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EDITORIAL

A Peep into the Past and Feel of the Present of Egypt during a Short Visit

RAJAT KANTI DAS

The history of Egypt is almost as old as the history of human civilization is. The civilization of the ancient Egyptians, though it may not be the earliest one to flourish in the world, endured longer than any other known civilization. It continued to flourish for three millennia and much of the information about people who lived there so long ago and which lay hidden in the sands for thousands of years has been revealed through archaeological remains, antiquities, early manuscripts written in hieroglyphs and hieratic text, funerary texts inscribed on the walls of the pyramids, coffin texts, cursive texts derived from the hieratic. Among other sources, mention may be made of execration texts with curses naming foreign rules and places which were used to destroy the enemies of Egypt. Documents associated with particular kings are also important sources of information. For example, *Abusir Papyri,* i.e., administrative documents of the mortuary cult of the Fifth Dynasty King Neferirkare, whose funerary temple complex was associated with his pyramid at Abusir, make interesting revelations. Many such temple complexes criss-cross the land. The impression one gains is duration of each Egyptian king was marked by a plethora of gods and goddesses and associated myths, festivals and rituals. The ancient Egypt and various sources of information about it have attracted a good number of scholars and institutions to make intensive, in-depth examination and analysis of them. Egyptology is now considered a specialised field of study, which also functions as an aid to Egypt's booming tourism industry. The young girl acting as a guide to explain the ancient objects and materials kept in the manuscript section of Alexandria University's Library was actually a student in the Department of Tourism. From her almost flawless demonstration and explanation it was clear that she had to give considerable time and attention to thoroughly learn the lessons given to her. Indeed, tourism holds some prospect for the younger generation and has been given a place in the academic curricula.

Egypt's one-time stability and prosperity was almost wholly attributed to the king or pharaoh and the gods. The pharaoh as an absolute monarch was believed to have derived his power from the gods who functioned as a link between them and the world of humans. To the Egyptians, pharaoh was a living god, who alone could unite the country and maintain the cosmic order or *Maat.* They believed that when he died, he would achieve eternal life – not just for himself but also for his people. Though the pharaoh assumed divinity, he was actually the servant of gods. The temples he created were devoted to the

gods he was linked with. The high priests acted on his behalf in the large and magnificent state temples erected throughout the country, which were of vital importance in the structure of Egyptian Civilization. There were women pharaohs too. The first woman pharaoh was *Hatshepsut,* who ruled Egypt as her step son *Thutmose 3rd* was a minor child. *Cleopetra* was the last Ptolemic pharaoh who tried to prevent Roma taking over Egypt. She was the one who could be regarded as a true Egyptian queen, to whom independence of Egypt was above her own personal interests. The real power was, however, exercised mostly by the male pharaohs who amassed wealth and ruled empires. *Amenhotep 3rd*(1390 BC), for example, established a huge empire and ruled at the height of its wealth. He built the colossi of Memnun and Luxor temples, and also added Karnak temple. Mumphis was the famous capital of the ancient Egypt. Today only the colossal statue of *Ramses II* and an alabaster sphinx are left of what was once a prosperous capital. The 5000 years old pyramids of Giza, built by the pharaohs Cheops, Chephren and Mykerinos, stand magnificent even today, though these have undergone renovations from time to time.

Egypt was home to stone- age cultures, hunting, fishing and food gathering communities who lived all along the flat and terraced lands of the Nile valley. The earliest agricultural communities started emerging in this land from 5500 BC. Over the next 2500 years or so the country got divided between separate and discrete self-governing communities which developed at different periods at different places. With the development of local cultures, craftsmanship increased in quality, level of sophistication or application of finer and improved methods. Pottery was painted and jewellery fashioned. This was the stage when some of those engaged in subsistence agriculture turned to craftsmanship and in the process the society became more and more differentiated. It also signalled the emergence of elite as an influential group who could make their contributions to develop art and writing, afford luxury goods, and who could presumably control the trade routes, local irrigation systems, building projects like tombs, luxury goods made on the graves of the dead. They could be the nobility, traders and wealthy businessmen, the repository of the knowledge system and, above all, a group firmly saddled in the power structure. With the introduction of division of labour and status differentiation in the social, economic and political fields, society took the form of a stratified society. The exchange of goods paved the way for exchange of ideas. The contact with Mesopotamia (today's Iraq) appeared to be of much significance in the early period. It was not unlikely that foreign traders would have been attracted to Egypt by the prospect of purchasing gold and other rare metals. Indeed, the palaeontologist Elliott Smith, who was no mean Egyptologist, claimed to have identified a group of people whom he called "Prospectatores", after examining the skulls and skeletal remains excavated from graves. Such a group of people, a racial group according to him, came here probably to explore the prospect of

trading in gold. Reference to Mesopotamia has not simply been made in connection with cultural transfer, but also as a possible catalyst in Egypt's formation as a unified state which coincided with the emergence of a highly developed system of writing (hieroglyphs).

Right from ancient times Egypt existed in a landscape of extremes, with vast expanses of arid desert bordering a narrow stretch of fertile land, very little of which has changed even to this day. The river Nile is Egypt's lifeblood. North of al Aswan it flows for 900 Km.(560 miles) through the Nile valley until it along with its tributaries reaches the Delta before releasing its muddy water to the Mediterranean Sea. The thick black deposits inspired Egyptians to name their country as *Kemet* (Black land). This is in contrast to the barren desert cliffs which used to glow pink turning red at dawn prompting them to describe the desert as *Deshert* (Red land). The ancient Egyptians named the summer season *Akhet,* which was equivalent to the four months from July to October when the great river overflowed its banks flooding the Nile valley and Delta. So devastating was its effects that even some of the great monuments could not escape its fury. The huge volumes of water actually originated as rain that fell in central Sudan raising the level of White Nile in the process. The Blue Nile refers to the stretch of the river in Ethiopia, where its tributary Atbara also flows along. Only in 1968 were the waters of the Nile could be tamed following the construction of the Aswan Dam. The Nile and the stretch of fertile band of arable land almost all along its length have always sustained Egypt's population. The people first settled on its bank and the tiny settlements ultimately grew into large communities with administrative centres, ruling houses, priesthoods and deities, gods and goddesses. Some of these settlements have a long history of agriculture. Fayam, for example, is known to be one of the earliest centres of agriculture. Agricultural cycle used to determine the major seasons. At Kom Ombo one could find carvings of three lions representing three seasons of the year – flood, planting and harvesting. The gods and goddesses worshipped by the people were initially restricted to each location, but gradually they were spread to other centres of worship. As the society became more evolved, the townships developed and the links between the townships were established. The Nile stands as the symbol of people's uphill struggle at different times against the vast stretches of Saharan desert lurking at a distance which has all along been a threat to human existence. The river and its significance in Egyptian life make one believe in the hydraulic theory of Karl Wittfogel that civilizations grew where water was available in plenty in the form of a big river. Even today the green fringe along the banks of the Nile continues to make a strong contrast to the golden yellow of the sand, which turns pink to red in the evening. The ancient Egyptians were particularly fearful of the desert as a place of scorching heat by day and freezing cold by night. It was also a place of wild animals, fugitives and nomads-turned-marauders and, above all, countless demons which their perception

could realise. But the desert was also the source of their wealth. Much of the greatness of Egyptian civilization came from wealth yielded by desert which included amethyst, turquoise, copper, limestone, sandstone, granite and, above all, gold. As a matter of fact, the dual benefits of water provided by the Nile and the Sun symbolised by the desert made Egypt a flourishing, prosperous land. Transformation of Egypt at the political level took the course of a national government in the form of a superstructure taking control of a countless number of local governments distributed all over the country at the infrastructural level. Besides, there were independent kingdoms which gradually came under the direct control of Egypt's national government. Nubia, for instance, was an independent local kingdom, which was conquered by Egypt during the Middle Kingdom signifying that the centre of power was in middle Egypt at that time. The period also marked development of trades with Syria and Palestine. The case of Nubians was a little different. They were one of those people who had to face displacement effects wrecking their lives as a result of the construction of high dam at Aswan. Today Nubians of Aswan present a case of a people with extremes – a rich affluent section owning modern houses, well maintained gardens and a large poorer section living a hand to mouth existence. As a displaced and resettled people, their past memories are obscure. Understanding their culture is to a great extent influenced by the way they present their cultural items to the visiting tourists. In the present context, culture's role in identity manifestation is somewhat superficial, partly because of their larger Muslim identity. Their ethnic and cultural identities lie submerged within it. There is an undercurrent of a strong Egyptian nationalistic sentiment pervading all sections of population. Again, North Africa including Egypt, Morocco, Libya, Algeria, Tunisia, has strong Arabian roots, which is in sharp contrast to the real or original Africa represented by the Negroid population, even though Arabian Muslim influence has made a dent into the core of Africa. To avoid any conflicting situation, principles of Muslim brotherhood, common business interests have been invoked to keep the consideration of a unified Africa alive. In Cairo and other places 'the Arabian African International Bank' has earned a place among all other banks. In this regard, the role of sports is no less important. Organizing the African Nations Cup, the major football tournament involving the football-playing nations of Africa, has also been playing its part in bringing the African nations closer to one another. Racial differences are rather underplayed, at least outwardly, to project common religious identity. The integration of Nubians representing a different racial stock with the major group of Egyptians has followed a course which has become a part of Egypt's own history. The construction of Aswan Dam and its effects on the Nubian settlements have been widely discussed. Undoubtedly, it has a telling effect on their cultural tradition. In and around Al Aswan displaced Nubians got distributed in a number of river islands and vacant spaces on the banks of the river Nile. Actually their forefathers occupied these areas after being displaced during

the mid-twentieth century. Today these settlements are recognised as Nubian villages with fortified painted houses built in Nubian style. But who will authenticate that these houses are typically Nubian and are representative of the traditional Nubian culture? Indeed, the first impression I had after visiting one such Nubian village was about the problem of cultural representation. The houses were equipped with some modern appliances but one could find very little trace of their traditional material culture, particularly agriculture and fishing. That the Nubians are still engaged in agriculture and fishing is no proof of their attachment to these activities as traditional occupations. Gradually it has dawned on them that it is money power which controls their life in today's world. Consequently, they take up various income-generating activities including those which were supposed to be their traditional occupations, the products of which have market value. There are now Nubian farmers owning farm houses, decorated gardens. International tourism has made some of the urban-based Nubians rich and prosperous. Even the common villagers, either directly or indirectly, make their earnings from tourism. The middle aged man, whom I asked about the village and his ancestors, was more interested in showing his saleable items displayed in front of his house. He skilfully avoided my question by giving a stock reply and made it clear that to him it was money which mattered most, without which the jest for life would go. "If there is no money, there is no honey", he reminded me. Answering such useless questions amounted to sheer wastage of time. There may also be some doubt about how far it would be possible for them to retain their traditional knowledge system unless they could prove the utility and efficacy of it. May be the traditional knowledge system developed on a different kind of environment has little relevance in the new environment they are now faced with. Some of the river islands, presently in their occupation, were all unique with respect to vegetation in the form of herbs and grasses, aquatic animals and birds. I had no time to verify whether they were in the process of creating a new knowledge system to maintain biodiversity. But in the event of much human interference, in which they were also involved, it is unlikely that the specific character of biodiversity could be maintained for a long time.

Egypt with a population of ninety per cent Muslims and about ten per cent Christians has not simply been basking on its past glory but making rapid strides towards modernity. Tourism, which has found an important place in the country's economy, makes them realise how important it is to develop a non-discriminatory cosmopolitan attitude and give publicity to it, at least to the visitors coming in numbers. In course of visits to places of attraction, our tour guide made all efforts to prove the tolerant attitude of the majority group of Muslims to the minority Christians. Visits to Churches would be kept in the itinerary although some of the desolate structures cramped between new buildings did not create much enthusiasm in the minds of the visitors. The Muslims in general try not to show hostility towards the minority Christians,

though the past records speak of clashes between the two communities in which Christians mostly suffered. Islam as it is practised today has taken the form of a 'popular religion', which was earlier heavily biased towards the powerful, literate and wealthy people. Today the private aspects of folk religion do not function as a totally separate form of expression. The difference which existed between the state-run temples and the local cult temples earlier has been considerably narrowed down. During ancient times religion was fully within the grip of kings who assumed the status of gods. Popular religion in its present form actually signifies the day-to-day religion of the people in general. At present it is difficult to delink religion from politics with state standing as the symbol of power. But that does not mean state and religion are inseparable components. Religiosity or religious identity carries a more potent force than what the state ideally stands for. Confusion may arise when community-specific identity is swamped by the religious identity. Equally problematic is the meaning cultural expressions hold for the local community. In the context of the vast expanse of civilization or a conglomeration of civilizations that gave Egypt a distinctive place of its own, cultural expressions did not get separate attention by virtue of their communitarian link. Culture finds meaning mostly in the way cultural objects are represented. The representation of gods and goddesses could also take the form of cultural expressions, in which community's link remained hazy or a matter of dispute. When the Arabs conquered Egypt after the end of the Roman rule, they produced their own myths about the pyramids. One popular Arab legend claimed that the great pyramid at Giza was in fact the tomb of Hermes, the Greek deity identified with the Egyptian god of wisdom *Thoth* (Lucia Gahlin.2014 *Gods and Myths of Ancient Egypt.* London: Annes Publishing Ltd.). The very thought of identifying a Greek deity with the Egyptian god is indeed a revelation. It is even said that the Greco-Roman perception of Egypt was largely created from the legendary poems of Homer and the writings of Herodotus. At the material level, pens which are made from reeds growing along the banks of the river Nile were believed to have been introduced by the Greeks and adopted by the Egyptians by the 1st Century AD. Papyrus is also made from these reeds. Cultural representation in Egypt has always been the centre of many debates and discourses. Timothy Mitchell (1991) in his book *Colonising Egypt* (Cambridge: Cambridge University Press) searches for the main point of debate. Mitchell is of the opinion that the point of debate, and probably all conflicts and controversies, seem to boil down between a 'sphere of representations' and 'sphere of real objects'. That speaks a lot about what Egypt possesses in the name of cultural heritage and the way it is displayed to the whole world. Such displays need to be related with the vast and varied civilization. With nationalism having a strong root, the concept of a unified Egypt gets intimately linked with it. The country celebrates its National Day on the 6th October as a mark of Egypt's victory over Israel followed by annexation of the Sinai desert, which is not only strategically important to Egypt but is also economically

vital for it since the area is rich in oil. On the other side, a visit to Egypt will confirm the rise of capitalist forces, which are now virtually in control of trade and business. Vast stretches of desert close to highways are being purchased by them to build hotels, farm houses, malls, housing complexes, business establishments, industries. Yet, people suffer because there are not enough jobs and adequate opportunities. Delayed responsibility is probably one direct effect of growing uncertainties in the economic sector. Our tour guide was frank enough to admit that he could marry only when he was approaching forty because he could not find a suitable job for himself. Now that he had two daughters, he could not think of expanding the family any further. It is expected that many more would share his thoughts.

P.S. With the outbreak of Corona virus , which has affected almost all countries of the world at varying degrees, Egypt also no exception to this, the economic consequences of the disaster have been the main cause of anxiety for Egypt. Incidentally, as early as February 14, 2020, Egypt confirmed its first case of Covid -19 which was probably the first in the whole of Africa. Tourism, the mainstay of Egypt's economy, has started suffering which is going to have a telling effect on people who are dependent on tourism either directly or indirectly. Its immediate effect will be felt at the family level as it would experience further destabilising effects like unemployment and loss of productivity.

Editor, JIAS

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Identity Delineation of Indian Tribes*

AJIT K. DANDA

Abstract: In contemporary social science literature of India as well as in the administrative diction, 'tribe ' as a concept has got wide usage and multiple meanings. This reflects rather a casual approach to identity delineation of the people. In fact, certain notions about the very percept are often taken as if, more or less for granted. Such broad presuppositions naturally justify a close exercise of careful standardization, before the same is accepted as a scientific delineation. Various illustrations establish with evidence that the so-called tribes of India as such represent a very wide spectrum. It is, therefore, important to re-examine the details critically, whether such vibrant populations really deserve a casual approach or the question of their identity should be examined afresh in terms of their participation in various walks of life.

Key words: Identity, Indian tribes, Socio-cultural reality

I

At the outset, let me express my highest compliments to the members of the Ashin Dasgupta Institute of Tribal History, who by undertaking the task of promoting genuine tribal history, have committed themselves to an academic exercise, which was very dear to Professor Ashin Dasgupta himself. I had the privilege of coming in close contact with Professor Dasgupta, when he was the Director of the National Library in Calcutta and had many opportunities to discuss with him aspects of tribal life in various parts of this country. I noted with great admiration his extraordinary concern about systematic recording of tribal history, who himself felt quite convinced that this could be successfully achieved only by a combination of approaches of anthropology and history.

The Ashin Dasgupta Institute of Tribal History has done me a great honour by inviting me to deliver the First Ashin Dasgupta Memorial Lecture. When I accept this invitation with all humility, I consider myself yet not fully prepared to deal as such with any specific area of tribal history. Therefore, I, instead propose to draw your attention to rather a generalized issue, Formation of Identity among Indian Tribes, which no matter what has been the exigencies or magnitude of compulsions, has been subjected to serious confusion. Tribal names like the Sentinelese or the Bison Horn Maria indicate the degree of dedication with which the matter has been generally dealt with. I personally believe that at least some awareness about the issue is a must for due appreciation of the need for exercises on tribal history. Permit me to refer to

***** This is an updated version of the First Ashin Dasgupta Memorial Lecture, delivered at Gorky Sadan, Calcutta; on February 05, 2001.

