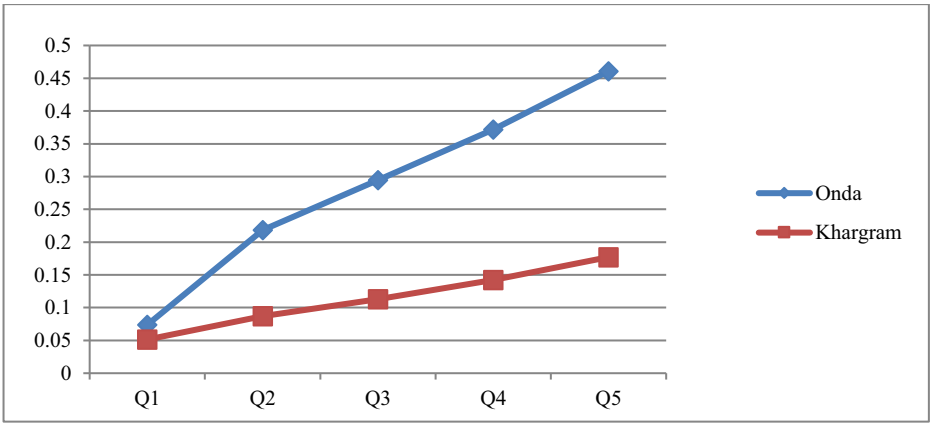
[3]Degrees of Freedom, d.f. = (no. of rows – 1) × (no. of column – 1)

Table 2. Description of Overall Empowerment Index of ASHAs in Onda and Khargram

Parameters	Overall Empowerment	
	Onda	Khargram
Mean	0.32	0.11
Standard Deviation	0.07	0.03
Skewness	0.02	0.30
Minimum	0.07	0.03
Maximum	0.50	0.20

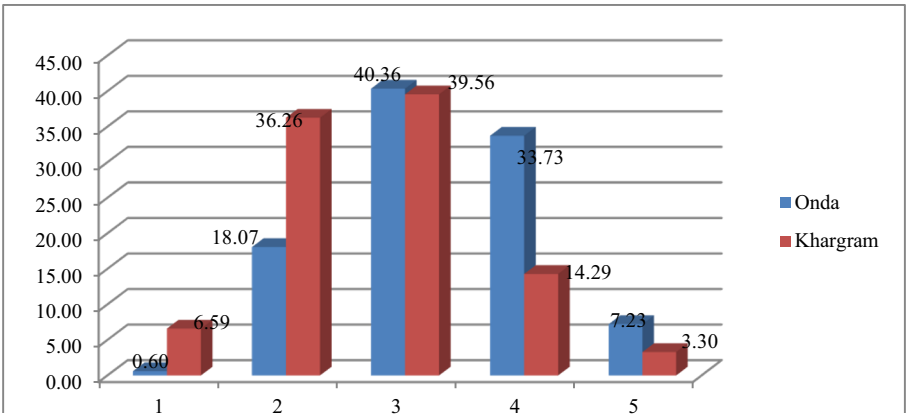
Source: Authors' Calculation using PCA

Above table (Table 2) clearly shows that Onda possesses a higher average empowerment value of 0.32 ranging from 0.07 to 0.50 while Khargram is lacking empowerment of ASHA workers with an average value to only 0.11. Also, despite both being positively skewed, higher skewness in empowerment level of Khargram implies existence of higher portion of ASHAs below mean empowerment.



Source: Authors' Calculation

Fig. 1. Overall Empowerment of ASHAs in Onda and Khargram across Quintiles



Source: Authors' Calculation

Fig. 2. Percentage of ASHA workers of Onda and Khargram across Quintiles

Fig. 1 is evident that Onda is more empowered than Khargram in functioning of ASHAs. This also reflects the findings of [24].

Fig. 2 presents a comparative analysis of the percentage of ASHA workers in each quintile. It can be observed in this figure that majority of ASHAs in Onda belong to higher empowerment quintiles whereas ASHAs of Khargram concentrate more in lower empowerment quintiles.

Thereafter, results have illustrated domain-wise empowerment level. It is noted that for limitation and scope of this paper, only three out of six domains are explained here. Focus is given on three relatively important domains: 'Services,' 'Resources' and 'Income and Incentive.'

