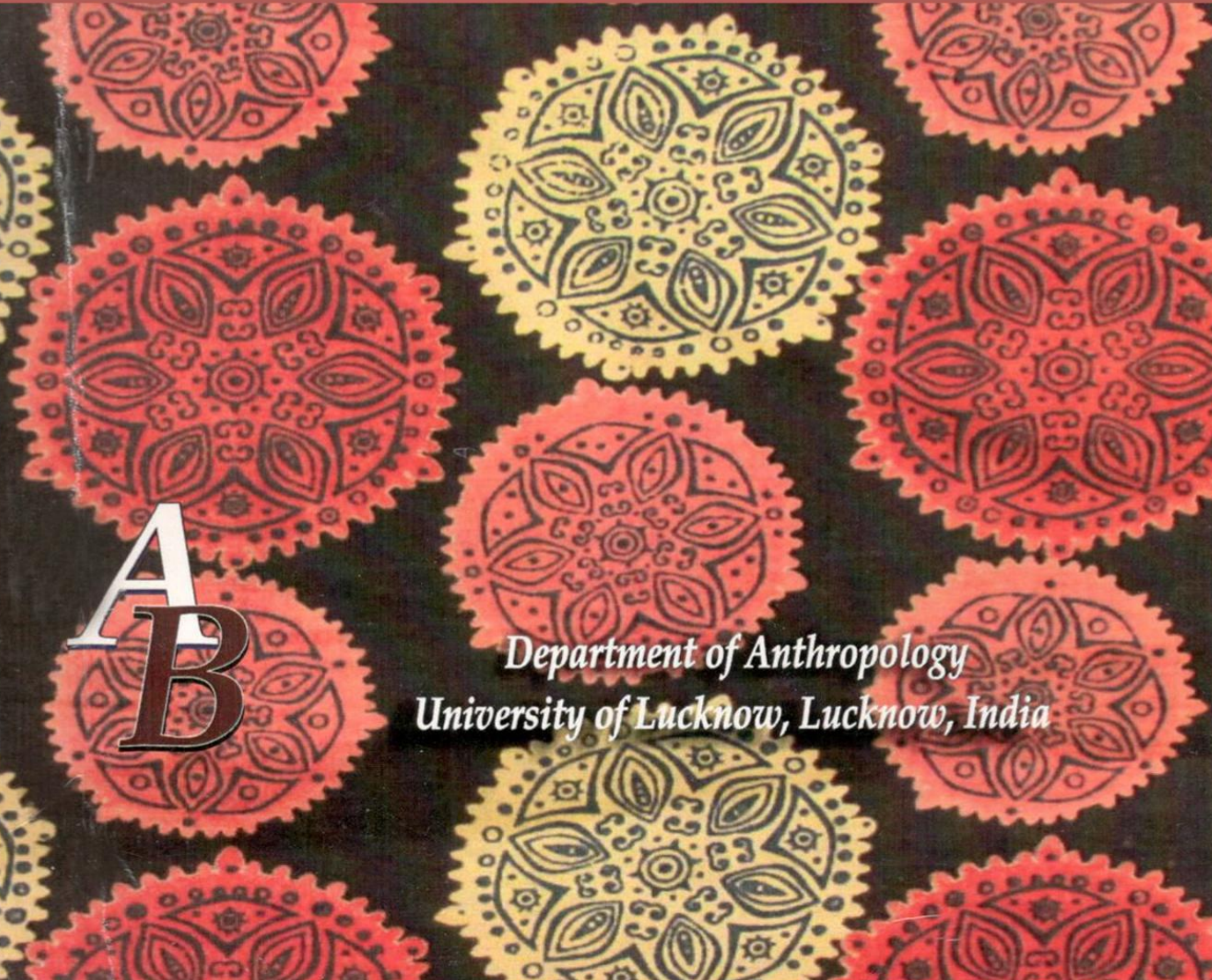


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Feeding the Tribal World of Gaddis: Anthropology of Agriculture

¹*Keya Pandey*

ABSTRACT

The economic importance of agriculture among the Gaddis is that it plays a main role in their subsistence level economy and they have made adjustments and modifications indigenous as well as modern to make maximum use of their land. Historical records show that during the days of Chamba being an erstwhile state all land belonged to the 'Raja' (ruler) of Chamba who gave the right to work on the land to the villagers (who were the commoners of his kingdom) to level it, to build retaining walls and to clear it of rocks, stones, weeds and trees. The individual could cultivate the tract only at the pleasure of the king. After Independence with the introduction of the concepts of ownership of land to the cultivator, the times have changed. There are no kings, no commoners. This is now a democratic country with the constitution proclaiming justice and equal opportunities to all but what remained unchanged was the approach towards agricultural technologies and the outlook towards the agriculturist. Over the years much has been done for the betterment of agriculture and the agriculturist.

Salz (1933) provides a discussion on the social activity 'occupation', which has various socio-cultural and economic dimensions in the modern society. He takes it to be a fact and refers to its evolution and history. **Walton (1933)** describes the economic organization as a scheme of control and articulates the enterprises in an economic system. **Firth (1962)** provides an insight into the contributions of the German scholars towards the understanding of savage economic life. The article highlights the evolution of the economic anthropological studies. It underlines that though comparatively the economic aspect has been the last to receive attention from the anthropologist, yet in reality, it presents complex problems of vital concern for native welfare.

Firth (1929) has based his work on the theme of the problems of the economic aspect of life (especially primitive). He has examined the various institutions of the Maoris of New Zealand, who form an interesting example of environmental adjustment. **Majumdar (1937)** gives a clear narration of agriculture and allied activities as the economic basis of the Ho tribe and the hunting and fishing which occupy secondary but important position. It is a cultural study which emphasizes upon the economic aspect and the associated policies and problems. The struggle with the natural set up & uncertain economy; the competition with another community are highlighted in the work as those factors which are beyond the control of Ho's.

¹Keya Pandey, Assistant Professor, Department of Anthropology, University of Lucknow, Lucknow

Herskovits (1956) specifically introduces the role of human economics - the associated shortcomings and the important aspects of simple societies and those of contemporary world. **Singh (1977)** has presented a case study of Kodaku tribe in Madhya Pradesh, experiencing retrogressive change from food producers to gatherers. The author has observed the not so successful impact of various rehabilitation and development programs among the extremely poor people with hand to mouth economy. **Rizvi (1977)** has discussed the economy of hill Korwas of Surguja district, M.P. with the tables and statistics.

Bliss et al. (1982) have studied the rural Indian markets. Their study aims at examining and developing theories relevant for the context of an Indian village. It suggests that the rural markets and the behaviour of those involved in them should be the centre of economic study in the poor countries. **Panda (1990)** considers his study to be a partly speculative exercise based on the attempt to reconstruct the past based on our experiences among the contemporary societies due to the non-availability of authentic information of that span of time. Without trying to speculate to present the exact chronology of events, he succeeds in highlighting the problems of tribal identity, tribal adjustment as also the rational attitude to be employed towards their problems. **Nag (1998)** has presented the economic study of the Baigas and the history of primitive economics.

Forsythe, Nancy et al.(2000) suggest the role of national and international agencies in assessing the part played by the gender issues like biases and inequalities in affecting the growth pace of the economic system. The study also declares that this is a burning issue for the contemporary studies.

Krishna (2002) provides a glimpse into the socio-economic set up of the various districts in Uttaranchal, India. The author makes valuable suggestions about the proper utilization of resources both natural & human. However, the absence of alternative economic opportunities resulting in out-migration of the population and the livelihood demands of the people in negative relation to their education leaves the reader wondering that in lieu of the ecological degradation & backward agrarian character of the state, is Uttaranchal economically viable? **MaUick (2003)** has presented an analytical case study in a hill village of West Bengal describing how the traditional tribal occupations became a part of nationalized economy. The diverse factors responsible for economic hardships and those, which encourage the trend of, dispersed economic settlements.

Velayutham et al. (2005) have developed the concept of the translocal village as a subset of transnationalism to describe the highly circumscribed social relations that often emerge from small scale trans!ocalized rural villages. The author duo find the movement of the community in question interesting as the same in translocal practices is determined by a moral economy of obligations and responsibilities based on caste membership, which in turn is regulated by the gaze of fellow translocals.

Land and the Gaddi

As regards Gaddi economy, it is important to have an insight into the relationship between a Gaddi and his land. Gaddis are small farmers and generally own up to 17 ft. to 18 ft. plots, not adequate to maintain a living. The field is usually fragmented into smaller plots.

The important field measurements are as follows:

Gaddi measure of a piece of land

Common measure for a piece of land

1 acre

1bigha

1 acre

5 biswe

1 bigha (12 hectares)

25biswe

Sharma, 1999

12 kanaali = 20 biswe; 'kanaali' is the smallest unit in the Gaddi agricultural jargon

However, it is not always the size of the field, which acts as a limiting factor for the proper and complete utilization of the land. There are a few restraints as follows:

Natural aspects of Bharmaur-

Bharmaur is situated in the Himalayan zone with fewer rains. The precipitation is mainly in the form of snow that remains for about 5 to 6 months. The southern aspect in which Bharmaur is located, has no moisture, less snowfall, less rainfall and hence less vegetation as compared to the northern aspect which has huge amount of moisture, good deep soil and great snowfall thus resulting in more vegetation. Above the height of 10,000 ft. lie the alpine pastures and further up are the rocky mountains. With good vegetation cover, the region supports livestock rearing. The slopes are not very suitable for cultivation of the land.

Terrace farming is an important example of permanent plough cultivation well adapted for hilly terrain. These terraces are formed of rocky soil as a result it is a tough job to level it. Further, whatever useful tillable soil is available is washed away during rains. To avoid this, *stonewall* of 4 ft. to 10 ft. height is erected at a few meters from the terraces. The distance and the height up to which the stone wall has to be erected depends on the number of fields. When the area receives rains, the soil and land erosion caused by the flush of water damages the fields so much that for the next cropping season it has to be worked upon again.

Land Revenue

There are 112 villages in Bharmaur tehsils of which 4 villages of the area of study viz, Sachuine, Dhadkautta, Gotru, Sawanpura were under the supervision of the Patwari who gave important information about the revenue history of the area along with the explanation of revenue procedure, the entries so made in detail. The Patwari and the Kanungo are authorised by the government to maintain a record of the land size and its respective holders in the entire area of their supervision which is known as '*halka*'. A revenue form is a list prepared out of short entries to highlight important information at a glance. According to the land laws a piece of land can be gifted to -

- a) Blood relatives (son's, daughters, brothers, sisters)
- b) The family priest (who is also a Gaddi) '*Kulpurohit*'.

The Attendancy Act, 1972 under section 104 makes it clear that the owner and the landholder cultivator were separate individuals. According to the Kanungo, later the cultivators of the land were considered to be the actual owners which, however, could not be implemented.

The details of the land and livestock are entered along with nine maps, which are known as '*shijra*' in the document called *Hal kitab*'. However, in the present time only land record is mentioned and has only eight maps with the details of the total area, area cultivated, uncultivated area, and the total number of owners. The revenue is charged even if a land turns unproductive or barren i.e. '*banjar*'. The settlement officer fixes the revenue amount. In case a crop fails, the revenue amount to be deposited with the government shall incur loss to the farmer, so he may choose to surrender his land willingly to the government. Since there is no defined cause for the profit and loss from a land, no relief scheme has been planned but in case the crop fails due to a natural calamity, the revenue department is supposed to assess the nature of the loss and compensate them in accordance with the amount prescribed in the relief manual.

Land Ceiling, Sale, and Purchase

The ceiling on land size is a government motive to ensure equitable distribution of the cultivable plots of land among Gaddis. The sale and purchase of land in tribal areas is prohibited for the non-tribal population who, however, are allowed to set up their business

in the area but only as tenants. All kinds of sale and purchase of land in this area is registered in the revenue records and is usually associated with business activities (such as that related to hotels and restaurants) or as a rented accommodation (in private houses or guesthouses), the latter is the most preferred mode of income today.

It has been found that about 60% land in the area which values worth lakhs of rupees is now owned by Gaddis. The land is purchased at prices fixed by the government, which are revised every five years, and this, according to the local population, is said to be done in accordance with the law of the land but it largely confirms the share of government's profit. The Gaddi community members opine that they have been living in the area for past several years and it becomes their easementary right to use the land and forests in their region. Nevertheless, the government has started controlling the land economy by persuading them to accept the government's intervention as this will be beneficial to them since it will bring about an equitable distribution of land. Thus, all of them will have source for earning income.

Any action violating the law is punishable and hence they now have to seek prior permission for sale and purchase of land and the free use of some forests as well is prohibited without issuance of permits. According to them, in this way the government has started sharing the profits from the area.

In this context, the revision of land price every 5 years also reduces the possibility of the growth of the class of intermediaries who are interested in active land deals thus causing sudden price hikes and upsetting the economy. It was difficult during the course of this research work to make the better off members of this society to reveal the actual land size they own but it seems they try to bend the rules by employing pressure tactics, religious beliefs, and influence as a means.

Many small temples of local and popular deities were found constructed over the years in the name of some miraculous appearance of the lord from underneath the earth or in the name of appeasing a supernatural power. Once constructed these religious structures cannot be removed /demolished to utilize the area under it, these are erected not just to occupy the area, but they find multifaceted uses. The entire village very religiously devotes time, money and energy to construct them thus saving owners expenditure and adding to his popularity of one being bestowed with divine blessings to have discovered a religious icon near his/her place. Hence, be it for commercial purpose to popularise the structure as the one, a visit and donation to which fulfills all desires or be it personal, they can provide several reasons to justify their doing so. In this way for the ownership of land, they bend the rules and find a via media to remain in possession of excess land by constructing religious structures. The management of that area thus remains in their control. They exercise their politico-religious clout and economic power.

Recovery of Land

Agriculture Recovery Act has authorised the Banks operating in the area and the Recovery Tehsildar to realise the loan on agriculture from a defaulter. The entire process has to be conducted without using force and any dispute in that matter shall be subjected to the honourable court for jurisdiction. If the bench presiding over the dispute issues orders to realise the property, it can be done through the 'auction' of the property or by confiscation 'kurki'.

Importance of Land

The importance of land is not just limited for housing or agriculture or to generate income, rather it plays an important role in confirming their status of being a Scheduled tribe. However, this cannot be generalized as in the case of the landowners of Hudsor village who are not listed as Scheduled Tribe despite the fact that they live in the Bharmaur region.

Though no specific reason could be suggested by the concerned authorities and the local population, yet a historical reason that seemed plausible for such an exclusion is that when in the past the area was declared as 'Scheduled Area' and the people as 'Scheduled Tribe', the priest families of the village Hudsor objected to consider themselves a 'tribe' fending pride in their high status.

Another reason can be that as these families do not put the title 'Gaddi' to their name hence, they have not been considered as a 'Scheduled Tribe'. However, now there is a change of scenario and interests. Having understood the importance and benefits associated with the ST status, the residents of the villages specially Hudsor and Ulansa are campaigning to get themselves registered as a Scheduled Tribe.

TENANCY

Some of the Gaddis who are in government services and are transferred too often get lesser opportunity to look after their fields. Their children also are not available to assist since they study in schools away from Bharmaur. Hence, big landholders appoint tenants on their fields. This practice of sub-letting the field temporarily is called '*ghad per denain* Gaddi language. The owner of the field, gets about half the share of the produce. After sowing the required quantity and quality of seeds, the sharing is made out of 'net produce'. This is beneficial to those in service as they sell their produce in their native places and bring money to the place of their stay and similarly to those who are always on the move i.e. the shepherds.

