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Studies on socioeconomic status of goat farmers in Jabalpur district of M.P.

R Shehar, B Roy, B Aharwal, A Mishra and GP Lakhani

Abstract
Present study was performed to access the status of goat farming by performing a questionnaire survey in each of the seven blocks (Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora) of Jabalpur district of Madhya Pradesh. The overall proportion of uneducated respondents were 60.33%. The overall proportion of young, middle and old age groups (%) was 17.36, 67.49 and 15.15, respectively in Jabalpur district. Maximum number of respondents having the main family occupation as labourer was 57.02% followed by labourer and farmer, farmer, self-employed and Job and their percent were 16.25, 12.95, 12.12 and 1.65, respectively in Jabalpur district. Maximum (70.25%) number of the respondents had nuclear family type. 81.27% of the respondents of Jabalpur district are landless. The overall proportion of respondents having low, moderate, medium, high and very high income (%) were 28.10, 32.51, 24.52, 4.41 and 10.47, respectively in Jabalpur district.

Keywords: Goats respondents Jabalpur district age labourer farmer self-employed job

Introduction
The livelihood in rural India mainly depend on agriculture in the form of various land-based enterprises like crop farming, livestock rearing etc. But the landless people in the villages depend mainly on agricultural wages. These landless rural resource poor possess own labour as the only abundant factor which is free to them and they try to use it to its maximum for their survival and thus concentrate on animal husbandry (Pasha, 1991) [21]. Goats are kept as a source of additional income and as an insurance against income shocks of crop failure. In addition, the rural poor who cannot afford to maintain a cow or a buffalo find goat as the best alternative source of supplementary income and milk (Rath, 1992). Goats represent a more liquid form of capital than cattle and are readily tradable, hence goats are called as "poor man's cow" in India and "wet nurse of infants" in Europe. Children in six grades were able to take care of goats (Koda *et al*., 2016) [14]. Goats are also perceived to be a less risky to invest into compared to sheep (Dossa *et al*., 2008) [6]. Goat rearing has significant effect in augmenting farmers' income (Soodan *et al*., 2020) [33]. Goats preferentially select plant parts that are higher in digestibility when stocking density is low. Tolerance of goats toward bitterness may play an important role in maximizing grazing capacity and in biological control of weeds (Lu, 1988) [19].
Farming surveys are useful in describing the characteristics of a large population and are relatively inexpensive way to draw an outcome of their response. No other research method can provide this broad capability, which ensures a more accurate sample to gather targeted results to draw conclusions and make a hypothesis. Questionnaire personal interview of the respondents is the most commonly used method in survey based studies (Kabir, 2016) [11]. Survey is a more flexible way of collection of a huge information and also with the help of today's technology, a left questionnaire/confusion can be cleared remotely via mobile phones. Surveys conducted anonymously provide an avenue for more honest and unambiguous responses than other types of research methodologies.
Various studies conducted in Jabalpur district to analyse the status of goat farming did not covered the whole district and comprised only the data of few villages and on limited parameters (Kirar *et al*., 2012, Lakhera and Kirar, 2012, Kirar and Mondal, 2014, Bilwar, 2015, Bilwar *et al*., 2016, Baghel *et al*., 2017, Singh, 2017, Singh *et al*., 2017 and Singh *et al*., 2018) [12, 18, 13, 4, 3, 2, 29, 30]. Hence, there is a need to conduct a detailed study to cover each block of Jabalpur district for assessing goat farming status.

Materials and Methods
The survey was conducted in Jabalpur district comprising 7 blocks, as per survey proforma

developed by Bilwar (2016) [4] with minor modifications as desired in the study. For the study, 5 villages was be selected from each of the seven blocks of Jabalpur district, so as to cover the whole district, thus total number of village will be 36 as one extra number of village was taken from Jabalpur block because of its higher population base in comparison to other blocks. A total of 10 farmers was be selected randomly from each of those 36 villages. The number of respondents selected from Ujjarod village of Patan block was 13. Hence, the total number of respondents covered in the study was 363.

Result

Education of respondents (%) in different blocks of Jabalpur district

The data present in table 1 represents the proportion of uneducated respondents (%) were 53.33, 68.00, 72.00, 26.00, 77.36, 48.00 and 78.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportions of below primary respondents (%) were 5.00, 4.00, 10.00, 4.00, 3.77, 12.00 and 2.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportions of upto primary (%) respondents were 18.33, 10.00, 10.00, 18.00, 3.77, 20.00 and 14.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportions of upto middle respondents (%) were 15.00, 2.00, 2.00, 12.00, 3.77, 12.00 and 6.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportions of upto high school respondents (%) were 6.67, 8.00, 4.00, 34.00, 1.89, 6.00 and 0.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportions of above high school respondents (%) were 1.67, 8.00, 2.00, 6.00, 9.43, 2.00 and 0.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The overall proportion of uneducated, below primary, upto primary, upto middle, upto high school and above high school (%) were 60.33, 5.79, 13.50, 7.71, 8.54 and 4.13, respectively in Jabalpur district.