Table 3. Description of Domain Specific of Empowerment Indices of Onda and Khargram

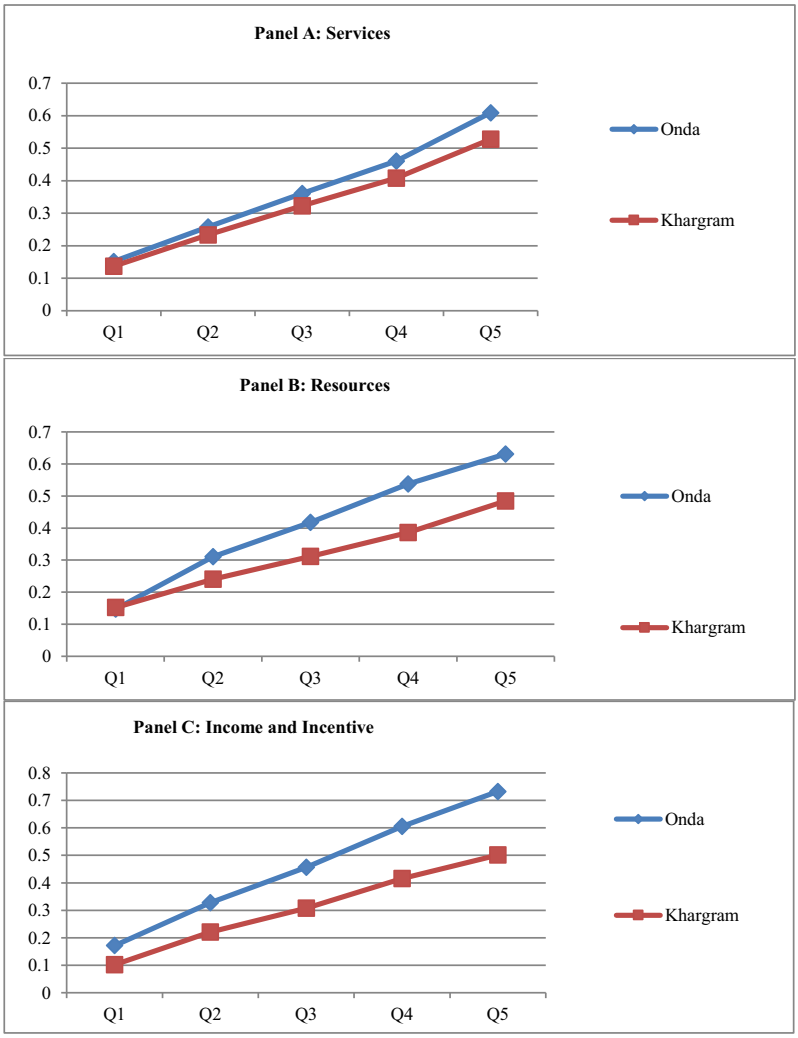
Parameters	Services Domain		Resource Domain		Income and Incentive Domain	
	Onda	Khargram	Onda	Khargram	Onda	Khargram
Mean	0.32	0.11	0.48	0.30	0.57	0.36
Standard Deviation	0.07	0.03	0.10	0.08	0.16	0.11
Skewness	0.02	0.30	-0.61	0.00	-0.66	-0.81
Minimum	0.07	0.03	0.12	0.10	0.10	0.05
Maximum	0.50	0.20	0.71	0.52	0.81	0.57

Source: Authors' Calculation using PCA

Table 3 shows that there are significant differences in average empowerment of ASHAs in domains like 'Resources' and 'Income and Incentive'. Onda, in these two domains, is leading with a notable empowerment gap. Both the domains are very important in defining impact of ASHA program in rural communities. The 'Service'

domain also has a bit higher edge towards Onda, pointing out better execution of duties and responsibilities of ASHA.

Figure below (Fig. 3) perfectly replicates the findings across quintile. In all three domains, Onda shows higher level of empowerment. Panel A in the figure shows the difference of empowerment of ASHAs in delivering services. It should be noted that better services are delivered in Onda but the difference is not too large as compared to other two domains in Panel B and Panel C. In first quintile, both the blocks almost match their level of empowerment.



Source: Authors' Calculation

Fig. 3. Domain-wise Empowerment of ASHAs in Onda and Khargram across Quintiles (Panel A – C)

Panel B in the above figure shows the highest disparity. Availability of resources can be considered the most significant element for succeeding ASHA program. And, here Onda takes a lead as compared to Khargram. The difference between the two blocks in Panel B of Figure 4 rises with every quintile. Similar results are seen in case of getting income and incentives. The third domain shown in Panel C in the above figure is the representative of motivation factor behind proper functioning of ASHA workers [21], [22] and clearly, here also, Onda exceeds Khargram.

6.2 Results from Chi-Squared Test

Proceeding further to the next part, this paper uses Chi-Squared test to signify the difference in level of empowerment of ASHA workers in respect to different socioeconomic variables.