FARMING

Being a hilly terrain, Bharmaur has less cultivable land area. In this context it can be quoted "Agriculture in H.P. means subsistence farming even so, it hardly suffices for the cultivars simple need working members of the land owners and tenants families pursued some subsidiary occupation to supplement the income from land. The scope for employment as agricultural labour being very little many of them have taken to rearing of sheep and goats."⁸³

This is true among Gaddis as well. The marginal subsistence farmers particularly those in high altitude areas manage to be fully self-sufficient from agriculture for only about 2 to 6 months a year. Consequently, they rely on other livelihood strategies. The area is commonly replete with red and black soil. They practice dry terrace cultivation on steep hill slopes. Terracing makes plough agriculture possible by producing relatively level fields and minimizes erosion; it also enhances the productivity by conserving heat and moisture. Gaddi terms for the months of the year have been shown in the following table 1.1

Table No 1.1 : NAMES OF GADDI MONTHS OF THE YEAR

S.no.	Name of the month (English)	Name of the month (Hindi)	Name of the month (Gadiali)
1	January	Paush-Magh	<i>Paush-magh</i>
2	February	Magh-Phalgun	<i>Magh-phalgun</i>
3	March	Phalgun-Chaitra	<i>Phalgun-chaitra</i>
4	April	Chaitra-Vaisakh	<i>Chaitra-baisakh</i>

5	May	Vaisakh-Jyesth	<i>Baisakh-jeth</i>
6	June	Jyesth-Aashad	<i>Jeth-haad</i>
7	July	Aashad- Shravan	<i>Haad-saund</i>
8	August	Shravan-Bhadrapad	<i>Saund-bhaaru/bhadru</i>
9	September	Bhadrapad-Aashvin	<i>Bhadru-suj</i>
10	October	Aashvin-Kartik	<i>Suj-kaati</i>
11	November	Kartik-Margshrish	<i>Kaati-maghyar</i>
12	December	Margshrish-Paush	<i>Maghyar-pauh</i>

The agriculture is mainly rain fed. The sowing and harvesting periods vary with the variation in the altitude of the cultivated farms and the region has two distinct cropping seasons viz.

1- Summer crops- Commonly known as 'Kharif crops, these are called '*sairi*' in the Gaddi vernacular.

2- Winter crops- These are known as 'Rabi crops' and are called '*nihai*' in Gadiali. The sowing of summer crops i.e. Kharif / '*sairi*' in the region is done between the middle of April to the end of July and are harvested from October to November. The winter crops Rabi/ '*nihai*' is sown during September and October. The crops are harvested from late May to August. The region grows a variety of subtropical and temperate crops during these cropping seasons and some of them are very little known outside this agro-ecological region.

They experiment with the use of seeds. Before sowing them in the agriculture field they sow them in a small plot and use them only after the quality of seed satisfies them. The seeds are made available at subsidized rates to them by the State Agriculture Department at the government depots. They also procure seeds from the local traders who come usually from Chamba and nearby areas. Sometimes, the seeds of a previous crop, which performed well, are also stored to be used in the next cropping season.

Table No 1.2 :Kharif and Rabi crops in Bharmaur-

KHARIF * SAIRI'

Activity	S.no.	Name of the crop		Botanical names of the crop
		English	Hindi /gadiali	
	1	Maize	Makka	<i>Zeamays</i>
	2	Tomato	Tamaater	<i>Lvcopersiconescenlentiim</i>
	3	Potato	Aaloo	<i>Soianumtuberosum</i>
	4	Pumpkin	Kaddu/ sitaphal	<i>Curcurbitamoschata</i>
	5	Chilly	Talmirch /Pipdi	<i>Capsicum annum</i>
	6	Brinjal	Baigan/batta	<i>Lofanummelongena</i>

SOWING	7	Cabbage	Bandh gobi/pattagobhi	Brassies oleraccavar, Capitata
	8	Bottle Gourd	Lauki/gandoli	Laaenariasiceraria
	9	Kidney bean	Raj man	Phaseolus vulgaris
	10	Black Mung Bean	Urd	Visnomuneo
	12	Mash Bean	'Moong'	Viana radiate
	13	French beans	'Faras bean'	Phaseolus vulgaris
	14	Underwood's spikemoss	'Seun'	SelaejnellaunderwoodiiHier on.
	15	Great millet	'Jowar'	Sorahum bicolor
	16	Bulrush/ spiked millet	'Bajra'	PermisetumTyphoides
	17	'Ragi'	'Mundua'	Eleusinecoracana
HARVESTING	18	Lady finger	Bhindt	Abelmoschusesculentus
	19	Spinach	Palak	Spinaciaolerecea
	20	Moth	Muth	Hvles lineate
	21	Horsegram	Kulthi /Kulth	Dilichosbiflorus
	22	Almond	Badaam	Prunusamvsdalus
	23	Pear	Nashpati	Pvruscommunis
	24	Apple	Seb	Malussvlvespris
	25	Plum	Aloobukara	Prunussalicina
	26	Walnut	Akhrot	Jugiansnigra
	27	Garlic	Lahsun	Allium tuberosum

RABI 'NIHAI'

Activity	S.no	Name of the crop		Scientific names of the crop
		English	Hindi/Gadiali	
	3	Wheat	Gehun /Gandam	Triticumaestivum
SOWING	2	Barley	Jau	HordeumVulaare

	3	Onion	Piyaz/gandu	Alh'umcepa
	4	Garlic	Lahsun	Allium tuberosum
	5	'Auri'(saag)		Bpinaciaoleracea
	6	Mustard	'Sarson'	Brassica campestris
	7	Pea	Matar	Vianaunsuiculata
HARVESTING	8	Coriander	Dhaniya	CoriandrumSativum
	9	Gram	'Ghana'	Cicerarietinum
	10	Lentil	'Masoor'	Lens culmaris

There is a wide variation between the months of sowing and harvesting the crops, which can be attributed to the variations in altitude and temperature. The traditional Kharif crops viz. 'Kodra' (*Paspalumscrobiculatum*): 'Chinae' (*Panicummiliaceum*): 'Bhrace' (*Fagopyrumesculentum*) grown during mid 1970's have now been replaced by cash crops mainly 'rajmah' and 'urd'. 'Kodra' etc. are now used as the coarse grains for home consumption since they do not provide enough profit. While, 'rajmah' and 'urd' fetch more money and have become more popular. The production of wheat cultivation has remained unchanged throughout. According to a study, which was conducted during the 1970's 1990's it, was found that wheat continues to occupy about one fourth of the total cropped area. However, maize cultivation in the region has declined slightly over this period. But the acreage of barley and other inferior cereals has declined significantly up to 10% and 9.08% respectively of the total cropped area in 1998-2001.

The Rabi crops outnumbered by the Kharif ones because by the time the sowing season for the former crops comes, there departure of Gaddis to lower areas is also scheduled since almost no agriculture is practiced due to heavy snowfall. The small field size in the rugged hilly terrain also restricts them. Hence, to make the maximum out of minimum they practice mixed farming and crop rotation.

Table No 1.3 : CROPS IN MIXED FARMING:

S.no	Name of the main crop		Name(in gadiaH)of the other crops
	English	Gadiali	
1	Maize	Makka	<i>Mah (pulse)</i>
2	Maize	Makka	<i>Rong;(pulse)</i> <i>Gandholf (vegetable)</i>
3	Maize	Makka	<i>Seun; French beans; Rong</i>
4	Maize	Makka	<i>Chaulla</i>
5	Mah		<i>Chinae</i> <i>Panicum</i> <i>Miliaceum</i>
6	Mah		<i>Rong</i>
7	Wheat	Gandam	<i>Mah</i>
8	Wheat	Gandam	<i>Masoor</i>

I. 'Chinae' followed by Wheat.

II. Wheat followed by 'Chinae V 'PhullanV 'Bhrace' and 'Seun'.

III. Maize followed by Wheat, Barley.

IV. Maize followed by 'Masoor' (pulses).

V. Barley followed by 'Mah'.

The influence of agro-climatic factors and accessibility on the cropping pattern is evident in the different areas of Bharmaur tehsil.

According to different studies on the agriculture and its produce in the area, the share of the pulses in the cropping pattern had started increasing since 1980V. By the end of the 20th century, pulses (rajmah and urd) occupied about one fourth of total cropped area in the entire Bharmaur region. In its traditional cropping pattern, the share of non-food grain crops was negligible. Mainly during the two crop seasons, the change in the cropping pattern ensures the restoration of efficiency or the productive capacity of the field. As regards the mixed food crops, Gaddis prefer the combination of 'makka', 'mah', and 'rong' as the mixed crop as it offers maximum productivity and profit. Along the crop of Wheat, they also raise the crop of peas in the same field as coexistent or con-comittant crop.

FARM ACTIVITY

Preparation of Field-

Every year stonewalls are constructed to protect erosion of soil. The numerous weeds etc. are cleared with the help of 'daraat' (sickle) and the earth is dug by 'kudaal' (iron-hoe). These grass and thorny weeds are spread over the entire field. On drying, they are burnt, as the ash so produced is believed to help in better growth and productivity of the crop.

MANURING

Now the field is manured with the cattle dung. The application of manure requires a lot of patience and hard work. The fields are best manured and cleared off the excrescences by the overnight grazing of the livestock.

In exchange of the service so offered the Shepherds (the 'pohals') are rewarded with some salt, grains (*jinus*) and sometimes the peasants help in transporting the '*chikka*' (i.e. the blankets, ropes etc. are carried by 'pohals' on their back) from one place to another but this service is possible only when there is adequate man-power in the peasants family. If the 'pohals' are not in the left having left for pastures, an alternative arrangement can be made by requesting the small flock owners in the village.

Types of Manuring

There are two types of manuring practices popular among the Gaddis. These have been depicted in the following table no 1.4.

Table No 1.4: TYPES OF MANURE

TRADITIONAL MANURE	S.No.	Name of the Manure
	1	Cattle dung manure
	2	Cattle dung manure mixed with foliage from leaves, grass and 'ash from hearth
	3	Cow dung manure mixed with urea for all types of fruits.

S.no	MODERN Fertilizers		
	Name of the Fertilizer	Name of the Crop	Time of application
1		Maize	March to April
2	123216 Super Phosphate	Potato	
3	Chan	Maize and Wheat	June to December
4	Newvon (poison to kill insects)	-	As and when required
5	Indofilm 45(A fertilizer mixed with Newvon)	Apple	

TRADITIONAL MANURES-

In the traditional manuring system, usually the cattle dung is the chief component of manure, which finds an association with dried leaves, foliage in the fields and the 'chir' leaves, which are put in the cattle-byre. Apart from those practices mentioned in the table there is one peculiar Gaddi custom called 'Goth' wherein the shepherds spend a night in the fields of the peasants whom they meet while enroute to pastures and also during their transhumance. The peasants provide salt, fodder for the animals, some clothes, grains, & food to the shepherds, who leave their 'dhan' (popular Gaddi term for livestock) in the fields overnight when the animals graze and pass their waste clearing the weeds and providing natural manure to the soil. However, this cannot be a regular practice because it is only so when the shepherds pass through their fields and since in Bharmaur, there is a practice of grazing the livestock in the open, most of the dung and urine, which is possible to be used as manure, is wasted.

MODERN FERTILIZERS-

About the government, induced programs to enhance use of the afore-mentioned manures it can be said that it is generally winning over the Gaddi confidence yet it needs to prove the potential so claimed of clearing weeds and pests and providing healthy crop.

PLOUGHING

After manuring, the field is ploughed for the first time with a pair of ox. Usually fields in the area are small and located at slopes, the broad plots of land are very rarely found near the Gaddi houses. It was found during the study that those fields which lie in the proximity of a village are more productive and ploughing and manuring is also much convenient than elsewhere. This, however, could be attributed to the fact that frequent and easy visits are possible to these fields.

First ploughing

The first ploughing is known as 'udhaarkarna\ Dxam% the ploughing of the field the Gaddis keep scuffling and cleaning their fields. While, fields are readied they also arrange to assemble the parts of the plough 'haV. The material things and the shape and size of agricultural tools and implements required for other field works which the Gaddis use are not very uncommon among the people of other places all over the country, however, the nomenclature and cultural importance may show a different association in each society. The usual implements are sickle, types of iron-hoe ('KudaaV) etc.

Second ploughing

Some of the Gaddi farmers believe that if a second ploughing is done before sowing the seeds, the fields will become more productive.

SOWING

SOWING OF KHARIF CROPS:

By the month of April and May the first sowing is done for the crop of potato. By the end of the month in the period of 'baisa' maize is sown in the higher altitudes while, in the lower areas it is sown between May-June. This, however, is governed by the monsoon. A late monsoon delays the sowing of maize 'makka'. 'Rajmah' is a creeper and often it is sown along with maize since 'rajmah' grows and produces better. Sometimes, 'kakadf', bottle gourd ('gandol'), pumpkin ('kadoo') are also sown at the boundary of maize fields while 'bajarbhang' is sown at the boundary of a field of potato. Although potato, Seun, 'bajarbhang' may also be separately sown. After maize, Chinae ('chani') and 'Kodra' are sown. Mash / 'mah' i.e. urd is sown by the end of the month of 'jeth' i.e. end of May to the beginning of June. While, 'phullan' and 'bhrace' are sown in the last week of the month of 'haad' i.e. end of June -beginning of July.

SOWING OF RABI CROPS:

The crop of barley ('jau') takes a longer time to be ready for harvest and does not require pruning etc. The grains are ground to prepare 'sattu' (coarse flour) and fine flour of which chapattis are prepared. This flour is mixed with wheat flour to prepare 'berad' (a kind of thick chapatti). These grains are churned and a variety of local liquor is prepared. Although the crop of wheat takes longer time to be ready for harvest, yet it offers the maximum produce in Bharmaur and the Pangi area near it. The developed varieties of modern seeds are sown after a delay of few months but not in the areas of higher altitudes.

PRUNING:

Pruning is an important step in the entire agricultural process. When the potato plant grows about two to three inches above the soil. The field is turned for the first time when the plants attain a height of up to 1 ft. it is covered with mud and the soil is turned for the second time. At this time, chemical fertilizers are applied in the field. The soil is turned twice for crops like Chinae, Mash/ mah while they do not prune the Phullan and Bhrace crops and even the soil is turned.

HARVEST:

The period between the end of August and September is the prime for harvest. The potato crop is ready for harvest by this time and in the areas with a surplus maize production the corns are separated and left to dry over the roofs of the houses to preserve and store for winter consumption.

Variety of cucumber

Table No 1.5: Traditional Practices to Maintain Soil fertility

S.n	Crop name	Month	Sown	Harvest
1	Wheat / Barley	October to November	+	
2	Wheat	June - July	-	+
3	Barley	May - June	-	+
4	Urd	June ~ July	+	-

5	Urd	October	-	+
Land is left fallow for some time especially for the period when gaddis migrate to lower areas. Only few fields are sown with winter wheat.				
6	Chinae, Chaula, Bhrace, Phullan, Kodra	June	+	-
	Chinae, Chaula, Bhrace, Phullan, Kodra	October- November	-	+
	Maize	April- May	+	-
9	Maize	October	-	+

FALLOWING

Due to regular and rigorous agricultural operations, the field potential in nourishing every crop equally is exhausted and it needs a proper rest period to reclaim its lost minerals and rejuvenate. Gaddis follow a very simple, traditional system of restoring the lost nutrients of the field and that is firstly, they follow mixed farming and rotate the crops in such a manner that between each sowing and harvest they get ample time to plough and manure the field. Secondly, between the winter and summer cropping season the land is left fallow for about 6 months since Gaddis are on a move and as the fields and pastures are covered by snow, there is enough time for the soil to gain the lost minerals and prepare itself for the next crop after the retreat of snow.

Post - harvest

The Gaddi people, whose fields yield good crops, assess their personal consumption need and if they find surplus produce, they prefer to sell it in the market either directly or through a '*thekedar*(contractor).