Table 1: Education status of the respondents (%) in different blocks of Jabalpur district

S. No	Groups	Jabalpur (n=60)	Kundam (n=50)	Majholi (n=50)	Panagar (n=50)	Patan (n=53)	Shahpura (n=50)	Sihora (n=50)	Overall average (n=363)
1.	Uneducated	53.33	68.00	72.00	26.00	77.36	48.00	78.00	60.33
2.	Below primary	5.00	4.00	10.00	4.00	3.77	12.00	2.00	5.79
3.	Upto primary	18.33	10.00	10.00	18.00	3.77	20.00	14.00	13.50
4.	Upto middle	15.00	2.00	2.00	12.00	3.77	12.00	6.00	7.71
5.	Upto high school	6.67	8.00	4.00	34.00	1.89	6.00	0.00	8.54
6.	Above high school	1.67	8.00	2.00	6.00	9.43	2.00	0.00	4.13

Age of respondents (%) in different blocks of Jabalpur district

The data present in table 2 represents the proportion of different categories of age of respondents in different blocks of Jabalpur district. Young respondents (%) were 18.33, 6.00, 30.00, 22.00, 18.87, 22.00 and 4.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportions of middle age group respondents (%) were 66.67, 90.00, 54.00, 64.00, 64.15, 68.00, 66.00 and 67.49 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportions of old age groups of respondents (%) were 15.00, 4.00, 16.00, 14.00, 16.98, 10.00, 30.00 and 15.15 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The overall proportion of young, middle and old age groups (%) was 17.36, 67.49 and 15.15, respectively in Jabalpur district.

Table 2: Categories of respondents (%) in different blocks of Jabalpur district

S. No	Age group (Years)	Jabalpur (n=60)	Kundam (n=50)	Majholi (n=50)	Panagar (n=50)	Patan (n=53)	Shahpura (n=50)	Sihora (n=50)	Overall Average (n=363)
1.	Young (< 33)	18.33	6.00	30.00	22.00	18.87	22.00	4.00	17.36
2.	Middle (33 to 54)	66.67	90.00	54.00	64.00	64.15	68.00	66.00	67.49
3.	Old (> 54)	15.00	4.00	16.00	14.00	16.98	10.00	30.00	15.15

Table 2a: Relationship between age and education status of the respondents (%) of Jabalpur district

S. No	Age groups	Education status					
		Uneducated	Below primary	Upto primary	Upto middle	Upto High school	Above High school
1.	Young (<33)	11.87	14.29	24.49	25.00	19.35	60.00
2.	Middle (33 to 54)	69.41	76.19	65.31	60.71	70.97	40.00
3.	Old (>54)	18.72	9.52	10.20	14.29	9.68	0.00

Main occupation of the family (%) of respondents in different blocks of Jabalpur district

The data present in table 3 represents the proportion of respondents family having the occupation of labourer (%) were 58.33, 50.00, 48.00, 64.00, 56.60, 48.00 and 74.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondent's family having the occupation of labourer and farmer (%) were 16.67, 28.00, 26.00, 14.00, 7.55, 14.00 and 8.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents family having the occupation of farmer (%) were 5.00, 4.00, 8.00, 10.00, 32.08, 22.00 and 10.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents family having the occupation as self-employed (%) were 20.00, 12.00, 18.00, 10.00, 3.77, 12.00, and 8.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents family having the occupation as job (%) were 0.00, 6.00, 0.00, 2.00, 0.00, 4.00 and 0.00 in

Jabalpur, Kundam, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The overall proportion of respondents family having the occupation as labourer, labourer and farmer, farmer, self-employed and Job (%) were 57.02, 16.25, 12.95, 12.12 and 1.65, respectively in Jabalpur district.