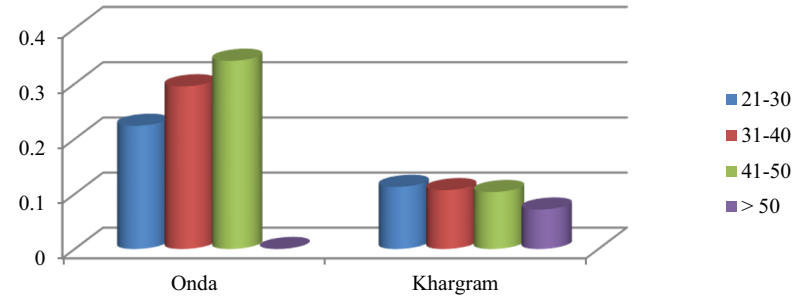
Table 4. Difference in level of empowerment of ASHA workers

Socioeconomic Variables	$\chi 2$	D.F	P Value
Age	10.53	3	0.01
Levels of Education	9.34	2	0.01
Years of Experience	61.05	1	0.00
Marital Status	8.83	3	0.03
Occupation of Spouse	38.55	5	0.00
Religion	49.80	2	0.00
Monthly Household Income	15.45	6	0.02
Household Type	2.44	1	0.12

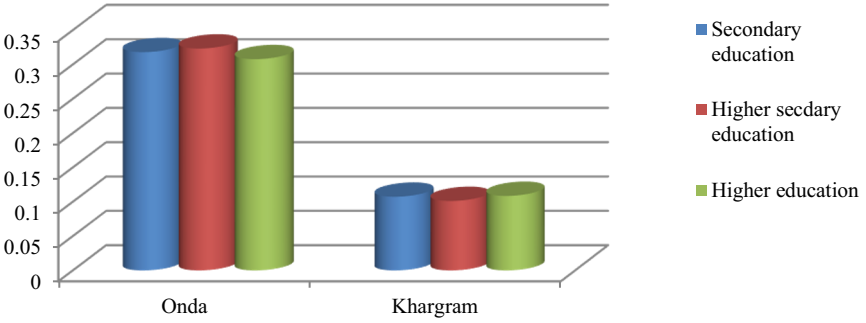
Source: Authors' Calculation using Chi-Squared Test

Above table (Table 4) indicates that all the variables except 'Household Type' show significant difference between empowerment level of Onda and Khargram. Here, an interesting fact to note is that experience should influence work and efficiency of ASHA but Khargram having all 182 ASHAs with more than ten years of experience shows poor results. This can be seen in Panel C of the following figure (Fig. 4).