Rabindranath Tagore here who, in the context of history of India, observed the following about one hundred and twenty-five years ago:

> *We must get rid of the superstition that history of all nations should have to have the same set of constituent elements. Those who consider the chronicles of royal lineages and their accounts of warfare as the only essential ingredient of history and look for the same in the Indian National Archives, have reasons to feel disappointed as India has neither such archives, nor the chronicles. Naturally they got overwhelmed by the general notion that where there is no politics, there is no history. In reality, they search for eggplants in the paddy fields and failing to get the same, out of sheer disappointment, refuse to accept paddy as any food grain at all.*
> (Free translation by the present author)

Let me make a small digression here before I take up the major issue of discussion for this evening.

In a recent (1999) best-seller***: Guns, Germs and Steel***; Jared Diamond made a general observation that what the contemporary world knows as history, reflects only 0.1 percent of the total human experience; nearly 99.9 percent of which by and large has remained unaccounted for. Incidentally all human pride and prejudices are based on this meager account.

With these introductory words, kindly permit me take up the issue of identity formation among the Indian Tribes in some details.

II

In contemporary social science literature of India as well as in administrative diction, 'tribe' as a concept has got so wide a usage that we often do not ask (i) what it actually stands to mean, (ii) since when the concept has gained currency, and (iii) what is its degree of efficacy or exclusiveness as an analytical category. In this context, certain notions about the percept are taken more or less for granted: one, tribe as a conceptual category is standardized enough to be used as a research tool; two, in the administrative parlance, it refers to a set of social groups that being basically parallel to one another suggests a sort of homogeneity; three, the concept indicates a sort of exclusiveness and thus stands out distinctly among similar endeavours for conceptualization. As would be evident from the discussion that follows, the broad presuppositions will require a great deal of substantiation before they really could establish themselves, as if beyond any scope for ambiguity. This, somewhat indirectly though, indicates a possibility for uncertainty, if not disagreements on related issues. To add to the confusion, of late a new category, the Scheduled Tribe, has come into wide circulation. Although the Scheduled Tribe, being an administrative category by and large stands to refer to a precisely defined social group; it is neither homogeneous in nature, nor has the precision as a concept of the statute as it is expected to have. Perhaps in the eagerness to keep the percept somewhat dynamic, thus somewhat flexible, not a very rigid

definition was prescribed for the same. In fact, the constitutional definition of the Scheduled Tribe, strictly speaking, is no definition at all, but rather an operational strategy, which could keep the percept open but not without any loss toward its apparent precision as a standardized analytical instrument. This strategy, no matter how much practical has that been, obviously reflect certain other implications.

The Scheduled Tribes constitute nearly eight per cent of India's overall present population. Demand for further inclusion in the list is extraordinarily pressing and appears to be ever increasing. Besides, there are a number of populations in India who were once treated as tribes but do not find a mention in the Schedule of the Government of India any more. Altogether there are at least four different categories of populations like (i) the Scheduled Tribes; (ii) communities pressing to be identified as Scheduled Tribes; (iii) those once described as Scheduled Tribes but do not belong to the schedule any more; (iv) communities that are treated simultaneously as Scheduled Tribes as well as Scheduled Castes with free choice to opt for either; that apparently constitute the total tribal populations of India. In all there are 427 Scheduled Tribes in India. The total number of tribal communities, nevertheless, is estimated to be 642, several among whom have now either become extinct or been merged with other communities. There are some who have undergone transformation of their identity altogether. Tendencies for fusion or fission among tribal populations being on-going, it is difficult to work out the exact number of such communities in India without making a reference to any specific point of time. It is, however, evident that the overall population strength of tribal communities in India is appreciably high.

III

Anthropologically speaking, the proportion of tribe-like populations in India is much higher than that of the tribes as such. In reality, very few even among the Scheduled Tribes, according to anthropological definition, will as such qualify as tribes. Besides, as already indicated, there is in existence a number of apparent anomalies related to the issue. For illustration, there are several cases where the same people distributed over adjoining States in India are being treated as tribes in some States but as non-tribes in some other State/ States. For example, the Gonds are a Scheduled Tribe in Madhya Pradesh but not so in Maharashtra, except in several selected districts. Primarily due to certain extraneous considerations, such anomalies do occur even at the sub-State level. As an illustration, the Bhumij of Purulia District of West Bengal enjoy the status of Scheduled Tribes, whereas in the neighbouring districts of Bankura and Midnapur of the same State, they are non-tribes. The Gond of Chandrapur District of Maharashtra are a Scheduled Tribe but not those belonging to Nagpur District of the same State. In areas where scheduling has been done on territorial basis, even the so-called upper Hindu Castes like Brahmin and Kshatriya have also been extended with the recognition and

facilities available to Scheduled Tribes, as is the case in Kinnor District of Himachal Pradesh. Incidentally, as implied, the Scheduled Castes over there, in the interest of entitlement to certain advantages, can as well opt for Scheduled Tribe identity. In Lakshadweep, where most of the people are Muslim; in Ladakh, where most of the people are Buddhist; and in Nicobar where most of the people are Christian enjoy the Scheduled Tribe status.

Instances are not rare to demonstrate that communities ever eager to assert their non-tribe identity during the pre-independence days have become extra-vocal in their demand for the status of Scheduled Tribe, apparently for the entitlement to certain benefits extended by the Government of independent India to the Scheduled Tribes. Phonetic variation in the title of tribes or communities spread over a wide geographical space,that often depended on the influence of regional dialects, invariably led to differences in spellings of their names. Sometimes such differences were responsible for determining the status or identity of a people, whether the community concerned belongs to Scheduled Tribe or otherwise. There are, nevertheless, tribes with multiple synonyms, in several cases among whom the same have not been properly indicated. This resulted in further ambiguity of the situation. The phenomenon of self-ascription versus imposed identity to a people too is an important factor to promote anomaly in this regard. The Sentinelese of the North Sentinel Island of the Andaman and Nicobar Group of Islands and the Bison Horn Maria of Bastar in Chhattishgarh certainly do not project the respective names themselves as their identity markers. How they came to be designated as such demands a thorough probe. The confusion over Abor/Adi of Arunachal Pradesh, Kuki/Mizo of Mizoram, Mikir/Karbi of Assam, Purum/Chote of Manipur and Santal/Hor of West Bengal, Bihar and Orissa and several such other communities can be cited as examples.

Migration of populations and ascription of a term of reference in their place of immigration unrelated to their generic identity, is also an important factor in this context that deserves close attention. The Bunas of Bengal, in fact constitute a composite population, primarily consisting of several Chotanagpur tribes like Santal, Oraon, Munda, Ho, Kharia and such others. From their hilly forest terrains, after several visits to the plains of Bengal as seasonal labourers when these tribes had settled down there, they were assigned with this new designation, which is now referred to indicate as if an exclusive tribe. This, no doubt, adds to the complexity of the problem of identity.

Ethnicity or other reform movements and urge for fulfillment of aspirations of the people sometimes led to identity shift, thus further contributing to the process of fusion or fission. Demand for Bodoland, Pan-Naga or Pan-Mizo identity, and creation of tribe-dominated States in North-East India and elsewhere in the country are important illustrations related to ethnicity in tribal India. Until plurality of identity as a phenomenon is accepted as something rather universal and emphasis is shifted to the dynamic aspects of

the process as such, the real assessment of the problem is certain to remain mostly misunderstood.

Scheduled Tribes like the Meena of Rajasthan, Chaudhry of Gujarat, Deshwali Majhi and Toto of West Bengal, Gond and Bhatra of Chhattishgarh and Madhya Pradesh have moved to an appreciable extent toward Hinduization. The Mizo of Mizoram, Naga of Nagaland, Nicobarese of Andaman and Nicobar Islands and to a considerable proportion the Oraon of Jharkhand and Bihar have embraced Christianity. The Meo and Tadvi Bhil of Rajasthan have mostly moved in the direction of Islamic faith. The Chakma of Tripura, Bhutia of West Bengal, Mon and Sherdukpen of Arunachal Pradesh, and the Ladhaki of Jammu and Kashmir are by and large identified with Buddhism. Being profusely exposed to multiple major faiths, to what extent they have been able to retain their original system of belief, specific identity, as well as characteristics as tribes is a matter that deserves serious scrutiny.

In the Indian context, if we examine relevant facts from the historical perspective and pay some attention to her scriptural background, this provides a sort of conceptualization which is manifestly different from what we have come to learn as a tribe on the basis of our exposure through the Western system of education. The obvious question that instantly arises here is whether a scientific concept can afford to be society-specific or culture-specific? Let us review the matter somewhat closely on the basis of selected though pertinent issues.

IV

The *Webster's Third New International Dictionary* (1967), among its several definitions, describes a tribe as "an endogamous social group held to be descended from a common ancestor and composed of numerous families, exogamous clans, bands, or villages that occupies a specific geographic territory, possesses cultural, religious, and linguistic homogeneity, and is commonly united politically under one head or chief" (1967: 2440). Out of a number of definitions incorporated there, the given one goes closest to the anthropological definition of tribe as reported in the ***Dictionary of Anthropology*** by Charles Winick (1964), which reads as follows:

> *A social group, usually with a definite area, dialect, cultural homogeneity and unifying social organization. It may include several subgroups, such as sibs or villages. A tribe ordinarily has a leader and may have a common ancestor, as well as a patron deity. The families or small communities making up the tribe are linked through economic, social, religious, family or blood ties (1964:* 546).

The sixth revised and rewritten edition of ***Notes and Queries on Anthropology*** defined a tribe as a politically or socially coherent and autonomous group occupying or claiming a particular territory (1960: 66). The last said reference further observed that in most primitive societies the

widest recognized political group is the tribe (1960: 134). It becomes conspicuous thus that all of the definitions cited here list a series of attributes most of which are common. Besides political unity that has been emphasized in the first and third of the definitions but remained implied in the second and presence of patron deity, as has been highlighted in the second one, there is practically very little disagreement among the three. What is important to note down in this connection is the fact that all the three sets of attributes, notwithstanding their similarities or differences, seem to reflect a sort of prejudice, as if the members of a tribe are somewhat very strange, if not queer or exotic, who live rather an isolated existence and have practically no communication across the boundary of their immediate tribal territory. Such facts that the human populations who, for the purpose of specific objectives, have been designated as tribes can also live side by side with non-tribes and constitute a part of a nation-state, do not seem to be within the comprehension of definitions referred to here.[1] In other words, such ideas that the tribes represent a primordial state of life, way behind in the scale of evolution, gets strengthened, if not perpetuated, through circulation of these definitions.[2] There is scarcely any scientific reason but rather a historical accident that helped creating a sort of myth around the way of life of the populations designated as tribes. The impression of their queer or exotic existence is, therefore, not only unrealistic and devoid of any objective basis, but by and large negates the reasons of science

Since Anthropology, as an academic discipline, grew in India under the patronage of the then British rulers, the definitions adopted for anthropological understanding and analysis in this country reflect the experiences and social realities of Europe, particularly of the United Kingdom and not that of India. Incidentally, although Anthropology as a body of knowledge existed in India long before the British hordes stepped onto the Indian soil with their so-called system of liberal education and analytical tools, cognition, perceptions, and concepts for carrying out advanced researches, due to the mechanism of restricted circulation of such knowledge in-built into the indigenous methods of education, such prior information could not percolate down to the masses or make any impact on the borrowed definitions and percepts. As a result, rather unwittingly, the transplanted concepts based on experiences elsewhere assumed the character of major analytical tools here. As an outcome, India got deprived of her due at least on two counts : (i) Such a tragedy usually negates the existence of any knowledge of Anthropology in India before its formal induction into the university system as an academic discipline; (ii) India is made to accept analytical tools which reflect somebody else's socio-cultural realities and do not necessarily speak of her own mundane experiences at the background. Thus somewhat indirectly though, the character of universality has been attributed to a set of definitions and concepts that were at the most regional in nature and do not reflect the socio-cultural

reality of India as such. In fact, traditional India's perception of tribe, as for example, was altogether different.

V

A. L. Basham (1954: 13) reported the pre-Harappan populations of India to have belonged to several cultures each having its own distinctive features.[3] Although broad similarities could be established in their village lay-outs and material items, the northern and southern populations of the pre-Harappan culture seems to have had differential levels of techno-cultural efficiency. This is evident from their pots and pottery techniques, that not only suggest to some degree of their mutual exchanges and interactions across the ethnic boundaries, still at the same time, that speak of the maintenance of a sort of group distinctiveness.

Evidences of ethnic plurality but simultaneous co-existence of various human populations are conspicuous in the Harappan civilization. From the skeletal remains so far excavated and examined, it appears that some of the people were long-headed, narrow-nosed, slender Mediterranean type. The second set of elements were of the Proto-Australoids with flat nose and thick lips. Traces of the Mongoloid and Alpenoid physical types have also been found from the Harappan sites.

When the Aryan invaders arrived in India, they found the country to have already had experienced a considerable amount of ethno-cultural diversity. It may not be out of place to mention in this connection that the Aryan invasion as such is not considered as a single concerted action, but one covering centuries and involving many human groups/populations. Thereby the character of ethno-cultural plurality of India over the periods of time got further reinforced, if not intricate during the Vedic period itself.

What is important to note down here is that although pre-Vedic populations of India were not generally referred to as tribes, the Vedic Aryans, perhaps largely due to their own ethno-cultural heterogeneity, internal differentiation, as well as distinctions experienced through contacts with non-Aryan populations, had by and large designated various populations, including themselves, with separate names, which can broadly be taken as identification markers of tribes. Thus the accounts of the Vedas, whatever historical value may these have in their depiction of ethnic and cultural background, remain the earliest reference ever on tribes or tribal cultures reported upon from anywhere in the world. Although initially the designation of tribe remained restricted primarily to the Aryan subgroups, over the years of contact of the Aryans and non-Aryans, the tribal identity gradually got extended even to the non-Aryan indigens and a graded system developed. D. D. Kosambi reconstructed what happened in the Gangetic Plain in this respect around 600 B.C. In his own words:

> *In the Gangetic valley about 600 B.C., there coexisted distinct sets of social groups in various stages of development. Bengal was covered by a dense, swampy forest. Considerable patches of Bihar and Uttar Pradesh were thinly inhabited by tribesmen who did not speak an Aryan language and had little direct contact with the Aryans. Above them were developed tribes normally in conflict with Aryans. They still retained their own languages. These higher non-Aryans may be grouped under the generic name Nagas. Both sets of tribesmen were scattered throughout the region not settled by food producers. The stage above the Nagas was that of Aryan tribesmen settled along the river and land trade-routes. Each of these tribes spoke an Aryan language, and many had differentiated into caste-classes. These Aryans were thus divided into two main groups, of which the simpler had not been permeated by Brahmin ritual (1956: 140-141).*

From the given description it may be appreciated that the distinction between the tribals in India was never as sharp as it was between the Caucasoid Europeans and the Negroid Africans, neither the line of divide between the Aryans and non-Aryans was in full agreement with the distinction between tribes and non-tribes, as it is understood today. It may therefore be noted that whatever the criteria for delineation of tribes may be, neither do they represent India's own traditional system of social or cultural categorization, nor the sense of hierarchy implied in the scheme of distinction between tribes and non-tribes ever existed in the then system of social and cultural grouping in India.

VI

The reason for my bringing out these details with some emphasis here is to draw attention to the fact that the way the scholars of European background tried to designate the peoples of Africa or the autochthons of the Americas as tribes attributing a sense of hierarchy, speak of their own ethno-centric bias and an aura of superiority that perhaps grew out of their successes through industrial revolution. Since due to their initial lead in the area of liberal education, even such bias and prejudices could be propagated widely that to a large extent became a part of the exercise for delineation of definitions, but because of their very subjective nature, narrow vision, and limited background of information to fall back upon, as analytical tools they remained rather deficient, if not utterly inadequate. In other words, the definitions of tribe as cited here, no matter how perfectly they represent the European point of view, are by and large society-specific and culture-specific.[4] Thus, as analytical tools they are found rather extremely inadequate, particularly with reference to India's socio-cultural and ethnic experiences right from pre-Harappan days. In view of his historical as well as contemporary experiences, for an Indian scholar, the bulk of who have come to be known as tribes, is very much a part of his larger social and cultural whole with whom he shares not only his identity but a great deal of his experiences, too. Since multiplicity of identities is an

oft-repeated phenomenon for the people of this country, sometimes in spite of their apparent biological as well as cultural distinctions, the so-called tribes over here do not represent "other cultures" as much as the African or American Indians do to the Euro-American scholars, particularly to those belonging to the Anglo-Saxon tradition.[5]

Since definitions of tribe perfected by Euro-American scholars flowed down to India along with the spread of liberal education initially under British Patronage and then through contact with North America, in spite of the said socio-cultural distinctions and unlike experiences, researches on tribal cultures in British India followed more or less the same tradition, that they had acquired through their British masters. The Indian scholars, due rather to their exposure to the British system of education, largely ignored their historical experiences as well as the traditional knowledge. The result was obvious. They were rather too quick to forget India's own notion of tribe and accepted the Euro-American conceptualization in this respect uncritically and practically without any verification with their own experiences.[6] It may be pointed out in this connection that the establishment of the Asiatic Society by Sir William Jones in 1784 was quite crucial in this respect since in contemporary India the earliest initiatives for the study of tribal cultures, according to the so called new trend, grew under the patronage of the Asiatic Society. But the pioneering initiative of the Asiatic Society was no exception to the pattern already enumerated here.[7]

A quick glance at the research publications of the Asiatic Society suggests that the study of tribal cultures was initiated by the then British Administrators in India who came face to face with the tribal populations during their routine sorties to the interior areas for administrative reconnoiter. Since to a British administrator the so-called Indian tribes or for that matter the people of India as such were none but the natives, who scarcely varied in terms of cognition from African tribes. It was rather natural that the Indian populations particularly the autochthons would be met with similar treatment and be assigned with like identities. Thus, a new research tradition was set in, into which the Indian scholars, especially those exposed to the British system of education, consciously stepped in and as a result, India's characteristic approach to the comprehension of tribe and her system of categorization of social-groups lost their significance and gradually slipped into oblivion.