Table 3: Main occupation of the family (%) of respondents in different blocks of Jabalpur district

S. No	Occupation	Jabalpur (n=60)	Kundam (n=50)	Majholi (n=50)	Panagar (n=50)	Patan (n=53)	Shahpura (n=50)	Sihora (n=50)	Overall average (n=363)
1.	Labourer	58.33	50.00	48.00	64.00	56.60	48.00	74.00	57.02
2.	Labourer and farmer	16.67	28.00	26.00	14.00	7.55	14.00	8.00	16.25
3.	Farmer	5.00	4.00	8.00	10.00	32.08	22.00	10.00	12.95
4.	Self employed	20.00	12.00	18.00	10.00	3.77	12.00	8.00	12.12
5.	Job	0.00	6.00	0.00	2.00	0.00	4.00	0.00	1.65

Family type of respondents (%) in different blocks of Jabalpur district

The data present in table 4 represents the proportion of respondents having joint families (%) were 46.67, 6.00, 32.00, 28.00, 35.85, 12.00 and 34.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents having nuclear families (%) were 53.33, 84.00, 68.00, 72.00, 64.15, 88.00 and 66.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The overall proportion of respondents having joint and nuclear families (%) were 29.75 and 70.25, respectively in Jabalpur district.

Table 4: Family type of respondents (%) in different blocks of Jabalpur district

S. No	Family type	Jabalpur (n=60)	Kundam (n=50)	Majholi (n=50)	Panagar (n=50)	Patan (n=53)	Shahpura (n=50)	Sihora (n=50)	Overall Average (n=363)
1.	Joint	46.67	16.00	32.00	28.00	35.85	12.00	34.00	29.75
2.	Nuclear	53.33	84.00	68.00	72.00	64.15	88.00	66.00	70.25

Goat flock size (%) of respondents in different blocks of Jabalpur district

The data present in table 5 represents the proportion of goat rearers having small flock size (%) were 1.67, 6.00, 14.00, 10.00, 7.55, 2.00 and 2.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of goat rearer having medium flock size (%) were 61.67, 44.00, 50.00, 56.00, 88.68, 32.00 and 48.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of goat rearer having large flock size (%) were 36.67, 50.00, 36.00, 34.00, 3.77, 66.00 and 50.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks , respectively. The overall proportion of small, medium and large flocks (%) of goat rearer were 6.06, 54.82 and 39.12, respectively in Jabalpur district.

Table 5: Goat flock size (%) of respondents in different blocks of Jabalpur district

S. No	Flock size (no. of goats)	Jabalpur (n=60)	Kundam (n=50)	Majholi (n=50)	Panagar (n=50)	Patan (n=53)	Shahpura (n=50)	Sihora (n=50)	Overall average (n=363)
1.	Small (< 5)	1.67	6.00	14.00	10.00	7.55	2.00	2.00	6.06
2.	Medium (5 to 10)	61.67	44.00	50.00	56.00	88.68	32.00	48.00	54.82
3.	Large (> 10)	36.67	50.00	36.00	34.00	3.77	66.00	50.00	39.12

Land holding of the family (%) of respondents in different blocks of Jabalpur district

The data present in table 6 represents the proportion of landless respondents (%) were 13.77, 76.00, 68.00, 94.00, 73.58, 78.00 and 96.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of marginal farmer respondents (%) were 2.20, 16.00, 20.00, 6.00, 1.89, 10.00 and 2.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of small farmer respondents (%) were 0.55, 6.00, 10.00, 0.00, 16.98, 4.00 and 2.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of semi medium farmer respondents (%) were 0.00, 2.00, 0.00, 0.00, 5.66, 8.00 and 0.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of medium farmer respondents (%) were 0.00, 0.00, 2.00, 0.00, 1.89, 0.00 and 0.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. There were no larger farmer respondents (%). The overall proportion of landless, marginal, small, semi medium and medium respondents (%) were 81.27, 9.92, 6.06, 2.20 and 0.55, respectively in Jabalpur district.

Table 6: Land holding of the family (%) of respondents in different blocks of Jabalpur district

S. No	Groups	Jabalpur (n=60)	Kundam (n=50)	Majholi (n=50)	Panagar (n=50)	Patan (n=53)	Shahpura (n=50)	Sihora (n=50)	Overall average (n=363)
1.	Landless	13.77	76.00	68.00	94.00	73.58	78.00	96.00	81.27
2.	Marginal (< l.0 ha.)	2.20	16.00	20.00	6.00	1.89	10.00	2.00	9.92
3.	Small (1.0 to 2.0 ha.)	0.55	6.00	10.00	0.00	16.98	4.00	2.00	6.06
4.	Semi medium (2.0 to 4.0 ha.)	0.00	2.00	0.00	0.00	5.66	8.00	0.00	2.20
5.	Medium (4.0 to 10.0 ha.)	0.00	0.00	2.00	0.00	1.89	0.00	0.00	0.55
6.	Large (> 10.0 ha.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 6a: Relationship between land holdings and goat flock size of the respondents (%) of Jabalpur district