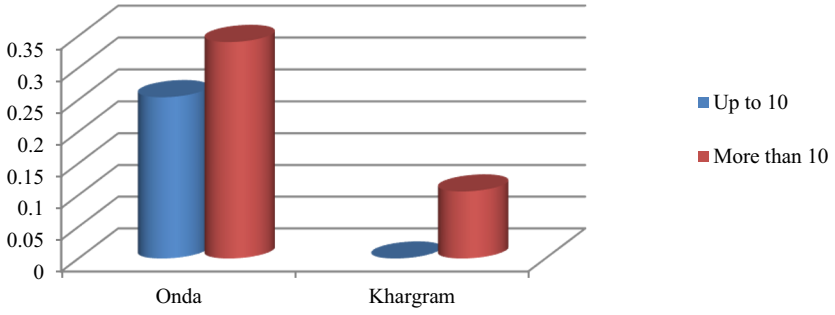
Panel A: Age

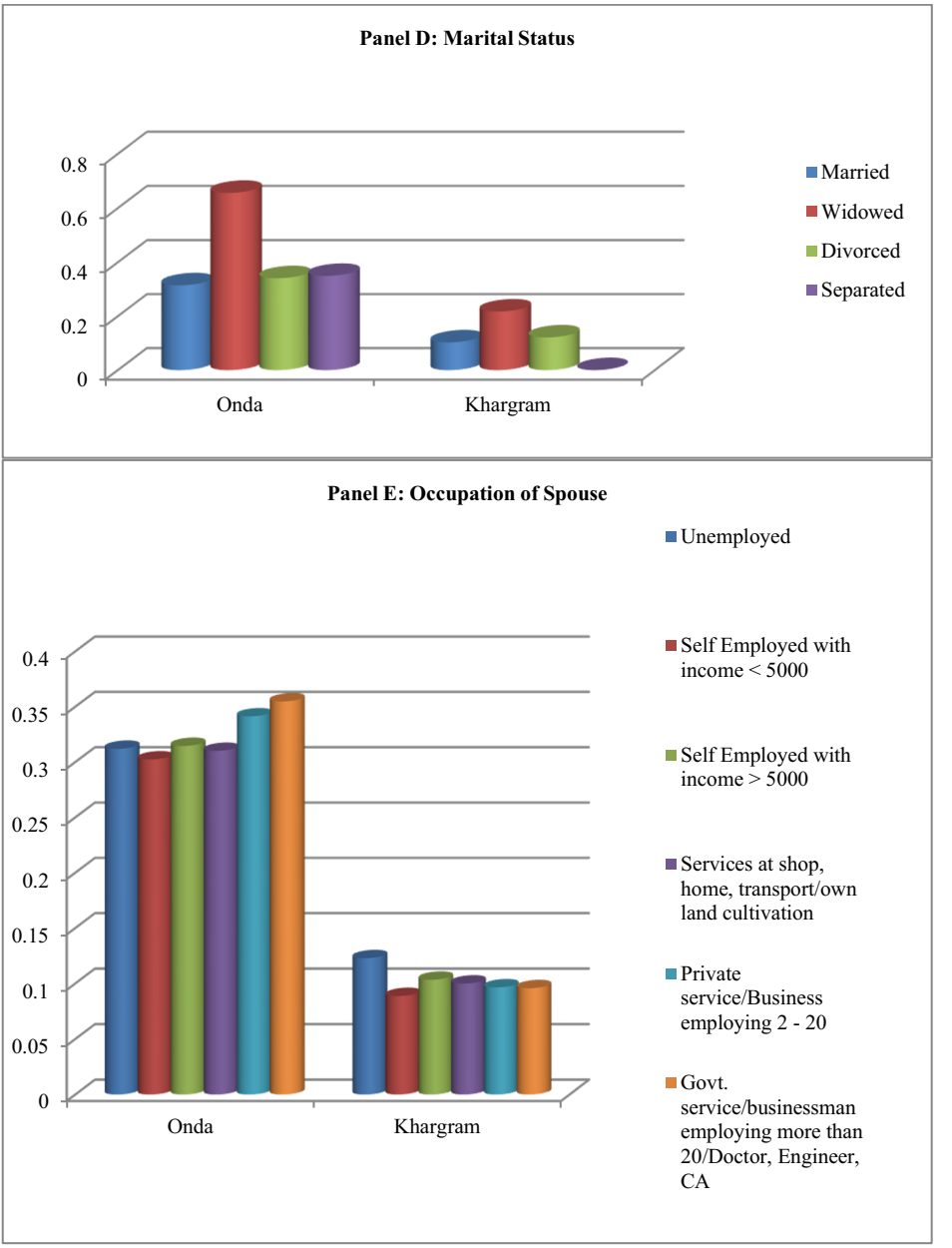


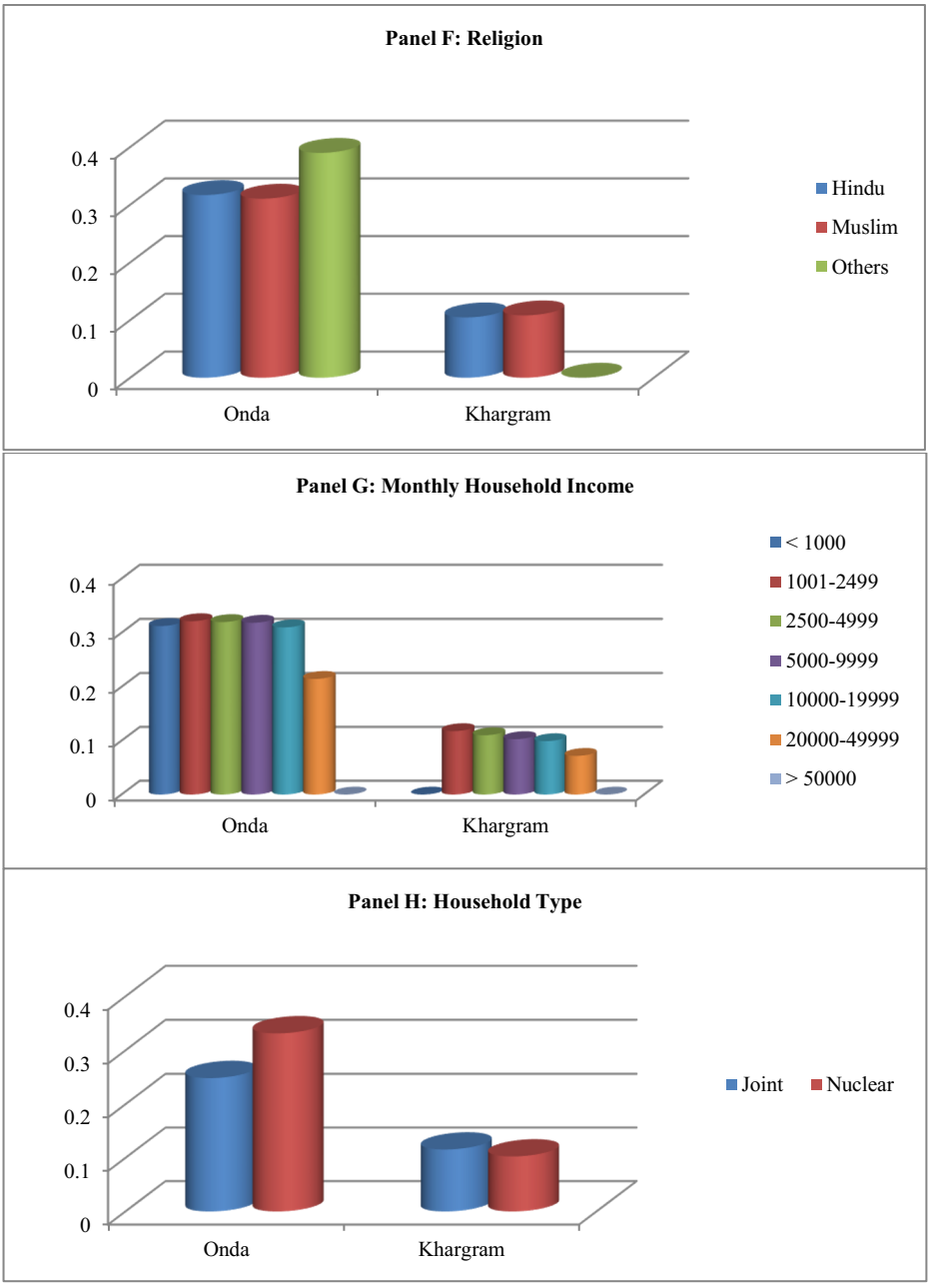
Panel B: Levels of Education



Panel C: Years of Experience




Panel D: Marital Status
0.8
0.6
0.4
0.2
0
Onda
Khargram
Married
Widowed
Divorced
Separated
Panel E: Occupation of Spouse
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Onda
Khargram
Unemployed
Self Employed with income < 5000
Self Employed with income > 5000
Services at shop, home, transport/own land cultivation
Private service/Business employing 2 - 20
Govt. service/businessman employing more than 20/Doctor, Engineer, CA



Source: Authors' Calculation

Fig. 4. Empowerment of ASHAs with respect to Different Socioeconomic Factors (Panel A – H)

In all panels of Fig. 4, ASHAs are more empowered in the Onda block across all eight socioeconomic variables considered.

In Panel A of the above figure, it is recorded that the empowerment level of ASHAs in Onda is increasing with the rise in age, whereas Khargram shows opposite scenario. Panel B illustrates that throughout all educational levels, both Onda and Khargram possess similar level of empowerment. However, Khargram is less empowered. Panel C tells a very interesting story. In numbers, it is seen that all ASHAs in Khargram have more than ten years of experience in this field but still perform very poor, even the ASHAs having less than ten years of experience in Onda score much better. This may be a result of poor training, resources, and administrative support. This result validates the findings of [2]. Panel D counters a surprising fact that an ASHA being married holds relatively lower level of empowerment