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Literacy Status of Scheduled Caste Community in West Bengal

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Abstract— The Scheduled Castes (SC) are among the most socially and educationally disadvantaged groups in West Bengal. The aim of this paper is to provide an overview of the literacy status of Scheduled Caste and various sub-castes of Scheduled Caste community in West Bengal. The paper also reviews the current literacy status and literacy growth pattern of Scheduled Caste and various sub-castes. The paper highlights district-wise current literacy status and literacy trends among Scheduled caste in West Bengal. Also, highlights the sub-castes wise current literacy status and literacy growth pattern among Scheduled caste. The paper briefly analyses districts wise and sub-castes wise current literacy status and literacy growth pattern among scheduled caste in West Bengal. The researcher concludes that districts wise and sub-castes wise literacy growth rate is consistently increase and the Government needs to pay more attention to those districts and sub-castes where the literacy rate is relatively low among scheduled castes in West Bengal.





Keywords— Literacy Status, Scheduled Caste (SC), Sub-castes of Scheduled Caste.

I. INTRODUCTION

The Scheduled Castes (SC) are among the most socially and educationally disadvantaged groups in India (Rukhsana & Alam, 2014). After the seven decades of independence Scheduled Castes, people are educationally lagging behind than other castes of India. Due to the discrimination and social exclusion, the representation of Scheduled Caste in the educational arena is very less (Majhi & Sardar, 2019). As per the 2011 Census, the state of West Bengal comprises 10.7% of the overall population of India, which is made up of around 16.6% Scheduled Caste people. West Bengal ranks third in terms of the percentage of the overall population that is comprised of Scheduled Castes, representing 23.5% of the population. The Scheduled Caste is one of the largest socially segregated groups in India. They are people known as untouchables or outcastes who experience violence, discrimination and social exclusion on a daily basis. The traditional taboos are the same for Dalit men and women (Ghosh, 2019; Dutta & Bisai, 2020). The schedule castes are comparatively backward occupational, educational, social, cultural, religious and political sector (Chouhan, 2012). Scheduled Castes have different histories of social and economic deprivation, and the underlying causes of their educational marginalisation are also strikingly distinct (Rukhsana & Alam, 2014). But now a day's they are going under educational, social and economic changes both in rural and urban areas with their attitude towards education, religion, child marriage, superstitions, etc. is changing (Chouhan, 2012). The state of West Bengal has the second highest Scheduled Castes population with 60 sub-communities. Among 60 Scheduled Caste communities of West Bengal 34 are lying below the state average of literacy rate (Dutta & Bisai, 2020). So, the researcher intends to study literacy status of Scheduled Caste and different sub-castes of Scheduled Caste community in west Bengal.

Objectives:

- 1. To examine the growth rate of Literacy of Scheduled Caste in West Bengal.
- **2.** To study the districts wise literacy trends of Scheduled Caste in West Bengal.
- 3. To examine the Growth Pattern of Literacy rate among different sub-castes of Scheduled Caste in West Bengal
- **4.** To analyse the district wise trend of gender gap among Scheduled Caste in West Bengal.
- **5.** To study the currents literacy status of Scheduled Caste in West Bengal.
- 6. To study the Current Literacy Status of Different subcastes of Scheduled Caste in West Bengal
- 7. To analyse the literacy rate among different sub-castes of SC based on locality (Rural-Urban) in West Bengal.
- **8.** To compare literacy status among Rural SC sub-castes and Urban SC sub-castes in West Bengal.

II. METHODOLOGY

This is a documentary study and approach of the study is qualitative. The study is based on the secondary sources according to the need of the study. The data about the Scheduled caste are collected from government websites, reports, journals, internet sources etc.

III. ANALYSIS AND INTERPRETATION OF DATA

Data were presented and analysed objective wise.

Objective- 1: To examine the growth rate of Literacy of Scheduled Caste in West Bengal.

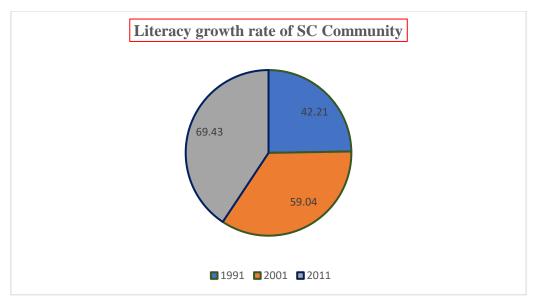
Table No- 1: Growth rate of Literacy among Scheduled Caste in West Bengal.

Years	Total %	Decada rate %	al growth	Male %	Decadal growth rate % Female % Decadal growth rate %		th rate	Gap %		
1991	42.2			54.5			28.9			25.6
		16.8			16			18		
2001	59.0]		70.5	10		46.9			23.6
2011	69.4		10.4	77.2		6.7	61.2		14.3	16.0

Source: Census of West Bengal 1991,2001,2011.

Interpretation: Table 1 shows the growth rate of literacy among scheduled caste in West Bengal from 1991 to 2011. The growth rate of SC community literacy from 1991 to 2001 is 16.8% and from 2001 to 2011 the literacy growth rate of SC community is 10.4%. In 1991 the male literacy rate of SC community was 54.5% which increased to 70.5% in 2001 and this growth rate is 16% and in 2011 the literacy rate is 77.2% which is an increase of 6.7% since 2001. In 1991 the female literacy rate of SC community was 28.9% which increased to 46.9% in 2001 and this growth rate is

18% and in 2011 the literacy rate is 61.2% which is an increase of 14.3% since 2001. In 1991 to 2001 the decadal growth rate of male literacy rate is 16% and 2001 to 2011 the decadal growth rate of male literacy rate is 6.7%. on the other hand, 1991 to 2001 the decadal growth rate of female literacy rate is 18% and 2001 to 2011 the decadal growth rate of female literacy rate is 14.3%. So, it can conclude that the decadal growth rate from 1991 to 2011 of female literacy is better than male literacy.



Objective- 2: To study the districts wise literacy trends of Scheduled Caste in West Bengal.

Table No- 2: Districts wise literacy trends of Scheduled Caste in West Bengal.

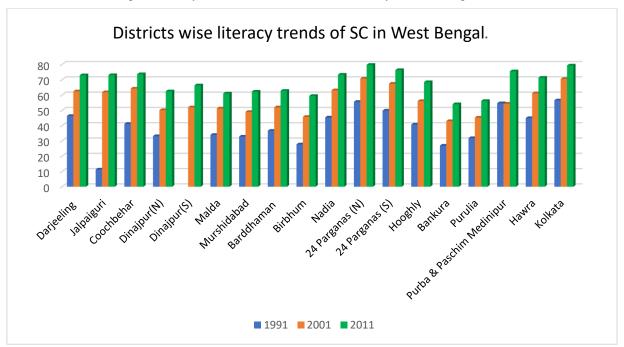
Districts	SC Literacy Rate % 1991	SC Literacy Rate % 2001	Decadal growth rate % (1991- 2001)	SC Literacy Rate % 2011	Decadal growth rate % (2001-2011)
Darjeeling	46.3	62.4	16.1	72.9	10.5
Jalpaiguri	11.3	61.8	50.5	73.0	11.2
Coochbehar	41.1	64.2	23.1	73.6	9.4
Dinajpur(N)	33.1	50.1	17.0	62.4	12.3
Dinajpur(S)	_	51.9	18.8	66.3	14.4
Malda	33.9	51.2	17.3	61.0	9.8
Murshidabad	32.8	48.9	16.1	62.2	13.3
Barddhaman	36.6	51.9	15.3	62.7	10.8
Birbhum	27.7	45.7	18.0	59.4	13.7
Nadia	45.3	63.1	17.8	73.3	10.2
24 Parganas (N)	55.5	70.7	15.2	79.7	9.0
24 Parganas (S)	49.8	67.4	17.6	76.3	8.9
Hooghly	40.7	56.0	15.3	68.4	12.4
Bankura	26.9	42.9	16.0	54.0	11.1
Purulia	31.8	45.2	13.4	56.1	10.9
Purba & Paschim Medinipur	54.6	54.3	-0.3	75.5	21.2
Hawra	44.9	61.1	16.2	71.3	10.2
Kolkata	56.5	70.5	14.0	79.3	8.8

Note: North Dinajpur & South Dinajpur are calculated together because at the time 1991 Dinajpur was not divided.