S. No	Land holding	Flock size		
		Small	Medium	Large
1.	Landless	6.44	56.27	37.29
2.	Marginal (< l.0 ha)	8.33	33.33	58.33
3.	Small (1.0 to 2.0 ha)	0.00	63.64	36.36
4.	Semi medium (2.0 to 4.0 ha)	0.00	75.00	2.00
5.	Medium (4.0 to 10.0 ha)	0.00	1.00	1.00
6.	Large (> 10.0 ha)	0.00	0.00	0.00

It is quite interesting that further analysis of data in table 6a revealed that the maximum number of medium and large size of herds were also maintained by landless and marginal farmers as compared to other categories in Jabalpur district. Similar finding reported by other studies are as follows:
Tudu and Roy (2015) [35] surveyed Nadia district of West Bengal and found that goat rearing is much popular amongst the landless, small marginal farmers (46%), followed by the agricultural labourers (38%). Sakthivel and Narmatha (2019) [26] analysed the characterization of households of marginal and landless livestock farmers in rural Tamil Nadu and concluded livestock keeping was more important to the socially backward, landless and marginalized sections of the rural society.

Goat rearing experience of the respondent's family (%) in different blocks of Jabalpur district

The data present in table 7 represents the proportion of respondents having low goat rearing experience (%) were 11.67, 12.00, 16.00, 18.00, 24.53, 18.00 and 8.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents having medium goat rearing experience (%) were 55.00, 36.00, 46.00, 32.00, 50.94, 34.00 and 36.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents having high goat rearing experience (%) were 33.33, 52.00, 38.00, 50.00, 24.53, 48.00 and 56.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The overall goat rearing experience as low, medium and high (%) were 15.43, 41.87 and 42.70, respectively in Jabalpur district.

Table 7: Goat rearing experience of the respondent's family (%) in different blocks of Jabalpur district

S. No	Groups	Jabalpur (n=60)	Kundam (n=50)	Majholi (n=50)	Panagar (n=50)	Patan (n=53)	Shahpura (n=50)	Sihora (n=50)	Overall average n=363)
1.	Low (< 6 yrs)	11.67	12.00	16.00	18.00	24.53	18.00	8.00	15.43
2.	Medium (6 to 10 yrs)	55.00	36.00	46.00	32.00	50.94	34.00	36.00	41.87
3.	High (> 10 yrs)	33.33	52.00	38.00	50.00	24.53	48.00	56.00	42.70

Table 7a: Relationship between goat rearing experience (in years) and goat flock size of the respondents (%) of Jabalpur district

S. No	Goat flock size	Goat rearing experience (years)		
		Low (<6)	Medium (6 to 10)	High (>10)
1.	Small (<5)	32.14	1.97	0.65
2.	Medium (5 to 10)	60.71	76.97	30.97
3.	Large (>10)	7.14	21.05	68.39

Table 7b: Relation between goat rearing experience (in years) and age % of the respondents of Jabalpur district

S. No	Age of the respondents	Goat rearing experience (Years)		
		Low (<6)	Medium (6 to 10)	High (>10)
1.	Young (<33)	19.64	19.08	14.84
2.	Middle (33 to 54)	67.86	64.47	70.32
3.	Old (>54)	12.50	16.45	14.84

Income of respondents from goats in past one year (%) in different blocks of Jabalpur district

The data present in table 8 represents the proportion of respondents having low income (%) were 15.00, 20.00, 42.00, 32.00, 54.72, 26.00 and 8.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents having moderate income (%) were 41.67, 44.00, 28.00, 32.00, 35.85, 16.00 and 28.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents having medium income (%) were 31.67, 20.00, 16.00, 16.00, 7.55, 36.00 and 44.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents having high income (%) were 1.67, 2.00, 4.00, 10.00, 0.00, 8.00 and 6.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The proportion of respondents having very high income (%) were10.00, 14.00, 10.00, 10.00, 1.89, 14.00 and 14.00 in Jabalpur, Kundam, Majholi, Panagar, Patan, Shahpura and Sihora blocks, respectively. The overall proportion of respondents having low, moderate, medium, high and very high income (%) were 28.10, 32.51, 24.52, 4.41 and 10.47, respectively in Jabalpur district.