VII

In spite of multiple early initiatives on the study of different social groups in India, systematic enquiry of tribes in contemporary India did not grow until the same became a part of its census operations. The initial interest of the census organization, nevertheless, was an assessment of the break-up of the population composition on the basis of successive census enumerations and the concerned authorities published such population figures, treating animism as if a separate system of faith.[8] Thus, somewhat indirectly though, seeds were

sown for creating new identities and dividing India's populations by application of the same as a criterion and accordingly, cultivating the idea of a new sense of hierarchy among the social groups.[9] Since the socio-political and cultural climate of the then India was somewhat different from what we find it today, J. A. Baines, the Commissioner of the Census of India : 1891, felt it important to consider the distinction between tribal peoples who were Hinduised and those who followed their orthodox pattern of tribal religion on the basis of available empirical information. He, nevertheless, felt it rather futile to maintain such a distinction. Enthoven,[10] one of the Superintendents of Census Operations for 1901, in this connection observed:

> *The difficulty that the average Hindu enumerator finds in identifying this stage of belief (animism) lies, it is to be presumed, not only in his ignorance of the true significance of much that characterizes it, but to a certain extent, also, in the fact that he is commonly acquainted with very similar acts of worship among members of his own religion (1902: 65).*

In spite of such direct census enumerations, pre-conceived notions were allowed to have a free play over the early Western notions and the people of India were categorized without adequate realistic basis. Sir Herbert Risley, who was the Commissioner of Census of India: 1901, being guided by such pre-conceived notions, extended the scope of Census enquiry on the tribes and their way of life and made such conceptualization a part of the Census analysis of population data. While discussing the social types of the people of India, Risley drew a distinction between ethnology or racial divisions and ethnography or social divisions and incorporated both within the scope of Census enquiry and analysis. This was perhaps necessary to legitimize his system of categorization that had otherwise a questionable empirical validity. He also attempted a definition of tribe[10] that reads as follows:

> *A tribe as we find it in India is a collection of families or groups of families bearing a common name which as a rule does not denote any specific occupation; generally claiming common descent from a mythical or historical ancestor, and occasional animal, but in some parts of the country held together rather by obligations of blood feud than by tradition of kinship; usually speaking the same language and occupying, professing, or claiming to occupy a definite tract of country. A tribe is not necessarily endogamous; that is to say, it is not an invariable rule that a man of a particular tribe must marry a woman of that tribe and cannot marry a woman of a different tribe (1915 : 62).*

From the given definition it is not difficult to discern the kind of preoccupation of mind and nature pre-conceived notions Risley had regarding various social and cultural groups existing in India.

Without maintaining and clear distinction between ethnology and ethnography, R. G. Latham in his *Ethnology of India* published in 1859, Campbell in his *Ethnology of India* published in 1866, and E. J. T. Dalton in his *Descriptive*

Ethnology of Bengal published in 1872 dealt with matters that could as well qualify as ethnographic information. But due to non-differentiation of approach to ethnology and ethnography, until Risley published his accounts, ethnographic researches in general and on tribal cultures in India in particular, could not make any major impression. Nevertheless, the accounts expressed the same preoccupation of mind that came to be known as the major trend of thoughts during Risley's time and afterwards.

Another factor that might have acted as the source of inspiration from behind and had a role to play in this respect was perhaps the publication of Charles Darwin's *On the Origin of Species* in 1859. Since along with the growth of the idea of organic evolution, a large number of scholars engaged themselves in the exercise of identifying the stages of social and cultural developments, there was a great demand for ethnographic information from all over the world. In fact, this trend continued till functionalism, which threw a mighty challenge to evolutionism, set a new trend of thoughts, where the basic question was shifted from identifying the stages of evolutionary sequences to evaluate how various elements in a culture integrate.

When the first Post-Graduate Department of Anthropology was set up by the University of Calcutta in 1920, an exercise in ethnographic research became the essential prerequisite for the students in Anthropology aspiring to earn a degree. Ever since, this practice is continuing and the interest has been found to have proliferated to the other new University Departments of Anthropology when they were set up. Ethnographic approach, thus, remained a matter of continuous concern of anthropologists and as a part of this exercise recording of socio-cultural facts on the so-called tribal populations of India became rather an ongoing process.

In their selection of populations for study, however, they were generally guided by the notions or perceptions that they had acquired through their exposures to the system of education introduced by the then British rulers. Thus, attempts for utilizing any indigenous experience was rather infrequent and even organizing any rigorous exercise toward having a definition on the basis of empirical facts occupied only the subsidiary importance.[11] There were hardly few attempts to highlight the notions of tribe as appeared in traditional India.

VIII

K. P. Chattopadhyaya through a posthumous account on the *Ancient Indian Culture Contacts and Migrations* (1970) had drawn attention to the nature of contacts and the consequences thereof during the Vedic period. He, nevertheless, attempted to identify the then tribal communities from around this part of the world and demonstrated with evidence, how over a period of time their identity underwent major transformations. According to his analysis: Dasa, Asura, and Deva originated from the same stock but the Devas

and the Asuras, though agnates, fought with one another for establishing supremacy (1970: 6-7). He also indicated how the ancient tribe Puru of the Rig Veda came to be identified as the Kuru in the Mahabharata (1970: 8). Suniti Kumar Chatterjee's *Kirata-Jana-Kriti* (1974) discussed at length the ancient tribes in India, their linguistic affiliations, possible routes of migration as well as the distributions. They were neither exotic nor organized in any order of hierarchy. K. C. Misra in his *Tribes in the Mahabharata* (1987), identified as many as 363 tribal communities and gave a brief account of their migration as well as distribution. According to his analysis, all identifiable social and cultural groups, irrespective of whether they have any racial basis, could be identified as tribes. Mamata Chaudhury, in her essay on "Ancient Indian Tribes and their Integration into the Hindu Society" (1976) raised the question about the definition of tribe though, since her main objective was to examine the process of integration, she did not pursue that point to the said logical end. Her analysis presents a tribe as a distinct socio-cultural entity, devoid of having any notion of hierarchy.

Whatsoever had been the mechanism for identifying the tribes it may be pointed out in this connection that through their accounts, the respective authors primarily dealt with the issues associated with contacts primarily at the political level. The other important areas like economic interactions miscegenation, or cultural exchange and their possible consequences on tribal life have, until independence of India, received only sparing attention. A refreshing exception in this respect appears to be the statement of D. R. Gadgil, who avoided any reference to tribes as such and dealt rather with the problems of aborigines of India. According to his assessment, the issues have rather very important politico-economic involvments. In his own words:

> *"... this is hardly surprising as it is fundamentally the result of contact between peoples with widely different techniques. The particular problem of the aborigines in India lies at one extreme of the body of problems created by the British occupation and exploitation in India. The initial contact was usually established at the political end, whether for economic or political aims; the later economic penetration was universal whatever the nature of the political authority obtained over the particular region. The immediate and palpable results of economic exploitation, however differed from tract to tract and from one economic activity to another according to the worth of exploitable resources contained within the region, or the directness of the impact on the activity ... It is not necessary to labour the point that a change in economic habits and way of life necessarily leads to a general change in all other directions. The intimate connection of social practices and religious rituals with economic life is well known, and if the balance of the one is disturbed the other cannot remain impaired (1943: VII-VIII).*

It may be noted in this connection that although in common usage

aborigines are generally considered, as if synonyms of tribes, Gadgil seems to have used the concept *aborigine* by assigning a specific meaning to it and not treating the same as a broad but not precisely defined category like tribe or an administrative category like the *Scheduled Tribe*. There is no doubt that the problems of the tribes *per se* and those of the aborigines are not at all and cannot be analogous. In the interest of proper appreciation of the issue, it is, therefore, pertinent that distinctions are maintained between aborigines and tribes defining each category with precision and assigning exclusive meanings to them.

The issues related to the aborigines have further been spelt out by G.S. Ghurye, according to whom:

> *The problem and ills of the so-called aborigines may be grouped under two categories. The first category is formed by those problems which, like those of new habits, language, and shifting cultivation are peculiar to some or many of them, and are not common to other classes of Indian population. In the second category are comprised such problems as arise from the inroads of the British systems of law and revenue on their solidarity, from the forest laws, and from the loss of their land as combined result of the British system and the rapacity of money lending classes.... The latter kind of problems... are far more important to their very existence than the problems of the first category, which in comparison may be regarded as minor ills (1943:199)*

From the descriptions of Gadgil (1943) and Ghurye (1943) it becomes conspicuous that the aborigines as a category is fairly distinct from the tribes and so are their problems. For instance, the problems of aborigines, as has been envisaged, are related to their placement in the scale of evolutionary sequence, as well as due to contact with other than aborigines, who by and large represent a superior material manifestation of life and belong to a relatively more elaborate socio-economic network. In case of Scheduled Tribes as such, the problems are primarily toward adaptation of the transformation process emanating out particularly from the induced programme. This distinction makes two points rather explicit. One, as conceivable categories both Scheduled Tribes and aborigines justify independent recognition. Two, whosoever have been identified as the Scheduled Tribes, their predicament as tribes, as found in contemporary India, is not due to any unplanned exposure of the people to forces which are not familiar to them, they have been rather made subjected to a series of developmental programmes out of which, due to inadequacy of preparedness, they are yet to be able to derive optimum benefits.

In spite of the problems associated with the definitions of tribes in India, it may be noted with appreciation that a sustained interest about the study of tribes and their cultures continued almost throughout in this country. Even if we pay our attention to the administrative category of Scheduled Tribes,

their population strength, distribution, and capacity to maintain cultural, economic, and ethnic boundaries, seem to have played important roles in this respect. The very facts that every 14th man of India happens to belong to this category, there are about 427 Scheduled Tribe communities in the country and as many as nine states and/or Union territories are governed by the peoples themselves belonging to the category of Scheduled Tribes, make the socio-cultural reality of India quite distinct and perhaps having hardly any parallels the world over.

It is important to note down in this context that in spite of the extraordinary concern, as is reflected through the growth of multiple institutions engaged in the study of Scheduled Tribes and other social and cultural groups, there is hardly any initiative on record, where any concern has been expressed to define tribes scientifically or at least on the basis of socio-cultural backgrounds of the concern peoples in India.

Nihar Ranjan Ray's concern in this respect comes to the category of exception. In fact, as he elaborates, tribe as a concept is derived from Latin root, *tribuz* that refers to the three political divisions into which the early Romans grouped themselves. The Greeks instead, used the concept in two different senses like fraternities as well as geographical divisions. The Irish traditionally used the term to mean families or communities of persons having the same surname. According to him, during the early phase of British consolidation of power in India and as late as in 1766, the terms caste and tribe were found to be used synonymously (1972 : 5).

He further added :

> *Today with anthropologist and sociologists of western origin the term means race of people, now applies especially to a primary aggregate of people in a primitive or barbarous condition, under the headman or chief. It is in this meaning, roughly speaking that most of the western scholars working on India, have been using this term….I would humbly enquire : does this definition meet the relevant social situation in India?(1972 : 8).*[12]

IX

From the given facts it becomes more or less obvious that a new awareness about her tribal population grew in India around the date of independence of the country and a new sense of responsibility to understand their problems of apparently being in long exclusion and to promote measures for their integration to the mainstream of national life became important. Quite a large number of contemporary researchers dealt with the issues and a series of books and articles have been published by scholars from India and abroad highlighting their respective measures of understanding and comprehension of the problems. Paucity of space as well as time will not permit a thorough review of them. I shall, therefore, refer rather to an extremely few cases of them by way of illustration. [13]

In 1941, Nirmal Kumar Bose delivered a lecture before the Indian Science Congress Association on "The Hindu Method of Tribal Absorption". There he dealt with the question of culture contact and acculturation which, according to his assessment, assumed vital importance in the understanding of national life of India. In his own words:

> *Today the problem of establishing democratic society in India has become a pressing one. But although, on the whole, Hindu society is one, yet there are differences among its social classes which have to be made up before we can combine as a nation unified in political aspiration as well as in national action. It is necessary therefore that a scientific enquiry into the character of Hindu social organization should precede any activity toward that end. (Adapted from 1953 : 156)*

Bose then drew attention to certain specific instances demonstrating how tribal customs and rites during the pre-independent days have been undergoing modifications through the process of cultural absorption. According to him, the extra-ordinary capability of the Hindu system of resilience to accommodate specificities of independent ethnic and cultural entities made their integration to the Hindu fold rather the natural outcome. It may be pointed out in this connection that the processes today are not exactly the same as they were immediately before independence of the country.[14] Still it is a matter of gratification that due to exposure to the government-sponsored programmes, particularly of education and development, the Scheduled Tribes in India, instead of feeling shy of or losing their identity by way of absorption could become assertive about their right to maintain their independent cultural identity and at the same time become a partner of the larger national whole on equal terms.

In three very perceptive essays Surajit Sinha examined the positions of the tribals of contemporary India in historical perspectives and analyzed their extent of integration with the cultural, social, political, and economic systems of India. In his essay on 'Tribal Cultures of Peninsular India as a Dimension of Little Tradition in the Study of Indian Civilization : a Preliminary Statement' published in 1958, Sinha tried to conceptualize the social and cultural positions of the little communities constituting the so-called tribal belt of peninsular India in relation to the study of Indian Civilization. According to him, these communities expected special consideration since in their case it was found that communication with the larger universe of Indian civilization was rather restricted if not interrupted, although there was not a single case to demonstrate that the community was completely shut off from contact with what is called the great cultural community of India. In his own words :

> *Within the limitation of our present endeavour ... we have been able to demonstrate the possibility of orthogenetic development of civilization in India from a primitive cultural level roughly comparable to cultures of the less acculturated tribes of Peninsular India. We have pointed out vital*

> *elements of continuity between tribal and Hindu peasants traditions. We have also been able to isolate some potential elements of transition in the direction of peasant cultures in tendencies toward feudalization, stratification, specialization of roles and so on (1958 : 517)*

In 1962, Sinha examined the question of political aspiration and integration of tribals with the Hindu social system through his essay on 'State Formation and Rajput Myth in Tribal Central India'. He observed by and large a positive role of State in integrating the tribals with the Hindu social system, although a few instances were there to demonstrate how unwise oppressive policies followed by some chieftains occasionally hindered if not reversed the process. According to him, "Hinduization of the tribes has not been implemented through the structural medium of states alone; a good deal of it has been achieved through the spontaneous interaction of the Hindu artisan, cultivator and sacerdotal castes with the tribals. ..." (1962: 78).

The issue of 'Tribe-Caste and Tribe-Peasant Continua in Central India' has been taken up by Sinha in 1965. The relative positions of the isolated Hill Maria of Bastar and the Hinduised Bhumij of Manbhum (now Purulia) have been examined by him in terms of two ideal sets of continua. According to him, the ideal tribe and the ideal caste may be defined both as social structure and as cultural pattern and movement from the isolated tribal pole to the caste and peasant end involved progression toward ethnic heterogeneity in social interaction, role specialization, social stratification, and in enlargement and diversification in the networks of relationship with civilization centres (1965: 57).

Martin Orans put forward his thesis of rank concession syndrome in 1965 while examining various aspirations of a tribal community in his title, *The Santal : A Tribe in Search of a Great Tradition.* According to him, analytically it should be possible to identify a series of rank paths that the tribal delineate for themselves for the fulfillment of their aspirations[14]. This, as such makes their identity often indistinct. In his own words:

> *It is true that until recently the Santal in large numbers took part in their own way, in various Hindu festivals. At many of the major Hindu festival the Santal would assemble for mixed dancing, and some would become possessed and speak in the name of the Hindu deities invoked. Although this activity has recently been somewhat curtailed ... It is still possible to observe Santal worshiping Juggannath at the Cart Festival (Ratha Jatra) in Baripada ... Many Santal, even in villages where there are few Hindus, may also be seen immersing the Hindu Tusu Goddess (1965 : 88-89).*

Edward Jay in 1974 examined the nature of continuity as well as discontinuity between isolated tribal villages and Hindu peasant villages from Central India on the basis of detailed comparison of social and cultural patterns. According to him, the former is more 'folklike' than the latter.

'Conceptually, both belong to the same socio-cultural continuum, not even at the opposite ends ...' (1974 : 39).

Mahapatra (1974) examined the issue relatively more closely, particularly with respect to the position of the Scheduled Tribes of Orissa, although he did not keep his observation limited to the bounds of that State alone. He sought to evolve certain social types from the standpoint of the dominant society. His typologies like the marginal society, associative society, and the partly assimilated society suggest the possibility for these peoples' categorization as the emergent minority and thus put emphasis on the numerical strength and the degree of integration, instead of ethnic boundary (1974 : 81-82).

B. K. Roy Burman[15] examined the aspirations, roles and functions of the tribal communities in global perspective and expressed his dissatisfaction with the continuous use or abuse of the concept 'tribe', which according to him is already value-loaded, to identify a category of people who are not necessarily primitive. Although his recommendation for adoption 'post primitive' instead of 'tribe' would not necessarily free the concept from the stigma, if it has been suffering from any, his concern for the tribes as such and reported inadequacy of information regarding their identification tag are worth consideration.[16]

References cited in this section of the article examined the positions of the so-called tribes in India from multiple angles. They, nevertheless, stand for a collective inadequacy and share a common concern. Most among the authors identified tribes on the basis of the definition acquired through their exposures to the Euro-American system of education. As a result, a kind of exclusiveness was assumed among the people which has not evolved from the facts enumerated by the references. Nevertheless, all the contributors were rather unanimous that the so-called tribes in India shared a great deal with the non-tribes and engaged themselves to examine the nature and extent of such sharing. Thus, there remains a hiatus between the research tools used for delineation of tribes and the natural socio-cultural reality.