Source: Census Report of West Bengal 1991,2001,2011.

Interpretation: Table 2 shows the districts wise literacy trends of scheduled castes in West Bengal from 1991 to 2011. In 1991, Kolkata district had the highest literacy rate and Jalpaiguri districts had the lowest literacy rate among scheduled caste in West Bengal. followed by, in 2001, North 24 Parganas districts had the lowest literacy rate among Scheduled Caste in West Bengal. Also in 2011, North 24 Parganas Districts had the highest literacy rate and Bankura

Districts had the lowest literacy rate among scheduled castes in West Bengal. In 1991 to 2001 Jalpaiguri district had the highest literacy decadal growth rate and Purba & Paschim Medinipur district had the lowest literacy decadal growth rate of SC community in West Bengal. On the other hand, in 2001 to 2011 Purba & Paschim Medinipur district had the highest literacy decadal growth rate and Kolkata district had the lowest literacy decadal growth rate of SC community in West Bengal.



Objective- 3: To examine the Growth Pattern of Literacy rate among different sub-castes of Scheduled Caste in West Bengal *Table No- 3: Growth Pattern of Literacy rate among different sub-castes of Scheduled Caste in West Bengal.*

All SC	1961	1971	1981	1991	2001	2011
1. Bagdi, Duley	8.7	10.8	13.9	30.0	47.7	61.4
2. Bahelia	11.6	14.4	22.5	39.2	59.6	70.4
3. Baiti	12.7	17.9	32.9	51.9	68.8	76.8
4. Bantar	15.4	18.1	17.3	41.8	33.1	72.4
5. Bauri	5.5	10.1	9.4	24.2	37.5	50.5
6. Belder	9.6	20.2	18.7	42.1	39.8	58.0
7. Bhogta	3.1	33.3	18.0	28.7	47.9	58.7
8. Bhuimali	11.3	17.4	21.2	35.2	57.1	68.3
9. Bhuiya	7.1	9.9	14.2	21.5	42.1	54.9
10. Bind	6.6	10.9	12.7	31.9	35.0	48.6
11. Charmakar,Chamar, Mochi, Muchi,Rabidas,Ruidas,Rishi	8.3	12.0	14.4	35.9	46.9	60.0
12. Chaupal	3.3	16.3	20.8	39.6	43.2	53.0
13. Dabgar	29.2	20.4	22.4	33.9	34.5	71.8

14. Damai (Nepali)	21.1	37.3	37.5	20.8	69.9	78.3
15. Dhoba, Dhobi	18.9	24.3	38.8	28.1	73.9	80.7
16. Doai	6.2	17.3	22.6	28.5	60.1	65.7
17. Dom, Dhangad	7.1	9.9	12.6	52.9	46.0	58.9
18. Dhari, Dharhi, Dosadh, Dusadh,	12.9	16.7	23.7	52.4	59.6	69.4
19. Ghasi	5.8	10.2	9.0	37.1	30.5	40.0
20. Gonrhi	5.6	18.6	25.2	29.1	56.1	67.7
21. Halalkhor	24.5	10.4	29.9	44.2	68.7	80.8
22. Hari, Mehtar, Mehtor, Bhangi, Balmiki	8.8	11.9	15.3	37.4	49.5	62.4
23. Jalia Kaibartta	17.9	20.5	30.2	26.6	64.9	73.0
24. Jhalo Malo, Malo	14.5	19.2	25.5	37.9	60.3	71.5
25. Kadar	12.2	22.8	25.5	51.5	69.7	78.1
26. Kami (Nepali)	18.1	27.9	34.7	42.1	68.8	79.1
27. Kandra	15.1	24.0	31.5	49.3	72.2	81.8
28. Kanjar	16.2	8.2	16.0	42.5	65.4	71.9
29. Kaora	9.7	17.3	17.8	55.4	52.9	66.2
30. Karenga, Koranga	9.5	12.3	18.4	49.5	54.8	67.6
31. Kaur	12.3	14.5	16.5	60.1	52.2	65.4
32. Keot, Keyot	13.8	16.6	23.2	32.5	58.8	68.9
33. Khaira	5.3	9.2	10.9	32.3	42.3	55.2
34. Khatik	25.3	17.9	30.0	35.7	68.9	74.4
35. Koch	8.6	16.1	15.2	38.7	42.9	52.5
36. Konai	7.4	9.1	15.9	30.6	49.7	63.0
37. Konwar	15.7	24.5	45.7	58.4	82.9	82.9
38. Kotal	12.5	14.4	21.8	45.4	59.7	69.9
39. Kurariar	5.4	21.9	25.1	42.2	56.7	64.2
40. Lalbegi	18.1	21.5	25.9	51.8	67.2	85.6
41. Lohar	8.3	12.4	15.1	29.7	46.5	59.1
42. Mahar	11.8	13.5	19.9	40.3	52.6	63.2
43. Mal	5.9	9.6	12.2	26.6	39.6	54.4
44. Mallah	14.1	15.4	23.8	37.7	53.9	65.8
45. Musahar	3.16	8.3	5.3	15.8	15.3	24.4
46. Namasudra	21.0	26.9	35.9	56.2	71.9	79.5
47. Nat	4.5	39.2	31.3	49.7	59.3	64.8
48. Nuniya	11.0	15.9	20.8	39.4	54.2	65.7
49. Paliya	11.6	20.8	18.5	31.0	50.3	64.3
50. Pan, Sawasi	16.9	16.4	27.3	54.9	61.0	72.3
51. Pasi	15.6	7.9	26.8	46.3	64.1	72.6
52. Patni	16.2	18.9	25.4	49.4	64.5	73.9

53. Pod, Poundra	26.7	27.3	36.5	56.1	72.1	79.8
54. Rajbanshi	14.8	17.6	24.7	40.7	60.1	70.7
55. Rajwar	9.2	11.4	16.6	38.7	46.4	59.7
56. Sarki (Nepali)	14.4	26.0	27.3	49.3	62.5	72.6
57. Sunri (Excluding Saha)	28.6	22.4	54.9	66.0	82.5	86.3
58. Tiyar	8.1	20.4	25.3	45.2	62.1	71.9
59. Turi	7.5	12.9	14.3	27.6	40.6	53.7
60. Chain (in Malda, Murshidabad, Nadia and Dakshin Dinajpur districts)						62.1

Source: Census Report of West Bengal 1961,1971,1981,1991,2001,2011.