MODERN METHODS-

With the government intervention and consistent efforts to persuade them to use modern irrigational methods, the farmers of the villages lying in proximity to the market and the main road have agreed upon the proposal and new pipelines have been set from the main canals to the fields by the engineers. Although in villages like Malkhautta and Baadi which are situated at a higher altitude and closer to the springs '*kuhls*' are still in vogue and can be seen quite commonly. Though the '*kuhls*' lack the efficiency and approach of a water-pipe , yet having been prepared from wood these are biodegradable and their repair or replacement is easy unlike the water pipes which can only be tested and fixed by experts in plumbing.

MAIN CROPS

The major agricultural operations carried out during the Kharif and Rabi season is very important and has been mentioned in the table 1.6 and 1.7.

Table No 1.6 : AGRICULTURAL OPERATIONS -KHARIF

Name of	Nature Of	Digging/	Sowing	Hand Weeding	Harvesting
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the crop	operation	Ploughing			
Kharif MAIZE	Turn	3 times	once	Once or twice	Once
	Duration	March /April	May /June	July/August	September/ October

Table No 1.7 : AGRICULTURAL OPERATIONS- RABI

Name of the crop	Nature Of operation	Digging/ Ploughing	Sowing	Hand Weeding	Harvesting and threshing
Rabi WHEAT	Turn	once	once	Not required	Once
	Duration	September /October	September / October	Not required	June/July

Wheat and Maize constitute the staple diet of Gaddis. Wheat is the prominent Rabi crop and after the first ploughing, no further scuffling of the field is required until the harvest. It provides highest produce. Maize is the leading Kharif crop for which field is ploughed thrice before sowing and during the showers in July-August.

Before the harvest, the field is manually weeded. However, not all crops require such a patient harvest. There are a few plants which can grow within a period of four weeks to two months as shown in the table 1.8

Table No 1.8: SHORT DURATION CULTIVARS-

Name of the crop	Duration
Carrot, radish, cucumber, bitter gourd, garlic, turnip	30 to 60 days
Coriander(can be grown in each crop season)	20 to 25 days

IMPORTANT CROPS:

There are a few crops, which are used as a multipurpose item and others which have different importance than others. These are listed as follows-

Vegetables grown for

cattle	Pumpkin
Staple Gaddi diet	Wheat and Maize
Cash crop	Rajmah

Pumpkin is grown as a vegetable to be provided as food to the animals while during, fasts it is cooked as a fruit for human intake. In this region 3 varieties of Rajmah are known which have been mentioned in the table 1.9

Table No 1.9: Varieties of Rajmah

S. no	Name of the variety	Colour	Size
1	Chitro. Kukti	White to light Brown	Medium

2	Local rajmah	Maroon	Small
3	Jwala	Maroon	Bigger than the other two.

Rajmah is the cash crop for the region and its proportion is higher in the lower areas of valley than the upper areas. The variety 'Jwala' is introduced in the region by the agricultural department. The agro-climatic conditions are congenial for the production of cash crops like off season vegetables, potato and ginger. The main vegetable grown in Bharmaur are mentioned in table no. 2.0-

Table No 2.0: MAIN VEGETABLES IN BHARMAUR

S.no	Name of the vegetable (English)	Name of the vegetable in gadiali	Name of the vegetable (Hindi)
1	Tomato	Tamaater	Tamaater
2	Potato	Aloo	Aloo
3	Pumpkin	Kadoo	Kadoo
4	Chilly	Pipdi/mirch	Mirch
5	Brinjal	Batta	Baigan
6	Peas	Matar	Matar
7	Cabbage	Pattagobhi	Pattagobhi
8	French beans	Faras bean	-
9	Gourd	Sandoti	Lauki
10	Turnip	Gugu!	Shaljam
11	Auri(saag)	-	-
12	Coriander	Dhaniya	Dhaniya
13	Mushroom	-	-
14	Lady finger	Bhindi	Bhindi
15	Radish	Mooli	Mooli
16	Carrot	Gajar	Gajar
17	Onion	Gandu	Piyaz

Vegetables which are widely cultivated and those which have a narrow area of cultivation are as follows-

S.no	By all	By a few
1	Tomato	Auri

2	Potato	French beans
3	Pumpkin	Peas
4	Chilly	Radish
5	Gourd	Carrot
6	Cabbage	Mushroom
7	Sarson(mustard)	Lady finger
8	-	Turnip

Rice, Wheat and Maize are the important cereal crops and the other members of the group have been shown in table 2.1.

Table No 2.1 Cereals Cultivated

S.no	By All	By a Few
1	Rajmah	Barley
2	Urd	Gram
3	Kulth	Chaula
4	Ramdana	Phullan
5	Maize	Methi
6	Moong	-
7	Chakor	-
8	Kodra	-
9	Masoor	-
10	Wheat	-

Crops, which are largely preferred for cultivation are Chaula, Seun, Chakor. The seeds of Chaula and Seun are separated from the husk and dried to form '*ladoos*' [small balls mixed with 'ghee' (clarified butter) to be consumed during fasts.] Chakor is used to prepare the local brew '*sur*', consumed by males above 40 years and females above 80 years of age. No particular reason could be assigned for such a prescribed age limit. Crops cultivated on large scale by a few are 'Phullan', 'Kesar' (saffron).

Phullan is sold to traders from Jalandhar, who then use it to prepare bread and biscuit. Kesar is not cultivated now a days since, not only does it need time and labour, but also is too expensive. The Agricultural Department introduced it at subsidised rates at about 50% of the market price. Like any other part in the country, there are limits of increasing the agricultural production through expansion of cultivable land in Himachal Pradesh as well. In Bharmaur a few varieties of crops which could sustain themselves in the harsh conditions and provide better production are mentioned in table 2.2 as follows-

Table No 2.2: Crops introduced by Agriculture Department

S.no	Name of the crop	Year of Introduction
1	Pea	1995
2	Cabbage	1984-1985
3	Chilly	1984-1985
4	Brinjal	1984-1985
5	Tomato	1984-1985
6	Onion	1984-1985
7	Garlic	1984-1985

DIVISION OF LABOUR

Labour is not readily available in Gaddi society since everybody is engaged in the various agricultural and pastoral activities along with other occupations. Hence, to compensate this limitation of labourers, the members of each household help their co-villagers in one or the other activity. However, the physiological factors like, age, sex govern the task to be allotted. This has been separately mentioned in the categories as under-

AGRICULTURE:

All members of a family work in their field and the sons sow the seeds. The head/eldest male of the family harvests the crops which he properly arranges in bundles called '*khundu*'. These bundles are then carried back home by his wife or the eldest female, who also brings food for the members working on the field. Girls of the family, usually are not engaged on the field, yet at times they can be asked to clear the fields of the weeds with their friends or the younger siblings. However, there are certain prohibitions for women. The males exclusively do ploughing and harvesting of crop. During the period of menstruation the women are considered unclean and are prohibited from even touching the plough or crossing an unharvested field as these are supposed to loose their productivity.

Reward for Labour-

In earlier times, these people used to give the corn in exchange of work. Now- a-days, they give money in exchange of services to non-members of the family. Everybody cooperates since this activity is governed by the principle of reciprocity. They cooperate with one another to make the exchange of manual service among themselves easily available and thus encourage the practice of discharging the mutual obligations within the community.

RELIGION AND AGRICULTURE

There are no exclusive Gaddi agricultural festivals. This aspect of their society fully reflects the festivals prevalent in the Hindu society. Except for the months of May and June, which are devoid of festivity the entire year in Bharmaur, whichever place they reside in is full of festivals. They sing and dance and celebrate the occasions and enjoy the life in the rugged terrain.

The members of each family take bath. Women clean the hearth or '*Chulha*'. It is then worshipped by offering groundnuts, '*revari*' (sweet prepared out of jaggery and '*til*' Sesame), '*chura*', '*songaT*' (instrument with which chela beat themselves; used in religious ceremonies by them), '*trishul*' (weapon of Lord Shiva) are also worshiped. They then perform '*yagyaV*' '*hawan*' (offerings made to sacred fire). In the evening they offer '*til*' (sesame), some rice and jaggery ('*gud*') in the fire of the '*hawan*' and dance and sing. After the celebrations, they eat and drink.

PATHRODU-

Every time the cereals are harvested, they worship them.

BAISAKHI/ 'basoa'

This festival marks the time to harvest the crops and is celebrated in April. The entire community gathers at a place and worship major and minor gods of the Hindu pantheon. They arrange for the festival a month before and there are occasional singing and dancing programs.

SANKRAANTI-

This is one of the favourite festivals in the area. It marks the time for Gaddis to move to Bharmaur for their summer residence. They celebrate it enthusiastically by preparing potpourri 'khichadi' of rice and urd'mah'. They rejoice as they reach Bharmaur since they are back to their home and meet other members of their community after a long time.

TRANSHUMANCE AND AGRICULTURE

Gaddis and Transhumance have become synonymous to one another. Despite the fact that the younger generation does not have any intention to carry the age-old remarkable practice any further, the significance of this 'seasonal migration' hitherto remains unchallenged. Hence, it is in this respect that whenever and whatever is contributed to agriculture it is always in relation to the Gaddis migratory habit.

Thus, we may draw the following conclusions- the Gaddi people have been known the world wide as a transhumant population of Himachal Pradesh. Agriculture has been practiced by them as an occupation secondary to pastoralism. Their agricultural and pastoral activities have been so adroitly balanced that it became a way of life as transhumance. In the present time, however, as agriculture plays an important role in their subsistence level economy, indigenous and modern modifications have been made to make maximum out of this activity. With the increasing environmental concerns, the number of people engaged in pastoral activities is lesser than that before. With government efforts and culture contact the frequent out-migration of considerable Gaddis to areas with better opportunities, the Gaddi way of agriculture has continued showing a blend of sedentarized farming and transhumance.

The annual cycle of agriculture and related social activities have been shown in table nos. 2.3-2.6. The tables hereby give a brief introduction of the Gaddi agricultural activities with respect to their corresponding transhumant behaviour and hence the socio-cultural response in Gaddi lifestyle and their fields.

Table No 2.3: AGRICULTURAL ACTIVITY

D E C E M B E R	J A N U A R Y	F E B R U A R Y	M A R C H	A P R I L	M A Y	J U N E	J U L Y	A U G U S T	S E P T E M B E R	O C T O B E R	N O V E M B E R
Major Agriculture Activity											
No agricult ure	Ready the plots.	HarvestWhe at and Barley sown inNovember month ofthe	Sow Phullan, Seun,Tob acco,vege table,pul	Harvest Chinae(infallo w plots).	Harvest Kodra,Phull an, Bhrace, ;Seun, Tobacco &	Manure& plough thefields torepare them for sowing					

		previous year.	ses		Maize.	Wheat & Barley.
People left back in Bharmaur after the fields.	Arreng e manure	Sow Rajmah, Chinae Maize.	Plough & manure the field		Manual weeding before ploughing the field	Seeds from Maize crop are stored
			Thrash & dry harvested Wheat		Collection of firewood and fodder.	
					Dry meat & vegetables for winters	

Table No 2.4: TRANSHUMANCE & AGRICULTURE

D E C E M B E R	J A N U A R Y	F E B R U A R Y	M A R C H	A P R I L	M A Y	J U N E	J U L Y	A U G U S T	S E P T E M B E R	O C T O B E R	N O V E M B E R
Reside in lower areas.			Move back to Bharmaur		Almost all of the livestock back in Bharmaur		Pohals take sheep and goats to the 'dhars'	Some Gaddi males to the forests to collect herbs and medicinal plants		Sheep brought back to the fields	By the end of the month Gaddi families start migrating towards lower areas.
			Minjar&Suj festival in Chamba mark the beginning of the time for Gaddies to move		Register their arrival to the S.D.M. office at Bharmaur and that of their livestock with the		Sheep are taken to the 'trakar'/'trakal' (pastures) where they are sheared				Obtain transfer certificates for their wards from the local schools.

	towards Bharmaur		Range Officer	off.			
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Table No 2.5 : SOCIAL ACTIVITIES

D E C E M B E R	J A N U A R Y	F E B R U A R Y	M A R C H	A P R I L	M A Y	J U N E	J U L Y	A U G U S T	S E P T E M B E R	O C T O B E R	N O V E M B E R
Work as domestic helps in lower areas				Gaddi children admitted to a new class in Bharmaur .		Ready the pinning & weaving equipments. :	Pohals leave for "dhar s'	Mani-mahesh yatra begins.		Complete weaving the blankets & shawls etc.	By the end of Gaddis obtain mid term certificates Gaddi farmers and other start migration
			Gaddi children for final term in schools of lower areas.	Repair their houses. Reconstruct their roads.			Spin & weave.	Area buzzes with preparations for Mani Mahesh procession			Shepherds depart for pastures.

Table No 2.6: ECOLOGICAL CYCLE & CULTURAL ACTIVITIES

D E C E M B E R	J A N U A R Y	F E B R U A R Y	M A R C H	A P R I L	M A Y	J U N E	J U L Y	A U G U S T	S E P T E M B E R	O C T O B E R	N O V E M B E R
heavy snow fall in bharmaur			Onset of spring		Snow melts (abundant water) first showers						Occasional rains& hairs.
										major tourist activity	
Gaddies stay in the lower area. Those in Bharmaur do not			SUMMAR				RAIN			WINTER	

observed much sociocultural activities as most of their family & kin move to area other than Bharmaur.							
N A V V A R S	L O H A R I	H O L I	B A I S H A K H		RAKSHA BANDHAN	S A H R I (for maize)	N A V R A T R
	Minjar & Sui		sankra nti	Prepare for Mani Mahesh procession		Influx of tourists	DIWALI
					Ready their stalls and shops for the yatra.	Best period to visit Bharmaur	
					Independence day celebration in schools & colleges Mani Mahesh yatra commences		

Gaddis practice a mixed economy and present a profile of a tribal society with a well-adjusted economy with some stratified occupations. They are known worldwide as a transhumant population. They have practiced agriculture as an occupation secondary to pastoralism. Due to wide variations in altitude and temperature, they practice mixed farming to produce maximum out of minimum. Importance of land, however, is not just limited for housing/cultivation or to generate income, rather plays an important role in confirming their status of being a resident of this area and hence the scheduled tribe of the area. The landholdings though are not large enough to fulfill the modern economic needs. With the introduction of horticultural activities, many of them have volunteered to practice profitable farming of fruits and flowers. Cattle keeping and rearing requires a good amount of skill and knowledge for maximum exploitation of natural resources. The livestock is important not only for their multipurpose utility and better adaptability but also for socio-economic importance. Transhumance is an age-old tradition of Gaddi shepherds adopted as a survival strategy. It has created variegated shades in the fabric of Gaddi community. *That animal husbandry and agriculture can exist side by side and mutually supportive as well is evident in case of Gaddi people.* The peasants invite Gaddi shepherds to their fields and pay food grains, to settle their animals for some time (to get manure and the weeds on the field are cleared by the animals). This is a traditional arrangement suits the Gaddi shepherds' interests as well as they need not carry extra grains while moving.

In the ultimate analysis of the feedbacks and views expressed by the beneficiaries and the government representatives respectively, it can be said that many of the Gaddi people find the present landholdings insufficient to sustain a livelihood. They blame the government for having introduced the land ceiling etc which clipped the land size in the area and restricted the people to limited plots. They find themselves helpless when for something which according to them is supposed to be their prerogative, they have to be on the mercy of

those in power. Sometimes they plead, sometimes they bribe and mostly they offer their services to please the person whom they find influential and in control of the concerned office. They, however, praise the effort of channelising the administration but do not appreciate their activities being controlled by the people who according to them do not know the problems and challenges before an agro-pastoral community like theirs.

Despite the erratic impressions on the Gaddi people, there is no gainsaying the fact that the efforts of Himachal Pradesh government are commendable. The schemes with whatever intensity of their implementation have produced desired efforts to be seen in the affluence of the area both in its human as well as in natural resources. The introduction of horticultural activities such as bee-keeping, commercial production of crops, fruits, and flowers as an alternative to pastoralism and agriculture are a few to be earmark the level of achievement. Apart from the direct benefits, they have assisted jobless people by creating employment opportunities; subsidies on tools and equipments for farm and non-farm activities; Self Help Groups to train and guide the participants to use improved techniques and generate better income.