X

The illustrations cited here present in brief, only an outline how over a period of time, the tribal situation in India has been comprehended and dealt with rather insensitively, with improper research tools and inadequate conceptualization. Since there is hardly any area of social, economic, cultural, and political life in India where the so-called tribes do not have their representatives, it is extremely important and urgent that the overall situation in India is examined closely with all earnestness and appreciated relatively more intimately. It is also considered imperative at this stage that applicability of the existing research tools for the study of tribes in particular, and tribal cultures in general, is thoroughly scrutinized and if necessary sufficiently

indigenized, so as to represent the Indian situation adequately as well as scientifically. The time is perhaps ripe when the Indian scholars should come forward with their own research tools and strategies of conceptualization on the basis of their respective as well as collective socio-cultural experiences, gained specifically through their exposures to the Indian social and cultural situations.

It is evident that the so-called tribes in India represents a very broad spectrum in terms of their population strength, geographical distribution, livelihood pattern, economic involvement, social and political participation, as well as cultural distinctions. As a result, there is hardly any area of socio-economic and cultural life, where they do not interact with their non-tribe counterparts or enjoy anything that could be designated exclusively as tribal in nature. Under the circumstance, to what extent the question of drawing the sharp line of divide between the tribes and non-tribes in India is at all valid or relevant, is required to be closely examined. Various socio-political and cultural movements that have been reported upon from different areas of tribal concentrations of this country indirectly suggest their nature of penetration in the life and culture of the people and how fruitfully the so-called tribes could utilize their exposures to liberal system of education and national programmes for their development and fulfillment of their respective aspirations. Instances are not rare to indicate that as adaptive measures, the people are participating with confidence in various interest alliances, which have made the nature of their apparent cultural or ethnic boundary rather fluid. In view of such facts, it has perhaps become important that we tend to reformulate our research questions and research strategies, redefine research tools, and try to make our assessment of tribes altogether afresh. It would be worthwhile to examine critically whether these vibrant populations, the so-called tribes, could be looked upon in terms of their participation in the contemporary political, economic, and social dynamics, instead of comprehending the tribes rather as a static category of sort, as if, a stagnant pool.

END NOTES

1. Incidentally, all the definitions cited here emerged out of social, cultural, and ethnic experiences of North Atlantic region of the world, particularly of those who have learnt to see tribes through the hegemony of their colonial administration, only as the subject populations. F. G. Bailey paid some attention to the relationship of tribe, caste, and nation though, while selecting the criteria for identification of tribes, he also fell back upon the same line of thinking when he had said, "Tribal people live in the hills : they are not Hindus, but animists : they are economically backward : they are autochthones : they speak tribal languages" (1960 : 263).
2. The temper of times and concomitant evolutionary bias, not only helped ignoring the cultural attributes of the so-called tribes but reduced them to savages or barbaric populations, the characteristic of whom appear more imaginary than having any realistic basis.

3. Enthoven, too, in this connection observed that, *from the dawn of history India has been subject to invasion by land and sea and the invaders who were themselves very probably of mixed origin, have seldom refrained from intermarriages with the heterogeneous population already established in the country (1920 : V).*
4. There is every likelihood that if the autochthons of Africa, America or India had to define what was tribe after their initial contact with Europe, they would have chosen a different set of attributes. The obvious questions that instantly crop up are, can scientific definition of tribe be subservient to the perception of a particular section of the global population only and if so, under the circumstance, what is the extent of its general applicability?
5. K. S. Mathur in this context observed that on cultural and linguistic plane, the tribes of India have never been markedly different from their neighbouring non-tribes (1972 : 459).
6. As an illustration, although S. C. Sinha was aware that the *Atabikas* or the forest dwelling people of the ancient and medieval texts of India were in symbiotic interaction with the caste-peasants of the plains and substantial segments of them were being drawn into the Varna-Jati social order, while attempting a definition he also wrote, *For our purpose, the tribe in contrast to the Varna-Jati based peasant core of Indian civilization is ideally defined as ecologically techno-economically, socially and culturally outside the threshold of caste-peasant social order(1984 : 14).* Nihar Ranjan Ray observed in this context that with the rise and growth of nationalism in Europe the term 'tribe' came to be used in denotation of a particular stage of socio-political evolution of a community of people within a given territory and language area (1972 : 7).
7. Since the thrust of research of any organization cannot ordinarily ignore the influence of theories and concepts already in circulation, it was rather likely that the Asiatic Society also patronized the set notions and concepts, in order to study and understand the Indian society and culture.
8. Edward B. Tylor (1871) considered Animism as the earliest form of religion. As a natural corollary, an association was assumed between Animism and archaic form of culture. Thus, believers of Animism have been attributed with the characteristics of tribes.
9. As observed by Ray : *It was in this context that the study of Indian anthropology and sociology began. Risley's People of India and his speculative comments on such terms as 'race', 'clan', 'caste', 'tribe', 'nation', 'people', etc. would illustrate what I mean. The situation ... has not changed very much since Risley ... who was one of the firsts to plead for the first partitioning of Bengal in his days (1972 : 8).*
10. R. E. Enthoven, too attempted a definition of tribe by identifying one positive and several negative attributes. According to him, *Broadly speaking, the term tribe is used in these pages for a unit based on common descent as opposed to the term caste which is applied to a social unit founded on common occupation, common residence, common language or common political control (1920 : IV).*
11. The myth of Aryan ancestry so much overwhelmed the so-called elites of India that they appeared to have had lost the vision of objective analysis of social and cultural facts generated from India.
12. Ray found the traditional Indian concept *Jana* more comprehensive and appropriate in this respect than the borrowed concept of tribe (1972 : 9).
13. Since such references bear opinions of individual scholars and not necessarily represent the view points of the organization they are attached with, I prefer not to take note of their institutional affiliations.

14. Spread of education and relatively higher degree of contact with the outside world have made the Scheduled Tribes of contemporary India respectful to their tradition, which at times got reflected through revivalism.
15. Unpublished manuscript received through personal communication.
16. Elsewhere Roy Burman (1979) dealt with the specific instance of the Post-Primitive of Chotanagpur. He took up the issue all over again and observed, *A tribal community may involve itself in multi-nucleated production situation, as a strategy of preservation of identity. It ceases to be 'primitive' but emerges Miranda like as the 'post-primitive' tribe.*

REFERENCES

A Committee of the Royal Anthropological Institute (First Published in 1874) 1960. *Notes and Queries on Anthropology*. London, Routledge and Kegan Paul Ltd.

Bailey, F.G.1960. *Tribe, Caste, and Nation*. Bombay, Oxford University Press.

Basham, A.L.1954.*The Wonder that was India*. New York, Grove Press, Inc.

Bose, Nirmal Kumar 1953. "The Hindu Method of Tribal Absorption", *Cultural Anthropology and Other Essays*. Calcutta, Indian Associated Publishing Co. Ltd.

Campbell, J. 1866. Ethnology of India. *Journal of the Asiatic Society of Bengal*. 35(Supplementary Number Part 2): 1-152.

Chatterjee, Suniti Kumar 1974. *Kirata-Jana-Kriti*. Calcutta, The Asiatic Society.

Chattopadhyay, K,P. 1970. *The Ancient Indian Culture Contacts and Migrations*. Calcutta, Firma K.L. Mukhopadhyay.

Chaudhuri, Mamata 1976. Ancient Indian Tribes and their Integration into the Hindu Society. *Journal of the Indian Anthropological Society*. 2 (2): 125-145.

Dalton, E.J.T. 1872. *Descriptive Ethnology of Bengal*. Calcutta, Supdt. Government Printing.

Darwin, Charles 1859. *On The Origin of Species By Means of Natural Selection Or the Preservation of Favoured Races in the Struggle for Life*. London, John Murray.

Enthoven, R.E. 1902. *Census of India 1901*, Vol. IX, Part 1, Bombay, Government Central Press.

Gadgil, D.R.1943. Foreword. In: *The Aborigines-"So-Called"-And Their Future* ed. by G.S. Ghurey, pp. VII-XIV. Poona, Gokhale Institute of Politics and Economics.

Ghurey, G.S.1943. *The Aborigines-"So-Called"-And Their Future*. Poona, Gokhale Institute of Politics and Economics.

Jay, Edward 1974. A Comparison of Tribal and Peasant Villages in India. *Journal of the Indian Anthropological Society* 19(1): 39-69.

Kosambi, D.D. 1956. *An Introduction to the Study of Indian History*. Bombay, Popular Book Depot.

Latham, R.G. 1859. *Ethnology of India*. London, Vass Voorst.

Mahapatra, L.K. 1974. Determining Social Types on the Tribe-Peasant Continuum. *Journal of Indian Anthropological Society* 19(1): 71-83.

Mathur, K.S.1972. Tribe in India: A Problem of Identification and Integration. In: *The Tribal Situation in India*, ed. by K.S. Singh, pp. 457-61. Simla, Indian Institute of Advanced Study.

Merriam-Webster 1967. *Webster's Third New International Dictionary of the English Language*. Vol. II, Massachusetts, G&C Merriam Company.

Misra, K.C. 1987. *Tribes in the Mahabharata: A Socio-Cultural Study*. Delhi, National Publishing House.

Orans, Martin 1965. *The Santal: A Tribe in Search of a Great Tradition*. Detroit, Wayne State University Press.

Ray, Nihar Ranjan 1972. Introductory Address. In: *The Tribal Situation in India*, ed. by K.S. Singh, pp. 21-22. Simla; Indian Institute of Advanced Study.

Risely, Sir Herbert (Reprinted in 1969) 1915. *The People of India*, Delhi, Oriental Books Reprint Corporation.

Roy Burman. B.K. 1979. Post Primitives of Chota Nagpur, Race *and Society*, pp. 102-141. Paris, UNESCO.

Roy Burman, B.K. 1983. Transformation of Tribes and Analogous Social Formations. *Economic and Political Weekly* XVIII (27): 1172-1174.

Sinha, C. Surajit. 1958: "Tribal Cultures of Peninsular India as a Dimension of Little Tradition in the Study of Indian Civilization: A Preliminary Statement", *Journal of American Folklore*. Vol. 71, No. 279, pp. 504-518.

Sinha, C. Surajit. 1962. State Formation and Rajput Myth in Tribal Central India. *Man in* India 42(1): 35-80.

Sinha, Surajit.1965. Tribe-Caste and Tribe-Peasant Continua in Central India. *Man in India* 45(1): 57-82.

Sinha, S.C. 1984. Tribal Societies in India: Case for Development through Conservation. *Conservation of Nature*. Calcutta, Humboldt Club.

Tylor, Edward B. 1971. *Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Language, Art and Custom.* London, J. Murray.

Winick, Charies. 1964. *Dictionary of Anthropology*. New Jersey, Littlefield, Adams and Co.

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Women Readymade Garment Workers and Their Sustainable Empowerment: Reality or Illusion? An Empirical Study in Dhaka, Bangladesh

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Abstract: Emergence of the RMG sector has enabled Bangladeshi women to take part in formal economic activities through which they have been able to attain empowerment that was previously denied to them. However, with lacking control over income and inadequate future planning, sustainability of this empowerment is questionable. This paper examines the sustainability of empowerment achieved by the female garment workers through a qualitative approach with Focus Group Discussions (two FGDs), In-depth Interviews (18 interviews) and Passive-Participant Observation methods since it provides a clear understanding and holistic image of the reality while incorporating Naila Kabeer's proposed three dimensions of empowerment- resource, agency and achievement. Three areas of Dhaka- Ashulia, Mirpur and Mohammadpur were chosen for this study as these are well known for their favorable garment infrastructure. The participants include- women currently employed (n=25) and former female apparel workers (n=3). Crucial themes emerged from this study are: trade unions are playing a vital role in awareness building among the workers; women, in general, still lack the control over their own income and have to bear the double burden that threaten their future; controlling the income is gradually emerging as a contested issue between the sexes due to their (women) enhanced awareness and self-esteem, that in turn, challenges the stern grip of patriarchy.Hence, sustainable empowerment for them is not a mere illusion; it has the very possibility to become a dazzling reality.

Key words : Empowerment, Control over Income, Readymade Garment Workers, Double Burden, Sustainable Empowerment.

INTRODUCTION

'Made in Bangladesh'- this tag is seen on most of the clothes in famous shopping malls and outlets of fashion houses throughout the world. Certainly this clothing sector is one of the few things through which people around the world hear the name, Bangladesh; even if it is for the first time. Bangladesh and readymade garment- these two words have now become synonymous to each other as it is the second largest country in the world in terms of producing and exporting clothing after China (McVeigh, 2014). This sector has not only provided the country with a strong economic base but also helped improve its position in gender indices as it is the single largest sector to employ women on a massive scale. Hence, this sector proved to be a pioneer one in ensuring women's economic empowerment in Bangladesh (Amin *et al.* 1998; Dannecker, 2002; Kabeer and Mahmud, 2004; Karim, 2014; Kautto, 2015; Khosla, 2009). The RMG sector, on the other hand, has also been strictly criticized for its

negligence towards workers' safety issues, violation of human rights and disputes in wage related issues (Bradfield, 2015; Dannecker, 2002; Khosla, 2009; Souplet-Wilson, 2014). Recent tragic incidents of Tazreen garments in November 24, 2012 and Rana Plaza in April 24, 2013 that claimed the lives of 124 and 1132 workers respectively (Jacobs and Singhal, 2017; Seabrook, 2013), shifted the focus highly on building safety measures. Consequently, the issue of nature and extent of women's empowerment through their employment in this industry has been subsided.

Presently, 80% workers employed in the RMG are female (Chakrobarty, 2017) who usually come from the rural areas (Amin *et al.* 1998; Bradfield, 2015; Dannecker, 2002; Karim, 2014). Since 1980s, women apparel workers have contributed a lot for the process of industrialization (Feldman, 2009). These women now earn income that has enhanced their status. However, the society remains highly patriarchal in nature where a male is usually considered all in all in a family, irrespective of his employment status(Dannecker, 2002).In a recent study by Heintz, Kabeer and Mahmud (2018), it is found that hierarchical relations between men and women exist in Bangladeshi society that refrain women from involving in activities of economic, social and political domain. They also showed that women's participation has increased their earnings that have enhanced their status in the family and involvement in decision making. Since gendered structures of restraints have not been changed, the procedure of empowerment is restricted as there has not been an entire change in the unequal power relations among them (Souplet-Wilson, 2014). In a highly male dominated society like Bangladesh where patriarchy is in full swing and regulates everyone's life, the issue of women apparel workers' empowerment should not be faded away as these women have challenged the hard and fast norms of patriarchy on their own (Dannecker, 2002; Kabeer and Mahmud, 2004; Karim, 2014). These women are still struggling for having control over their income as the typical patriarchal structure prohibits them from exercising the right to control their own earnings (Bradfield, 2015; Dannecker, 2002; Kautto, 2015; Souplet-Wilson, 2014). Apart from this income issue, there is another aspect that is part and parcel of every Bangladeshi working woman's life and it is no less significant than economic insecurity in terms of threatening their future- 'Double burden.'[1] The synchronous influence of these two aspects infallibly pose a threat to the present 'empowered' status of female apparel workers.

In this era of 'Sustainable Development,'[2] it is imperative to investigate whether they can maintain their current better situation and augmented status in the long run for being termed as 'sustainable empowerment' or it is true that this mega industry is just expanding itself by taking the "comparative advantage of women's disadvantage" (Arizpe and Aranda, 1981).

In order to bridge the gap between reality and illusion, this paper adopted a qualitative approach to get a clear idea about the status of empowerment of

the female RMG workers by focusing on their lives both in private and public spheres. By critically reviewing necessary secondary literatures, this paper constructed the logical arguments. With a view to providing a vibrant understanding on the issue, this paper is being structured in three main sections. The first one provides a thorough understanding on the meaning of empowerment by reviewing available scholarly publications. Later on, this part deals with the conceptualization of sustainable empowerment and hence, depicts a clear portrayal of it. The second section briefs on methodological aspects and finally, the last part highlights the findings i.e. voices of the respondents that help unearth the real setting.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Empowerment of Women: A Brief Narrative

The term 'Empowerment' indicates to measures intended to enhance the level of autonomy and self-confidence in individuals and in networks so as to enable them to speak to their interests in a dependable and self-decided way, following up on their own position. It is the way toward getting sturdier and more determined, particularly in controlling one's life and asserting one's rights. Robert Adams focuses to the limitations of any single meaning of 'empowerment'. Yet he tries to provide a definition: "Empowerment: the capacity of individuals, groups and/or communities to take control of their circumstances, exercise power and achieve their own goals, and the process by which, individually and collectively, they are able to help themselves and others to maximize the quality of their lives" (Adams:: 2008:xvi). Rappaport (1984) considers empowerment as a process and defines it as the instrument that makes people enable to have mastery over their own lives.

The concept of 'women's empowerment' has drawn significant attention in the past few decades and has emerged as a noteworthy issue in the field of development. It is multidimensional and dynamic in nature (Malhotra, Schuler and Boender, 2002). Bennett (2002) has proposed a framework relating 'empowerment' and 'social inclusion' closely but as distinct ones. She conceptualizes empowerment as the expansion of resources and competences of assorted persons and groups to participate, influence and hold responsible the institutions that affect their lives. Social inclusion is defined as the deletion of institutional restrictions and the augmentation of inducements to enhance the access of different people and groups to resources and development opportunities (Bennett, 2002). As most of the women in Bangladesh are marginalized to a greater extent and excluded from mainstream development practices, Bennett's definition of social inclusion is highly appropriate in the context of Bangladesh.

There is an amalgamation of a couple of keys, covering terms that are regularly incorporated into characterizing women's empowerment: 'options,' 'choice,' 'control' and 'power.' Often these are alluding to women's capacity to

settle on choices and influence results of significance to themselves and their families. Control over one's own life and over assets is frequently pushed (Malhotra, Schuler and Boender:: 2002:5). According to Keller and Mbwewe (1991), it is a procedure by which females become capable of forming themselves to boost their own autonomy, to make choices by asserting their independent right and to have control over assets which will help them to challenge and remove their very own subordination.