Interpretation: Table 3 shows the Growth Pattern of Literacy rate among different sub-castes of Scheduled Castes in West Bengal. The table shows that Growth Pattern of Literacy rate of various SC sub-castes the top five are Lalbegi (67.5%), Konwar (67.2%), Kandra (66.7%), Kadar (65.9%) and Baiti (64.1%). On the other hand, the bottom five are Musahar (21.2%), Ghasi (34.2%), Bind (42.0%), Dabgar (42.6%) and Koch (43.9%). Also, sub-caste Rajbanshi literacy growth rate (55.6%) has the 28th from highest literacy rate among the mentioned sub-castes of

Scheduled Caste. The literacy rate of various sub-castes of the Scheduled Caste community in West Bengal has consistently increased from 1961 to 2011, exceptionally Bantar, Bauri, Belder, Bhogta, Dabgar, Dhoba, Dhobi, Dom, Dhangad, Ghasi, Halalkhor, Jalia Kaibartta, Kanjar, Kaora, Kaur, Khatik, Koch, Musahar, Nat, Paliya, Pan, Sawasi, Pasi, Sunri (Excluding Saha) etc sub-caste.

Objective- 4: To analyse the districts wise trend of gender gap among SC in West Bengal.

Table No- 4. Trends in Gender gap in literacy of Scheduled Caste in West Bengal.

Districts	SC L	iteracy Ra (1991)	te %	SCL	iteracy Ra (2001)	te %	gro rat (19	adal wth e% 91- 01)	SC	SC Literacy Rate % (2011)		Decadal growth rate% (2001- 2011)	
	Male	Female	Gap	Male	Female	Gap	M	F	Male	Female	Gap	M	F
Darjeeling	58.1	33.3	24.8	73.9	50.3	23.6	15.8	17.0	80.6	65.0	15.6	6.7	14.7
Jalpaiguri	54.8	26.6	28.2	73.4	49.6	23.8	18.6	23.0	80.1	65.5	14.6	6.7	15.9
Coochbehar	54.3	26.9	27.4	75.8	52.3	23.5	21.5	25.4	80.7	66.0	14.7	4.9	13.7
Dinajpur(N)	45.7	19.1	26.6	63.5	35.7	27.8	17.8	16.6	70.9	53.3	17.6	7.4	17.6
Dinajpur(S)				63.7	39.6	24.1	18.0	20.5	73.8	58.2	15.6	10.1	18.6
Malda	46.6	20.2	26.4	62.8	38.9	23.9	16.2	18.7	68.6	52.9	15.7	5.8	14.0
Murshidabad	40.5	24.4	16.1	58.1	39.3	18.8	17.6	14.9	68.5	55.7	12.8	10.4	16.4
Barddhaman	47.5	24.7	22.8	63.7	39.6	24.1	16.2	14.9	71.5	63.6	7.9	7.8	24.0
Birbhum	38.5	16.1	22.4	57.8	33.1	24.7	19.3	17.0	68.0	50.4	17.6	10.2	17.3
Nadia	55.0	34.8	20.2	71.8	53.9	17.9	16.8	19.1	79.0	67.3	11.7	7.2	13.4
24 Parganas (N)	64.7	41.2	23.5	70.8	61.4	9.4	6.1	20.2	85.4	73.7	11.7	14.6	12.3
24 Parganas (S)	64.9	33.4	31.5	79.6	54.2	25.4	14.7	20.8	84.4	67.8	16.6	4.8	13.6

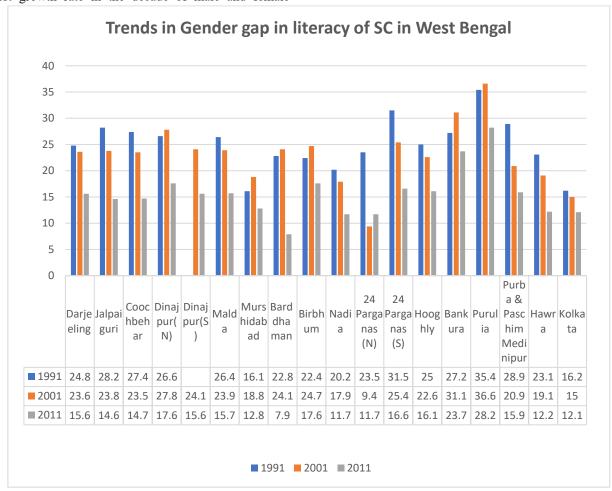
Hooghly	52.8	27.8	25	67.3	44.7	22.6	14.5	16.9	76.3	60.2	16.1	9.0	15.5
Bankura	40.3	13.1	27.2	58.2	27.1	31.1	17.9	14.0	65.8	42.1	23.7	7.6	15.0
Purulia	48.9	13.5	35.4	63.0	26.4	36.6	14.1	12.9	69.8	41.6	28.2	6.8	15.2
Purba & Paschim Medinipur	68.7	39.8	28.9	62.3	41.4	20.9	-6.4	1.6	83.2	67.3	15.9	20.9	25.9
Hawra	56.0	32.9	23.1	70.5	51.4	19.1	14.5	18.5	77.3	65.1	12.2	6.8	13.7
Kolkata	63.5	47.3	16.2	77.3	62.3	15.0	13.8	15.0	85.0	72.9	12.1	7.7	10.6

Note: North Dinajpur & South Dinajpur are calculated together because at the time 1991 Dinajpur was not divided.

Source: Census of West Bengal 1991,2001, 2011.

Interpretation: Table 4 shows the districts wise trends in gender gap in literacy of scheduled castes in West Bengal from 1991 to 2011. In 1991, Purulia districts in West Bengal had the highest gender gap in literacy and Murshidabad districts had the lowest gender gap in literacy. In 2001, Purulia districts had the highest gender gap in literacy and the North 24 Parganas had the lowest gender gap in literacy. In 2011, Purulia districts had the highest gender gap in literacy and Bardhhaman districts had the lowest gender gap in literacy. From 1991 to 2001 Cooch Behar district had the highest growth rate in the decade of male and female

literacy, with males at 21.5% and females at 25.4%. Overall, the decadal growth rate of female literacy is better than the decadal growth rate of male literacy in all districts. Exceptions are North Dinajpur, Murshidabad, Burdwan, Birbhum, Bankura and Purulia districts. On the other hand, in 2001 to 2011 Purba & Paschim Medinipur districts had the highest growth rate in the decade of male & female literacy. Overall, the decadal growth rate of female literacy is better than the decadal growth rate of male literacy in all districts.



Objective- 5: To study the currents literacy status of Scheduled Caste in West Bengal.

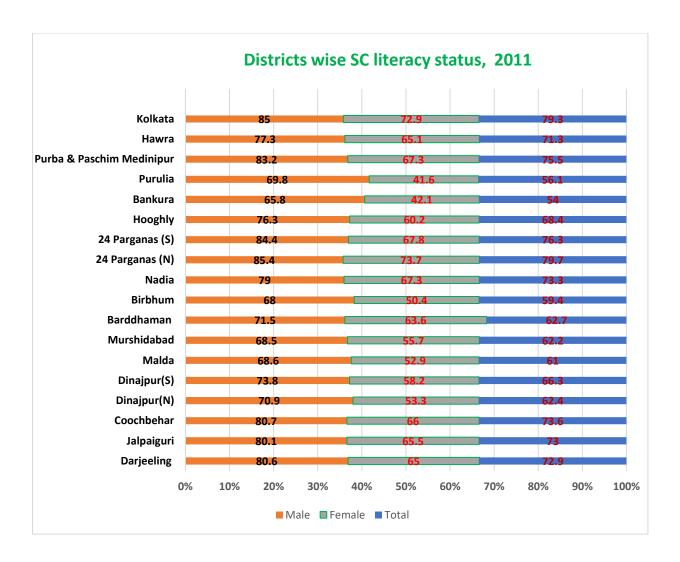
Table No- 5. Districts wise literacy status of Scheduled Caste in West Bengal, 2011.