while the widowed ASHAs are the most empowered ones. This can be possible due to family and societal pressure on married women. This result opposes the findings of [17]. Panel E reflects a fully opposite scenario of Onda and Khargram. In Onda, ASHA workers who have their spouses in the highest occupation group are empowered the most, but the ASHAs of Khargram whose spouses are unemployed, have relatively high empowerment. Status of different religions in ASHA empowerment is shown in Panel F. Both in Onda and Khargram, Hindu and Muslim ASHAs have achieved a similar level of empowerment. However, in Onda, ASHAs from other religions are low in numbers but are high in empowerment, which implies that minority communities receive better primary health care service in Onda. Khargram does not have ASHAs from other religion. In Panel G, ASHAs from higher-income families are seen to have noticeably lower empowerment in both blocks. This can be seen due to lack of urge to work more as they have sufficient income to live. Lastly, in Panel H, ASHAs belonging to nuclear families have higher empowerment while, in Khargram scenario is totally opposite.

Difference in empowerment of ASHAs in Onda and Khargram is seen due to several other causes that turned up during field surveys. Onda is nearer to the main town Bankura. On the other hand, Khargram is far from the main town of Murshidabad. Thus, training facilities are not made properly and dominance of Muslim communities in some areas restricted ASHAs from working freely. Also, due to remoteness of areas under Khargram block, ASHAs must travel for a longer time which has narrowed the scope of attending trainings every time.