A common element that is frequently found in the scholarly writings is 'self-efficacy' which is closely related to 'agency' (Malhotra, Schuler and Boender, 2002). That is, women ought to have the capacity to characterize self-interests and decision, and view themselves as capable, as well as qualified for making choices (Nussbaum, 2000; Rowlands, 1996; Sen, 2000). Kabeer (2005) goes further and portrays this procedure regarding 'thinking outside the system' and contending the 'status quo.' She offers a definition of empowerment that is convenient in capturing the commonalities to these delineations and can easily be applied across the focused contexts and dimensions of development:

> "The expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them" (Kabeer:: 1999:437).

Kabeer (2005) in her writing places a great emphasis on 'choice,' but there is variability in the importance of the choices as she argues that some pose more significance than others in terms of consequences. According to her, 'strategic life choices' are of most importance which comprise 'where to live,''whether and whom to marry,''whether to have children,' 'how many children to have,''who has custody over children,''freedom of movement and association' (Kabeer:: 2005:14). These questions are related to the quality of a woman's life, but Naila Kabeer is careful in the sense that these choices should not be harmful to others' capacities.

The argument of Kabeer (2005) regarding 'choice' is based on three interlinked concepts: 'agency, resource and achievements' and she states that these are the primary components of empowerment. Resources and agency are the two most highlighted components of women's empowerment by academicians. Kabeer (2005:14) defines agency as "the processes by which choices are made and put into effect". Sen (2000) sees it as the process of eliminating innumerable forms of 'unfreedoms' that hinders choices and agency of an individual. Malhotra, Schuler and Boender (2002) define it as the capability to figure key tactical decisions and to control assets and choices that influence significant life outcomes.

Kabeer (2005) defines 'resources' as the medium for exercising agency. Resources are not regarded as empowerment; rather they act as the reagents for empowerment. These can be seen merely as the 'enabling factors' that help get empowered. Some proxy variables, like 'education' and 'employment' have

been used conventionally for assessing empowerment can be considered as resources that enhance the possibility of empowerment (Kishor, 2000 in Malhotra, Schuler and Boender:: 2002:8).

The third component in Kabeer's writing is 'achievements' which she describes- individuals' abilities are made by resources and agency. In connection to conceptualizing empowerment, achievements have been considered as far as both the agency practiced and its outcomes (Kabeer, 2005). Malhotra, Schuler and Boender (2002) simply put this as achievements are best considered to be the outcomes of empowerment, not as the empowerment itself.

Conceptualizing'Sustainable Empowerment'

In light of different propositions in the academic literature (Graflund, 2013; Hashemi, Schuler and Riley, 1996; Haque *et al.* 2011; Hossain, Alam and Majumder, 2016; Jinia, 2016; Malhotra, Schuler and Boender, 2002; Mason and Smith, 2003; Nessa, Ali and Abdul-Hakim, 2012; Pitt, Khandker and Cartwright, 2006; Rahman and Naoroze, 2007; Rahman, Junankar and Malik, 2009), empowerment of Bangladeshi women RMG workers can be measured by six dimensions that are expected to portray the extension of 'choice' and 'freedom' of women to decide, and in addition to take the activities which are significant in influencing their life outcomes. These dimensions can be divided into two parts-

1. Private sphere
2. Public sphere

Private sphere dimensions include-

1. Economic Decision Making
2. Involvement in Major Household Decisions Making
3. Control over Income
4. Political and Legal Awareness

Public sphere dimensions include-

1. Mobility
2. Collective Voice

These dimensions can be further linked with Kabeer's (2005) approach to empowerment which is a combination of three dimensions: 'agency,' 'resources' and 'achievements.' The interrelation among these three variables is quite complex due to different contexts. A variable might act as a supporting factor in one context whereas it might work as a pointer of females' agency in other and might symbolize achievement in another context. For instance, access to microcredit and employment are frequently regarded as assets for the empowerment of women (Malhotra, Schuler and Boender, 2002).

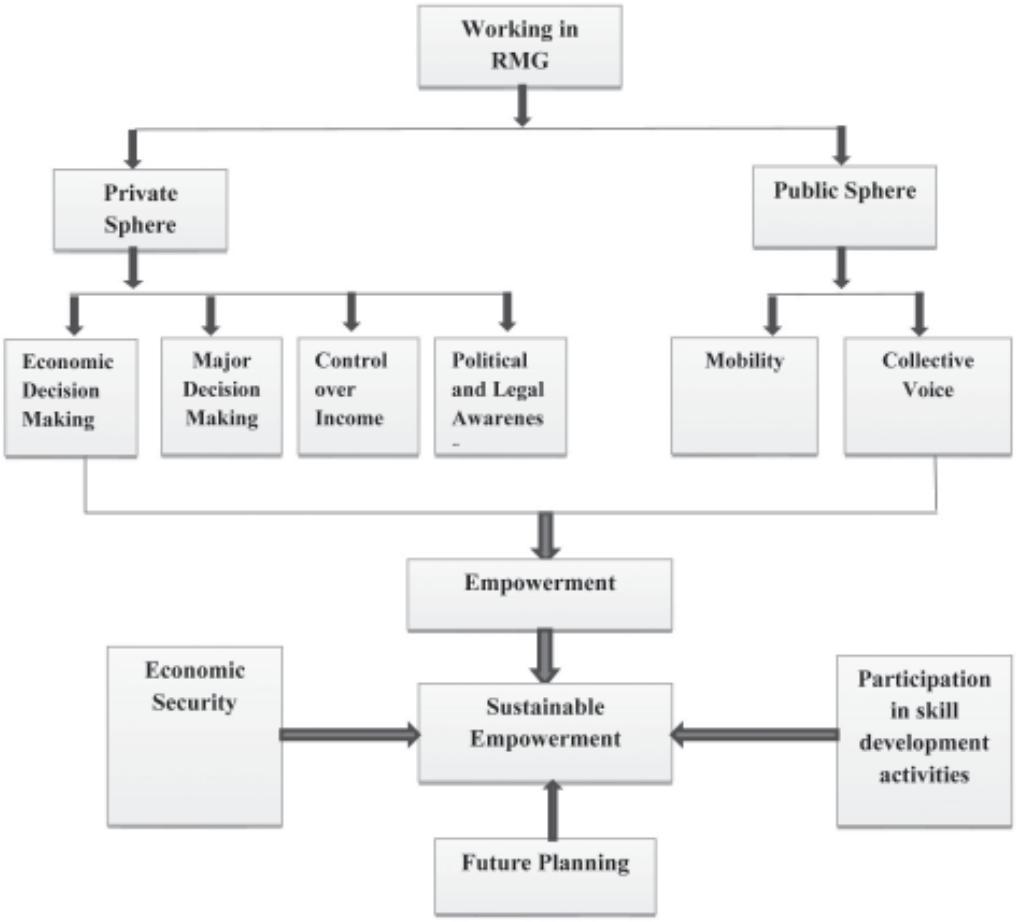

Figure 1: Conceptualization of Sustainable Empowerment

In the context of Bangladesh, participation in making economic and major household decision making can be considered as indicators to capture the agency of women as these (including 'strategic life choices' as well) entail certain choices to be executed.

Resources can be considered as the supporting factors that foster the process of empowerment. In this study, employment in the garment sector is considered as the resource.

Achievements simply refer to the outcome of agency and resources (Kabeer, 2005). In Bangladesh, the achievements of women apparel workers can be termed as their freedom of movement, control over own income, savings, assets and collective voice. Here, collective voice basically means their participation in trade unions and co-operatives, united stand or collective bargaining power and collective protest. Since it is found in literature that

female workers have to bear the double burden while lacking control over own income, they await an uncertain future. Sustainability of empowerment to be assessed by focusing on 3 factors-

1. Economic Security
2. Future Planning
3. Participation in Skill Development Activities.

Here, 'control over income' and 'economic security' have been used for depicting conditions in present and future respectively.

In Bangladeshi apparel sector, workers' payment is very low as they used to get a minimum wage of 5300 Taka and recently, it has been raised to 8000 Taka (The Daily Star, January 14, 2019). Furthermore, there are allegations of irregular payments and gender based discrimination in wages (Alam, 2016; Dannecker, 2002; Bradfield, 2015; Jalava, 2015; Khan and Wichterich, 2015; Souplet-Wilson, 2014) that make it very difficult for female workers to make their both ends meet. The situation gets even worse as it is evident that they do lack control over their own earnings. Under such circumstances, the question of economic security gains significant ground.

Another important issue is future planning or the purpose of savings (if any), as it requires to be productive one for the betterment of the workers in upcoming times. Available literatures have not placed much emphasis on this point. It has been found that unmarried women workers try to save money for their marriage as dowry is required and for other expenses related to marriage (Dannecker, 2002; Souplet-Wilson, 2014). Another motivation for female workers is to buy land in their villages, although there is no specificity about the usage of land (Dannecker, 2002). Saving, particularly for marriage is quite risky in a sense that in Bangladesh there are lots of cases where female RMG workers are being abandoned by their husbands (Ashraf Ali, 2014; Dannecker, 2002; Souplet-Wilson, 2014). Additionally, in a painstaking job like apparel sector, where women have to work for long hours, even more than eight hours set by labour laws on a regular basis (Alam, 2016; Jalava, 2015; Khan and Wichterich, 2015), their duty to bear the double burden seriously hampers their health (Ashraf Ali, 2014; Dannecker, 2002; Enole, 2015; Kabeer and Mahmud, 2004; Khosla, 2009; Naved *et al.* 2017) that undoubtedly casts clouds over their future. It is a reality that they just cannot avoid. Any failure in fulfilling their assigned domestic roles, however, lead to violence against them (Dannecker, 2002; Souplet-Wilson, 2014). Furthermore, the situation is surely to get worse in case of their lacking of control over income and other assets along with nonspecific or even worse, no plans for future.

In Bangladesh, many female RMG workers have memberships in different co-operatives and they also take loans from these organizations (Amin et al. 1998; Dannecker, 2002; Bradfield, 2015). But the question is for what purpose they intend to use such loans? If they use these for productive purposes like

investment and skill development, then it will be beneficial for their future since available literatures suggest that after quitting factory job, many of them start working as maidservants that is highly perceived as 'less dignified' (Dannecker, 2002; Kabeer and Mahmud, 2004). Yet the question remains- with such a hectic working schedule, is it really possible for them to engage in skill development activities?

METHODOLOGY

Study Design

Depending upon the characteristics of the 'research questions,' a study is designed (Creswell, 2012). If the aim of a research is to explore the life of the respondents and their daily activities in both private and public spheres, then the best appropriate approach is considered to be the qualitative one (Silverman, 2013). According to Bryman (2012:620), "Qualitative researchers often want to interpret people's behavior in terms of the norms, values, and culture of the group or community in question." Since this study intends to explore the extent of empowerment of female RMG workers in both private and public spheres by listening to the voices of concerned characters, qualitative research approach was embraced.

Research Area

The study area covers three factories from Ashulia, Mirpur and Mohammadpur of Dhaka respectively which are regarded as the 'garment belt' (Textile Today, 2016). Among the chosen factories, two are signatories of Accord[3] and the remaining one belongs to Alliance[4].

Sampling and Study Population

Sampling and sample size are two important issues in a research. The study followed 'snowball' and 'purposive' sampling techniques for the sake of convenience. It was not possible to reach all the participants in the FGDs within a fixed period of time.

I used my networks to get access to the factories to select respondents, to get familiar with them and to observe the internal physical settings and conditions of those factories. Firstly, I discussed with the floor managers and requested them to select general female workers considering variations on age, educational background and marital status. As the floor managers know workers under their supervision well, they proved to be very useful in this regard. After conducting FGDs in two factories and an informal conversation with nine workers in the other one (it was not possible to conduct FGD due to time constraints), I hand-picked 15 respondents for having semi-structured in-depth interviews who provided rich and to the point information.

Although the factory owners were contacted through social networks, they were somewhat skeptical about our intentions and reviewed the FGD questionnaire. This sort of attitude from factory authorities is highly evident

in available relevant literature (Akhter, 2018; Bradfield, 2015; Dannecker, 2002; Kautto, 2015). Nevertheless, after understanding the main purpose of this study, they co-operated warmly and arranged the FGDs at their conference rooms with no interference. The owners and officials were highly optimistic about the positive changes accrued to female workers and they unanimously opined that the credit should go to the owners only since they have provided jobs to these "poor and destitute" women. Such self-conceited perception has the possibility to lead to authoritarian behavior from factory management that might hamper workers' welfare.

When it comes to qualitative research, the rules for calculating sample size are much flexible than they are for quantitative ones (Agar, 1986). A sample size consisting of 20-30 (Creswell, 2014) or 25-30 respondents (Ager, 1986; Pelto and Pelto, 1978) is generally considered to be adequate when studying a 'homogenous population' (Walliman, 2006). In qualitative research, it has been discovered that 'saturation' happens at somewhere in the range of 20 and 25 respondents (Pelto and Pelto, 1978). 'Saturation' alludes to the time when additional meetings uncover hardly any, new bits of knowledge and 'insights (Charmaz, 2006; Ritchie and Spencer, 2002). In this study, the author chooses to discuss 'saturation' with reference to the number of participants in FGDs and not from the standpoint of total composition of FGDs. Here the basic assumption was that women as readymade garment workers maintain a level of uniformity with respect to time schedule, which also implies that the 'return' will almost be similar in the case of all the female workers.

This study includes two categories of respondents- women currently working (n=25) and former women workers (n=3) in order to ensure saturation.

Data Collection& Analysis

This study followed In-depth Semi-structured Interview, Focus Group Discussions (FGD) and Passive-participant Observation (both in their workplace and residence) tools for primary data collection since these effectively enable to find out intensive data on female workers and their empowerment situation regulated by their employment in the apparel sector. These methods help examined whether or not they are enjoying the 'empowered status,' and if yes, to what extent they are exercising their 'agency' in reality. Focusing on the narratives from the study people, these three techniques helped understand this particular context elaborately.

For this study, two FGDs, each consisting eight members, were conducted at two factories after regular working hours and those meetings lasted for about 70 to 80 minutes. Respondents were selected on the basis of a shared background i.e. socio-economic condition and status of employment in order to uphold the study purpose strictly. It is worth mentioning that this research incorporates general female workers, not those who hold an upper position in the employment hierarchy. This commonality leads to get a 'homogeneous population' that reflects the attribute of data saturation. The group discussions

essentially widened the scope for all the participants to exchange their views and experiences and to get familiar with new thoughts and ideas. A trained female research assistant was appointed to form the research team who contributed immensely during fieldworks. From these 16 FGD respondents, eight were selected for further in-depth interviews.

In-depth interviews particular proved to be worthwhile as it created the opportunity for getting a deeper insight about the thoughts and perceptions of the study population in a precise manner. The in-depth voices of 15 currently working and three former women workers have been incorporated in this study and the time span of those discussions varied between 35 to 60 minutes. All these interviews took place at their residence as per their favorable time.

The findings from both the above mentioned tools have been reinforced by passive-participant observation that enables researchers to tacitly gather information about a phenomenon or setting in real terms. This specific technique proved to be very useful for this study as it helped capture certain aspects regarding working environment, behavior and attitude of female workers and their employers that were not formally incorporated into the questionnaires.

The method of 'close verbatim' was used for collecting primary data since it is found that usage of tape recorders often make respondents uncomfortable and doubtful (Haque, 2018). The 2019 uprising in Bangladesh's apparel sector (The Daily Star, January 10, 2019) created such uncomfortable circumstances for the respondents of this study and they strongly requested for not using any electrical devices to record our conversations since they all have a common experience of seeing many workers getting fired from jobs because of having recorded interviews with journalists and participating in protests. This particular aspect has been portrayed in literature as workers always remain in a state of fear of losing jobs (Dannecker, 2002). Participants of this study wanted to maintain as less exposure as possible and stated that they do not want to fall into any 'trouble,' as now-a-days, it is getting harder and harder to find jobs in this industry due to abundance of labor force. Therefore, to ensure their anonymity, this paper uses pseudo names for each respondent. All their narratives were written down on a field note book and to capture important quotations precisely, I politely asked the participants to pause for a while to note those words and resumed the conversations again just as suggested by Patton (2002:381). Both the transcription and analysis of qualitative data were done manually.

In qualitative research, validity and thoroughness of a study is kept up through a process named, 'triangulation' that refers to the collection of data from various sources using multiple methods (Patton, 2005). Here a small attempt has been made in that direction.

UNVEILING REALITIES: DIFFERENT VOICES, DIFFERENT PERCEPTIONS

Decision Takers

Two of the well-articulated empowerment dimensions are women's participation in household's economic decision making (buying daily necessities, big purchase like television/refrigerator/furniture) and their involvement in major household decisions like education, treatment and marriage related decisions of the family members and decisions on financial lending-borrowing, buying and selling of assets. Wage employment has essentially enhanced women's participation in decision making along with their negotiating power (Amin *et al.*1998; Bradfield, 2015; Dannecker, 2002; Kabeer, 2005; Kabeer, Mahmud and Tasneem, 2011; Karim, 2014; Rahman, 2014; Souplet-Wilson, 2014). Though previous studies suggest less participation of married women in decision making, this study concludes that employment in garment sector has increased women's such participation. However, strategic household financial decisions (Borrowing-lending, buying or selling of land or property) are still mainly controlled by men as majority from both the sexes consider it as men's domain. Sheuli opines:

> My husband takes the decisions related to big purchase and I think it's a men's task. He understands well about this (Author's interview, March 2019)

This gendered conception is not unfamiliar in a patriarchal society like Bangladesh. The deep-rooted perception that a female is to be necessarily 'supervised' by a male entity highly encircles their lives. Women too, are part of this setting and are brought up knowing the practice of males' hegemony in decision making. Nonetheless, this scenario is changing through women's increasing participation in economic activities which gives their income generating activities a 'recognition.' This recognition is important in gaining their enhanced status both in family and society. Hafiza narrates:

> My income earning capacity is the game changer. If a woman can earn, everyone will respect her. After I had got this job, my father and mother started listening to my words, my opinions which he actually never used to do. Now, there is no single matter where I do not take part (FGD 2, March 2019).