Districts	Total	Male	Female	Gap
Darjeeling	72.9	80.6	65.0	15.6
Jalpaiguri	73.0	80.1	65 .5	14.6
Coochbehar	73.6	80.7	66.0	14.7
Dinajpur(N)	62.4	70.9	53.3	17.6
Dinajpur(S)	66.3	73.8	58.2	15.6
Malda	61.0	68.6	52.9	15.7
Murshidabad	62.2	68.5	55.7	12.8
Barddhaman	62.7	71.5	63.6	7.9
Birbhum	59.4	68.0	50.4	17.6
Nadia	73.3	79.0	67.3	11.7
24 Parganas (N)	79.7	85.4	73.7	11.7
24 Parganas (S)	76.3	84.4	67.8	16.6
Hooghly	68.4	76.3	60.2	16.1
Bankura	54.0	65.8	42.1	23.7
Purulia	56.1	69.8	41.6	28.2
Purba & Paschim Medinipur	75.5	83.2	67.3	15.9
Hawra	71.3	77.3	65.1	12.2
Kolkata	79.3	85.0	72.9	12.1

Sources: Census of West Bengal, 2011.

Interpretation: Table 5 shows the districts wise literacy status of scheduled castes in West Bengal. The table shows that districts wise literacy status among Scheduled Caste the top five literacy rate are North 24 Parganas, Kolkata, South 24 Parganas, Purba & Paschim Medinipur and Cooch Behar.

On the other hand, the bottom five literacy rate are Bankura, Purulia, Birbhum, Malda and Murshidabad. In 2011, North 24 Parganas district had the highest literacy rate and Bankura districts had the lowest literacy rate among scheduled castes in West Bengal.



Objective- 6: To study the Current Literacy Status of Different sub-castes of Scheduled Caste in West Bengal.

Table No 6: Current Literacy Status of Different sub-castes of Schedule Caste in West Bengal 2011.

All SC Community	Total%	Male%	Female%	Gap%
Bagdi, Duley	61.4	70.3	52.3	18.0
Bahelia	70.4	74.6	65.7	8.9
Baiti	76.8	82.0	71.2	10.8
Bantar	72.4	87.5	55.9	31.6
Bauri	50.5	62.1	38.8	23.3
Belder	58.0	69.3	46.0	23.3
Bhogta	58.7	70.4	46.7	23.7
Bhuimali	68.3	74.0	62.2	11.8
Bhuiya	64.9	65.6	43.8	21.8
Bind	48.6	56.6	40.1	16.5
Chamar, Charmakar, Mochi, Muchi, Rabidas, Ruidas, Rishi	60.0	68.2	51.4	16.8
Chaupal	53.0	62.6	41.8	20.8
Dabgar	71.8	80.9	62.5	18.4

Dhoba, Dhobi 80.7 87.2 73.7 13.5 Doai 65.7 72.9 58.3 14.6 Dom, Dhangad 59.0 68.5 49.2 19.3 Dom, Dhangad 59.0 68.5 49.2 19.3 Dosadh, Dusadh, Dhari, Dharhi 69.4 77.9 59.6 18.3 Ghasi 40.0 50.8 29.4 21.4 Gonrhi 67.7 73.2 61.5 11.7 Halalkhor 80.8 88.0 72.7 15.3 Hari, Mehtar, Mehtor, Bhangi, Balmiki 62.4 71.0 53.5 17.5 Jalia Kaiburta 73.0 79.5 66.1 13.4 Jalia Kaiburta 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kadar 78.1 85.7 70.3 15.4 Kamir (Nepali) 79.1 87.1 71.4 15.7 Kamir (Nepali) 79.1 87.1 71.4 <	Damai (Nepali)	78.3`	86.4	70.6	15.8
Dom, Dhangad 59.0 68.5 49.2 19.3 Dosadh, Dusadh, Dhari, Dharhi 69.4 77.9 59.6 18.3 Ghasi 40.0 50.8 29.4 21.4 Gonrhi 67.7 73.2 61.5 11.7 Halalkhor 80.8 88.0 72.7 15.3 Hari, Mehtar, Mehtor, Bhangi, Balmiki 62.4 71.0 53.5 17.5 Jalia Kaibartta 73.0 79.5 66.1 13.4 Jhalo Malo, Malo 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kani (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 </td <td>Dhoba, Dhobi</td> <td>80.7</td> <td>87.2</td> <td>73.7</td> <td>13.5</td>	Dhoba, Dhobi	80.7	87.2	73.7	13.5
Dosadh, Dusalh, Dharin 69.4 77.9 \$9.6 18.3 Ghasi 40.0 50.8 29.4 21.4 Gonrhi 67.7 73.2 61.5 11.7 Halalkhor 80.8 88.0 72.7 15.3 Hari, Mehtar, Mehtor, Bhangi, Balmiki 62.4 71.0 53.5 17.5 Jalia Kaibartta 73.0 79.5 66.1 13.4 Jahia Kaibartta 73.0 79.5 66.1 13.4 Jhalo Malo, Malo 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kamir 78.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kandra 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Keur 65.4 74.3 55.5 18.8 <td>Doai</td> <td>65.7</td> <td>72.9</td> <td>58.3</td> <td>14.6</td>	Doai	65.7	72.9	58.3	14.6
Ghasi 40.0 50.8 29.4 21.4 Gonrhi 67.7 73.2 61.5 11.7 Halalkhor 80.8 88.0 72.7 15.3 Hari, Mehtar, Mehtor, Bhangi, Balmiki 62.4 71.0 53.5 17.5 Jalia Kaibartta 73.0 79.5 66.1 13.4 Jhalo Malo, Malo 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kami (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Kauranga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6	Dom, Dhangad	59.0	68.5	49.2	19.3
Gonrhi 67.7 73.2 61.5 11.7 Halalkhor 80.8 88.0 72.7 15.3 Hari, Mehtar, Mehtor, Bhangi, Balmiki 62.4 71.0 53.5 17.5 Jalia Kaibartta 73.0 79.5 66.1 13.4 Jhalo Malo, Malo 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kami (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kandra 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khaira 74.4 80.8 67.2 13.6	Dosadh, Dusadh, Dhari, Dharhi	69.4	77.9	59.6	18.3
Halalkhor 80.8 88.0 72.7 15.3 Hari, Mehtar, Mehtor, Bhangi, Balmiki 62.4 71.0 53.5 17.5 Jalia Kaibartta 73.0 79.5 66.1 13.4 Jhalo Malo, Malo 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kami (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 88.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1	Ghasi	40.0	50.8	29.4	21.4
Hari, Mehtar, Mehtar, Bhangi, Balmiki 62.4 71.0 53.5 17.5 Jalia Kaibartta 73.0 79.5 66.1 13.4 Jhalo Malo, Malo 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kami (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8	Gonrhi	67.7	73.2	61.5	11.7
Jalia Kaibartta 73.0 79.5 66.1 13.4 Jhalo Malo, Malo 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kami (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karoa 66.2 73.9 58.2 15.7 Kaura 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khaira 55.2 66.5 43.9 22.6 Khaira 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konai 64.2	Halalkhor	80.8	88.0	72.7	15.3
Jhalo Malo, Malo 71.5 76.7 65.9 10.8 Kadar 78.1 85.7 70.3 15.4 Kami (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Kooh 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2	Hari, Mehtar, Mehtor, Bhangi, Balmiki	62.4	71.0	53.5	17.5
Kadar 78.1 85.7 70.3 15.4 Kami (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Kornai 63.0 69.7 55.9 13.8 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6	Jalia Kaibartta	73.0	79.5	66.1	13.4
Kami (Nepali) 79.1 87.1 71.4 15.7 Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1	Jhalo Malo, Malo	71.5	76.7	65.9	10.8
Kandra 81.8 89.4 73.9 15.5 Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 15.5 Mala 54.4 63.4 45.2 18.2 Mala 54.4 63.4 45.2	Kadar	78.1	85.7	70.3	15.4
Kanjar 72.0 76.1 68.0 8.1 Kaora 66.2 73.9 58.2 15.7 Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khaik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mall 54.4 63.4 <td>Kami (Nepali)</td> <td>79.1</td> <td>87.1</td> <td>71.4</td> <td>15.7</td>	Kami (Nepali)	79.1	87.1	71.4	15.7
Solution 66.2 73.9 58.2 15.7 Kaora 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Mullah 65.8 74.4	Kandra	81.8	89.4	73.9	15.5
Karenga, Koranga 67.6 75.2 59.9 15.3 Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lohar 59.1 69.7 48.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.	Kanjar	72.0	76.1	68.0	8.1
Kaur 65.4 74.3 55.5 18.8 Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nuniya 65.7 73.7	Kaora	66.2	73.9	58.2	15.7
Keot, Keyot 68.9 77.7 59.4 18.3 Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1	Karenga, Koranga	67.6	75.2	59.9	15.3
Khaira 55.2 66.5 43.9 22.6 Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.6 80.8 63.3 <	Kaur	65.4	74.3	55.5	18.8
Khatik 74.4 80.8 67.2 13.6 Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 <td< td=""><td>Keot, Keyot</td><td>68.9</td><td>77.7</td><td>59.4</td><td>18.3</td></td<>	Keot, Keyot	68.9	77.7	59.4	18.3
Koch 52.5 60.8 43.7 17.1 Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 80.8 63.3 17.5	Khaira	55.2	66.5	43.9	22.6
Konai 63.0 69.7 55.9 13.8 Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Khatik	74.4	80.8	67.2	13.6
Konwar 82.9 87.7 77.5 10.2 Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 80.8 63.3 17.5	Koch	52.5	60.8	43.7	17.1
Kotal 70.0 77.4 62.3 15.1 Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Mallah 65.8 74.4 56.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nuniya 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Konai	63.0	69.7	55.9	13.8
Kurariar 64.2 70.6 57.3 13.3 Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Mallah 65.8 74.4 56.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Konwar	82.9	87.7	77.5	10.2
Lalbegi 85.6 92.1 78.2 13.9 Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Mallah 65.8 74.4 56.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Kotal	70.0	77.4	62.3	15.1
Lohar 59.1 69.7 48.2 21.5 Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Mallah 65.8 74.4 56.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Kurariar	64.2	70.6	57.3	13.3
Mahar 63.2 72.3 53.8 18.5 Mal 54.4 63.4 45.2 18.2 Mallah 65.8 74.4 56.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Lalbegi	85.6	92.1	78.2	13.9
Mal 54.4 63.4 45.2 18.2 Mallah 65.8 74.4 56.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Lohar	59.1	69.7	48.2	21.5
Mallah 65.8 74.4 56.2 18.2 Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Mahar	63.2	72.3	53.8	18.5
Musahar 24.4 30.3 18.2 12.1 Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Mal	54.4	63.4	45.2	18.2
Namasudra 79.5 85.1 73.6 11.5 Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Mallah	65.8	74.4	56.2	18.2
Nat 64.8 70.6 57.9 12.7 Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Musahar	24.4	30.3	18.2	12.1
Nuniya 65.7 73.7 56.6 17.1 Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Namasudra	79.5	85.1	73.6	11.5
Paliya 64.3 72.1 56.0 16.1 Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Nat	64.8	70.6	57.9	12.7
Pan, Sawasi 72.3 81.7 62.7 19.0 Pasi 72.6 80.8 63.3 17.5	Nuniya	65.7	73.7	56.6	17.1
Pasi 72.6 80.8 63.3 17.5	Paliya	64.3	72.1	56.0	16.1
	Pan, Sawasi	72.3	81.7	62.7	19.0
Patri: 72.0 70.6 (7.9 11.0	Pasi	72.6	80.8	63.3	17.5
raun /3.9 /9.0 6/.8 11.8	Patni	73.9	79.6	67.8	11.8