Table 8: Income of respondents from goats in past one year (%) in different blocks of Jabalpur district

S. No.	Income groups	Jabalpur (n=60)	Kundam (n=50)	Majholi (n=50)	Panagar (n=50)	Patan (n=53)	Shahpura (n=50)	Sihora (n=50)	Overall Average (n=363)
1.	Low (<Rs. 7000)	15.00	20.00	42.00	32.00	54.72	26.00	8.00	28.10
2.	Moderate (Rs. 7001-14000)	41.67	44.00	28.00	32.00	35.85	16.00	28.00	32.51
3.	Medium (Rs. 14001-21000)	31.67	20.00	16.00	16.00	7.55	36.00	44.00	24.52
4.	High (Rs. 21001-28000)	1.67	2.00	4.00	10.00	0.00	8.00	6.00	4.41
5.	Very high (> Rs. 28000)	10.00	14.00	10.00	10.00	1.89	14.00	14.00	10.47

Table 8a: Relationship between flock size and income of respondents (%) in past one year of Jabalpur district

S. No	Flock size of goats	Income of respondents from goats in past one year				
		Low	Moderate	Medium	High	Very high
1.	Small	19.61	1.69	-	-	-
2.	Medium	80.39	76.27	29.21	6.25	-
3.	Large	-	22.03	63.00	93.75	100.00

Discussion

It is revealed from the data from table 1 that majority of the respondents are uneducated (60.33%) and only 4.13% are educated above high school in Jabalpur district.

Study revealed that majority of the goat keepers (67.49%) were from 'middle' group of age (33 to 54 years), followed by 17.36% belonged to 'young' age group (33 years and below) and 15.15% belonged to old age group (>54 years) in Jabalpur district.

As most of the goat owners belonged to middle age category, the probable reason might be their awareness about improved goat managemental practices, their enthusiasm due to high energy and most probably conditions of non-availability of desired occupation where they resides. Middle age group respondents will be more malleable to change. Therefore less number of young and old people might have involved in rearing of goats. Also the maximum number of respondents of middle age groups were uneducated 62.04%, these reasons probably let them choose goat rearing as primary or secondary occupation. Moreover, the maximum information was also obtained from middle age group of respondents, therefore middle age group of respondents were the representative of all age categories in Jabalpur district.

The problem of inexperience, lack of interest due to having at least some level of education (from below primary to above high school) were 58.73% in young age groups. Also the opportunities of work are more for young population, as they migrate into urban area for instant daily income. These were probably the reasons that young peoples are less interested in goat farming. The respondents of the old age group had the maximum number of uneducated heads (62.04%). None of the respondents from old age group were educated upto high school in Jabalpur district. Similar findings observed in various studies are as follows:

Sharma *et al*. (2007) [28] found that majority of goat rearers belonged to middle age group. Horvath (2008) [9] surveyed and revealed that the potential for migration, especially among the young, is still high. It argues that the migration of young people is typically connected with the problematic transition to adulthood, in situations where jobs are insecure and difficult to obtain in the primary segment of the labour market. Migration turns out to be an indeterminate context linked to the uncertain socio-economic status of a prolonged transition to adulthood. Adams and Ohene-Yankyera (2014) [1] found that goat farmers had low level of education and their average age were 47.29±16.00 years. Sabapara (2016) [24] conducted survey to assess the socio-economic characteristics of goat rearers and marketing practices of goats in Navsari district of Gujarat. The data revealed that majority (51.2%) of the goat rearers belonged to middle age group (31-45 years) followed by 34% old age and 14.8% young age group. This may be because most of older people stayed within villages and were involved in goat rearing for income generation. While, the young aged were literate to some extent and migrated to cities in search of work. Therefore, less number of young people might have involved in rearing of goats. Findngs similar to the study were given by. Singh *et al.* (2018) [31] also found that respondents were predominantly of middle age group (32-53yrs.). Siyal *et al*. (2020) observed in a study that the majority (65.55%) of the total respondents in their study were middle age group followed by young 19.45% and old age group 15.00%.

In contrast to the present study, Gautam (2008) surveyed the current trends of migration in Nepal imply that the extensive out-migration of young people from rural areas, to foreign and internal urban centres, coincides with a rise in the problem of older couples in rural areas. The old couples staying at home are compelled to participate in all activities of which animal husbandry is a major burden for them. Deshpandey *et al*. (2010) also found that 36.00% goat keepers were in the higher age group followed by middle age and young age group respectively.

The analysis of the various studies conducted over socio-economic goat farming practices in different regions of the world suggests that association of age, education, occupation, income, flock size, flock strecture etc. of goat rearers differentiate from region to region, because of the particular requirements and criterions for livelihood vary accordingly to the places for which the farmers belonged. This is related particularly with the feeding practices and economical status of common peoples residing, mangling and enjoying on goat related products and services, in that geographical area.