The scenario, however, is quite opposite for those unmarried apparel workers living with their parents since decisions are usually made by their fathers. This segment of women are willingly accepting this practice since it is a well-established custom in Bangladesh's highly patriarchal society and the continuous physical presence of parents, chiefly the fathers, reminds them of this tradition. This ascribed norm usually teaches 'never to question your parents as they better understand what is best for you.' In reality, this has become more like 'not to question your father' as society promotes male supremacy and mother plays a subordinate role in household power dynamics.

Their wage earning ability turns them into a valuable asset for parents, but this, objectifies women as mere income generating machines as well since they are being left out from being an active decision maker. Interestingly, unmarried female workers living alone do materialize their own agencies way better than that of those living with parents (Dannecker, 2002) as they get the space required to think by themselves. After 19 years, this particular scenario has not yet been changed. Her study (2002) depicted that unmarried women living with other relatives in Dhaka have negligible participation in making decisions regarding their residing household, although mostof them handover their income to the male household heads i.e. brothers, uncles and brother-in-laws. This situation has changed in the course of time as this study found their(female workers') prominent participation as decision takers as well. This picture draws our attention to the fact that parents' role as being the 'controllers' of their daughters' lives is actually making them submissive in nature which they might never overcome and fall victim to their parents' 'well-wishes' in the long run.

Freedom of Movement

Any type of wage employment has a positive effect on women's mobility (Amin *et al.* 1998; Dannecker, 2002; Malhotra, Schuler and Boender, 2002; Kabeer, 2005; Kabeer and Mahmud, 2004), and if it is factory work, especially export garment sector, then working women undoubtedly enjoy much freedom of movement (Kabeer, 2005;Kabeer, Mahmud and Tasneem, 2011). Movements entail them with additional benefits like, in holidays, they usually visit many places in a move to get recreated or entertained as it frees them from the monotony of factory work. Their increased mobility enables them to explore the capital city that makes them well known about important locations which in turn act as a significant asset to them. According to Kulsum:

> Obviously my movement has increased in Dhaka which is simply unimaginable in my village. There, after a certain age, people do not like girls' movement without any guardians. But in Dhaka you cannot survive if you pay heed to these words; you cannot live if you start to consider what people say about your movement. And actually, people living here are all busy with their lives. Wherever we get time, Poppy, Salma, Rashida and I go out and visit parks, shopping centers and even sometimes we go to movie theaters. I know this city very well and last year I helped one of my distantly related uncles to get admitted into the PG Hospital (Bangabandhu Sheikh Mujib Medical University). I made all the arrangements and my uncle was blown away by this as he thinks women should not work outside (Author's interview, March 2019).

Kulsum's words are particularly significant in Bangladeshi context where the lives of women are guided by various societal norms and 'purdah' (Amin *et al.*1998; Kabeer, 2005; Kabeer, Mahmud and Tasneem, 2011;Khosla, 2009)

that restrict their mobility. Employment in formal sector is used by these women as a tool to break this practice and in Bangladesh, predominantly the RMG sector has provided the ground for this change on a mass basis (Amin *et al.*1998; Bradfield, 2015; Dannecker, 2002; Kabeer, 2005; Kabeer, Mahmud and Tasneem, 2011; Kabeer and Mahmud, 2004; Khosla, 2009). The confidence and glaze in their eyes and body language regarding the issue of freedom of movement that I witnessed during the fieldworks clearly indicates the smugness and joy of certain achievements; achievements that challenge patriarchal norms, ensure their dignity and instill a vibe of being empowered. However, this increased mobility has its own demerits as women in Bangladesh have to deal with issues like sexual harassment in public transport and eve-teasing. Kabeer, Mahmud and Tasneem(2011) summarize this by saying that the types of work that empower women in turn are responsible for their harassment as it take them to public sphere. They put it as a cost of women's participation in paid employment. With all these constraints, women working in Bangladesh's apparel sector are marching forward as economic actors and they have their own strategies to mitigate these adversities which are to be discussed in the next part.

Collective Voice

It is well-articulated that women are employed in this sector because of their 'docile' nature (Amin, *et al.*1998; Dannecker, 2002; Kabeer and Mahmud, 2004; Kibria, 1995; Paul-Majumder and Begum, 2000). However, this does not stop them from resisting and raising their voices in a maneuver to survive (Dannecker, 2002). Women have their own strategies to respond to any inconvenient events and through factory work, they have built their own networks which helps them raise voice collectively and protest against anything harmful to their interests. Hafiza shares her out of factory experience:

> Some stalkers used to disturb me on my way to home. I felt insecure as I usually cannot reach home before evening and so, I shared this with some of my colleagues who live nearby. The next day they (altogether 6 women) joined me on my way back home. Those men started using bad language and Rahela *apa* (a Bengali word meaning sister or senior female colleague) went straight toward them and slapped one. We all were stunned by this and they (miscreants) left the place immediately. *Apa* then took me to the ward councilor's office and we complained about those guys. He took the matter seriously and summoned them. I have not faced any problems since then (FGD 2, March 2019).

The other experiences are more or less similar and the fact that these collective actions instill a sense of strength and self-confidence which have a long lasting impact on the workers that they effectively utilize in their other spheres of life (Dannecker, 2002). The informal networks they build among themselves (workers) prove to be important tool or strategy for them to deal

with adverse scenarios. Dannecker (2002:220) puts it like "networks represent the ground on which women's individual discontent can be converted into collective action." Lipi shares her experience of utilizing both informal and formal networks:

> There was an incident in my previous factory where we all acted together. Our supervisor (a male) used to touch a woman badly whenever he could. We all knew about his ill character, but were afraid to say anything as he was from our owner's village. One day that man touched Sufia (Lipi's former colleague) so indecently that I could not resist from doing something and immediately shouted. All the workers stopped working after knowing what happened. Even our male colleagues joined us. Manager and some trade union leaders arrived after a while and we all complained to the owner and demanded that he should be punished. It was a serious accusation and he was sacked immediately. For the first time, I felt a sense of strength in myself (Author's interview, March 2019).

Trade union's role in this incident is quite astonishing as available literatures suggest that women workers and unions share a fragile relation, although it is considered as a 'formal network of workers' that uphold their interests. These unions have been criticized for neglecting workers' rights and interests (Alam, 2016; Dannecker, 2002; Jalava, 2015; Khan and Wichterich, 2015). Furthermore, Dannecker (2002) termed women's participation in trade unions as short-term and focused on their insignificant role in these organizations. Surprisingly, participation rate of women workers nowindicates an upward trend. As most of the women (21 out of 25) in this study are active members of trade unions and they try to participate in regular meetings arranged by the organizations since they find it beneficial to their interests. This notion is stressed by Dannecker (2002) as she opined that if women see any benefits from joining an organization, then time constraints and marital status are not main obstacles for them to join. This spontaneous participation lies in contrast with previous studies where women workers lacked the willingness to join the unions. Authoritarian behavior and bad treatment by the leaders, less focus on female worker's issues, unfamiliarity with the union leaders emerged as the prime reasons for women's such reluctance (Alam, 2016; Dannecker, 2002; Jalava, 2015; Khan and Wichterich, 2015). However, things have changed and in reality, trade unions are now playing praiseworthy role in building awareness by letting workers inform about labour laws, train them on building safety issues and are well-behaved towards women workers as well. According to Hasina:

> I have been a member of trade union for about four years and whenever I get time, I try to join the meetings. They discuss on various issues like safety in working place, wage and labor laws. They have also informed us about various laws and systems that protect women from

> violence; now I know what to do in case I face any violence. They even regularly organize mock drills on fire safety (FGD 1, March, 2019).

An important factor regarding factory employment is about workers' safety, dignity, working conditions and other facilities provided to them. Unfortunately, Bangladesh's RMG industry holds a bad reputation for neglecting these issues (Alam, 2016; Bradfield, 2015; Dannecker, 2002; Jalava, 2015; Kautto, 2015). However, things started to change after the back to back tragedies of Tazreen garments and Rana Plaza as international pressure led the authority concerned to bring about some effective changes. The physical setting of the study factories is quite satisfying as owners have placed much emphasis on building safety codes since they are under regular monitoring by Accord and Alliance. Each factory has a spacious fire exit and numerous extinguishers are placed on each floor. However, in one factory, the fire escape on the top floor was kept locked and this space was being used as a makeshift storeroom. Such apparent minor negligence might cost hundreds of lives in a sudden accident.

Dannecker (2002), in her study showed that the sanitation system inside the factories is not adequate and workers are not allowed to use toilets more than two times causing significant health problems. This study finds that physical conditions of washrooms are hygienic as they are kept clean while male and female workers have separate toilet facilities. However, the number of toilets on each floor is still inadequate and for using toilets, workers require permissions from their floor supervisors. Each worker is allowed to use toilets thrice a day during working hours. The reason for setting such a ceiling on toilet usage is that factory authority believes that workers, especially females, 'waste' additional time in washrooms for gossiping (Dannecker, 2002). Interestingly, most of the participants opined in favor of this controlling system as they consider young females do have such tendency. However, management authorities allow females who have illness like diabetes to use toilets as per their necessity. Another significant issue is that the role of floor supervisors are now being awarded to females mostly and the number of women officials in administrative structure is slowly rising that is making women as an entity visible in a formal office setting. This scenario is encouraging as previous studies show that women lack participation in such prominent positions, especially in the administrative and managerial ones that further makes female workers vulnerable as they find no female body who could address their problems effectively, which in turn, increases the scope and incidence of abuse by male employees (Bradfield, 2015; Dannecker, 2002). The presence of females in these positions instill a sense of security and comfort among general women workers as they now have female bosses to share their concerns with.

Another significant initiative that is particularly congenial to working mothers is that functional day care centers with breast feeding corners in

factory premises have been arranged. Lack of such a facility is a major concern for mothers and it has been found that separation from children for long hours adversely affect their mental health (Akhter, 2018; Dannecker, 2002). However, majority of the female workers hold the view that their children should be looked after at home by any relative since they are not familiar with this formal arrangement, although they appreciate the initiative. The main reason behind their apathy towards this arrangement is that there is only a female worker assigned to look after children who they consider inadequate as she lacks proper training and has to take care of babies for long working hours. This trust issue gets more intensified as workers are permitted to check on their babies during the lunch breaks only.

As a platform for workers' united stand, trade unions are now slowly creating a space where female workers can identify themselves as significant active participants whose words are being accounted for. Moreover, the informal social capital built among these women effectively acts as an invaluable resource that enables them to mitigate adversities while enhancing their solidarity further. The end result is that, through these formal and informal networks, they are now creating a strong, collective and dignified identity for themselves.

Social, Political and Legal Awareness

Formal sector employment has a positive impact on awareness issues. In case of Bangladesh's RMG sector, workers have been found unaware about their rights and labor laws which led to their further exploitation (Amin *et al.*1998; Dannecker, 2002; Kabeer, 2005; Kabeer and Mahmuud, 2004). However, Kabeer, Mahmud and Tasneem (2011) in their study showed that garment workers, particularly the women are aware of labour laws. Hasina describes accordingly:

> I know my rights as a worker. The trade union leaders arrange regular meetings and through them I have become familiar with the labour laws. The scenario changed after the incident of Rana Plaza and they (trade union leaders) started to discuss with us more on wage, building safety issues and workers' rights. They even have discussed on various laws that protect women from violence. Recently my daughter introduced me with a government emergency service called '109'[6](Author's interview, March 2019).

Trade unions' role is significant in introducing workers with various policies and laws and hence, points to their meaningfulness if properly functioned. Moreover, new information and learning are disseminated to other non-participant women by the participating union members and thus, create a chain referral system that no women can escape. The information Hasina received form her daughter signifies the role of family members as potential information providers and their enhanced level of awareness as well. This specific aspect reinforces their (female workers) knowledge on social and

political happenings that keeps them updated since it is almost impossible for women apparel workers to find time to read newspapers or to watch television (Dannecker, 2002); two potential sources of information. They are politically aware too, as they exercise their right to vote, take part in discussions on various political and social issues.During interviews, the enthusiasm they exhibited regarding Bangladesh's election, political culture and socio-economic development related issues is quite extraordinary. A significant point is that they all believe their formal employment created the 'space' necessary to get involved in such discussions which is absent in their private lives since this sort of participation is highly viewed as men's domain. Thus, they again challenge the beliefs driven by typical patriarchy.

Who Controls the Income?

Employment in the RMG sector has provided marginalized Bangladeshi women with the opportunity to contribute to their families financially that in turn enhances their status and bargaining power within the households (Dannecker, 2002; Kabeer, 2005; Kabeer and Mahmud, 2004; Karim, 2014). During conversations, the pride and honor I sensed among these women about their augmented position in the households due to their participation in wage employment is clearly an indication to their enhanced 'life chances' (Kabeer, 2005, Bradfield, 2015).However, Dannecker (2002) stresses that, this earning capacity has further increased their exploitation while their lack of control over income is evident (Bradfield, 2015; Dannecker, 2002; Kautto, 2015; Souplet-Wilson, 2014). Hazera's experience can be helpful to understand the adverse consequence of this particular aspect:

> I have been working in this sector for almost six years and after getting married, I used to give my salary to my husband. I had to ask him for money whenever needed which usually made him angry. Before my marriage, I used to keep the money to myself. However, that low wage was not at all sufficient to raise a savings. After three years of marriage, I suddenly came to know about his affair with another woman. He had been spending my hard earned income on her and a few days later, he divorced me. I was left alone with my only child having no financial base; all I had was my job. This was a lesson for me and now I try to motivate others to have at least some sort of economic solvency (Author's interview, March 2019).

Hazera is not the only soul with such an experience; two other respondents have gone through similar straits.Women garment workers are considered to be good wives by men because of their income potential (Dannecker, 2002). She found that only unmarried women who live in the hostels, a tiny portion of working women, fully control their incomes. The other categories like unmarried and living with relatives, unmarried and living with their families and married women have no control over their earnings, especially the married ones (Dannecker, 2002). Control over income and

financial assets still remains a highly disputed issue, as men, in general, are not willing to lose hold of that grip; it is largely viewed as a 'men's task' by both the sexes. This study found that 68% women do not have the *de facto*[5]control over their own income and married women, in general, now have greater say on the usage of their earnings, although it is still dominantly controlled and managed by their husbands. However, women who perceive that they, themselves should be controlling their income, are gaining strong grounds by their effective financial contribution to the households. Shuktara states:

> Yes, I keep the income to myself and from there I regularly try to save some money. Every month I send some money to my parents. My husband does the same; he gives money to his parents from his own income. We share the household expenditure and have our different savings. But in emergency, we give money to each other and strictly maintain a diary about financial expenditures (Author's interview, March 2019).

Now-a-days, controlling the income is arising as a significant factor for breaking up of marriage. Debate over this question is leading to violence against women and instead of being a passive victim, they are now showing a tendency to confront it. Even, they use their networks to get support in this regard; at least four women have successfully utilized this social capital which surely can be seen as a hard earned achievement. Nasrin (a former worker) narrates:

> I strictly believe that a person should control his/her own income. Of course, I have responsibilities and have to support my family financially. But that does not mean that I just handover my income to husband and he misuses it. My husband did not like my attitude and we often had severe quarrels over this issue. He started to beat me and made this habitual. I endured enough pain and one day decided to divorce him. My colleagues in the factory helped me a lot to get rid of that greedy man (Author's interview, March 2019).

A significant aspect is that, mostly veteran working women possess the view that earner should hold the control over earnings and they emphasized on learning from experiences and examples. During FGDs, these experienced ladies literally conveyed this message to their fellow young colleagues- "Learn from our mistakes." The fact is that veterans have experienced and fought the hard and fast norms of patriarchy, whether they like to do it or not. The knelt mentality of accepting male hegemony that has been engrafted deep inside our souls requires to be challenged, and enlightened perception about self-dignity and rights can do so.

Preparing for the Future

Preparedness for future is a significant life decision that can shape a person's upcoming days. Dannecker (2002) showed that women apparel workers do not have any specific plans for their future and she stressed on the uncertainty related to it as they are not supposed to work throughout their lives (Dannecker,

2002). Shahnaz's (former worker) experience can be of help to understand the reality:

> My husband left me after four years of our marriage. I used to handover my income to him and never questioned about the usage of that money. He was my husband caring for me and I was happy with that. I never imagined this could happen to me. All I ever dreamt of was a better life together. Now I realize no matter what happens, one should think about his/her own life (Author's interview, March 2019).

This scenario is not uncommon in Bangladesh and lack of financial autonomy coupled with lack of proper future plans is thus a serious concern for Bangladeshi working women (Amin et al. 1998; Bradfield, 2015; Dannecker, 2002; Kabeer and Mahmud, 2004). Moreover, those who have/had an unpleasant conjugal life tend to show much protectiveness to their children since they consider them as their last resort and that their future planning usually circles around their offspring. They view their daughters as assets, rather than mere liabilities and are highly determined to invest on their girls. In terms of old age security and dependence, women now have more trust on daughters than on sons. This surely indicates a change in peoples' perception. Sharifa, a separated woman having a daughter describes:

> Now all I have is my daughter. I am saving money for her education and for starting a grocery shop in the village. I wish to stay here (Dhaka) but I cannot bear all the expenses as my daughter is growing up and life in Dhaka is expensive. I will admit her in a school in Kishoreganj (Sharifa's home district) and I have a small house there, which will relieve me of from bearing house rents (Author's interview, April 2019).