7 Conclusion

India is one of the future economic giants of world. With its manpower, skill and brains, Indians are being recognized globally. But to use this huge demographic dividend, this country must have to focus on developing its fundamental features and

public health in one of them. Till now, most of the citizens are village dwellers. So, to emphasize more on primary health of rural people, National Rural Health Mission (NRHM) was launched in the year 2005. One of the main goals of NRHM (later known as NHM) was community involvement in delivering primary health services. To mobilize this scheme, Accredited Social Health Activists (ASHAs) are introduced. Though West Bengal was initially opted out of this scheme, this state was in urgent need of betterment of primary health care and thus ASHA scheme was implemented here too.

In this study, empowerment of ASHA workers of West Bengal is evaluated by comparing the best-performing block, Onda and the worst-performing block, Khargram. Results from PCA illustrate a significant gap in overall and domain-specific empowerment level of ASHAs in Onda and Khargram. Domains like 'Resources' and 'Income and Incentive' are among main factors that can determine dedication and performance of an ASHA. Studies have reported that most of the rural women, who have joined as ASHA, have joined for financial support. But a very irregular and improper incentive system, they often lose the motive to serve. Also, unavailability of resources and timely, effective training programs has impacted the empowerment level of ASHA negatively. Onda block holds some special advantages as it is situated closer to urban areas. So, facilities and amenities have been reached circulated. These differences are reflected through the distribution of empowerment of ASHA across quintiles where ASHAs of Onda accumulate in higher empowerment quintiles while that of Khargram accumulate in lower quintiles.

Different socioeconomic factor is observed to affect level of empowerment of ASHAs in those two blocks significantly. Factors like education level, experience level, religion, household income, and household types present some interesting scenarios. Thus, it can be concluded that better performance of Onda block depends not only on socioeconomic factors but also on facilities, training and resources allotted to ASHA workers. And to improve condition of primary health care service delivery in all areas of rural West Bengal a rigorous and detailed monitoring of the whole system is needed. From better involvement of PRIs in selection and functioning of ASHA to ornamenting them with more efficient training, better equipment and satisfactory incentive, betterment is necessary in all fields to achieve a sustainable development of public health and continuous growth of human capital in West Bengal as well as in India.

Conflict of Interest. There is no conflict of interest.

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Appendix

Table A1: List of Variables

Service Domain (12 Variables)	Onda	Khargram	Monthly Household Income		
Population size served			< 1000	1.8	0.0
Up to 1000	25.3	21.4	1001-2499	4.2	11.5
More than 1000	74.7	78.6	2500-4999	43.4	29.7
No. of village covered			5000-9999	40.4	44.5
Up to 2	74.7	91.8	10000-19999	9.6	12.6
More than 2	25.3	8.2	20000-49999	0.6	1.6
No. of households visited per week			> 50000	0.0	0.0
Up to70	69.3	86.3	**Household Type**		
More than 70	30.7	13.7	Yes	16.9	76.4
Group Talk on Sanitation			No	83.1	23.6
Yes	49.4	4.9	**Time Domain (10 variables)**	Onda	Khargram
No	50.6	95.1	**No. of hours worked per week**		
Group Talk on Family Planning			Up to 30	51.8	97.8
Yes	32.5	36.3	More than 30	48.2	2.2
No	67.5	63.7	**Time required to go to training center (Min)**		
Group Talk on Nutrition			Up to 30	53.6	33.0
Yes	35.5	58.2	More than 30	46.4	67.0
No	64.5	41.8	**No. of full training days given by PHCs**		
Group Talk on Health and immunization			Up to 44	57.8	100.0
Yes	56.0	86.8	More than 44	42.2	0.0
No	44.0	13.2	**Training on pregnancy, child birth, post-natal care**		
No. of pregnant women registered in past			Up to 3	56.0	93.4