The further analysis of data from table 2a revealed that maximum number of respondents belonging to uneducated-middle age category were 69.41% followed by uneducated-old 18.72% and uneducated-young respondents 11.87%, So it can be concluded that goat farming is an important tool of livelihood to rural illiterates and/or less educated peoples in Jabalpur district. Similar findings were given by Sakthivel and Narmatha (2019) [26] conducted survey in rural areas of Tamil Nadu on landless and marginal farmers and found that illiterate, primary, middle and high school and above farmers were 45.50%, 30.00%, 17.00% and 7.50%, respectively. Gokhle *et al.* (2002) reported that overall less level of education among goat owners suggest that educated peoples do not prefer goat farming. There was no effect of education and age on family type, land holding and flock size of the respondents. The survey observations revealed that rural illiterate unemployed people are looking to goat as a tool for livelihood. Fareque *et al*. (2016) illustrated that most of the farmers were either primary educated (55%) or illiterate (38.3%). About 3.33% were below secondary school certificate and 1.67% belonged to higher secondary school level.

The data from table 3 reveals that majority of the respondents family have main occupation as labourer (57.02%) followed by other occupations. This suggests that people consider goat farming as a secondary subsidiary business and that can withstand against job scarcity and crop failures as well. Observations similar to the findings were given by. Roy and Tiwari (2016) [23] elaborated that in Mymensingh district in Bangladesh, agriculture was the main occupation of the goat owners. Sabapara (2016) [24] surveyed the socio-economic profile of goat rearers in southern Gujarat and found that majority of the respondents were landless and labourers and had goat rearing as their subsidiary occupation. Singh (2017) [29] surveyed the impact of extension strategies on goat farming in adopted villages of Jabalpur and found that the main occupation of goat farmers was labourer. Singh *et al.* (2018) [31] surveyed in Jabalpur district and indicated that

majority (55%) of the goat owners were labourers and in most of the cases, the families had more than one occupation as their source of income. Islam *et al*. (2018) [10] found that the majority of the goat farmers in Sylhet district of Bangladesh (59.33%) were labourer. Sahoo *et al*. (2018) [25] did assessment of socio-economic status of contract and non-contract goat farmers of Odisha. In case of contract farmers, 41.66% had taken up contract goat farming as a secondary occupation followed by animal husbandry (30%), labourer (11.66%) and agriculture.

The majority of the goat owners were from nuclear families (70.25%), the probable reason might be that respondents living in joint families do not prefer goat farming and consider goat rearing as a taboo in the society, that it is mostly reared by the poorer section and deprived class of peoples of the society. Respondents living in nuclear families do possess a less number of negative advisors of their own family so, it is easy for them to continue with goat farming as compared to joint families. Moreover in general joint families are also reducing in numbers. These finding is supported by Kumar *et al*. (2015) [16] who conducted survey and found that goat farming is preferred by nuclear family (78.33%) than joint family (21.67%). Sabapara (2016) [24] who reported that majority (68%) of the respondents had nuclear type family while 32% of the respondents had joint type their family. Patil *et al*. (2012) [22] surveyed the tribal goat farmers in Rajasthan and revealed that majority (95.00%) of the respondents belongs to the nuclear family composition. Singh *et al*. (2021) conducted socio-economic status studies of goat farmers in Gorakhpur district of Uttar Pradesh and concluded that joint family system is slowly declining in due course of time even in rural villages.

The data from table 5 revealed that larger proportions of goats are possessed by medium sized flocks (54.82%) followed by large (39.12%) and then by small flock size (6.06%) by the respondents of Jabalpur district. This suggests that medium size of flocks are most preferred by goat rearers of Jabalpur district. More over breeding related stratergies such as having self-buck for breeding are resolved by having more strength of goats. In case of grazing also medium size flocks are easier to be handled and consume similar time to be grazed, so it is better to keep medium sized flocks of goat as compared to small sized ones in terms of manpower and man-hours used in grazing, it will be more economic viable also. Similar findings was observed by other studies are as follows.

Koli and Koli (2016) [15] surveyed the relationship between personal, situational, psychological and socio-economical characteristics with adoption of goat farming technology by the goat keepers in Maharastra and found that small, medium and large flocks of goats were 10.00%, 73.33% and 16.66%, respectively. Mohanty (2018) [20] revealed that 42.5% of the respondents have 21-30 goats followed by 41.66%, 7.5%, 4.16% and 4.16% respondents were had 10-20, 31-40, 41-50 and >50 goats, respectively.

It is revealed from the data from table 6 that most of the goat farmers belongs to landless class (81.27%) in Jabalpur district followed by other categories, suggests that goat farming can be easily done without the possession of an agricultural land. Goats are easy to be managed in accommodation in the house along with the family members or a separate protected house (usually kacchha house) is made alongside of the main house to accommodate goats. There was no respondents (0%) having large category of land holding ei. >10 acres and also respondents having medium categories of lands were 0.55%. It can be concluded that as the land possession increases there is deduction in goat rearing or it can also be said that those who possess larger lands do not prefer or rely on income or products from goat farming enterprise.