Most of the respondents of this research, are well-aware about their future and have own plans that commonly include children's education, starting a small business, buying land, investment in agriculture. However, there is a small group of women, especially the younger ones, has not yet given it a thought. During the Focus Group Discussions, the respondents having no future plans stated their willingness to think on it seriously as they came to know about the successes and potential benefits from it. This represents their eagerness to learn something new that is congenial to them. Non-Government Organizations that provide small loans are placed well in their planning as they consider these organizations as possible source of getting additional capital for future start-ups. Women consider villages as their eventual place of return and hence, their future plans are based on this. The main reason for choosing village over city is the high cost of living in Dhaka which they think will be beyond their capacity after quitting the job. However, those who were brought up in Dhaka see their future here and the married ones whose husbands are in favor of going back to villages are engaged in a mutual negotiation process about their future settlement. This further indicates their enhanced bargaining power over making decisions.

Apart from all these planning, there is another notion, 'participation in skill development activities' which is quite significant since it has the potential to ensure a secured future for these brave women. However, the problem is, hectic working schedules do not allow them to seek any sort of skill enhancing trainings, although majority of them have the intentions to do so. The issue of workers' residence has got much attention from scholars since it has a sweeping effect on their mental and physical health (Akhter, 2018; Amin *et al.* 1998; Bradfield, 2015; Dannecker, 2002). Apparel workers usually live in ghettos adjacent to factories and the physical environment of these settlements is not at all satisfactory since they seriously lack proper water supply and sanitation system. Thus, they are living in a hazardous and disease prone area that poses a severe threat to their health. With their little earnings, they frequently need to bear additional medical expenses that further beef up their miseries; one more penny spent today leaves one less penny to save, that in turn, threatens their future sustainability.

Bearing the Double Burden

All the awareness and economic contribution, however, has failed to liberate women from one thing- bearing the double burden. They necessarily have to manage both their household and employment in a perfect order, whereas men are considered to perform single role as breadwinners. Zakia, a married woman narrates:

> I have to do all the household chores and there is no one to help me with this. My husband is a bus driver and he often comes home late. It is very painstaking but I have no option. Furthermore, this is women's task; men will never do domestic works (FGD 1, March 2019).

Women living with their parents and relatives have someone to share with the domestic chores, and as stated by Kabeer (2005) and Dannecker (2002), they share it with other female members of the family. Household chores are seen exclusively as women's responsibility and it is like a tradition in Bangladesh. Kabeer and Mahmud (2004) found that the average span of working in the garment industry is about five years for female workers which they quit primarily due to health issues and to manage households properly.Former women workers who participated in this study exactly uttered the similar words.During IDIs, I had to wait for a while to start the conversation as respondents were busy doing some domestic chores; they are meant to manage household without receiving any virtual help from male members. Their role as breadwinners has not brought any significant change in the structure of household division of labour as Kabeer (2005:20) states, "The division of labour in domestic chores and child care is rarely negotiated between the sexes." However, there are signs indicating a slight ongoing change where men are sharing few household tasks with their female counterparts; yet it remains at a preliminary stagesince this study finds merely two such cases.

Due to their workload, these women can hardly manage any space for their own and most of the times they even do not get sufficient interval for resting. Naturally, they find themselves in a congested position where they cannot afford to be engaged with any special skill development trainings or activities that supposedly are helpful for their future economic security. Thus, lacking financial solvency together with bearing the double burden remain at large and jointly pose serious threat to the sustainability of their empowerment.

CONCLUSION

Globalization has opened up new pathways for the women of Bangladesh to be involved in formal income earning activities. The readymade garment sector is leading the way in terms of women's wage employment that has enabled a significant number of women to change their role from being passive actors to active ones in real settings. Undoubtedly, this official employment has entitled them with the recognition of economic contributors; an important aspect that is absent in informal sectors and even the discipline of Social Sciences constantly fails to recognize.

With their earning capacity, these women are restructuring household dynamics, societal norms and practices and are craving their way out of ever existent patriarchy; a system that still hinders women from exploring and utilizing their full potential. Bangladesh is considered as a leading country in reducing gender gap, promoting women's employment and empowerment. According to "The Global Gender Gap Report 2018" published by the World Economic Forum, Bangladesh ranks top among the South Asian countries and has been holding this position for the last four years. This really is an encouraging fact, but in this era of 'Sustainable Development,' only quantitative measures are not adequate to represent the ground reality. Rather in-depth qualitative measures at micro level are required to unearth the truth. Quantitative measures ignore women's participation in decision making, how far they can materialize their own choices into actions and to what extent they control their income. Without addressing these issues we cannot expect of getting a clear understanding on the status of women's empowerment.

This paper attempted to get a closer look into the lives of the female apparel workers and to hear the stories of their wills and woes. Their empowerment has come at a cost that has been constantly paying by them. The employment opportunity has enabled them to bring about many positive changes while creating new dimensions of oppression as well. These women now have better participation in decision making, has improved mobility and better awareness; there is no denial of it. Nevertheless, in terms of materializing choices or opinions into action and controlling financial assets, these women are still largely confined by the patriarchal norms of male supremacy; they are even restricted by their own submissive perceptions. Since they are no alien to this society, many simply cannot think out of the box and have willingly accepted

this subordinated status which they have been taught and seen throughout their lives. Yet, another group of women are battling this ascribed norm and are setting examples for others to achieve empowerment in real sense that can be regarded 'sustainable' in nature. Thus, 'Sustainable Empowerment' for these working women is not an illusion. However, to make this happen, there is still a long way to go and evidence suggests that their struggle to achieve sustainable empowerment is not going to be a piece of cake. Rather, it will require a drastic change in perceptions of related characters. Tanzila's narrative is worth mentioning here:

> It is not about male supremacy, it is about our (women's) way of thinking and perceptions that make us subordinated…that make us weak. You see, there are many well-educated women who willingly accept that they are to remain under their husband's custody. Again, I have seen many illiterate women who have established their dignified position by their strong and bold persona. So, we need to change our perception of being submissive and male need to change their perception of being the master. But, you see, that is not going to happen unless we realize our rights and raise our voices (Author's Interview, March, 2019).

At present, Bangladesh enjoys comparative advantage in terms of labour costs and in any trade negotiation the country uses this attribute as a 'trump card.' Accordingly, the readymade garment industry, being country's prime export earning sector, still thrives on this very particular aspect. Should women workers, on whose blood and sweat the apparel sector is built, be remained as mere contributors? It is high time for us to think beyond monetary aspects and to enable these brave hearts to sustain their empowerment that they have achieved completely on their own. Otherwise, we will be labeled as a nation who succeeded in building a strong economic base at the expense of its own daughters.

END NOTES

1 Double Burden essentially means the responsibility to shoulder both household chores and employment simultaneously by an individual. This phenomenon is highly evident in the lives of working women and their wage employment does not work as an incentive that can reduce their domestic workload. Double burden that the female apparel workers usually have to bear severely affects their health and well-being which reduces their capacity to work (Ashraf Ali, 2014; Dannecker, 2002; Kabeer, 2005; Kabeer, Mahmud and Tasneem, 2011).

2 The notion of Sustainable Development was first introduced by Brandtland Commission in 1987 that conceptualizes it "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Sharmin:: 2016:60). While placing people at the core, "Sustainable development" bases itself on three pillars- "economic," "environmental" and "social" that essentially turns it into an approach of "inclusive" and "holistic" in nature (Khatun, 2018; Sharmin, 2016).

3 The Accord on Fire and Building Safety in Bangladesh (European based coalition of RMG importers), was signed on May 15, 2013. This five-year independent, legally binding agreement between global brands trade unions is structured to ensure safety in Bangladeshi textile industry. https://www.thedailystar.net/lifestyle/perspective/news/the-debate-extending-accord-alliance-1662787

4 The Alliance for Bangladesh Worker Safety (a coalition of North American RMG buyers), started in 2013, is also abinding, five-year undertaking with the intent of improving safety in Bangladeshi RMG factories. https://www.thedailystar.net/lifestyle/perspective/news/the-debate-extending-accord-alliance-1662787

5 De facto simply refers to the practices that exist in reality, even though they may not be intentional or permitted legally.
https://dictionary.cambridge.org/dictionary/english/de-facto
https://www.dictionary.com/browse/de-facto

6 A helpline introduced by the Government of Bangladesh to prevent violence against women and children, combat child marriage and to impede sexual harassment.
https://www.dhakatribune.com/bangladesh/law-rights/2017/03/24/dial-109-combat-violence-women-children

REFERENCES

Adams, Robert 2008. *Empowerment, Participation and Social Work*. New York, Macmillan International Higher Education.

Agar, Michael H. 1986. *Speaking of Ethnography* (Vol. 2).California, Sage Publications.

Akhter, Sadika 2018.*Health and Safety Issues for Women Working in the Ready-Made Garment Industry in Bangladesh*.Ph.D thesis submitted to Centre for Environment and Population Health, School of Environment, Griffith University, Australia

Alam, Rushmita 2016.*Aftermath of the Rana Plaza Tragedy: Through a Gender Lense*. Master's thesis submitted to OCAD University, Toronto, Canada.

Amin, S., Ian Diamond, Ruchira T. Naved and Margaret Newby 1998.Transition to Adulthood of Female Garment-Factory Workers in Bangladesh. *Studies in Family Planning*29(2): 185–200.

Arizpe, L. and Josefina Aranda 1981. The "Comparative Advantages" of Women's Disadvantages: Women Workers in the Strawberry Export Agribusiness in Mexico. *Signs: Journal of Women in Culture and Society*7(2): 453-473.

Ashraf Ali, H.M. 2014. Microcredit and Power: Examining How and Why Women Encounter Domination in Bangladesh. *Development in Practice* 24(3): 327–338.

Bennett, L. 2002. *Using Empowerment and Social Inclusion for Pro-poor Growth: A Theory of Social Change* (Background Paper for the Social Development Sector Strategy Paper).Washington DC, World Bank.https://pdfs.semanticscholar.org/7951/578c23114f23ce9708c5041a3018b47cd6da.pdf, accessed on October 21, 2018.

Bradfield, Justin G. 2015. *Female Employment and Gender Relations: A Case Study of Female Garment Workers in Dhaka District, Bangladesh.* Master's thesis submitted to School of Development Studies, University of KwaZulu-Natal, Durban, South Africa.

Bryman, Alan 2012. *Social Research Methods* (4thed.). New York, Oxford University Press.

Chakrobarty, Niloy 2017. *Women Workforce Empowerment vs Productivity: Case from the Bangladeshi RMG Sector*. Master's thesis submitted to the Department of Social Relations, East West University, Dhaka, Bangladesh.

Charmaz, Kathy. 2006. *Constructing Grounded Theory A Practical Guide Through Qualitative Analysis*. Los Angeles, Sage Publications.

Creswell, John W. 2012. *Qualitative Inquiry and Research Design: Choosing among Five Approaches.* Thousand Oaks, Sage Publications.

Creswell, John W. 2014. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Los Angeles, Sage Publications.

Dannecker, Petra 2002. *Between Conformity and Resistance: Women Garment Workers in Bangladesh*. Dhaka, The University Press Limited.

Feldman, S. 2009. Historicizing Garment Manufacturing in Bangladesh: Gender, Generation, and New Regulatory Regimes. *Journal of International Women's Studies* 11(1): 268-288.

Graflund, Frederik 2013.*The Impact of Microcredit on Women's Empowerment-A Case Study of Microcredit in the Tangail District, Bangladesh.* Bachelor thesis submitted to the Department of Economics, Lund University, Sweden.

Haque, Md. M., TowfiquaMahfuzul Islam, Md. Ismail Tareque and Md. GolamMostofa 2011.Women Empowerment or Autonomy: A Comparative View in Bangladesh Context. *Bangladesh e-Journal of Sociology*8(2): 17-30.

Haque, Md. R.2018. *Love and Hate: Is Militarization Perceived as Sustainable Development for Chittagong Hill Tracts (CHT)?: A Case Study on CHT, Bangladesh* (IDE Discussion Paper No. 717). Wakaba, Institute of Developing Economies, Japan External Trade Organization (JETRO).http://hdl.handle.net/2344/00050374, accessed on January 11, 2019.

Hashemi, Syed M., Sydney Ruth Schuler and Ann P. Riley 1996.Rural Credit Programs and Women's Empowerment in Bangladesh. *World development* 24(4): 635-653.

Heintz, J., Naila Kabeer and Simeen Mahmud 2018. Cultural Norms, Economic Incentives and Women's Labour Market Behaviour: Empirical Insights from Bangladesh. *Oxford Development Studies*46(2): 266-289.

Hossain, D., M. A. Islam and S. Majumder 2016.Influences of Micro-credit Programmes on Women Empowerment in Bangladesh. *Journal of Bangladesh Agricultural University*14(1): 93-100.

Jacobs, B. W. and Vinod R. Singhal 2017. The Effect of the Rana Plaza Disaster on Shareholder Wealth of Retailers: Implications for Sourcing Strategies and Supply Chain Governance. *Journal of Operations Management* 49: 52–66.

Jalava, Madeleine 2015. *Human Rights Violations in the Garment Industry of Bangladesh*. Bachelor thesis submitted to Haaga-Helia University of Applied Sciences, Helsinki, Finland.

Jinia, Nasrin J. 2016. *Microcredit and Women's Empowerment. Does Microcredit Promote the Borrowers to Participate in the Household Decision-making Process in Bangladesh?* Master's thesis submitted to the School of Management, University of Tampere, Norway.

Kabeer, N. 1999. Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. *Development and change*30(3): 435-464.

Kabeer, N. 2005. Gender Equality and Women's Empowerment: A Critical Analysis of the Third Millennium Development Goal 1. *Gender & Development*13(1): 13-24.

Kabeer, N. and Simeen Mahmud 2004. Rags, Riches and Women Workers: Export-oriented Garment Manufacturing in Bangladesh. In: *Chains of Fortune: Linking Women Producers and Workers with Global Markets*, ed. by IndrajitCoomaraswamy and Nancy Spence, pp. 133-164. London, Commonwealth Secretariat.

Kabeer, N., Simeen Mahmud and SakibaTasneem 2011. *Does Paid Work Provide a Pathway to Women's Empowerment? Empirical Findings from Bangladesh* (Working Paper No. 05).

Dhaka, BRACDevelopmentInstitute.http://dspace.bracu.ac.bd/bitstream/handle/10361/2598/BDI_Working_paper_5.pdf?sequence=1, accessed on December 24, 2018.

Karim, L. 2014. Analyzing Women's Empowerment: Microfinance and Garment Labor in Bangladesh. *Fletcher F. World Aff.* 38: 153-166.

Kautto, Joakim 2015. *Women's Economic Empowerment: A Case Study in Bangladesh Garment Industry.* Master's thesis submitted to the School of Social Work, Lund University, Sweden.

Keller, B. and DorcasChililaMbewe 1991.Policy and planning for the empowerment of Zambia's women farmers. *Canadian Journal of Development Studies/Revue canadienned'études du développement*12(1): 75-88.

Khan, M. R. I. and Christa Wichterich 2015.*Safety and Labour Conditions: The Accord and the National Tripartite Plan of Action for the Garment Industry of Bangladesh*(Working Paper No. 38). Geneva, Global Labour University, International Labor Organization.https://www.econstor.eu/bitstream/10419/121446/1/835378594.pdf, accessed on February 10, 2019.

Khatun, Fahmida 2018. "SDGs: Three Years On, Where Do We Stand?" *The Daily Star*.September 24. https://www.thedailystar.net/opinion/macro-mirror/news/sdgs-three-years-where-do-we-stand-1637539, accessed on April 17, 2019.

Khosla, N. 2009. The Ready-Made Garments Industry in Bangladesh: A Means to Reducing Gender-Based Social Exclusion of Women? *Journal of International Women's Studies* 11(1): 289-303.

Kibria, N. 1995. Culture, Social Class, and Income Control in the Lives of Women Garment Workers in Bangladesh. *Gender & Society* 9(3): 289-309.

Kishor, Sunita 2000. *Empowerment of women in Egypt and links to the survival and health of their infants*. In: *Women's Empowerment and Demographic Processes: Moving Beyond Cairo,* ed. by Harriet B. Presser and Gita Sen. New York, Oxford University Press.

Malhotra, A., Sidney Ruth Schuler and Carol Boender 2002.*Measuring Women's Empowerment as a Variable in International Development*(Background Paper Prepared for the World Bank Workshop on Poverty and Gender: New Perspectives). Washington DC, World Bank.http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf, accessed on October 15, 2018.

Mason, K. O. and Herbert L. Smith 2003.*Women's Empowerment and Social Context: Results from Five Asian Countries* (Working Paper). Washington, DC, World Bank.https://pdfs.semanticscholar.org/6d1a/8d3e0d704c1ae15d78b1d957a6bb4ff98fac.pdf?_ga=2.107221066.939358571.1569419305-1636105806.1566479008, accessed on November 22, 2018.

McVeigh, Tracy 2014. "Ethical lobby to target fashion retailers with supply chain campaign," *The Guardian*. April 19. https://www.theguardian.com/fashion/2014/apr/19/ethical-fashion-retailers-revolution-day-rana-plaza-stella-creasy, accessed on April 23, 2019.

Naved, R., TabassumRahman, Samantha Willan, Rachel Jewkes and Andrew Gibbs 2017. Female Garment Workers' Experiences of Violence in Their Homes and Workplaces in Bangladesh: A Qualitative Study. *Social Science & Medicine196*: 150–157.

Nessa, T., Jamal Ali and Roslan Abdul-Hakim 2012. The Impact of Microcredit Program on Women Empowerment: Evidence from Bangladesh. *OIDA International Journal of Sustainable Development*3(9): 11-20.

Nussbaum, M. (2000).Women's Capabilities and Social Justice. *Journal of Human Development*1(2): 219-247.

Paul-Majumder, P. and Anwara Begum 2000. *The Gender Imbalances in the Export Oriented Garment Industry in Bangladesh* (Background Paper prepared for the World Bank Policy Research Report on gender and development). Washington DC, World Bank.http://documents.worldbank.org/curated/en/645581468767990219/The-gender-imbalances-in-the-export-oriented-garment-industry-in-Bangladesh, accessed on October 7,2018.