one year					
	51				
Up to 14	.2	31.9	More than 3	38.0	6.6
	48				
More than 14	.8	68.1	**Training on child healthy/new born care**		
Level of ANC			Up to 3	57.8	92.3
	12				
Up to 2	.7	29.7	More than 3	42.2	7.7
	87				
more than 2	.3	70.3	**Training on other than born care**		
Giving education on optimal breast feed-ing			Up to 3	60.8	18.1
	93				
Yes	.4	95.1	More than 3	39.2	81.9
	6.				
No	6	4.9	**Training on family planning**		
No. of birth registered in past one year			Up to 3	63.3	70.3
	52				
Up to 12	.4	45.6	More than 3	36.7	29.7
	47		**Training on Nutrition, water, sanitation,**		
More than 12	.6	54.4	**personal hygiene**		
No. of new born baby visited within one week of delivery			Up to 3	58.4	87.4
	59				
Up to 2	.0	3.8	More than 3	41.6	12.6
	41				
More than 2	.0	96.2	**Training on Medicines use**		
	O				
Resource Domain (24 variables)	nda	Khargram	Up to 2	50.6	31.3
Problem with language of instructor			More than 2	49.4	68.7
	40				
Yes	.4	45.1	**Commute to training center is <6 hours**		
	59				
No	.6	54.9	Yes	91.0	43.4
Clarification of doubts by the trainer			No	9.0	56.6
	96				
Yes	.4	40.1	**Leadership Domain (26 variables)**	Onda	Khargram
	3.		**Providing information about health ser-**		
No	6	59.9	**vices**		
Uses of diagrams/other teaching aids by the trainer			Yes	92.8	94.5
	90				
Yes	.4	8.2	No	7.2	5.5
No	9.	91.8	**Creating awareness on health, hygiene, and**		

	6		**nutrition**		
Training was organized at			Yes	93.4	86.8
	7.				
SC/PHC/CHC	8	8.2	No	6.6	13.2
	61				
GP Office	.4	90.7	**Antenatal Care**		
	30				
NGO	.7	1.1	Yes	94.6	98.9
Questions regarding some patients			No	5.4	1.1
	1.				
MO	8	0.0	**Postnatal Care**		
	3.				
PHC	6	0.0	Yes	91.0	98.4
	1.				
SC	2	1.6	No	9.0	1.6
	0.				
GP Office	0	1.1	**Immunization**		
	93				
ANMs	.4	97.3	Yes	91.0	100.0
Questions regarding sudden complication of pregnant women			No	9.0	0.0
	1.				
MO	8	0.0	**Sanitation**		
	4.				
PHC	8	0.5	Yes	93.4	35.7
	0.				
SC	0	15.9	No	6.6	64.3
	0.				
GP Office	0	13.2	**Illness and fever**		
	93				
ANMs	.4	70.3	Yes	93.4	31.9
Questions on disputes regarding performance-based salaries			No	6.6	68.1
	1.				
MO	8	8.2	**Birth preparedness & safe delivery**		
	6.				
PHC	0	11.5	Yes	92.2	90.1
	0.				
SC	0	4.9	No	7.8	9.9
	0.				
GP Office	0	20.3	**Newborn care**		
	92				
ANMs	.2	54.9	Yes	92.8	97.3
Receiving support from PRI/VHSC for			No	7.2	2.7

creating health awareness amongst villagers					
Yes	.366	91.8	**Breast feeding & complimentary feeding**		
No	.733	8.2	Yes	92.2	84.6
Receiving support from PRI/VHSC for cleanliness and sanitation programmers			No	7.8	15.4
Yes	.369	76.4	**Immunization of infants**		
No	.730	23.6	Yes	88.0	96.7
Provision for refresher training			No	12.0	3.3
Yes	.573	67.0	**Use of contraceptives**		
No	.526	33.0	Yes	93.4	60.4
Addressing difficulties encountered in daily works			No	6.6	39.6
Yes	.975	22.5	**Family planning measures**		
No	.124	77.5	Yes	92.2	70.3
Availability of ORS			No	7.8	29.7
Never	.922	58.2	**Personal hygiene & sanitation for mother and child**		
Rarely	.363	11.5	Yes	94.0	67.6
Usually	.810	11.5	No	6.0	32.4
Always	3.00	18.7	**Accompanying pregnant women or sick children to health facility**		
Availability of Thermometers			Yes	92.2	90.1
Never	.174	51.6	No	7.8	9.9
Rarely	.919	20.3	**Informing health facility about birth and death in village**		
Usually	5.04	11.5	Yes	78.9	69.2
Always	0.66	16.5	No	21.1	30.8
Availability of Oral Contraceptives			**Informing about outbreak of health problem and diseases**		
Never	.242	53.8	Yes	81.3	59.3