The reasons for migration vary and the classic push and pull factors due to which the Gaddi people have moved to lower areas (permanently or for short term) have been accentuated with increasing population pressure, decreasing availability of land and better income generating alternatives than agro-pastoral living. Although there are no formal data on the economic contribution of migrant labour, yet there seems to be little doubt that the transhumance and out migration for jobs and education have stimulated economic growth. The practitioners of transhumance migrate, seasonally at certain times of the year for certain duration. While, today it has also emerged as a component of individuals' diversification strategies.

A failure on the part of the planners to fully understand transhumance results in an insufficient understanding of what these people do to make a living and how policies can help them to maximize the benefits of multi-location livelihood strategies. It is for this reason that micro-level studies are better at capturing a wide range of possibilities in the spectrum between commuting, very short-term migration, seasonal migration, & permanent migration.

The persistence of transhumance with the modern means of livelihood is an example presented by the Gaddi perseverance as how a society can strike a harmony between its past and present. The government incentives persuading the shepherds to give up their cult have, however, created an imbalance in this synchronized set up. Their inclusion in the national mainstream as doctors, engineers; civil servants, political leaders etc is no doubt a welcome effort but it should not be encouraged on the relics of a fascinating tradition of transhumance.

❖ With increase in cropping area under vegetable production and more so the commercial agriculture, the alternative sources of fodder are shrinking and thus the pressure on natural pastures is increasing. Hence, a common act for the entire state for regulating cultivation, extraction, and trade of medicinal and aromatic plants should be effectively implemented and monitored.

❖ Community based irrigation scheme should be encouraged in which a group of 5 to 6 (IRDP & non-IRDP) families should be selected as beneficiaries.

❖ There is a need of rationalized approach on part of the government towards the allocation of funds for schemes in particular for pensioners, Revision of pension schemes should be done as and when there is high rate of inflation to avoid the ignoble mismatch between their income and basic requirements. For this purpose, appropriate agencies should be created by recruiting scholars from social sciences like Anthropology

etc which make an unbiased and just analysis of the grass root level economy and submit their reports which may project the real picture of the basic needs enabling the formation of better policies.

❖ The effort to open nationalized / regional banks in a tribal area is a positive attempt but there must be efforts to educate the people about the working of these institutions.

❖ The role of bank credits and loans must be specified and conveyed to them through channels known to them. The simplest of which is having a dialogue with them. The bank authorities should get into a straight conversation with these people instead of simply relying upon the Panchayat functionaries.

❖ Facilities in the form of rebates and subsidies, lesser interest rates and exemptions from payment of agricultural loans have made these people complacent. They take it as their right to obtain a loan but often prefer to exhibit their inability to pay it back. There must be efforts to educate them for owning the liability to defray the bank loans.

❖ Let NGOs from other areas be given priority in this region. The people from this area create an NGO to work amongst the local population but the problem is since the workers come from this very set of people, they share the same concepts and attitudes as the local people, hence to have a non-biased and wider approach NGOs from outer areas may be helpful.

❖ There should be proper follow up of the schemes and reporting system should be diagnostic and participatory in nature so that qualitative measures could be taken to improve and correct the discrepancies and anomalies regarding the functioning of the programme.

Thus, a good degree of transparency is required to develop an information system regarding the forests and their produce. This is required not only to manage but also to regulate and regenerate the resource. This attempt should not only confirm the environmental standards but also the social and economic set up of the area in question. Hence, capacity building and training are a pre-requisite for the implementation of any plan or policy. Other than mere participation, emphasis must be laid on efforts to overcome the mental barriers which act as speed breakers to the pace of development.

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An Ethnographic Approach to the Socio-Economic conditions of Assamese Migrants in Lucknow City.

Arif Rasheed¹

Daud Salim Faruque²

ABSTRACT

The Assamese migrant community living in Lucknow city faces unimaginable challenges. They live in groups of families in the slums developed on the basis of rent by their contractors. The contractors have to pay rent on behalf of the settled families, intentionally and with their consent, brought to Lucknow city as labourers. To earn their livelihood, they pick rag, classify rag, packing, and loading it for the transportation to the other places. The nature of their work and living standard limits their concerns only to be able to fill belly with exceptions though. The current paper follows the method of ethnographic research and tries to highlight the findings about their grass-root situation by directly visiting to the places where they live in make-shift houses. The researcher tries to present his observations about their living conditions, life-style, work, educational aspirations, business, and anxieties. Some case studies have been synthesized to support the findings.

Key Words: *Migration, Poverty, Drug Abuse, Flood, Employment, Rag-picking*

Introduction

Migration is a common phenomenon seen all over the world since growth centres often tend to concentrate in certain areas (Rajan & Chyrmang, 2016). Migration for economic reasons in India has increased in recent years, both according to the Census and NSS data. As per the Census data, the share of economic migrants in total population increased from 2.4 per cent in 1991 to 2.8 per cent in 2001. In 2001, 30.1 per cent migrants for economic reasons were intra-district migrants, 33.3 per cent were inter-district and 36.3 per cent were interstate migrants (Mishra, 2016).

The Assamese migrated to Lucknow along with their respective families prefer to live together. This is the tendency in most of the ethnic enclaves to build a strong community with women and children at the core. This helps to ensure the continuity of the community through the reproduction of cultural, religious and ritual norms, values and practices that lie

¹ Research Scholar, Department of Social Work, Aligarh Muslim University, Aligarh

² Executive Director, Oxford Evidence and Interventions, Oxford, U.K.

at the heart of community life. Scholars argue that the phenomenon of ghettoization begins with a family facing certain circumstances. Once the entire family moves together from one place to another, other families follow too (Thapan, Singh et al. 2016). Once they interact with new societies, migrant communities construct their own social worlds (Mishra 2016). Just like rubbing salt to injury, the poverty ridden Assamese, who face frequent floods bringing along phenomenal number of physical, economic and natural property destruction also even face the problem of citizenship rights. The frequent and disastrous floods in Brahmaputra on annual basis snatch lands and identity proof from many as the native citizens. People in the conflict prone regions, natural calamity, religious clashes, communalism and poverty forces them to migrate with some aspirations of earning income and consumption smoothening. The uneven economic and regional development due to the absence of industries in the region and backwardness in technological know-how as ignorant citizens of state internalize the feeling of doing even the highly degrading work and living well below the standard of living.

Theoretical Perspective

The mainstream literature on migration, essentially, portrays migration as an inevitable and largely beneficial outcome of economic transformation. We have selectively presented one perspective which helps to look at contemporary experiences of migration and associated socio-economic changes on a larger canvas of development and economic transformation. Regional variation in per capita income has increased in the post-reform period. The studies conclude that in the period of rapid growth of the Indian economy, regional inequality, as captured through interstate variation has increased significantly. The phase of uneven development, poverty and migration relatively less developed regions are getting integrated into the circuits of global capitalism is through labour flows from less developed to developed regions. It should be possible to understand migration as part of the dynamics of uneven development under global capitalism, which creates, strengthens and also occasionally destroys centres of growth. As an inevitable outcome of this process of uneven economic transformation, labour from less developed regions tends to migrate to areas of relative prosperity. There is some evidence to argue that when the poor migrate, they usually migrate under distress, are paid less and are exploited through a variety of means (Mishra 2016).

Migration and Ethnographic Approach

People are not territorially fixed or sedentary beings; they move, for seasonal work, for education, for better employment opportunities and for a host of accompanying reasons (Thapan, Singh et al. 2016). Tumbe argues that India has been witness to a 'culture of migration' for over a century and the impact of this culture covers roughly 20 per cent of the population which is equivalent to 200 million people (Tumbe 2012). Migration is expected to increase as a result of economic growth. On the one side, economic opportunities for some have expanded the aspirations for many, and there has been a desire for economic betterment that has induced many to migrate. On the other hand, there have been new barriers, vulnerabilities and anxieties for the migrants (Mishra 2016). Expansion of Indian Constitution under Article 19 provides basic freedom to move to any part of the country, right to reside and earn livelihood of their choice. A number of economic, social, cultural and political factors vary over time and place. Proper understanding of the patterns of migration would help in understanding not only the nature of population redistribution, but also regional inequality, labour market and the process of urbanization, modernization and development. Migration from rural to urban areas has historically played a key role in the rapid growth of cities, and along with the reclassification of rural localities into urban centres, it continues to be an important component of city growth. Seventy-eight per cent of the people of the more developed regions lived in urban areas in 2011 compared to just 47

per cent in the less developed regions. The urban population in India, which was 62 million in 1951, increased to 377 million in 2011 (Bhagat 2016).

Concerns have already been shown regarding 'exclusionary urban growth' that has created barriers both-economic and non-economic for migrants to enter into megacities. The way cities are being organized as gated communities, the securitization of key aspects of urban life, shrinking access of common people to urban spaces and private provisioning of amenities, the rising costs of urban spaces and private provisioning of amenities, the rising costs of transport, beautification programmes that target slum dwellers are all manifestations of the neo-liberal restructuring and creation of global cities have brought in migrant workers from even the remotest and poorest regions of India, but the labour relations are structured in a way that migrant workers remain a floating, mobile labour force. They act as part of a reserve army of labour that depresses wages in the informal labour market, but they are not expected to be a part of the cities (Mishra 2016).

Study Objectives

The current study tries to highlight the picture of the migrants from Assam and their settlement in the make-shift houses at the margins of the Lucknow city. The study aims to synthesise information using ethnographic approach in which subject's narrative accounts and researcher's personal observation will be the sources of data. The researcher also obeyed the principle of confidentiality and decided to hide the names of the subjects to keep their identity intact.

Methodology

Social research may be defined as a methodical and systematic study of a subject with the aim to generate new information, verify the existing knowledge in that subject, and reach a new understanding (Srivastava 2004). Apart from the views of Srivastava the idea generated out of the study experiences of Wilkinson and Bhandarkar help the investigator to keep in mind that the unstructured observation is suitable for this investigation. The investigator took care about the guidelines of Wilkinson and Bhandarkar that to see who the participants are, how many they are and how they are related to one another; to understand the setting, know its overt appearance, the kind of behaviour it encourages, discourages or prevents and its social characteristics. The observer also needs to understand what the participants do, how, with whom and with what they do it. For example, the observer should know what stimulus initiated the behaviour, what the goal is towards which the behaviour is directed, what are the qualities of the behaviour (duration, intensity etc.) and what are its consequences? The best time for recording the data is on the spot and during the event. This results in minimizing selective bias and distortions of memory. The investigator was fully equipped with the instruments like camera, voice recorder; dairy, pen and causal appearance. The method of ethnography has been considered to instill more realistic and robust approach in the process of collecting narrative accounts. Berreman was of the opinion that ethnography is a written report summarising the behaviours, beliefs, understandings, attitudes, and values of a group of interacting people. Thus, ethnography is a description about the most natural way of life and generally expected to give an overall view of the culture of a particular group of population. As such it attempts to cover all aspects of the culture of a given society. Everyone who does empirical research in cultural or social anthropology engages in ethnography as a process, though by no means does everyone report his research in the form of ethnography (Srivastava 2004)). The author visited the slum area where Assamese particularly reside. The data collected was through quasi-participant observation and interviewing. For this purpose, three areas of Lucknow were selected as the unit of study. These were *GayatriGomtinagar*, *UjriyawanandKannausi*. The researcher invested time among the Assamese by visiting their places of living, participating in their family functions e.g., engagements, marriages. The investigator held discussions with the Assamese

inhabitants. One of the Assamese acted as a bridge of communication between slum dwellers and the investigator helped in facilitating the communication. The following districts are the places from where Assamese migrated and settled at different pockets of Lucknow. The investigator collected data about the presence of people. The districts listed below (Table: 1) are the personal account of the Assamese shared with the investigator. The areas mentioned in the second picture are visited by the investigator.

Photo 1. Migrants from Districts Photo 2. Areas of Settlement in Lucknow

S. No.	Name of the Districts
1.	Barpeta
2.	Kaamroop
3.	Chirang
4.	Golpara
5.	Bongaigaon
6.	Navagaon
7.	Dhugri
8.	Kokrajhar
9.	Baksha

Table: 1. List of Assam Districts from where people migrated (Source: Field Study, May, 2016)



(Source: Field data collection, May, 2016)

Case Study: 1

'A' is 18 years old and the son of Y. He came to Lucknow when he was just 6 months old. His family lives in Lucknow since 2000. 'A' now is in a position to speak fluently in local language. Now it is difficult to differentiate him from Assamese or a local person of Hindi speaking. He understands the body language of local inhabitants, traffic rules, and the means to overcome when caught in case of breaking traffic rules. Furthermore, he knows the steps to follow in case of *chalan* and the case, if shifted, to the court. He is active, confident and social and has almost mixed in the age group of youngsters from local areas. The command over Assamese language has not been affected. 'A' also speaks well in that accent and wear a long chain in his neck and a piece of ring in his ear. It was shared by the interviewee that there is a tradition that young and lone son of a parent is socialized in a way to protect from bad-eye-view. The male members are considered to be protected through such cultural practices. It is no matter whether they are educated or uneducated. The same age group who is educated also wears ornaments on his body parts. The case and cause is same with other habitants too. These practices, thus, are normally obliged to and pressurised by mothers.

Case Study: 2

'P' is of 32 years of age and mother of four children. The elder son is named as 'H', 12 years, the other sons named as 'R' is of 10 years of age, 'N' is 08 years of age, and a daughter 'K' who is 07 years of age. The name of the father is 'D'. He and his wife are engaged in rag-picking and earn their livelihood on the same pattern as the labourer in the vicinity do. The

best part of their life is that both of them have decided not to let engage their next generation in the work in which they are. According to 'P', '*hum ne nishchaikiyahaikebachchoko is kaam me nahilagayengekuchchbhikarnapade, bachchoko pad hayenge*' (We have decided not to engage our children in rag-picking. We will let them study whatever pain we will have to take in the process of their study). 'N' and 'K' are now studying in nearby government school. They have just started their education. Do they face any difficulty or discrimination at school? They said no. Our children have never complaint about any such incidence. The elder sons, who has been a part of local Non-Formal Education School run by a religious organization within their vicinity, have now been enrolled in a smaller branch of religious seminary. At the time of discussion, the mother along with her four children showing the mark sheet of two elder ones to the Assamese facilitator. They have secured 95% and 75% marks in their exams respectively. Indeed the children were intelligent. In order to check their status of study at the school, the elder brother was requested to read the topic written on the Interview-Schedule. He read the topic with a little difficulty.

Photo 1. 'P' and her Children



Photo 2. Children on the garbage cart



(Source: Field Study, Ujriyawan Assamese Hamlet)

Case Study: 3

'T' is a 42 years old Assamese contractor who came to Lucknow in the year 1993. He was having only a meagre amount when reached to the city from Assam. He worked initially in rag-picking to survive and later become a contractor. 'T', thus, needs to go on regular basis to his native place to pursue groups of families to engage them in rag-picking. The settlement of new comers became the responsibility of the contractor who arranges for their stay. These families are those who either have taken debt from the contractor or out of poverty decided to shift from Assam and engage them in rag-picking. The contractor takes land on rent and in turn collects articles from labourer. Indeed the labourer works only for the contractor. 'T' shared that sometime contractor have to face loss when labour run away secretly. He was of the opinion that he cannot collect money if they encounter somewhere because they will not be having debt amount. However, he was satisfied that he is much better in condition since

his arrival to the city at the very first time. He is now living nearby the locality on rent basis. The ditching act by the labourer is committed by those families whose male members have engaged them in gambling. 'T' himself used to gamble. He, however, excuses by saying that he spent only a fixed and limited and already decided amount that only need to be spent in gambling and not more than that. He has to shift many places within the Lucknow during his long years of stay. The shifting depends upon the demand of the land owner and had to change places many times during whole stay in Lucknow. He also shared that a contractor has to have storage shades and during high wind it usually get destroyed. Before rainy season he has to maintain it again for the safety of collected articles, that is, *maalin* their business language.