Findings related to goat rearing experience (from table 7) of the respondents were given by. Tavva *et al*. (2016) [34] indicated the extent of differences in the market value and live weight of meat goats and the age and experience of goat producers in goat husbandry among sample farmers. Mohanty (2018) [20] surveyed and revealed that 56.66% of the respondents have goat rearing experience of 5-10 years, 26% of 3-5 years.

The data from table 7a reveals that the majority of small flock respondents have low level of goat rearing experience and majority of large flock keepers have higher level of goat rearing experience. Therefore, with the increase in experience there is also significant rise in the flock size of goats. As those having >10 years of experience possessed 68.39% of larger flocks of goat.

Table 7b states that the respondents of middle age groups have higher levels of goat rearing experience as compared to young and old age groups in Jabalpur district.

Table 8 includes income from goats are from sale of goats, milk, hide, manure and from breeding bucks. However there should be no doubt that most of the farmers rear goats as a secondary source of income and nearly maximum income comes from selling of live goats for meat purpose. Similar studies were done by Sabapara (2016) [24] surveyed the socio-economic profile of goat rearers in Southern Gujarat and found that majority of the goat rearers had an annual income of less than Rs. 25,000/year. Soodan (2020) [33] assessed the impact of goats in augmenting farmer's income in Kashmir and found that majority (40.63%) of the beneficiaries were having moderate (Rs. 7001-14000) level of income from the sale of goats followed by 25% having medium (Rs. 14001-21000) level, 6.25% beneficiaries each were having low and high income from sale of goats. About 15.62% beneficiaries were found to be having high level (Rs. 28001 and above) of income from the sale of goats. As the beneficiaries were provided with two goats, therefore, the average annual income from two goats was Rs. 17,193.00 which almost half of the income generation from other sources annually. This signifies a major augmentation of income of the beneficiaries through goat farming.

The data present in table 8a represents flock size and income of respondents of Jabalpur district. It is quite clear that with the increase in flock size there is also considerable increment in the income of the respondents.

References

1. Adams F, Ohene-Yankyera K. Socio-economic characteristics of subsistent small ruminant farmers in three regions of northern Ghana. Asian Journal of Applied Science and Engineering. 2014;3(3):351-364.
2. Baghel AS, Baghel RPS, Singh R. An impact study of livestock on rural economic development in Jabalpur district of Madhya Pradesh. Trends in Biosciences. 2017;42:6489-6496.
3. Bilwar H. Socio-Economic Improvement of Tribal People of Mandla District Through Goat Farming Practices. M.V.Sc. & A.H. thesis (Veterinary and Animal Husbandry Extension Education), Nanaji Deshmukh Veterinary Science University, Jabalpur. MP, 2015.
4. Bilwar H, Mandal MK, Ruchi S, Yadav JS. Socio-