	46				
Rarely	.4	12.1	No	18.7	40.7
	10		**Focused G.D. held in village before selec-**		
Usually	.2	25.3	**tion**		
	1.				
Always	2	8.8	Yes	30.7	20.9
Availability of Condoms			No	69.3	79.1
	25				
Never	.9	88.5	**Gram Sabha held during selection**		
	59				
Rarely	.6	6.6	Yes	49.4	27.5
	12				
Usually	.0	3.8	No	50.6	72.5
	2.				
Always	4	1.1	**Who played major role in selection**		
Availability of Disposable delivery kits			Entire village	2.4	7.1
	51				
Never	.8	86.3	Men in village	0.6	0.0
	39				
Rarely	.2	8.8	Women in village	1.2	0.0
	7.				
Usually	2	3.3	PHC	6.0	6.6
	1.				
Always	8	1.6	Village Panchayat	89.8	86.3
			Worked as a community-based worker be-		
Availability of Bandages			**fore joining ASHA**		
	60				
Never	.8	54.4	Yes	30.7	26.4
	31				
Rarely	.9	23.1	No	69.3	73.6
	4.		**Actively involved with local PRI/Health**		
Usually	8	18.7	**and Sanitation Committee**		
	2.				
Always	4	3.8	Yes	57.2	89.6
Availability of Cotton absorbent roll			No	42.8	10.4
	56		**Improvement of health facility in villages -**		
Never	.6	54.9	**Order of Preference**		
	35				
Rarely	.5	22.5	Up to 3	87.3	34.6
	7.				
Usually	2	18.1	More than 3	12.7	65.4
	0.		**To be a permanent worker in health center**		
Always	6	4.4	**- Order of Preference**		
Availability of Paracetamol			Up to 3	24.1	89.6

	30				
Never	.1	4.9	More than 3	75.9	10.4
	59				
Rarely	.0	11.5	**Social prestige - Order of Preference**		
	9.				
Usually	6	58.2	Up to 3	41.0	40.7
	1.				
Always	2	25.3	More than 3	59.0	59.3
Availability of Iron tablets			**Peer pressure - Order of Preference**		
	41				
Never	.0	4.9	Up to 3	6.0	1.6
	48				
Rarely	.8	7.1	More than 3	94.0	95.1
	7.				
Usually	8	62.6	**Income and Incentive Domain (8 variables)**	Onda	Khargram
	2.		**Provision for food and accommodation**		
Always	4	25.3	**during training**		
Availability of Folic Acid tablets			Yes	99.4	95.6
	74				
Never	.1	6.6	No	0.6	4.4
	21		**Receive compensation for attending train-**		
Rarely	.7	7.1	**ing**		
	3.				
Usually	0	63.2	Yes	77.7	34.6
	1.				
Always	2	23.1	No	22.3	65.4
Availability of Dicyclomine tablets			**Experiencing delay in getting incentives**		
	98				
Never	.8	91.2	Yes	59.0	34.6
	1.				
Rarely	2	8.2	No	41.0	65.4
	0.		**Satisfied with incentives given under pro-**		
Usually	0	0.5	**gram**		
	0.				
Always	0	0.0	Yes	35.5	68.1
Availability of Povidone ointment tubes			No	64.5	31.9
	98				
Never	.2	91.8	**Demand for regular monthly salary**		
	1.				
Rarely	2	7.1	Yes	92.8	91.2
	0.				
Usually	0	1.1	No	7.2	8.8
	0.				
Always	6	0.0	**Satisfied with career prospect as ASHA**		

Availability of Chloroquine			Yes	89.2	89.6
Never	96.4	94.0	No	10.8	10.4
Rarely	2.4	4.9	**Financial incentives - Order of Preference**		
Usually	0.6	0.5	Up to 3	80.7	100.0
Always	0.6	0.5	More than 3	19.3	0.0
Household Livelihood Domain (5 variables)	Onda	Khargram	**Opportunity to get more exposure - Order of Preference**		
Marital status			Up to 3	60.8	92.3
Married	79.5	82.4	More than 3	39.2	7.7
Widowed	18.1	11.0	**Other Socioeconomic Co-factors**	Onda	Khargram
Divorced	1.8	6.6	**Age**		
Separated	0.6	0.0	21-30	3.6	11.5
Occupation of Spouse			31-40	43.4	44.0
Unemployed	9.0	25.3	41-50	53.0	43.4
Self Employed with income < 5000	13.3	1.1	> 50	0.0	1.1
Self Employed with income > 5000	19.9	18.7	**Levels of Education**		
Services at shop, home, transport/own land cultivation	39.2	44.5	Secondary education	73.5	68.1
Private service/Business employing 2 - 20	6.6	1.6	Higher secondary education	15.1	26.4
Govt. service/businessman employing more than 20/Doctor, Engineer, CA	12.0	8.8	Higher education	11.4	5.5
Religion			**Years of Experience**		
Hindu	92.8	64.3	Up to 10	28.9	0.0
Muslim	5.4	35.7	More than 10	71.1	100.0
Others	1.8	0.0			

Source: Author's Calculation