Pod, Poundra	79.8	87.1	71.9	15.2
Rajbanshi	70.7	78.3	62.5	15.8
Rajwar	59.7	71.2	47.5	23.7
Sarki (Nepali)	72.6	81.2	64.4	16.8
Sunri (Excluding Saha)	86.3	93.5	78.6	14.9
Tiyar	71.9	79.4	64.0	15.4
Turi	53.7	63.2	43.7	19.5
Chain (in Malda, Murshidabad, Nadia and Dakshin Dinajpur districts)	62.1	69.1	54.7	14.4

Source: Census Report 2011 in West Bengal

Interpretation: Table 6 shows the Current Literacy rate among different sub-castes of SC in West Bengal, 2011. The table shows that current literacy rates of various SC subcastes the top five are Sunri (Excluding Saha) (86.3%), Lalbegi (85.6%), Konwar (82.9%), Kandra (81.8%), Halalkhor (80.8%) and Dhoba, Dhobi (80.7%). On the other hand, the bottom five are Musahar (24.4%), Ghasi (40.0%), Bind (48.6%), Bauri (50.5%), Koch (52.5%). Also, Sunri subcaste had the highest literacy rate, which is 86.3%, where male literacy rate 93.5% and female literacy rate 78.6% and their gap literacy between male and female

literacy rate 14.9%. Also, Musahar sub-caste had the lowest literacy rate, which is 24.4%, where male literacy rate 30.3% and female literacy rate 18.2% and their gap literacy between male and female literacy rate 12.1%. Also, sub-caste Rajbanshi literacy rate (70.7%) has the 24th from highest literacy rate among the mentioned sub-castes, where male literacy rate 78.3% and female literacy rate 62.5% and gap between male and female literacy rate 15.8%.

Objective- 7: To analyse the literacy rate among different sub-castes of SC based on Locality in West Bengal

Table No 7: Literacy status among different sub-castes of SC based on Locality in West Bengal, 2011.

SC Community		R	ural			I	Urban	
	Total	Male	Female	Gap	Total	Male	Female	Gap
	%	%	%	%	%	%	%	%
All Scheduled Castes	67.5	75.7	58.9	16.8	76.7	83.1	70.0	13.1
1. Bagdi, Duley	60.7	69.8	51.5	18.3	67.2	74.7	59.7	15.0
2. Bahelia	68.3	72.5	63.7	8.8	89.7	94.1	84.9	9.2
3. Baiti	74.0	79.4	68.2	11.2	84.2	88.7	79.3	9.4
4. Bantar	73.7	94.4	54.0	40.4	71.8	84.8	56.4	28.4
5. Bauri	48.4	60.1	36.6	23.5	58.9	70.2	47.5	22.7
6. Belder	52.3	63.8	40.2	23.6	73.4	83.8	62.0	21.8
7. Bhogta	58.1	69.9	45.9	24.0	76.5	81.8	70.5	11.3
8. Bhuimali	63.8	69.7	57.6	12.1	80.9	86.0	75.5	10.5
9. Bhuiya	57.5	68.7	46.1	22.6	45.1	54.3	35.3	19.0
10. Bind	45.2	53.6	36.3	17.3	62.8	68.8	56.2	12.6
11. Chamar,Charmakar,	57.3	65.4	48.9	16.5	68.6	76.8	59.3	17.5
Mochi, Muchi, Rabidas,								
Ruidas,Rishi								
12. Chaupal	51.2	61.0	40.0	21.0	77.3	83.2	69.4	13.8
13. Dabgar	60.8	67.2	53.1	14.1	81.7	94.7	69.8	24.9