economic empowerment of tribal farmers self-help groups through goat farming practices. Veterinary Practitioner. 2016;17(1):154-156.
5. Deshpande SB, Sabapara GP, Malik PK, Sadana DK, Singh PK, Singh G, *et al*. Morpho-metric characteristics of Surti goats and socio-economic status of Surti goat keepers. Indian Journal of Animal Sciences. 2010;80(6):575-577.
6. Dossa LH, Rischkowsky B, Birner R, Wollny C. Socio-economic determinants of keeping goats and sheep by rural people in southern Benin. Agriculture and Human Values. 2008;25(4):581-592.
7. Gautam TR. Migration and the problem of old age people in Nepal. Dhaulagiri Journal of Sociology and Anthropology. 2008;2:145-160.
8. Gokhale SB, Gokhale RB, Phadkej N, Desale RJ. Status of village goat management practices in Maharashtra. Indian Journal of Animal Sciences. 2002;72(9):810-814.
9. Horvath I. The culture of migration of rural Romanian youth. Journal of Ethnic and Migration Studies. 2008;34(5):771-786.
10. Islam MA, Hossain MN, Chokraborti SS, Rahman S, Tasnim A, Al Zabir A. Socio-economic profile of goat rearing farmers and their management practices in Sylhet, Bangladesh. Journal of Agriculture and Ecology Research International. 2018;15(4):1-10.
11. Kabir SMS. Methods of data collection: Basic guidelines for research: An introductory approach for all disciplines. Edition: First, 2016, 201-275.
12. Kirar NK, Mondal M. Study on the existing status of goat farming practices in Jabalpur. Journal of Interacademicia. 2014;18(4):678-685.
13. Kirar NK, Mondal MK, Suman S, Baghel RPS. Goat marketing system in rural areas of Jabalpur. Environment and Ecology. 2012;30(4A):1502-1505.
14. Koda N, Kutsumi S, Hirose T, Watanabe G. Educational possibilities of keeping goats in elementary schools in Japan. Frontiers in Veterinary Science. 2016;3:118-126.
15. Koli RT, Koli SR. Study of relationship between personal, situational, psychological and socio-economical characteristics with adoption of goat farming technology by the goat keepers. Research Journal of Animal Husbandry and Dairy Science. 2016;7(1):11-15.
16. Kumar R, Singh BP, Kumar V, Kumar S, Maousami. Adoption of health technologies among goat farmers in different agro-climatic zones of Bihar. Journal of Applied Animal Research. 2015;43(1):46-51.
17. Kumar S. Commercial goat farming in India: An emerging agri-business opportunity. Agricultural Economics Research Review. 2007;20(347-2016-16831):503-520.
18. Lakhera A, Kirar N. Reproductive status of goats in and around Jabalpur. Environment and Ecology. 2012;30(4A):1499-1501.
19. Lu CD. Grazing behavior and diet selection of goats. Small Ruminant Research. 1988;1(3):205-216.
20. Mohanty D. Economic impact of goat rearing on livelihood of goat farmers in nabrangpur district of odisha. M.V.Sc and A.H. thesis (Veterinary and Animal Husbandry Extension Education), Orissa University of Agriculture and Technology, Bhuvneshwar. Orissa, 2018.
21. Pasha SA. Sustainability and viability of small and marginal farmers: Animal husbandry and common property resources. Economic and Political Weekly. 1991;26(13):27-30.
22. Patil DS, Meena HR, Tripathi H, Kumar S, Singh DP. Socio-economic profile of sheep reared Dhangar pastoralists of Maharashtra, Journal of Entomology and Zoology Studies. 2012;7(4):1101-1104.
23. Roy R, Tiwari R. Socio-personal and Socio-economic profile of goat owners in India. Indian Journal of Extension Education. 2016;52(3-4):57-60.
24. Sabapara GP. Socio-economic profile of goat rearers and marketing practices of goats in Southern Gujarat, India. Livestock Research International. 2016;4(2):83-87.
25. Sahoo C, Tiwari R, Roy R. Assessment of socio-economic status of contract and non-contract goat farmers of Odisha- a comparative study. International Journal of Livestock Research. 2018;8(10):348-356.
26. Sakthivel KM, Narmatha N. Characterization of households of marginal and landless livestock farmers in rural Tamil Nadu. Journal of Krishi Vigyan. 2019;8(1):23-27.
27. Sakthivel KM, Narmatha N, Akila N, Uma V. Management practices followed by goat farmers in Namakkal district of Tamil Nadu. Indian Journal of Small Ruminants. 2012;18(1):125-128.
28. Sharma MC, Pathodiya OP, Jingar SC, Gaur M. A study on socio-economic status of goat rearers and adoption of management practices. The Indian Journal of Small Ruminants. 2007;13(1):75-83.
29. Singh SK. Impact of extension strategies on goat farming in adopted villages of Jabalpur. M.V.Sc. & A.H. thesis (Veterinary and Animal Husbandary Extension Education), Nanaji Deshmukh Veterinary Science University, Jabalpur. MP, 2017.
30. Singh SK, Ruchi S, Mandal MK, Priyanka K, Rashmi V. Socio-economic profile and existing flock structure of goat farmers in adopted villages of Jabalpur district. Journal of Interacademicia. 2017;21(3):301-306.
31. Singh SK, Singh R, Mandal MK, Panday G. Socio-Economic profile and existing flock structure of goat farmers in villages of Jabalpur District. Journal of Pharmacognosy and Phytochemistry, SP1, 2018, 1080-1083.
32. Singh VP, Singh RP, Singh AK, Singh RK, Upadhyay SP, Srivastava AK. Socio-economic status of goat farmers in Gorakhpur district of Uttar Pradesh. The Indian Journal of Animal Sciences. 2021;91(4):318-320.
33. Soodan JS, Kumar S, Singh A. Effect of goat rearing on farmers' income. Journal of Livestock Research. 2020;10(8):89-97.
34. Tavva S, Aw-Hassan A, Rizvi J, Saharawat YS. Determinants of market value of goats in Afghanistan. Indian Journal of Animal Sciences. 2016;86(9):1068-1072.
35. Tudu NK, Roy DC. Socio-economic profile of women goat keepers and rearing challenges in goat in Nadia district of West Bengal. International Journal of Science, Environment and Technology. 2015;4(2):331-336.