Case Study: 4

'M' is 60 years of age, belongs to district Barpeta. He lives in *Kannausi* area of *Ashiana* since three years. The area nearby is also known as Aasu Nagar. The total number of households (hamlets) is 120. He lives in Lucknow since 30 years or '*Trish Saal*'. Thirty years is pronounced in Assamese as *Trish Saal*. He, however, had spent a longer duration of 27 years in *Chandan*, another Assamese locality, in other portion of New Lucknow. He came to Lucknow in search of employment. 'M' is now working as a supervisor on wage labour in Nagar Nigam to keep other localities clean. Besides, on demand he used to serve as a supervisor-cum-labour in LLJK Company. In this Company he used to put a colour mark on the vile of expired medicine. In return, of four days work in a month, he fetches approximately four thousand rupees. This work is assigned once in a month. 'M' performs regularly his religious obligations and used to clean localities. The gathering, interaction and sharing in Assamese language with his fellows at evening at the local shop keeps him mentally active and gives a sense of satisfaction of being among his own people.

Analysis of the Case Studies

The Assamese believe in bad-eye-view and practices some ritualistic activities even after coming to the cities like Lucknow. The practices suggest that they have not only come rather they have also brought the ritual practices as well. The practice is prevalent due to the emotional attachment of mothers often to her single son and the feeling of insecurity. The other assumption is that this does not require much investment. The children follow the practice keeping in mind the obedience of their mother. 'Every human is born free but he is everywhere in chains', quoted Rousseau. The Assamese do have talent to study but live with a number of limitations. Their basic necessity is to earn and to fill their belly. The concern of seeking education takes a backstage. It is hard to conceptualize the image of their children studying in some schools. First of all, most of them are unable to give thought to their children's study. Rarely, it is found as in case of 'P'. The hospitality and regard towards their guest was observed with the act she performed. She brought two bottles of cold drink from the shop and offered the investigator and Assamese facilitator to drink. The mother and children expectedly may occasionally be enjoying cold drink but they happily offered it to the guests. The investigator noticed that she went to her house and brings money to pay to the shop keeper. This suggests that in such localities people live on mutual understanding of credit and debit. The act also suggests that they may be economical for themselves and their children but arranges for their guest for best treatment, that is, *thanda* (cold-drinks).

Indeed it was surprising that a group of people understand the importance of education and wish to save their children from such pathetic conditions and let them live a comfortable life. The second type of limitation in acquiring education is limited and temporary nature of special schools either in the capacity of non-formal education or formal education. The discussion and the basis of case study reveal that the children and even whole population living in slums of Assamese has not been given attention and care. They have been considered as the burden seekers and the cleaners of society. The care has only been taken by

the brethren of the same religious community which within certain limitations forwarded help and support in the form of identifying and linking the talented children to the religious knowledge centres. A kind of non-formal religious school have been tried to open by the philanthropists in the vicinity of the Assamese group habitations. The efforts seem to be fetching the fruits for the future of the community. However, it does have some more limitations and discontinuity in education of the children enrolled due to the displacement of these people from the temporary settlement. The settlement of a year or more at a place get disturbed as the displacement order from the owner or the government time and again completely changed their mind, thought and the facilities of education and linkages for further education.

One of the significant analyses of the case studies tells about the shifting of places by the Assamese after a certain interval irrespective of Assamese labour or contractor. The other noticeable aspect was gambling which hampers their well-being. The other aspect was the step taken by the contractors who in case of decent earning does not wish to live in the same locality rather he used to live on rent at nearby houses. The Assamese quacks used to come to treat patients in the locality on regular basis also prefer to live nearby on rent basis. The teachers in schools run by organizations also keep a distance and try to live in slightly better conditions but not far away from the locality. The case studies reveal that both the labour and contractor have faced the same conditions of migration. The only difference is that one has become master and the other servant. Both have the same cause of survival from the situations of poverty. The nature of poverty in Assam is less preferable to them than poverty and the nature of work they are engaged in.

The economic aspect of Assamese has been tried by the investigator to create a scene in a narrative description of the situation. The socialization of earning population in India seems to have been done in thoughtless extravagant expenditure; multiple means of enjoyment refers to the availability of unbelievable sources of income attract them towards major and minor outlets. These outlets practice using disposable plates, bowls, plastic water bottles, cans bottles of beer, plastic and glass bottles of wine, cold drinks. The brands covers such as Pepsi, Coca-Cola, Thumps-up, Dew, Sprite, Limca, such as the Bagpiper, brands of shoes and sleepers like Bata, Red Chief, Woodland, Ice-cream flavours like Vanilla, Strawberry, brands of pack Juicesuch asAppy Fizz, Maaza, Chinese plastic polythene are in common use of sophisticated elite group of people.

The use and abuse of abundant number of packets thrown outside and the liquid poured inside the body is a common feature of the cities in the era of uneven development. The other noticeable characteristic of developed cities is the temporary but timely visibility of small, adolescent, and child bearing female beggars. The elite and independent, free-thinking people of varied sizes, shaped and de-shaped personalities impacted by the obesity caused by over-eating of fast food enjoys the evening. They also face on daily basis most frustrating feature of this wishful one-time eating group of beggars. The chain of alms seekers is unending. The informal system of eaters and non-eaters, the enjoyment and the dream of enjoyment, ego and the hurt of ego, the expenditure and the saving, the gathering and the isolation, the return of air-conditioned and luxurious houses and the resuming of lifeless-houseless house are a limited picturisation of two streams of a present uneven development. The glamour and clamour of evening and night is the time for both the group of beggars and reluctant givers.

The owner of luxury houses bears the features of decorated articles such as sofa-set, LED television sets, wall-clocks, pen-holders, ceiling-fans, tube-lights with choke, curtain-hanger, iron roads, water-taps. Apart from these the items made of plastic i.e., chair, dust-bin, rack, tooth-brush, comb, socket, three-plug, table, hanger, doll, and other articles are the assets of households and also get piled out when considered useless. The end of the use of

articles mentioned in a household gives an opportunity to the migrated group of underprivileged Assamese as rag-pickers. The life of the un-life articles get end for some but the same articles give the beginning of earning to these migrated people. Their day began before sun-rise, their work start before the opening of eyes of those who invest day-time in offices and evening at market. The following are the rates (Table 1) which is shared by an Assamese contractor.

Table: 1. Rates of Rags

S. No.	ITEMS	RATE (in rupees) Per Kg
1.	Plastic Bottle	Rs. 10/-kg
2.	Mixer (Plastic, Milk pack (<i>Panni</i>), Chinese polythene	Rs. 8/- kg
3.	Polythene	Rs. 4/- kg
4.	Carton (Gatta)	Rs. 4/- kg
5.	<i>Raddi</i>	Rs. 1.5/-kg
6.	Tin	Rs. 2/- kg
7.	Broken Glass Bottle	Rs. 1/- kg
8.	Glass Bottle	Rs. 3/- kg
9.	Iron pieces	Rs. 8/- kg
10.	Slippers	Rs. 1/- kg
11.	Plain (<i>SadaRaddi</i>)	Rs. 3/- kg
12.	Hair (Female)	Rs. 1000-1200/-kg

(Source: Field Study, 18th May. 2016)

The thrown out articles in the dust-bins of the market place is searched by these migrants starting before the dawn and relaxes before the noon. The investigator shares the rates of the articles collected from faraway places. The rag-pickers sometimes touch the distance of more than 10 kilometres with a wish to collect more and more costly sellable disposed off materials such as plastic bottles, Chinese polythene, female hair and whatever they found on the way.

Conclusion

Out-migration of youth from the North Eastern Region (NER), on a large scale, towards far-off cities in other parts of the country is a recent phenomenon. A steady and steep increase in out-migration since 1980s, a trend that further strengthened in the immediate past, there has been growing concerns over the determinants and implications of such migration (Remesh 2016). The reasons or determinants of migration could also be grouped as 'push' and 'pull' factors, as done by North East Support Centre and Helpline (NESC&H) (2011). Such binary segregation allows to classifying the emerging situation of migration within the broad categories of 'compulsions' and 'attractions'. There is a felt mismatch between the demand in the job market and the weak local educational system, especially to meet the requirements of the new economy occupations and professional service sector (Lyndem and De 2004). Lower labour absorption capacity of local labour markets and perceived employment prospects in the urban centres together prompt the aspirant youth in NER to migrate to cities to explore better opportunities. The political unrest, violence and poverty of the region also often influence the decisions of youth in favour of migration. Most of the states in the NER have unrest and tensions which include religious, ethnic, communal clashes, tensions, between local and infiltrated population, insurgency, tensions between people army, insurgency and so on (Remesh 2016). Thus, the communal clashes, floods, political unrest, compulsions and attractions, violence and poverty, pulls the underprivileged to move from grave situations in search of comfort and earning. The dream of better life falls in somehow similar and little-bit situations of poverty, insecurity, illiteracy, but only a difference of hope. The hope of better days came to a halt and shatters sometimes when

displaced to another place of living within the periphery of the city. Thus, repeating the activity of settling down again with the feeling of insecurity of further displacement and the hope of some organizations approaching to facilitate the education to their children. In between hope and despair their rag-picking and other such degrading human activities are waiting for them to provide the means of earning. The uneven development requires equity for the all round development of the State and its citizens.

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Carwan Sarai of Nurjahan at Agra: An Archaeological Study

Manvendra Kumar Pundhir*

ABSTRACT

Year of 1558 was proved milestone in the history of Agra when it was declared Mughal capital and Akbar had settled the headquarter of his government at Agra. Since then it continued to enjoy the status of one of the capital cities even the transfer of government headquarter to Shahjahanabad in 1648 A.D. did not affect its significance and status. As a capital city of Mughals, Agra rose to prominence and its expansion was tremendous. Its remarkable growth was noticed and reported by foreign travelers. The German Traveler Johann Albrecht von Mandelslo in 1638 A.D. considered it at least twice as big as Ispahan. Mughal Emperors from Babur to Aurangzeb, had built a large number of structure of varied type and shape and nature. These monuments include Mughal Mansions, Mosques, Gateway to Sarais, Riverside towers, Tomb buildings, Riverside Terraces, Gardens, Pillared Pavilions etc. Presently an attempt is made to study the Carwan Sarai built by Nurjahan with the help of archaeological tools. The Sarai is situated between 27°12'25.12" north of latitude and 78°02'18.79" east of longitude in trans Yamuna Agra.

Key Words: Nurjahan, Sarai, Agra, Archaeological tools, Carwan,

The Sarai is situated between 27°12'25.12" north of latitude and 78°02'18.79" east of longitude* in trans Yamuna Agra. It can be located on the northern side of Ram Bagh or erstwhile *baghinurafshan* and southern side of BulandBagh on the left bank of River Yamuna. On the eastern side of the Sarai, there passes National Highway No. 93 i.e. Agra Aligarh Highway.

*Professor, Centre of Advanced Study, Department of History, Aligarh Muslim University, India
 mkpundhir@gmail.com

*Geo-coordinates have been calculated on the basis of Google Earth.

Year of 1558³ was proved milestone in the history of Agra when it was declared Mughal capital and Akbar had settled the headquarter of his government at Agra. Since then it continued to enjoy the status of one of the capital cities even the transfer of government headquarter to Shahjahanabad in 1648 A.D.⁴ did not affect its significance and status⁵. As a capital city of Mughals, Agra rose to prominence and its expansion was tremendous. Its remarkable growth was noticed and reported by foreign travelers⁶. The German Traveler Johann Albrecht von Mandelslo in 1638 A.D.⁷ considered it at least twice as big as *Ispahan* while others declared it as one of the biggest cities of the world⁸. River Yamuna known as Jun⁹ to Mughals was proved as a nucleus to the expansion of the city of Agra as its physical growth took place along the banks of the river. All the Mughal Emperors from Babur to Aurangzeb, had built a large number of structures of varied type, and shape and nature as per the status suited to Mughal capital. Basically these monuments are consisted of the structures of varied nature covering Mughal Mansions, Mosques, Gateway to *Sarais*, Riverside towers, Tomb buildings, Riverside Terraces, Gardens, Pillared Pavilions etc. Presently an attempt is made to study the *CarwanSarai* built by Nurjahan with the help of archaeological tools.

CarwanSarai was built by NurJahan¹⁰ as she was authorized by Emperor to collect transit duties on all the commodities which were to be transported through water¹¹. Foreign travelers who came to Agra in 17th century informed that the structure was composed of one storey building which at a one time could accommodate 500 horses and 2000 to 3000 travellers with their staff¹².

The *Sarai* was built on the river bank as during Mughal period River Yamuna was used for water transportation. Besides, a trade route coming from Bengal got terminus at the point of Ram Bagh. The *Sarai* is built as an infrastructure to facilitate the trade and used to provide accommodation to the traders and trading caravans.

The structure of the *Sarai* is aligned on east west axis though its eastern side is tilted towards southern side on plan¹³. Meaning by it is not exactly east west aligned. It occupies an oblong area measures 200 by 50.80 metres¹⁴. The *Sarai* is composed of a central courtyard, surrounding chambers along with fore corridors and two gateways¹⁵. The central courtyard

³. AbulFazl, *Akbarnama*, trans. By H. Beveridge, Vol. II, Delhi, 1979, pp. 117-118, cf. AbulFazl, *Ain-I Akbari*, trans. By H.S. Jarrett, Vol. II, New Delhi, 1978, pp. 190-191.

⁴. *The Shah Jahan Nama of Inayat Khan*, trans. By A.R. Fuller, edited and completed by W.E. Begley and Z.A. Desai, Delhi, 1990, pp. 407-09.

⁵. Bernier, Francois, *Travels in the Mogul Empire; AD 1656-1668*, translated and annotated by Archibald Constable, 2nd edition revised by V.A. Smith, 1934, reprinted in LPP, Delhi, 2008, pp. 283-299.

⁶. Foreign Travelers such as F. Pelsaert, F. Bernier, P. Mundy, Tavernier, N. Manucci, J. Mandelslo had described the Agra and its growth as a city.

⁷. Mandelslo, J., *The Voyages and Travels of J. Albrecht Mandelslo in East Indies*, trans. By John Davies of Kidwelly, London, 1669, p. 35.

⁸. Aziz, A., History of the Reign of Shah Jahan, *Journal of Indian History*, 7, 1928, p. 138. Cf Gupta, I.P., *Urban Glimpses of Mughal India: agra; the Imperial Capital (16th & 17th Centuries)* Delhi, 1988, p. 31.

⁹. Babur, Zahir-ud-Din Muhammad, *Babur-Nama (Memoirs of Babur)*, trans. By A.S. Beveridge, 1921. Repr. Low Price Publications, New Delhi, 2010, p. 485.

¹⁰. Ebba Koch, *The Complete Taj Mahal and the Riverfront Gardens of Agra*, London, 2006, p. 37.

¹¹. R. Nath, *Agra and Its Monuments*, The Historical Research Documentation Programme, Agra, 1997, p. 165.

¹². R. Nath, *Agra and Its Monuments*, op.cit.

¹³. See Figure-I.

¹⁴. See Figure-I.

¹⁵. See Figure-I and Plates I, II, III, IV, V & VI.

is of rectangular shape measuring 185 by 35.75 metres¹⁶. It is surrounded by the wings of chambers and verandah which is the part of corridor existing in front of chambers¹⁷. The northern wing of chambers and verandah is similar to that of southern wing while eastern is similar to the western wing.