	Damai (Nepali)	73.5	83.4	64.0	19.4	87.9	92.8	83.4	9.4
	Dhoba, Dhobi	78.7	86.0	71.1	14.9	84.2	89.4	78.5	10.9
16.	Doai	65.2	72.6	57.5	15.1	70.7	75.7	66.0	9.7
17.	Dom, Dhangad	57.8	67.3	48.0	19.3	63.1	72.8	53.2	19.6
18.	Dosadh, Dusadh, Dhari, Dharhi	59.6	67.1	51.3	15.8	73.4	82.2	63.1	19.1
19.	Ghasi	37.1	48.0	26.1	21.9	56.0	66.6	46.5	20.1
20.	Gonrhi	54.2	61.0	46.6	14.4	81.7	85.8	77.0	10.2
21.	Halalkhor	71.6	80.3	61.5	18.8	82.2	89.2	64.4	24.8
22.	Hari, Mehtar, Mehtor, Bhangi, Balmiki	60.1	68.5	51.3	17.2	68.4	77.6	59.2	18.4
23.	Jalia Kaibartta	70.1	77.1	62.5	14.6	80.9	85.8	75.6	10.2
24.	Jhalo Malo, Malo	69.5	74.8	63.8	11.0	75.4	80.5	69.9	10.9
25.	Kadar	78.7	86.4	70.7	15.7	69.7	75.0	64.7	10.3
26.	Kami (Nepali)	75.0	84.6	65.8	18.8	88.1	92.7	83.9	8.8
27.	Kandra	81.6	89.3	73.6	15.7	86.0	91.2	80.3	10.9
28.	Kanjar	69.7	73.1	66.5	6.6	80.5	86.1	74.4	11.7
29.	Kaora	64.1	72.3	55.5	5.8	71.3	77.9	64.5	13.4
30.	Karenga, Koranga	67.0	74.7	59.3	15.4	73.1	80.2	65.9	14.3
31.	Kaur	63.2	72.8	52.2	20.6	75.4	80.6	69.8	10.8
32.	Keot, Keyot	67.4	76.4	57.7	18.7	73.5	81.7	64.5	17.2
33.	Khaira	54.9	66.2	43.6	22.6	61.4	72.7	50.4	22.3
34.	Khatik	72.9	79.8	65.8	14.0	74.5	80.9	67.3	13.6
35.	Koch	51.7	60.1	42.7	17.4	77.1	81.3	73.2	8.1
36.	Konai	61.8	68.5	54.7	13.8	73.4	80.0	66.4	13.6
37.	Konwar	80.0	86.1	73.4	12.7	85.7	89.2	81.6	7.6
38.	Kotal	69.8	77.3	61.9	15.4	74.0	79.2	68.6	10.6
39.	Kurariar	62.9	69.4	55.8	13.6	69.6	76.0	63.3	12.7
40.	Lalbegi	81.6	87.3	74.5	12.8	87.1	94.0	79.5	14.5
41.	Lohar	57.3	68.1	46.2	21.9	72.6	81.2	63.6	17.6
42.	Mahar	60.4	69.7	50.8	18.9	78.4	85.9	70.5	15.4
43.	Mal	53.1	62.2	43.8	18.4	67.9	75.9	59.8	16.1
44.	Mallah	59.7	69.1	49.4	19.7	74.2	81.6	65.8	15.8
45.	Musahar	21.3	27.2	15.1	12.1	39.2	44.9	33.2	11.7
46.	Namasudra	77.5	83.4	71.1	12.3	83.9	88.7	79.0	9.7
47.	Nat	46.5	52.1	39.5	12.6	83.8	90.5	76.1	14.4
48.	Nuniya	59.3	67.9	50.0	17.9	72.3	79.5	63.8	15.7
49.	Paliya	63.9	71.8	55.5	16.3	80.5	84.5	76.4	8.1
50.	Pan, Sawasi	71.4	81.1	61.3	19.8	82.0	87.5	76.5	11.0
51.	Pasi	68.8	77.1	59.5	17.6	73.5	81.6	64.1	17.5

52. Patni	71.2	77.2	64.9	12.3	81.2	86.2	75.9	10.3
53. Pod, Poundra	78.8	86.6	70.5	16.1	83.8	89.2	78.0	11.2
54. Rajbanshi	70.1	78.0	61.8	16.2	74.5	80.8	67.9	12.9
55. Rajwar	58.9	70.4	46.9	23.5	65.2	76.8	52.5	24.3
56. Sarki (Nepali)	69.3	79.3	59.7	19.6	80.7	85.7	75.9	9.8
57. Sunri (Excluding Saha)	84.4	92.8	75.3	17.5	92.2	95.5	88.5	7.0
58. Tiyar	71.5	79.1	63.3	15.8	75.8	81.4	69.9	11.5
59. Turi	49.0	58.3	39.6	18.7	61.1	71.1	50.5	20.6
60. Chain (in Malda, Murshidabad, Nadia and Dakshin Dinajpur districts)	62.0	69.0	54.6	14.4	63.0	69.9	55.6	14.3

Source: Census of West Bengal, 2011.

Interpretation: Table 7 shows the literacy rate among different sub-castes of SC Rural and Urban areas in West Bengal. The table shows that among the rural literacy rates of various SC sub-castes the top five are Sunri (excluding Saha) (84.4%), Lalbegi (81.6%), Kandra (81.6%), Konyar (80.0%), Dhoba and Dhobi (78.7%) and the bottom five are Musahar (21.3%), Ghasi (37.1%), Bind (45.2%), Nat (46.5%), Bauri (48.4%). Also, sub-caste Rajbansi literacy rate (70.1%) has the 18th from highest literacy rate among the mentioned sub-castes. On the other hand, among the urban literacy rates of various SC sub-castes the top five are

Sunri (Excluding Saha) (92.2%), Bahelia (89.7%), Kami (Nepali) (88.1%), Lalbegi (87.1%), Damai (Nepali) (87.9%) and the bottom five are Bauri (58.9%), Bhuiya (45.1%), Dom & Dhangad (63.1%), Ghasi (56.0%) and Musahar (39.2%). Also, sub-caste Rajbansi literacy rate (74.5%) has the 30th from highest literacy rate among the mentioned sub-castes.

Objective- 8: To compare literacy status between Rural SC sub-castes and Urban SC sub- castes in West Bengal.

Table No 8: Comparison of literacy status between Rural Scheduled Caste sub-castes and Urban Scheduled Caste sub-castes in West Bengal.