Two gateways have been built in the centre of western and eastern wings¹⁸. Gateway existing in the centre of western wing provides approach to the River while gateway of eastern wing provides access to land and locality existing on eastern side of Sarai¹⁹. These gateways are in dilapidated condition²⁰. The eastern gateway is symmetrical to western one in orientation and dimension. These gateways are two bays deep and consist of three archways two on extreme end and one in between²¹. The archways are composed of big arches supported on stone door jambs²². Their roof has already collapsed but the fragments of lintels prove that these gateways were flatly roofed. In the construction of these gateways brick masonry was used except door jambs, lintels and arches which are built of stone.

Northern and southern wings are composed of chambers and front verandah which are connected by arched gate with 1.10 metres wide span²³. The inner chamber is of rectangular on plan measures 3.20 by 3.10 metres²⁴. The chamber has concave ceiling above²⁵. Front verandah which is a part of rotating corridor has an arched opening. The span of this arched opening is 1.90 metres²⁶. Since the verandah is a part of rotating corridor, it is connected with other flanking verandahs by arched passage. The span of arched passage is 1.20 metres and its length is .80 metre²⁷. The verandah has been built on oblong plan measures 3.10 by 2 metres²⁸. The verandah is surmounted by a concaved ceiling which is little higher than that of inner chamber. Northern and southern wings consist of 48 chambers excluding corner chambers²⁹. The corner chambers of the wings i.e. chambers existed at the point of convergence of two wings at right angle are rectangular on plan and their entrance is fixed diagonally. It measures 6 by 5.30 metres³⁰.

So far as western and eastern wings are concerned, four chambers are existed on both sides of the gates³¹. These chambers and front verandahs are similar to that of northern and southern wings in orientation and dimension. Above the arched opening of the verandahs at roof level projected dropping eaves have been provided in all four wings³². These eaves are supported by stone brackets. These eaves have fallen down and only few pieces of stone brackets are still survived³³. The structure of the *Sarai* has been destroyed totally leaving

¹⁶. See Figure-I and Plate I.

¹⁷. See Figure-I and Plates III, IV & VI.

¹⁸. See Figure-I and Plates I, II & III.

¹⁹. See Figure-I and Plates I & II.

²⁰. See Plates I & II.

²¹. See Figure-I.

²². See Plates VII, VIII & IX.

²³. See Figure-I and Plates VII, VIII & IX.

²⁴. See Figure-I.

²⁵. See Plates VII, VIII, IX & X.

²⁶. See Figure-I and Plates IV, VI & IX.

²⁷. See Figure-I.

²⁸. See Figure-I.

²⁹. See Figure-I and Plates III, IV & VI.

³⁰. See Figure-I.

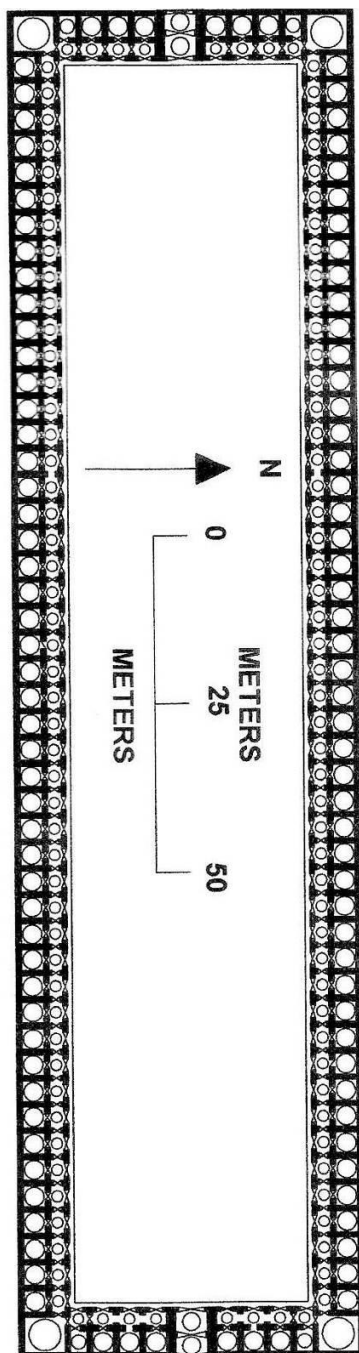
³¹. See Figure-I.

³². See Plates IV & IX.

³³. See Plates IV & IX.

some portions in dilapidated condition³⁴. These ruins of the *Sarai* are sufficient to study its space organization and its architectural and structural analysis.

FIGURE- I
GROUND PLAN OF CARWAN SARAI



³⁴. See All Plates.



Pl. I. A View of Eastern Gate



Pl. II. A View of Western Gate



Pl. III. An Inner View of Western Gate & Northern View



Pl. IV. A Closer View of Northern Wing



Pl. V. A View of North Western Wing



Pl. VI. A General View of Southern Wing



Pl. VII. A View of Chambers and Cloister



Pl. VIII. Another View of Chambers and Cloister



Pl. IX. A View of Southern Wing



Pl. X. An inner view of Ceiling of theDome of the Chamber

Design through participation: A review of definitions, theories and approaches

Mohammad Saquib*

ABSTRACT

Community participation has been a key to project success in many disciplines as it helps to ensure a mutual consensus over issues having contradictory opinions. Design through community participation is an effective method to arrive at successful design outcomes and numerous attempts have been made by designers to incorporate it in the design and planning processes. Despite its proven effectiveness, community participation is still not a commonly accepted practice for most of the designers. The paper aims to review definitions, theories and approaches to community participation for a holistic understanding of the idea and existence of community.

Key words: *Community participation, Community Design, Participatory Design, Democratic design, Community design methods, Anthropology, human development.*

Community participation has presently become a norm for many disciplines to arrive at proper and realistic results. Due to its unprecedented success in delivering positive outcomes there have been attempts by researchers to define it and identify measures of success and evaluation methods. The paper is an attempt to understand the contemporary perspective to community participation and engagement.

Design and Anthropology

Design innovation in Architecture has helped in transformation of contemporary built environment, society and its culture. Since design is an inherent component of Architecture, diversity in Architecture directly relates to the diverse ways design is approached and perceived.

There are numerous perceptions of design depending upon the discipline to which it is linked. Researches in the field of design have explored terms such as design theories, design

* Associate Professor, Faculty of Architecture & Ekistics, Jamia Millia Islamia, New Delhi, E-mail: arsaquib@gmail.com

approaches and design methods. Design methods elaborated in the first generation design methods movement of seventies were Systematic Design, Pattern Language, Participatory Design (Salama, 1995). Design since the nineties has been researched in the knowledge disciplines of Environment behaviour studies (EBS), Sustainability and environmental consciousness, and Digital technologies or virtual practices (Salama and Wilkinson, 2007). The paper discusses a component of Environment behaviour studies (EBS), known as community design or public interest design, and the idea of community engagement embedded in its process.

Environment behaviour studies (EBS)

Environment behaviour studies developed from the confluence of architecture, urban design and urban planning on the one hand and the social and behavioural sciences on the other. (Moore, 2006). EBS provided an alternative and fundamental approach to design, beyond the debate of form and function. As noted by Lang "The role of environment-behaviour research is fundamental to the building of the design disciplines, if any image of the designer other than that of pure fine artist is accepted" (Lang, 1991).

It initiated the social approach to design of built environment as noted by Moore "from ...behavioural and social sciences - psychology, sociology, anthropology in particular...while much was known about individual, group and cultural processes, perception, cognition, preferences, values, attitudes, social norms, semantic structures, cultural differences, and so on - little was known about the relation of these social understandings to the physical environment" (Moore, 2006). Clarke points out that "...it was rare for designers to even talk with human and social scientists. These days, it's not unusual to find psychologists and anthropologists among designers, sharing and adapting methods, integrating insights, generating and evolving ideas and implementing them." (Clarke, 2010).

"EBS operates at the level of the individual, the group, the society and culture, and includes changes to the environment by the activities of people at these various levels. The field also includes studies of the political, social and economic context of environment-behaviour relations" (Moore, 2006). There are three fundamental orientations to the field of EBS as suggested by Moore (Zube, Moore; 1989):

1. A pragmatic, social-problem, or environmental-intervention orientation;
2. A range of substantive empirical, user group research, and socio-behavioural research);
3. Various theoretical orientations

Community Design

Community Design is a design approach that addresses social issues as well as user group research in design. Design has mostly been considered a facility for the privileged and most architects have in their profession conformed to this fact by designing for this class. But design for "the other 98%" as suggested by Bell have mostly remained unanswered (Bell, 2014). Community design or Public Interest Design addresses this issue as quoted by Wilson and suggested by Seymour: "Design is making things better for people" (Wilson, 2014). It highlights the fact that designers are not just accountable to their clients, but to all individuals, ecosystems, and entities effected by their work.

Community design advocates design for people (pro-poor), and involvement of people in the process of design. As stated by Lang "It grew out of the activist spirit of the 1960s, but also from the strong criticism of the attempt to solve urban problems through physical design and the elitist values upon which concepts of good communities were built. The movement led to the development of the whole field of environment-behaviour research" (Lang, 1991).

Community design produces designs that are more acceptable and owned by the community. It cannot be created without engaging the affected community which is otherwise isolated. Therefore design for the community also requires understanding them, making them sensitive to vital issues to be resolved within the community and involving them at different levels of proposals developed and implemented for their benefit. The outcome may not be perceived as an aesthetically finished product but it is important for everyone involved due to its underlying process that relates to everybody in the design process. Since community design depends upon community involvement or participation in the process of design, the meaning of both the terms: community and participation or engagement require a deeper understanding.

Community

It is a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings (MacQueen et al., 2001). Definitions of community in current usage are many and usually vague and non-isolating" (Crow, 2007).

Community can be viewed through different perspectives such as a geographical area; a group of people living in a particular place; and as an area of common life (Schmidt, Terao and Yuen, 2013). A Community is created when people convene, in a manner that is either physical or virtual, and share the experience of an event (Bowman, 2012). Given the diversity of ways in which society exists or is perceived, solutions for various issues and problems faced by communities cannot be universal. A deeper study of societies and way they interact with each other helps in arriving at solutions which are individual, realistic and human.

Participation

Hamdi (2014) defines participation as a responsibility with authority in partnership with other stakeholders. The concept of user participation is as wide and variable as that of democracy touching political, ideological, psychological, managerial, administrative, legal and economical aspects in relation to various countries. (Bayazit, 2004). The concept of participation may seem more aligned towards the planning perspectives but it is important to understand the effects of participation at the grassroots level and the changes it can bring in people's lives as it may also be equally relevant in terms of design to an individual or a group of people at the same time. Participation is therefore a rich concept that varies with its application and definition (Mathbor, 2002). It is also contextual and varies in type, level of intensity, extent, and frequency. As noted by Hamdi, "Participation is about empowerment, assets, gender, resilience, sustainability, identity, community, design, interdependency, partnerships, equality, rights, ownership, efficiency." (Hamdi, 2014).

Numerous definitions of participation can be found in the literature (Sanoff, 2000). But there has been little analysis of the content of citizen participation, its definition, and its relationship to social imperatives such as social structure, social interaction, and the social context where it takes place (World Bank, 1995).

The goal of participation is to encourage people to learn as a result of becoming aware of a problem (Sanoff, 2000). Participation defines needs (desires and necessity), converges vested interests, gets accurate information, identifies conflict and trouble shooting, discovers alternatives, provides continuity, mobilise interests, mobilise resources, creates partnerships, positions problems, reduces dependency (Hamdi, 2014).

Factors that motivate people to participate are wanting to play an active role in bettering their own lives, fulfilling social or religious obligations, feeling a need for a sense of community, and wanting cash or in-kind rewards (Jo McCloskey et al., 2011). The main source of user satisfaction is not the degree to which his/her needs have been met but the

feeling of having influenced the decisions (Sanoff, 2016). Factors that affect participation are the kinds of actors, culture of decision-making, existing organisation and hierarchies. (Hamdi, 2014)

Perception of community is inherent in the meaning of participation, as participation implies an act by a group of people. The concept of community participation relates to and is used in many disciplines where a larger group or whole community is affected.

Methods of Community Participation

Community stakeholders can participate in a variety of ways, and to different levels of influence, in identifying needs, generating solutions, planning new initiatives and service delivery (Community Places, 2017). When people participate in the creation of their environment, they need the feeling of control; it is the only way that their needs and values can be taken into consideration (Sanoff, 1988). Participation in decision making is likely to contribute to participation in benefits. It is equally important that “Who participates (and how they participate) is as important to consider as to whether there is participation, and of what kind” (Uphoff, 1997). Meaningful community participation extends beyond physical involvement to include generation of ideas, contributions to decision making, and sharing of responsibility (Jo McCloskey et al., 2011).

Despite the presence of vast literature discussing models of participation, Arnstein’s (1969) ladder of participation is considered to be the most widely accepted model. It is a guide to seeing who has power when important decisions are being made (Lithgow-schmidt.dk, 2017). Since then many attempts have been made to arrive at a model of participation, one group among them attempting to modify or build upon Arnstein’s model itself. Apart from these linear ladder models, several non-linear model such as cyclic ones have also been introduced, still Arnstein’s model and its derivatives are the most widely accepted. As illustrated in fig.1, a few prominent models have been placed along with Arnstein’s model as explained by Sanoff (2000), in accordance with its 8 rungs of participation from non-participation to citizen power. Similar stages in other models have been kept in similar horizontal rows. Deshler and Sock (1985) place emphasis on reconfiguring the Arnstein’s ladder and is more detailed. Other models show their alignment towards certain specific rungs.

VIEWS ON PARTICIPATION									
S. No	Arnstein's Ladder of Participation		IRDC, Cornell University (by USAID)	Burns	Deshler and Sock			Rankopo	Sunderland Community Development Plan
	1969		1976	1979	1985			1995	2008
8	Citizen Power	Citizen Control			Genuine Participation	Empowerment	Citizen Control		
7		Delegated Power	Evaluation			Cooperation	Delegated Power		Delivering Services
6		Partnership	Benefits				Partnership		Developing solutions
5	Tokenism	Placation	Implementation	Implementation	Pseudo-participation	Assistentialism	Consultation	Incremental mode	Engagement
4		Consultation	Decision-making	Decision-making			Placation		Being asked
3		Informing				Domestication	Manipulation	Manipulative mode	Being informed
2	Non-Participation	Therapy		Perception			Therapy		
1		Manipulation		Awareness			Informing	Anti-participatory	

Figure 1: Views on Community Participation

These models suggest that basic parameters of participation are similar, and more emphasis has been given in realigning these parameters on new lines of thinking. Emphasis is again to suggest stages which relate to non-participation and participation leading towards citizen control and empowerment of the community. The initial stages of non-participation leading towards informing and manipulation, and last stages relating to citizen control and empowerment suggests stages through which people centric project can be developed which involves them in the deepest sense in making and controlling their own environment.

Conclusion

Participation is an essential tool if design has to reach to all. It helps in building common knowledge and essential learning by the community and with the community. Effective participation can change lives of the community for good and may result in an aware and informed society, who knows how to take its own care.

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Effects of Yogic Practices on Vital Capacity among Adolescents

Rajendra Singh*
 Durvesh Kumar**

ABSTRACT

The purpose of the study was to investigate the effect of Yogic practices (Asana, Pranayama and meditation) on vital capacity of school boys. Sixty (60) subjects were the sample of this study. All were boys, selected through the simple random sampling technique from D. S Inter College Aligarh, Uttar-Pradesh. In this study there were two groups, yogic group 'A' and control group 'B', 30 subjects in each group. Experimental group performed Asana Pranayama and meditation training program for 12 weeks, one hour daily and 5 days in a week, and control group acted as a control (no yogic practices). The collected data from both groups were taken before and after the experiment and statistically analysed by using t-test. The result of the study showed that the vital capacity of the experimental group has increased significantly through asana, pranayama and meditation in comparison with the control group.

Keywords: Yogic Practices, Vital Capacity.