SC Community	Total %	Rural %	Urban %	Difference % of Rural &	
				Urban	
All SC	69.4	67.5	76.7	9.2	
Bagdi, Duley	61.4	60.7	67.2	6.5	
Bahelia	70.4	68.3	89.7	21.4	
Baiti	76.8	74.0	84.2	10.2	
Bantar	72.4	73.7	71.8	1.9	
Bauri	50.5	48.4	58.9	10.5	
Belder	58.0	52.3	73.4	21.1	
Bhogta	58.7	58.1	76.5	18.3	
Bhuimali	68.3	63.8	80.9	17.1	
Bhuiya	64.9	57.5	45.1	12.4	
Bind	48.6	45.2	62.8	17.6	
Chamar,Charmakar,	60.0	57.3	68.6	11.3	
Mochi, Muchi, Rabidas,					
Ruidas,Rishi					
Chaupal	53.0	51.2	77.3	26.1	

Dabgar	71.8	60.8	81.7	20.9
Damai (Nepali)	78.3`	73.5	87.9	14.4
Dhoba, Dhobi	80.7	78.7	84.2	5.5
Doai	65.7	65.2	70.7	5.5
Dom, Dhangad	59.0	57.8	63.1	5.3
Dosadh, Dusadh, Dhari, Dharhi	69.4	59.6	73.4	13.8
Ghasi	40.0	37.1	56.0	18.9
Gonrhi	67.7	54.2	81.7	27.5
Halalkhor	80.8	71.6	82.2	10.6
Hari, Mehtar, Mehtor, Bhangi, Balmiki	62.4	60.1	68.4	8.3
Jalia Kaibartta	73.0	70.1	80.9	10.8
Jhalo Malo, Malo	71.5	69.5	75.4	5.9
Kadar	78.1	78.7	69.7	9.0
Kami (Nepali)	79.1	75.0	88.1	13.1
Kandra	81.8	81.6	86.0	4.4
Kanjar	72.0	69.7	80.5	10.8
Kaora	66.2	64.1	71.3	7.2
Karenga, Koranga	67.6	67.0	73.1	6.1
Kaur	65.4	63.2	75.4	12.2
Keot, Keyot	68.9	67.4	73.5	6.1
Khaira	55.2	54.9	61.4	6.5
Khatik	74.4	72.9	74.5	1.6
Koch	52.5	51.7	77.1	25.4
Konai	63.0	61.8	73.4	11.6
Konwar	82.9	80.0	85.7	5.7
Kotal	70.0	69.8	74.0	4.2
Kurariar	64.2	62.9	69.6	6.7
Lalbegi	85.6	81.6	87.1	5.5
Lohar	59.1	57.3	72.6	15.3
Mahar	63.2	60.4	78.4	18.0
Mal	54.4	53.1	67.9	14.8
Mallah	65.8	59.7	74.2	14.5
Musahar	24.4	21.3	39.2	17.9
Namasudra	79.5	77.5	83.9	6.4
Nat	64.8	46.5	83.8	37.3
Nuniya	65.7	59.3	72.3	13.0
Paliya	64.3	63.9	80.5	16.6
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Pan, Sawasi	72.3	71.4	82.0	10.6
Pasi	72.6	68.8	73.5	4.7
Patni	73.9	71.2	81.2	10.0
Pod, Poundra	79.8	78.8	83.8	5.0
Rajbanshi	70.7	70.1	74.5	4.4
Rajwar	59.7	58.9	65.2	6.3
Sarki (Nepali)	72.6	69.3	80.7	11.4
Sunri (Excluding Saha)	86.3	84.4	92.2	7.8
Tiyar	71.9	71.5	75.8	4.3
Turi	53.7	49.0	61.1	12.1
Chain (in Malda, Murshidabad, Nadia and Dakshin Dinajpur districts)	62.1	62.0	63.0	1.0

Interpretation: Table 8 shows the comparison of Literacy among rural & urban SC sub-castes in West Bengal. Among the various SC sub-castes, the difference between rural and urban literacy is that the top five sub-castes are Nat, Gonrhi, Bahlia, Chaupal and Koch. It can be found from the table that Nat sub-caste has the highest difference between rural and urban literacy rate, where the urban literacy rate (83.8%) is 37.3 % better than the rural literacy rate (43.5%), followed by Gonrhi sub-caste urban literacy rate (81.7%), 27.5% better than the rural literacy rate (81.7%), followed by Chaupal sub-caste urban literacy rate (77.3%) is 26.1% better than the rural literacy rate (51.2%), followed by Bahlia sub-caste urban literacy rate (89.7%) 21.4% better than the rural literacy rate (68.3%), followed by Koch subcaste urban literacy rate (77.1%) of is 25.4% better than the rural literacy rate (51.7%). On the other hand, the least difference between rural and urban literacy rate of five subcastes are Khatik (1.6%), Bantar (1.9%), Kotal (4.2%), Tiyar (4.3%), Rajbanshi (4.4%) & Kandra (4.4%).

IV. FINDINGS

The analysis of data revealed the following findings:

- 1. It is found that the growth rate of literacy among scheduled castes in West Bengal from 1991 to 2011 is consistently increase. However, the literacy rate from 1991 to 2001 is higher than that from 2001 to 2011.
- It is found that the districts wise literacy trends of Scheduled Caste in West Bengal from 1991 to 2011 is consistently increase in almost all district. However 2001& 2011, North 24 Parganas districts had the highest literacy rate and Bankura districts

- had the lowest literacy rate among SC in West Bengal.
- 3. It is found that North 24 Parganas district had the highest literacy rate, where male literacy rate higher than female literacy rate and Bankura districts had the lowest literacy rate, where male literacy rate higher than female literacy rate, among scheduled caste in West Bengal.
- 4. It is found that from 1991 to 2011 Purulia districts of West Bengal had the highest gender gap in literacy, while Murshidabad districts had the lowest gender disparity in literacy in 1991, also in 2001, North 24 Parganas had the lowest gender literacy gap. Then in 2011, Burdwan district had the lowest gender gap in literacy.
- 5. It is found that current literacy status of various SC sub-castes, Sunri sub-caste had the highest literacy rate and Musahar sub-caste had the lowest literacy rate, where sub-caste Rajbanshi literacy rate has the 24th from highest literacy rate among the mentioned sub-castes.
- 6. It is found that Growth Pattern of Literacy rate of various SC sub-castes has consistently increased from 1981 to 2011, exceptionally Bantar, Bauri, Belder, Bhogta, Dabgar, Dhoba, Dhobi, Dom, Dhangad, Ghasi, Halalkhor, Jalia Kaibartta, Kanjar, Kaora, Kaur, Khatik, Koch, Musahar, Nat, Paliya, Pan, Sawasi, Pasi, Sunri (Excluding Saha) etc sub-castes.
- 7. It is found that among the rural and urban literacy rates of various SC sub-castes the Sunri (excluding Saha) sub-caste has the highest literacy rate and Musahar sub-caste had the lowest literacy rate. Also, sub-caste Rajbanshi literacy rate of rural

- areas has ranked the 18th and urban areas has ranked the 30th from highest literacy rate.
- 8. It is found that Nat sub-caste has the highest difference between rural and urban literacy rate and Khatik sub-caste had the lowest difference between rural and urban literacy. Also, the difference in rural-urban literacy among sub-caste Rajbanshi is very low which is 4th position of the bottom five.

Literacy Programme in Independent India:

- Social Education (1951-56)
- Gram Shikshan (1959)
- ❖ Farmer's Functional Literacy Project (1967-68)
- ❖ Foundational Literacy for Adult Women (1975-76)
- ❖ Nation Adult Education Programme (1978)
- Rural Functional Literacy Project (RELP) & Mass Programme of Functional Literacy (MPFL)
- National Literacy Mission Authority (NLMA) (1988)
- Padhna Likhna Abhiyan (2020)
- Samagra Shiksha Scheme (2018)
 - 1. Sarva Shiksha Abhiyan (SSA)
 - 2. Rashtriya Madhyamik Shiksha Abhiyan Programme (RMSA)
- ❖ Saakshar Bharat (2009)
- Special educational development programmes for SC girls belonging to low literacy Districts

V. CONCLUSION

From the above discussion it can be concluded that the literacy rate among the Scheduled Caste population in West Bengal and districts wise literacy trends of Scheduled Caste is continuous increasing decade by decades in almost all district. It clearly shows that female education rate and female literacy decadal growth rate is significantly higher than male education rate in many districts. Also, the overall gender gap in the districts is gradually decreasing. On the other hand, the current literacy status and Growth Pattern of Literacy rate of various SC sub-castes is continuous increasing decade by decades. Again, it can be seen that the urban literacy rate is much higher than the rural literacy rate among different sub-castes of SC community in West Bengal. There are several districts in West Bengal that have lower literacy rates than others, such as Puruliya, Birbhum, Barddhaman, and Bankura. These districts require more attention from the government. Also, there are several Subcastes of Scheduled Caste in West Bengal that have lower literacy rates than others sub-castes, such as Musahar, Ghasi, Bind, Bauri, Koch, Belder, Bhogta, chaupal, Khaira, Mal and Turi. Also, sub-castes Rajbanshi literacy rate has the 24th from highest literacy rate among the mentioned sub-castes. According to Das (2018) Our scheduled caste pupils can make more academic success if we give them with better family environments, institutional facilities, institutional climates, and government facilities. There should be attitudinal change of the general caste towards the scheduled caste and State Government has to play active part for educating SC (Ghosh, 2019). The government acts to enhance the standard of life, education, and socioeconomic backwardness of the people in the South Carolina and participates in The state and federal governments offer several policies, several scholarships, and a range of training opportunities to students in the SC. But these policies alone are not enough because girls' education is very poor in the rural areas of the state, so the government should make the scheduled caste people living in the rural areas aware about female literacy in particular (Rukhsana, 2014).

REFERENCES

- [1] Barman, B., & Chouhan, P. (2017). Spatio -temporal Variation in Literacy among the Scheduled Caste Population: A Sub-divisional Scenario of Koch Bihar District, West Bengal, India. *IOSR Journal of Humanities and Social* Science (IOSR-JHSS), 22(7). http://dx.doi.org/10.9790/0837-2207100111
- [2] Barman, S., & Sarkar, B. C. (2020). Spatial Variation in the Level of Educational Development of Cooch Behar District of West Bengal, India: An Inter-Sub-Divisional Scenario. *International Journal for Innovative Research in Multidisciplinary Field*, 6(8). http://dx.doi.org/10.2015/IJIRMF.2455.0620/202008017
- [3] Biswas, S. (2017). Educational Status of Women in West Bengal. Journal of Emerging Technologies and Innovative Research (JETIR), 4(11). https://www.researchgate.net/publication/364329495
- [4] Biswas, S. (2022). Educational Status of Schedule Caste (Sc) & Schedule Tribe (St) in West Bengal- A Brief Study. Nb Publication. https://www.researchgate.net/publication/364330223
- [5] Census of India 1991: Union Primary Census Abstract for Scheduled Castes and Scheduled Tribes (India/State Level).
- [6] Census Report of India. (2011). State Census Hand Book. Published by Directorate of Census operation. in India: 2011. Error! Hyperlink reference not valid.
- [7] Census Report of West Bengal. (2001). District Census Hand Book. Published by Directorate of Census operation. West Bengal in India: 2001. Error! Hyperlink reference not valid.
- [8] Chattoraj, K.K., & Chand, S. (2017). Literacy Trend of West Bengal and Its Differentials: A District Level Analysis. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*,

- 20(9).https://www.iosrjournals.org/iosr-jhss/papers/Vol20-issue9/Version-3/A020930119.pdf
- [9] Chouhan, P. (2013). A study on literacy and educational attainment of scheduled castes population in Maldah District of West Bengal, India. *Journal of Geography and Regional Planning*, 6(1), 19-30. http://dx.doi.org/10.5897/JGRP12.028
- [10] Dutta, S., & Bisai, S. (2020). Literacy Status and Trend among Scheduled Castes of West Bengal: A Community Level Analysis. *International Journal of Humanities and Social Science Invention (IJHSSI)*, 9(3), 41-50. https://www.ijhssi.org/papers/vol9(3)/Series-4/H0903044150.pdf
- [11] Ghosh, B. (2010). New Delhi Context and Issues of Gender Discourse Today: The Case of West Bengal. In Pramanick, S. K. & Manna, S (Eds.). Women in India – Motherhood and Multiple Identities, (41-71). Serial Publication: New Delhi. https://www.researchgate.net/publication/235622539
- [12] Ghosh, I. (2019). Educational Status of Scheduled Caste Women in Four Eastern States of India. *International Journal* of Research in Social Sciences, 9(6) 742-755. https://www.ijmra.us/project%20doc/2019/IJRSS_JUNE2019/IJMRA-15760.pdf
- [13] Majhi, S., & Malakar, S. (2022). A Study on Educational Status of Scheduled Caste Population of Birbhum District in West Bengal. Geographical Review of India. 84(3&4). https://www.researchgate.net/publication/369720559
- [14] Majhi, S., & Sardar, B. K. (2019). Disparity in Education among the Scheduled Caste Population in West Bengal, 2011. *Indian Journal of Spatial Science*, 10(1), 32-38. https://www.researchgate.net/publication/362173593
- [15] Patra, P. (2021). Present Status of Scheduled Castes in India. Journal of Emerging Technologies and Innovative Research (JETIR), 8(9). https://www.jetir.org/papers/JETIR2109525.pdf
- [16] Roy, R. (2022). Spatio-temporal Analysis of Gender Disparity in the Literacy Rates of West Bengal, 1961-2011. A Dissertation Submitted to Sikkim University, Degree of Master of Philosophy, Department of Geography School of Human Sciences, Gangtok-737102 Sikkim, India. https://dspace.cus.ac.in/jspui/bitstream/1/7783/1
- [17] Roy. K., & Sarkar, B. C. (2022). Livelihood Of Tribal Population and Associated Problems in Koch Bihar District of West Bengal. *International Journal of Research in all Subjects in Multi Languages*, 10(7). https://www.raijmr.com/ijrsml/wpcontent/uploads/2022/09/IJRSML_2022_vol10_issue_07_Eng_09.pdf
- [18] Rukhsana., & Alam, A. (2014). Literacy Differentials Among Scheduled Caste and Non-Schedule Castes in West Bengal, India: A District Wise Study. International Journal of Innovative Research in Science, Engineering and Technology, 3(3). https://ijirset.com/upload/2014/march/107 Literacy.pdf
- [19] Rukhsana., & Alam, A. (2014). Literacy Differentials among Scheduled Caste and Non-Schedule Castes in West Bengal, India: A District Wise Study. *International Journal of Innovative Research in Science, Engineering and Technology*,

- 3(3), 10705-10712. https://ijirset.com/upload/2014/march/107 Literacy.pdf
- [20] Saha, B. (2012). Spatial Distribution of Schedule Caste and Schedule Tribe Population in the Urban areas of Koch Bihar District. Indian Streams Research Journal, 2(7). https://www.academia.edu/2103511/10
- [21] Saha, S., & Debnath, G. C. (2016). Status of literacy in West Bengal: A geographical appraisal. International Journal of Applied Research. 2(8). https://www.allresearchjournal.com
- [22] Sahoo, H., & Acharya, S. (2019). Education Among Scheduled Castes in India. *Indonesian Journal of Geography*, 51(3). http://dx.doi.org/10.22146/ijg.43192