Introduction

The word "Yoga" is derived from the Sanskrit root "Yuj" which means union, joining, harnessing, or connection. **Muktibodhananda S. (2013)**, in Hath Yoga Pradipika, says, yoga is a union between the individual awareness and the universal awareness. It is the fusion of a healthy body with a healthy mind for the purpose of spiritual development. Yoga is also blissful contact with the supreme power, higher than the highest of the known elements. Yoga is the harnessing of one's inherent inner power, as well as the wider natural forces from which one has emerged. It is an inseparable part of the Indian life and culture. It has come down to us from ancient times with an unbroken tradition.

Yogic practice mainly consists of Asanas (posture- a particular position of the body which contributes to steadiness of body and mind), Pranayama (to extension or control the breath in lungs, a way to get maximum benefits) and meditation it produces regular physiological changes and have sound and have sound scientific basis. **Gopal et al (1973)** In recent times, medical fraternity is much attracted towards beneficial effects of Yogic practices. We are well

* Associate professor, Department of Physical Education, Aligarh Muslim University, Aligarh

**Research Scholar, Department of Physical Education, Aligarh Muslim University, Aligarh

aware of the fact that any sort of yogic exercise done regularly is beneficial to our body. Yoga is considered to be a good quality exercise for maintaining proper health and also has a profound effect on the respiratory functions of an individual. It is stated that yogic exercises help in prevention, control and rehabilitation of many lung diseases. In view of this, the present study was undertaken to see whether yoga has any effect on vital capacity of lung functions, which depend on compliance of respiratory organ (lungs, thorax, and airway resistance and strength of respiratory muscles). Singh (1977) Regular practice of asanas and Pranayama and meditation maintain the physical body in an optimum condition and promote health even in unhealthy body. Through the practice of asanas and pranayama, the governed energy is released and experienced as increase confidence in all area of life. (June 2008) With this background in consideration, the present work was planned to find effects of short term Yoga practice on vital capacity.

Methodology

The study was formulated as a simple random group design, consisting of pre-test and post-test the subject were (n=60) randomly selected to equal group of school students age the age range from 14 to 18 years among the two groups the control group was strictly under control, without undergoing any yogic practices. The experimental group 'yogic group' had to undergo with the experimental treatments. Group A was provided asana pranayama and meditation to school boys for a period of 12 weeks and 5 days in a week from 7:30 to 8:30 o'clock A.M in the D.S Inter College Aligarh Uttar Pradesh. The control group was not allowed to participate in any of the training program except their daily routine works. The subjects were trend for a period of 12 week and after this period significant improvement was measured in the vital capacity of school students. The data were analysed by applying t-test technique. The level of significance was set at 0.05.

Training Programme:

Table no 1. Yogic Training Programme.

Asanas			Pranayamas	Meditation
Shavasana	Garunasana	Janushirasana	Nadishodhana	Om meditation
Makrasana	Nokaasana	Shashankasana	Ujjayi	Imaginary meditation
Chakrasana	Padamasana	Brakshasana	Bhastrika	
Trikonasana	Bakasana	Pavanmuktasana	Shitali	
Dhanurasana	Bhujangasana	Mayoorasana	Sheetkari	
Sarvangasana	Matayasana	pashchimotanasana	Bramari	

During the training period the yogic group underwent their respective training programme 5 days in a week for 12 weeks in addition to their regular daily routine on the training days, practices lasted in the morning from 7:30 to 8:30 A.M. The control group did not involve in any training program except their daily routine.

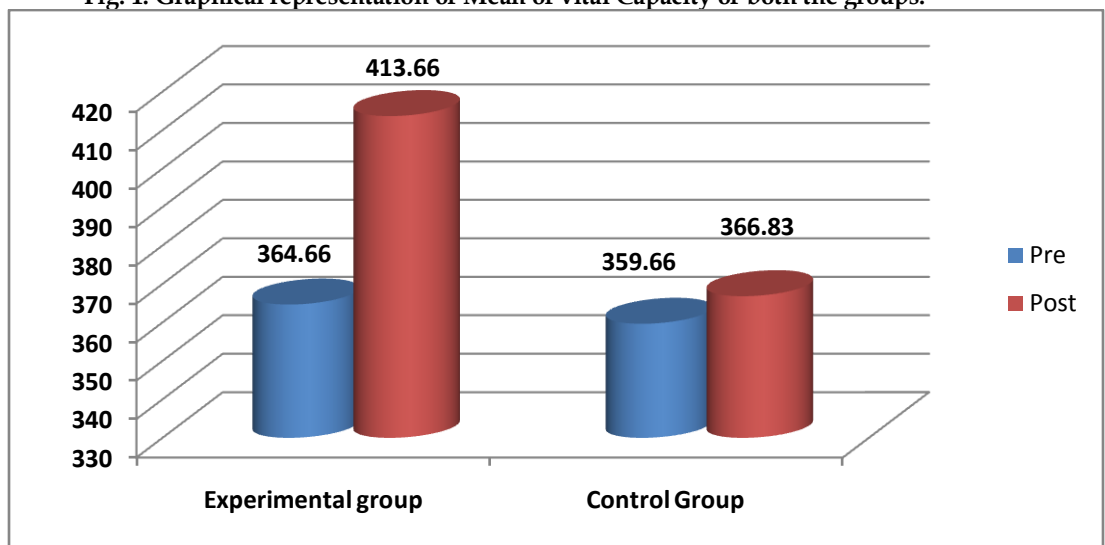
RESULTS

Table 2: significance difference in mean scores between the pre and post test of experimental and control groups of adolescents.

Groups	Test	N	Mean	S.E	t	p (sig)
Experimental	Pre	30	364.66	12.82	5.769	.000
	Post	30	413.66	9.50		
control	Pre	30	359.66	11.98	1.431	.163
	Post	30	366.83	12.33		

*Significant value at 0.05 level.

Fig. 1: Graphical representation of Mean of vital Capacity of both the groups.



Discussion

At the baseline the level of vital capacity was almost same in both the group but after the 12 weeks of yogic practices, the yogic group had better vital capacity in comparison to the control group. **L.N. Joshi et al (1992)** find out significant improvement in FVC, FEV1 and PEFR after six weeks Pranayama practice. **R.K Yadav et al (2001)** observed significant increase in FVC, FEV1 and PEFR in young females after 12 weeks Yogic practice which included (prayer, asans, pranayama and meditation). **RituSoni, et al (2006)** found significant increase in FVC, FEV1, MVV and PEFR after Pranayama practice in asthmatic patients. **Chhibber R., et al (2006)**, found significant improvement in FVC, FEV1 %, and PEFR at 6th and 12th week of Pranayama practice in healthy females. As shown in table 2 all the parameters in males show statistically significant improvement with regular practice of yoga. These effects can be explained on the following basis: Yoga postures (asanas) involve isometric contraction which is known to increase skeletal muscle strength. Yoga training improves the strength of expiratory as well as inspiratory muscles. **Madan Mohan (1992)** Bhastrika Pranayama is a bellows type breathing in which one breaths forcefully and rapidly and thus, exercises inspiratory as well as expiratory muscles. In breathing exercises like Kapalbhati, short powerful strokes of Exhalation in quick succession with contraction of abdominal and diaphragmatic muscles trains the subject to make full use of diaphragm and abdominal muscles in breathing. It also helps in removal of secretions from bronchial tree, clearing up respiratory passages and the alveoli making room for more air. Pranayama is characterized by slow and deep inhalation and prolonged exhalation. The stress is on more prolonged expiration and efficient use of abdominal and diaphragmatic muscles. This act trains the respiratory apparatus to get emptied and filled more completely and efficiently.

Conclusion

In this study we may conclude that Yoga practice can be advocated to improve of Vital capacity among adolescents' and hence to prevent respiratory diseases in future. And it will definitely help in other physiological benefits too.

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Commentary

Status of Health Problems amongst Tribal Population in India

Rupesh Kumar*

The tribal population groups of India are known to be the autochthonous people of the land. Tribal are often referred to as Adivasi, Vanyajati, Vanvasi, Pahari, Adimjati and Anusuchit Jan Jati, the latter being the constitutional name. The concept of tribe emerged in India with the coming of the British. Gradually, the concept of reservation emerged and through that emerged the idea of scheduled tribe in independent India.

In India, 427 groups have been recognized as scheduled tribes. They form approximately 8 per cent of the total Indian population. These tribal groups inhabit widely varying ecological and geo-climatic conditions (hilly, forest, desert, etc.) in different concentration throughout the country with different cultural and socioeconomic backgrounds. Due to their remote and isolated living, tribal groups are difficult to reach.

There is bewildering variation in population size of the scheduled tribes, ranging from 31 Jarwas of Andaman and Nicobar Islands to more than 7 million Bhils of Rajasthan, Madhya Pradesh, Maharashtra and Gujarat (1981 Census). The highest number of tribes is represented by the State of Orissa (62) and the lowest of Sikkim (2). The largest tribal population around 15.4 million reside in Madhya Pradesh. Seventy four primitive tribal communities have been identified by the Government of India in 15 States/Union Territories for taking up special socioeconomic development programmes on the basis of (a) Pre-agricultural level of technology, following a hunting-gathering way of life, (b) Extremely low level of literacy, and (c) Small stagnant diminishing population (Report of the Working Group, 1989)⁴ The scheduled tribes differ considerably from one another in race, language, culture and beliefs. Notwithstanding so much diversity, there are certain broad similarities between the mutually divergent tribal groups. Striking similarities are noticed in their modes of living, each tribe lives in a definite area, has common dialect, cultural homogeneity and unifying social organization. The tribal population of India has been found to speak 105 different languages and 225 subsidiary languages indicating a great deal of variety (IGNOU, 1990). Languages spoken by Indian tribes can be classified into four major families of languages, namely; Austro-Asiatic family, Tibeto-Chinese family, Dravidian family and Indo-European family. On the basis of racial features, Guha, B.S. (1935) considers that the

* Assistant Professor, Department of Social Work, University of Lucknow, India

tribal population of India belongs to three races namely the Proto-Australoids, the Mongoloids and the Negritos. Literacy among the tribals is very low (25.9 per cent) and especially so among the tribal females (14.5 per cent) (NSSO, 1991). The level of education among the most of the scheduled tribes is upto primary level. The lowest level of literacy among females was found in Rajasthan (4.1 per cent). Sex-ratio (females per thousand males) reflects the status of socio-cultural, maternal and child health care programmes existing in the population. In the 1991 Census, the sex ratio of the tribal population was 972 females per thousand males against 927 for the total population. The highest sex ratio for scheduled tribes among various States has been reported from Orissa (1002) and the lowest from Goa (889). The scheduled tribes are at different stages of social, cultural and economic development.

The cultural pattern varies from tribe to tribe and region to region. The economic life of the tribals is specific in nature. Based on the manner in which the tribals primarily and distinctly make their living, the Indian tribals can be classified into seven groups:

- (i) Food Gatherers and Hunters: For example Cholanaicken, Malapandaram and the Arahndan tribal groups of Kerala, Rajis of Uttar Pradesh, Birhor of Bihar, Hill Maria of Madhya Pradesh, Juangs of Orissa, Chenchus of Hyderabad, Kadars of Cochin, Jenu-Kuruba of Karnataka, the Onge, the Jarwa and the Andamanese of Andaman islands.
- (ii) Shifting (Jhum) Cultivators: For example Khasis of Meghalaya, Nagas of Assam, Korwa of Bihar, Saora of Orissa, Muria and Maria of Madhya Pradesh.
- (iii) Settled Agriculturists: For example major tribes like Santhal, Munda, Ho, Oraon, Gond, Bhil, Mina, etc.
- (iv) Artisans: The number of tribes subsisting on crafts like basket making, tool making, spinning and weaving is small e.g. Kota of Nilgiri Hills, Birhor of Bihar.
- (v) The Pastoralists and Cattle Herders: For example Todas of Nilgiris, Gujar, the Bakerwal and Gaddi in Himachal Pradesh.
- (vi) The Folk Artists: For example Pradhans of Madhya Pradesh.
- (vii) Wage Labourers: Large chunks of tribal territories have come under plantations, mining and industrial development. Tribals of Chhotanagpur have gone to North East India to work on tea plantations. The Santhals have been employed in coal mines of Bihar.

Tribal scene does not present a uniform canvas. The Dhebar Commission (1961) observed four different layers among the tribal population. On top is the acculturated layer whose scheduled tribe members have adopted more or less the way of life of non-tribal sections forming the upper crust of the society, e.g. Minas. They have travelled the farthest from original tribal habitat. The second are the settled scheduled tribes agriculturists e.g. Santal, Munda, Oraon, Gond, etc. in the fringe plains who have come quite some way from the tribal highlander, being no longer isolated and they are in the process of transformation. The third category is that of the highlanders who having hardly shifted from their habitat, have undergone little transformation and may still practice shifting cultivation e.g. Khasis, Muria and Maria. The last category, (at the base) a class of tribals, which is in an extremely underdeveloped stage, isolated backward groups, including the so-called "primitive groups", who, insisted in their original habitat, have been little exposed and, consequently, preserve original socioeconomic-cultural traits, e.g. Cholanaicken, Kadars, Onge, etc.

Health and Its Correlates

Health is a pre-requisite for human development and is essentially concerned with the well being of common man. The UNDP Human Development Index (HDI) comprises three components i.e. health, education and income generating capacity. Health is a function, not only of medical care, but also of the overall integrated development of society - cultural,

economic, educational, social and political. The health status of a society is intimately related to its value system, philosophical and cultural traditions, and social, economic and political organization. Each of these aspects has a deep influence on health, which in turn influences all these aspects. Hence, it is not possible to raise the health status and quality of life of people unless such efforts are integrated with the wider effort to bring about overall transformation of a society. Health development can be integrated with the larger programme of overall development in such a manner that the two become mutually self-supporting. Good health and good society go together. This is possible only when supportive services such as nutrition and improvements in the environment and in education reach a higher level.

Health Culture

The culture of community determines the health behaviour of the community in general and individual members in particular. The health behaviour of the individual is closely linked to the way he or she perceives various health problems; what they actually mean to him or her, on the one hand, and on the other his or her access to various relevant institutions.⁷ The holistic concept of health culture provides a valuable framework for analyzing the work of anthropologists in health fields. However, a very few studies are available in this direction, especially among the tribal population. Health Problems The health problems need special attention in the context of tribal communities of India. Available research studies point out that the tribal population has distinctive health problems which are mainly governed by their habitat, difficult terrains and ecologically variable niches. The health, nutrition and medico-genetic problems of diverse tribal groups have been found to be unique and present a formidable challenge for which appropriate solutions have to be found out by planning and evolving relevant research studies. Primitive tribal groups of India have special health problems and genetic abnormalities like sickle cell anemia, G-6-PD red cell enzyme deficiency and sexually transmitted diseases (Commissioner Report for Scheduled Tribe and Scheduled Caste, 1986-87). Insanitary conditions, ignorance, lack of personal hygiene and health education are the main factors responsible for their ill health. Some primitive tribal communities are facing extinction like the Onges, Jarwas and Shompens of Andaman and Nicobar Islands.¹¹ Some of the problems as indicated by investigations include:

- (a) Endemic diseases like malaria, introduced from outside or otherwise like tuberculosis, influenza, dysentery, high infant mortality and malnutrition,
- (b) Venereal diseases, induced abortion, inbreeding, addiction to opium, custom of eating tubers of DIOSCERA (may cause sterility as they contain substances used in oral contraception), and
- (c) Disturbed sex ratio leading to shortage of women.

Urgent studies are, therefore, required on different primitive tribal groups of India which are small in size. The health and nutrition problems of the vast tribal population of India are as varied as the tribal groups themselves who present a bewildering diversity and variety in their socio-economic, socio-cultural and ecological settings. Nutritional anemia is a major problem for women in India and more so in the rural and tribal belt. This is particularly serious in view of the fact that both rural and tribal women have heavy workload and anemia has profound effect on psychological and physical health. Anemia lowers resistance to fatigue, affects working capacity under conditions of stress and increases susceptibility to other diseases. Maternal malnutrition is quite common among the tribal women especially those who have many pregnancies too closely spaced. Tribal diets are generally grossly deficient in calcium, vitamin A, vitamin C, riboflavin and animal protein. Child bearing and Maternal Mortality Child bearing imposes additional health needs and

problems on women physically, psychologically and socially. Maternal mortality was reported to be high among various tribal groups but no exact data could be collected. The chief causes of maternal mortality were found to be unhygienic and primitive practices for parturition. For example, it was observed that among Kutia Khondhs the delivery was conducted by the mother herself in a half squatting position holding a rope tied down from the roof of the hut. This helped her in applying pressure to deliver the child. In complicated labour, obviously it might lead to maternal as well as child mortality. Similar crude birth practices were found to exist in other tribal groups like Kharias, Gonds, Santals, Kutia Khondhs of Orissa, Santals, Jaunsaris, Kharias, etc.). Expectant mothers to a large extent are not inoculated against tetanus. From the inception of pregnancy to its termination, no specific nutritious diet is consumed by women. On the other hand, some pregnant tribal women, (that is, Dudh Kharias, Santals) reduced their food intake because of simple fear of recurrent vomiting and also to ensure that the baby may remain small and the delivery may be easier. The consumption of iron, calcium and vitamins during pregnancy is poor. The habit of taking alcohol during pregnancy has been found to be usual in tribal women and almost all of them are observed to continue their regular activities including hard labour during advanced pregnancy. More than 90 per cent of deliveries are conducted at home attended by elderly ladies of the household. No specific precautions are observed at the time of conducting deliveries which resulted in an increased susceptibility to various infections. Services of paramedical staff are secured only in difficult labour cases. As far as child care is concerned, both rural and tribal illiterate mothers are observed to breast-feed their babies. But, most of them adopt harmful practices like discarding of colostrums, giving prelacteal feeds, delayed initiation of breast-feeding and delayed introduction of complementary feeds. Vaccination and immunization of Infants and children have been inadequate among tribal groups. In addition, extremes of magico-religious beliefs and taboos tend to aggravate the problems. The Infant Mortality Rate (IMR) The tribal population has much lower IMR as compared to the scheduled castes but moderately higher than the other population.

Tribal Households

About half of the population of Andhra Pradesh, Madhya Pradesh, Bihar and Orissa enter their dwelling units by bending or crawling only. In Gujarat, Rajasthan and Maharashtra about a quarter of the population has such dwelling units. Most of these houses lack adequate ventilation or natural lighting. A sizable population of tribes shares the living rooms with cattle, Bihar (40%), Madhya Pradesh (36%), Rajasthan (44%) and in Andhra Pradesh, it is very low (7%). Life Expectancy The expectation of life is the average number of years remaining to be lived by those surviving to that age. Basu and Kshatriya (1989) while studying the Bastar tribal groups of Madhya Pradesh found the average life expectancy at birth based on q5 values for Muria (males 37.56 years and females 40.07 years), Maria (males 40.26 years and females 41 years), Bhattra (males 43.68 years and females 45.30 years), and Halba (males 38.6 years and females 41.46 years) and 41.1 years for all the four tribal groups combined. Although these figures are comparable to the rural non-tribal population of Madhya Pradesh, they are far below the average life expectancy at birth of 58.6 years for the Indian population.

Genetic Disorders

Genetic disorders especially sickle cell disease and G-6-PD has been found to occur in high frequency among various tribal groups and scheduled caste population. The sickle cell disease has been found in 72 districts of Central, Western and Southern India. About 13 lakh G-6-P D deficient are present in tribal population. The prevalence is specially high among the tribes and scheduled castes of Madhya Pradesh, Maharashtra, Tamil Nadu, Orissa, Assam (more than 15 per cent) specially in hyper-endemic malarial zones (DST,

Report 1990). Prevalence rate upto 40 per cent of sickle cell trait has been reported in some tribes i.e. Adiyani, Irula, Paniyan, Gonds.

Sexually Transmitted Diseases (STDs)

Sexually transmitted diseases (STDs) are most prevalent disease in the tribal areas. VDRL was found to be positive in 17.12 per cent cases (reactive in dilution of 1:8 or more) of polyandrous Jaunsaris of Chakrata, Dehradun. Out of 17 per cent, 9.92 per cent was found among males and 7.19 per cent among females. Among the Santals of Mayurbhanj district, Orissa, 8.90 per cent cases (reactive in dilution of 1:8 or more) of VDRL were observed, out of which 4.99 per cent were females and 3.91 per cent were males.

Forest Ecology and Women's Health

The forest based, tribal economy in most parts of the world was women-centered. Women made provisions for the basic necessities like food, fuel, medicine, housing material, etc. from the forest produce. Food was obtained from shifting cultivation and from minor forest produces (MFP) like flowers and fruits collected from the forest. Extraction from herbs, roots and animals were used for medicine. All these efforts incurred an excessive workload on women. Because of extensive cutting of trees by vested interests, the distances between the villages and the forest areas had increased, forcing the tribal women to walk longer distances in search of minor forest produce and firewood. In this rapidly changing milieu, tribal women were confronted with an extraordinary workload. A study on the Kondhs revealed that women put in an average of 14 working hours per day as compared to 9 hours put in by men. Given this additional workload, even women in advanced stages of pregnancy were required to work in the agricultural fields or walk great distances to collect fuel and minor forest produce. The over strain on tribal women however, was not adequately compensated due to the non-availability of minor forest produce and decrease in food grain production. To add to the malnutrition and additional workload, there was destruction of traditional herbs through deforestation and the lack of access of the tribal to modern medicine. This along with the increasing ecological imbalance resulted in diseases such as TB, stomach disorders and malaria.

CONCLUSION

The scheduled tribes are at different stages of social, cultural and economic development. The cultural pattern varies from tribe to tribe and region to region. The economic life of the tribals is specific in nature. Based on the manner in which the tribals primarily and distinctly make their living, the Indian tribals can be classified into seven groups.

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Travelogue

India: Beyond Expectations

Ian Niblock*

India has long been on my mind as a destination in which to travel to and this summer I was fortunate enough to spend a month there.

Admittedly, I went during the months of June and July which is not the most favourable season for travelling (when I was in Agra the temperature reached 47 degrees!). Despite having always eaten meat, I realized that it is relatively easy to become vegetarian in India and as a result I have altered my diet since returning. Like many Westerners who travel to the subcontinent we do fear about incurring the dreaded 'Delhi Belly'. I am pleased to say that I never experienced this in Delhi and our tour guide would advise the group that; '90 percent of Delhi Belly comes from the water. If you get "Delhi Belly" make sure to drink a *lassi* (a yogurt-based drink) and you will feel better'. One of the best meals I ate in India was at the Bamboo Cafe, a delightful family-run business which is a perfect way to round-off a day viewing the Taj. If you would like to sample some traditional spices and teas I highly recommend that you venture to Mehar Chand & Sons, namely the 'Golden Horse' in the spice market of Dehli¹ which has recently celebrated their 100th years of trading.

Tourism does indeed seem like a popular route for states to diversify away being reliant on heavy industry. Gulf states such as Saudi and Bahrain, for instance, have a 'vision 2030' which incorporates elements of tourism to boost their economies. Interestingly, Saudi aims to develop tourism along the Red Sea, and in so doing will need to liberalize its economy in order to achieve this. One thing which I had noticed about India is the way it always seems to consistently host a flow of international tourists. I mention this because earlier this year I was on holiday in Egypt which appeared as quite a contrast to India. Both India and Egypt possess some alluring wonders of the world, yet from what I experienced,

* Associate Research Fellow, Foundation for Evidence-based Development in India (FEDI)

¹ The family business offers an array of teas and spices and has played host to famous visitors such as Christine Lagarde.

tourists in Egypt were rather sparse in should have been the peak season. Political unrest, of course, has played a part in affecting tourist numbers, but I hope anyone reading this will get the opportunity (if you haven't already) to gaze in awe at the Pyramids of Giza. On returning from Egypt an American man did ask me at the airport if I had any Indian rupees because all bureaus would not exchange his cash. Acquiring Indian currency had thus played on my mind ever since as I did not want to turn into the American asking other travellers for rupees. Luckily, the Modi government had mostly curtailed the circulation of 'black money' before I arrived in the country.

What I find fascinating about the world is that the more I travel, the more I have noticed the underlying issues facing regions. When in Beijing, I saw the effects of smog in how the local residents would crackle in their throats and spit out the accumulated phlegm. In Egypt, there is a major issue with garbage – indeed, this can be seen upon approaching the great pyramids. Myself and my friends passed through Mokattam Village which is the 'aptly-named' garbage city in order to reach the remarkable 'cave Church'. Despite it taking nearly two hours and two different taxi drivers to find the Church it was well worth the trip. There were actually two churches, an indoor winter church and an outdoor amphitheatre as a summer church. So long as relations between the Coptic community and Cairo remain cordial, then the capital's street will enjoy a garbage free environment. Admittedly, before I went to Egypt, I had been made aware of the issue over litter in Giza. In a similar vein, I had always thought that the Yamuna River surrounding the Taj Mahal faced environmental degradation. Upon visiting the Taj, I was pleasantly surprised that the local authorities were taking efforts to conserve the riverside. Nowadays, the area remains clean and only locals are permitted to graze their livestock along the river free from tourist interference. The view which I was subsequently able to capture of the Taj Mahal over river from the gardens, Mehtab Bagh, was breathtaking.

India is home to the quintessential backpacker and I definitely met some interesting characters on my journey. Madpackers and Zostel appeared to be main hostels for those travelling the Golden Triangle. As a result, I would bump into travellers I had seen before such as 'India' who was ironically celebrating her birthday in India, and Charlie who was a professional chef gathering recipes on route. Many backpackers talked of Rishikesh² as 'must' on the to-do-list especially if you want to immerse yourself in yoga, an intrinsic part of Indian culture. I never made it to Rishikesh on this trip, but I am glad that I was able to partake in a yoga workshop at Aligarh University. Depending on perspective, some consider yoga in connection to Hinduism while other regard it more in a philosophical light. As of 2016, yoga joined UNESCO's list of intangible world heritage as a mechanism to recognize ancient organic culture from the subcontinent. I did question whether should have booked three nights in Agra, as many people would say 'What is there to see apart from the Taj?'. Well, I did do a lot of reading in the hostel during the day (from 10am until 4.30pm) as the outside temperature was nearing 50 degrees. That is not to say, however, that I couldn't entertain myself in the city. If you visit Agra, I suggest that you meander your way to the Agra Fort, go to Mehtab Bagh for the views of the Taj Mahal, try the Bamboo Cafe for some authentic dishes and go on a walking tour of the city. I chose to try out the 'Mughal Heritage Walk' which was a incredible insight into the living culture of the city – discovering the workshops where the marble crafts are produced and meeting a man who races pigeons from his rooftop.

One aspect of India which I find so striking is how multi-faceted it is. Underlying

² Rishikesh came to notoriety when the Beatles stayed there. Perhaps, for this reason, so many visitors flock there while that is not to say there aren't plenty of other places to practice yoga.

disputes between faiths are apparent, most notably Hindus and Muslims, but from my own experience, India, by and large, has a rich history of embracing different groups. I learned that a Mughal ruler, for instance, at Red Fort took a wife from different nationalities and faiths. If you go to Delhi I definitely recommend that you take a tour of the stunning Lotus Temple which is a house of worship for the Baha'i faith. I thought it was interesting that this faith reflected on other faiths with a sense of unity. Moreover, I understood from my visit to the prestigious Aligarh Muslim University that the founder Sir Syed Ahmad Khan's mission was to bring students together under the purpose of learning³. Something which I will always treasure from my time in Aligarh was an invitation to visit the museum at Ibn Sina Academy of Medieval Medicine and Science. The museum hosts some marvelous Mughal writings, extensive medical literature and artifacts from the colonial period⁴.

After travelling in India, I can surely appreciate the lure of the country and why people want to return. I understand why my friend from university who I met in Delhi, as well as, my friends in Aligarh loves their country with a passion. India is the largest democracy in the world and for it to function its undoubtedly needs to embrace diversity. There is something about the essence of India which draws in foreigners. I remember being at the Taj Mahal and a young American woman asked for photos of herself spinning in traditional Indian dress – this was great to see – if you were going to visit somewhere so iconic in India, why not fully immerse yourself in the experience? While in Delhi, I got the chance to see the Akshardham temple complex. Although only opened in 2005, the Akshardham embodies a very ancient feel constructed from Rajastani pink sandstone. The evening light show is exquisite and told an interesting and colourful story of the gods. I was practically one of only a handful of foreigners there, but that made the experience all the more authentic. This article is merely a flavour of what I felt India had to offer and for the most part the country has surpassed my expectations. Because there is so much to see and do, I now realize why so many travellers view a trip to India as a right of passage.

³ You may like to know that Aligarh University was visited by Queen Victoria and the first graduate was Hindu

⁴ Many thanks to Syed Ziaur Rahman for providing me a tour of his family's collection.

Report

One day international symposium

Diversification of Health Research: An Evidence-based Approach

Foundation for Evidence-based Development in India (FEDI) organized this ambitious event in collaboration with Department of Amraze Jild wa Zohrawia, Faculty of Unani Medicine, Aligarh Muslim University on 12th January 2017. The event brought together some 100 health researchers, faculty and key internationally important speakers.

The symposium aimed at broadening the scope of health research through transportation of multi-disciplinary theories and practices to the context of health research. It was an effort to enrich the research themes and outreach by importing and imparting viable ideas from other disciplines.

Since FEDI has sound understanding of the advantage of research evidence in the development of policy and practices, it aims to bring a positive change to our developing society by strengthening policy implementation and to achieve accurate outcomes of interventions. In this symposia, FEDI provided its experts as resource persons to help achieve the objectives of this event. It was also expected that the event shall pave way to broadened considerations for the research problems in Unani medicine and other disciplines of health research.

Amongst the key speakers were Dr. Ashok Kumar (Founder Vice-Chancellor, AKS University Satna and Visiting Professor, Harvard Medical School, USA), Dr. R. C. Chaudhary (agriculturist and retired scientist of F.A.O. of United Nations), Dr. Amy Putman (expert of gender studies and media from Oxford), Jessica Singh (expert of social development), M. Mathur (consultant researcher of Save the Children) and Dr. D. S. Faruque (an expert of evidence-based research methodology from Oxford).



The event was inaugurated by the pro-vice Chancellor of A.M.U. in presence of the Registrar, Principal of AKTC, Dean F/O Unani Medicine, Finance Officer, Proctor and a large number of the members of AMU and FEDI.

Dr. Ashok Seth threw light on the viability of research in the areas of biotherapeutics. Dr. R.C.Chaudhary spoke about his personal research on medicinal plants and methods of

health research in agricultural fields. Jessica Singh spoke about research and statistical issues in socio-developmental research and likely challenges which health professional might face. M. Mathur provided a social worker's point of view while addressing the research issues of public health. Dr. D. S. Faruque spoke about the viability and feasibility of evidence-based methods in Indian society with a special reference to health issues. He also threw light on the utility of the method to frame new policies and to guide running public programs. Every speech was presided by a distinguished scholar who provided a scientific summary at the end of each presentation. The speakers were honored with mementos too.



Finally, the success of the event was due in no small part to the engagement of the local organizing committee, which comprised Professor Shagufta Aleem as organizing chairman, Dr. Zamir Ahmad as organizing secretary, Dr. Mohammad Anas as compere, Dr. Mohammad Mohsin as Convener and the patrons of the event Prof. M. M. Wamiq Amin, Dean, Faculty of Unani Medicine, and Dr. Saud Ali Khan, Principal, A.K.Tibbiya College, A.M.U.

A spread of gala lunch followed at the end of event which was organized at the sunny lawns of the AK Tibbiya College.

DAUD SALIM FARUQUIE