Patton, Michael Q. 2002. *Qualitative Research & Evaluation Methods* (3rded.). Thousand Oaks, California, Sage Publications.

Pelto, P. J. andGretel H. Pelto 1978.*Anthropological Research: The Structure of Inquiry*. Cambridge, Cambridge University Press.

Pitt, M. M., Shahidur R. Khandker and Jennifer Cartwright 2006.Empowering Women with Micro Finance: Evidence from Bangladesh. *Economic Development and Cultural Change*54(4): 791-831.

Rahman, Shahidur 2014. *Broken Promises of Globalization: The Case of the Bangladesh Garment Industry*.Lanham, Lexington Books.

Rahman, M. H. and KaziNaoroze 2007. Women Empowerment through Participation in Aquaculture: Experience of a Large-scale Technology Demonstration Project in Bangladesh. *Journal of Social Sciences* 3(4): 164–171.

Rahman, S., Pramod N. Junankar and GirijasankarMallik 2009. Factors Influencing Women's Empowerment on Microcredit Borrowers: A Case Study in Bangladesh. *Journal of the Asia Pacific Economy*14(3): 287-303.

Rappaport, J. 1984. Studies in Empowerment: Introduction to the Issue. *Prevention in Human Services* 3(2-3): 1-7.

Ritchie, J. and Liz Spencer 2002.Qualitative Data Analysis for Applied Policy Research. In: *Analyzing Qualitative Data,* ed. by Alan Bryman and Robert G. Burgess, pp. 173-194. New York, Routledge.

RMG Workers' Pay Disparity: Protest rages on. (2019, January 10). *The Daily Star.* Retreived fromhttps://www.thedailystar.net/frontpage/news/pay-disparity-protest-rages-1685380

Rowlands, Jo 1996. Empowerment Examined. In: *Development and Social Diversity*, ed. by Mary B. Anderson and Deborah Eade, pp. 86-92. UK and Ireland, Oxfam.

Seabrook, J. 2013. The Price of 'Progress'?From Senghenydd to Savar. *Race & Class*55(2): 82-92.

Sen, Amartya 2000. *Development as Freedom*. New York, Anchor.

Silverman, David 2013. *Doing Qualitative Research: A Practical Handbook* (4thed.). Sage Publications.

Souplet-Wilson, S. 2014.Made in Bangladesh: A Critical Analysis of the Empowerment Dynamics Related to Female Workers in the Bangladeshi Ready-Made-Garment Sector. *POLIS Journal*11: 359–397.

Sharmin, S. 2016. On 'Sustainable Development' and 'Sustainability': Different Explanations and Meanings. *Journal of Indian Research* 4: 56-72.

Textile Today 2016.*Delocalization need for the RMG industry of Bangladesh*. https://www.textiletoday.com.bd/delocalization-need-for-the-rmg-industry-of-bangladesh-2, accessed on December, 27, 2018.

The Global Gender Gap Report 2018(Report).Geneva, Switzerland, World Economic Forum.

Walliman, Nicholas. 2006. *Social Research Methods*. Los Angeles, Sage Publications.

Workers' wages rise in 6 grades. (2019, January 14). *The Daily Star*. Retrieved from https://www.thedailystar.net/business/bangladesh-garment-workers-salary-structure-be-revised-1686979

APPENDIX 1: QUESTIONNAIRE FOR FGD

1. How are the decisions related to household affairs made?
2. Have working in the RMG increased your freedom of movement? Please, draw a contrast between your past and present experiences.
3. Who controls your income?
4. Do you have any specific future plans? Please, enlighten us.
5. How often do you get any help from other family members in performing domestic chores?
6. When you visit your villages, how do your family members and neighbors treat you?
7. Are you involved with trade unions or any other organizations? If so, then tell us about their activities and your participation.
8. How do you perceive your situation before and after the job?

APPENDIX 2: QUESTIONNAIRE FOR FEMALE RMG WORKERS (IN-DEPTH INTERVIEW)

1. How are the decisions related to daily household expenditure made?
2. How are the major household expenditure (television/refrigerator/furniture) decisions taken?
3. How are the decisions regarding education and treatment of the family members made?
4. How are the decisions related to financial lending-borrowing, buying and selling of land/property/asset taken?
5. Have working in the RMG increased your freedom of movement? Please, draw a contrast between your past and present experiences.
6. Husband or any other family member contribute/s to the household income?
7. Do you keep your income to yourself? If no, then do you get it when necessary?
8. Do you have any land/property/savings/ornaments of your own?
9. For what purpose you intend to spend your savings?
10. Has the ownership been changed after your employment? Do you face/ Have you faced any discrimination regarding this ownership?
11. Do you have any specific future plan for upcoming years when you are no longer employed in factory job? Please, elaborate.
12. Do you have to bear the 'double burden' alone or other family members (and who) help you in this regard?
13. How do you spend your leisure time?
14. How do the family members greet and felicitate you at the time of your visit to the village? Do you sense any change in their behavior because of your employment status?
15. Are you involved with any organizations/co-operatives? If yes, then how are you being benefitted from this?

16. Are you a member of a trade union? If yes, then how often do you participate in their meetings or other activities?
17. How do the trade union leaders treat you? Do they pay heed to your accounts?
18. Have you ever participated in any protests or movement or collective bargaining (inside or outside the factory)? What was the aftermath of your participating in these types of activities?
19. Did you have to face any problems and what strategies did you adopt to resolve those? Did you get any help from the trade unions or neighbors?
20. How often do you discuss about socio-economic and political issues? Are you aware of your rights as a worker?
21. Does working in the RMG have brought any overall positive changes in your life? How do you perceive your past and present life?

APPENDIX 3: QUESTIONNAIRE FOR FORMER FEMALE GARMENT WORKERS

1. Why did you quit the factory job?
2. Do you think that working in the apparel industry helped you gain more control over your life?
3. How are the significant household decisions related to financial lending-borrowing, buying and selling of land/property/asset taken?
4. Who controls your income? Did you control your income earned from the job?
5. Do you get additional help from other family members in doing domestic chores? Does your husband/any male household member help you in this regard?
6. Did you have any plans about what to do after quitting the garment job?
7. Are you involved with any organizations/co-operatives? If yes, then how are you being benefitted from this?
8. Were you a member of a trade union? If yes, then how often did you participate in their meetings or other activities?
9. How did union leaders treat you? Did they pay heed to your accounts?
10. Have you ever participated in any protests or movement or collective bargaining (inside or outside the factory)? What was the aftermath of your participating in these types of activities?
11. Did you have to face any problems and what strategies did you adopt to resolve those? Did you get any help from the trade unions or neighbors?
12. Please, draw a contrast between your past and present life.

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Sexually abused Girl children: Experiences in the Institutional Setting

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Abstract: Child Sexual Abuse is reported to be a rampant problem in India at the institutional level. It is widely covered by media in recent times. What seems to be missing, however, is a concrete attempt to unravel the day-to-day realities of Child Sexual Abuse from the larger socio-political perspectives which in themselves emanate from various cultural practices. Studies suggest that girls and women are more vulnerable to sexual abuse, and this vulnerability increases exponentially in the case of children, girls and women with disabilities (Mehrotra and Nayar, 2020). Studies in the recent past also began to focus on sexual identity of disabled in general and sexual and reproductive rights of disabled women in particular. But there is very little academic exercise made on the problems of girls with disabilities at institutional level *viz.* family and school. It is in this context that the present paper attempts to discuss these aspects of sexual abuse against girl children with disabilities. The findings are drawn from an intense ethnographic study conducted in selected schools (both government and private) run for children with visual impairment. The schools are located in Hyderabad and Mahabubnagar districts of Telangana state. A total of 434 participants — 370 children and 64 teachers — were interviewed. Of 370 children aged between 6-20 years, 208(56%) were boys, and 162(44%) girls. The relevant data were collected using a scheduled interview method, along with in-depth conversations with children, teachers and care takers in the selected schools. It is observed that child sexual abuse is one of the major challenges facing children with disabilities, which hardly gets reported.

Key words : Child Sexual Abuse, Children with Disabilities, Institutional setting, Indian context.

INTRODUCTION

Child Sexual Abuse (here after mentioned as CSA) is widely reported in India in recent times. The issue of abuse and disability are interlinked with each other, for abuse may lead to disability as much as the disabled may have high risk of being abused.The present study is based on the idea that sexual abuse against children with disabilities is a persistent problem that needs institutional intervention. There is need to understand such a problem

systematically.Generally speaking, CSA is understood to be a sexual contact between an adult and a child. According to WHO, Child Abuse is "a violation of basic human rights of a child, constituting all forms of physical, emotional ill treatment, sexual harm, neglect or negligent treatment, commercial or other exploitation, resulting in actual harm or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power" (Saini, 2013).

The issue of CSA is a social problem that needs to be understood and tackled socially, taking into account the prevailing socio-cultural practices (Virani, 2000). Addressing or dealing with CSA is a challenge across all cultures and traditions of the modern world today. Children with disabilities are 3-4 times more vulnerable to physical exploitation, sexual violence and gross neglect than non-disabled children (UNICEF, 2013). Andhra Pradesh, Assam, Bihar and Delhi reported the highest incidence of CSA overall (Carson, Foster and Chowdhury, 2013).Girls almost predictably reported higher incidence of CSA (Deb and Walsh, 2012). Iravani (2011) found that 30% of men and 40% of women reported sexual molestation during childhood, half of the perpetrators were close family members. According to Hard (1986), 55% of the assaults were incestuous and 97% of perpetrators were males. They also found that perpetrators in case of children with disabilities are family members, special education teachers, residential care providers and health care providers (cited in Baladerian, 1991).

It is clear by now that Child Sexual Abuse against non-disabled children in India has moved from survey to discourse, but in the case of children with special needs the issue has not yet reached even to the level of comprehensive survey. For example, NGOs such as Save the Children, Tulir- Center for Healing and Prevention of Child Sexual Abuse, Recovering and Healing from Incest conduct periodic surveys on Child Sexual Abuse. Ministry of Women and Child Development also published a report in 2007 to this effect. Using the data collected through such surveys, scholars bring to fore the socio-cultural aspects underlying this abominable practice in the Indian context (see Virani, 2000).The irony, however, is that neither any Government agency nor a Non-Government Organization has so far conducted any comprehensive survey to understand sexual abuse against children with disabilities. One of the major objectives of the present paper, therefore, is to at least initiate a discussion on this neglected issue. Accordingly, the paper highlights the day-to-day routines of children with visual impairment studying in residential schools, with focus on child sexual abuse against children with disabilities in general and children with visual impairment in particular. I would explore both the policies dealing with child sexual abuse and the framework for the rights of persons with disabilities, examining them in the light of case studies conducted in select schools.

The nature of sexual offenses against persons with disabilities may be different in some respects, but they are no less unique when it comes to the nature of crime and its perpetrators. Society plays a vital role in constructing norms, ascribing roles and statuses and reiterating or inculcating the attributed norms. This in turn leads to the construction of certain kind of prefixed notions which may eventually perpetuate offences against a certain section of people. The widespread misunderstanding about asexuality of persons with disabilities is a case in point.

Since it is presumed that persons with disabilities are asexual, there is very little attention paid to sexual abuse against them, brushing it almost as a non-existent crime. The empirical evidences, brought out by studies such as the one by Nosek, et al. (2001), however, suggest otherwise. Nosek, et al. point to an inherent contradiction between the assumed notion that disabled women are asexual beings on one hand, and the empirical evidence showing the increasing number of offenses against women with disabilities on the other, which gives the impression that disability is the prime risk factor for abuse. It, of course, goes without saying that the denial of disabled people's sexuality is denial of their personhood in the societal normative framework, as Shildrick (2007) rightly points out. .

In the 1990s there was increasing recognition that individuals with intellectual disability were particularly vulnerable to sexual abuse due to multiple factors, including long-term dependency for care, trained compliance or culture of compliance, social isolation, lack of awareness about sexuality and sexual abuse, inappropriate accessibility and mobility (Akbas, et al. 2009; Wissink, et al. 2015; Vaidya, 2017; Smith and Harrell, 2013). The nature of perpetrators in the case of children with special needs is not dissimilar than that of non-disabled children. It is found that children with intellectual disability are more often sexually abused by a relative, most often a family member (Akbas, et al. 2009; Wissink, et al. 2015).

Media is one of the strongest tools in symbolizing and promoting the society's prefixed notions, ascribed roles and statuses and stereotypes at large. This is very much explicit in portraying the notions of disability and issues of disabled. By critically examining the media depictions/ representations of child sexual abuse, Vaidya (2017) concludes that most of the children with disabilities are often excluded from the formulation of child protection measures aimed at creating awareness on CSA, whereby the focus is more often on norm-bound, able-bodied children.

Like in several other countries, in India, too, disability-centered scholarship has started to pay attention to sexual abuse of women with disabilities. The prime focus is more on contradicting the attributed stereotypic notions, projecting women with disabilities as 'asexual' (Mehrotra, 2004). These notions are challenged through a systematic discussion on sexuality and

disability, sexual and reproductive rights of women with disabilities and how they are being abused (Addlakha and Nayar, 2017; Ghai, 2002).

Several of these studies also reveal that the perpetrators are often from within the immediate or extended family, that is parents and brothers (immediate family) and grandparents and uncles (extended family) (Daruwalla, et al. 2013; Sobsey and Doe, 1991). Scholars try to capture the nature and extent of abuse among women with disabilities. But in the whole discourse, neither CSA nor children with disabilities receive the attention they deserve.

In order to deal with the menace of CSA, the Government of India over a period of time came up with a plethora of legislative enactments, launched the Integrated Child Protection Scheme (ICPS), and set up the National Commission for Protection of Child Rights. The loopholes inherent in the relevant policy prescriptions together with the multiplicity of laws on the same subject often create impediments to prosecute the Child Sexual Abusers. In order to overcome these shortcomings, Indian Parliament enacted the Protection of Children from Sexual Offences Act in May 2012. Section 9 of PoCSO Act, 2012, appears to be relevant in the context of disabled children as many of these children stay in care homes. Section 19 and 21 of the Act mandates reporting from the people who are aware of incidents of abuse. Section 39 of the PoCSO Act, 2012 prescribes that one should desist from homogenizing all cognitive problems (in fact all disabilities).

Apart from its domestic laws, India is party to a number of international human rights treaties. Articles 15 and 16 of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), 2006 recognizes the issue of violence and provides for protection from torture, ill- treatment, exploitation, abuse and violence.

Subsection 2(k) of Section 20 of the Mental Health Care Act 2017 recognizes the rights of persons with mental illness and offers them legal protection from all forms of physical, verbal, emotional and sexual abuse. Section 7 of the RPwD Act, 2016 prescribes measures to protect and prevent persons with disabilities from all forms of abuse, violence and exploitation. Section 92(d) specifies certain penalties for sexual abuse of children and women with disabilities; Sections 96 and 97 offer an enabling provision, wherein it is stated unequivocally that an offence (including sexual abuse) committed against persons with disabilities should be adjudicated not only under the provisions of the RPwD Act, 2016 but also under any other relevant law for the time being in force, whichever prescribes higher quantum of punishment. Even after formulation of many laws and establishment of Commissions in India, the control and prevention as well as protection from child sexual abuse appear to be an immense challenge. This challenge further intensifies when it comes to children with disabilities. Loopholes in the formulation and implementation of laws against CSA often provide an opportunity for abusers to escape from facing the legal procedures.

METHOD:

The findings recorded in the present paper are based on an intense ethnographic study conducted in four schools (both government and private) run for children with visual impairment. The schools are located in Hyderabad and Mahabubnagar districts of Telangana state. Govt. HSBB, (Hyderabad), run by education department, Govt. RSVH, Mahabubnagar, run by department of disabled welfare, DSB, Hyderabad, run by a private trust were selected for the present study. A total of 434 participants with 370 children and 64 teachers were interviewed. Of 370 children aged between 6-20 years, 208(56%) were boys, and 162(44%) girls.

The concern for CSA became apparent while interacting individually with children, teachers, matrons and caretakers. My individual interaction with the above stakeholders, along with several others, was part of administering the interview scheduled originally designed to obtain data on the structure and function of special education, which continues to be the mainstay of my doctoral research. Throughout the study care was taken to maintain confidentiality of the participants, to see that no one felt inconvenience of any sort neither with researcher nor participants while recalling the traumatic events of the past and the disturbing thoughts of everyday routine. CSA propped up as a concern during our general discussion on issues not necessarily connected to it. My research participants brought up the issue during our individual conversations which I always allowed to flow in line with the preferences of the informants. While teachers, matrons and care takers talked about it putting the onus fully on a group of children who, in their sight, were of demonizing character, children (the actual victims) brought it out as a trap they fell into due to an intricate set of factors including their family backgrounds. When the narrative became louder and bigger as the field work continued on its pace, it became almost impossible for me to simply ignore the theme. As an apprentice in research, I indeed had an escape route to give the recurring theme a miss on a pretentious note that it did not fit the scheme of things at hand. I was in a dilemma for a while about it, but decided at some point that a strategic avoidance of as serious an issue as sexual abuse against children with disabilities, though not directly related to my doctoral research, would be nothing less than running away from the real challenge.

Accordingly, I went ahead and gathered the data from the subjects and acquaintances who were ready to share their experiences. The fieldwork for the actual study involved 370 children with special needs, their teachers, the matrons, the caretakers and other administrative staff working in selected schools spread across in the state of Telangana. The study was carried out for around 1 year. The primary data were substantiated with secondary data to locate the nuances of sexual abuse against children with disabilities in the larger context of disability discourse on one hand and mainstream children context on the other. The present study is an attempt to bring to light the

complexities involved in, and factors influencing, the sexual abuse of girl children with disabilities at the institutional level.

FINDINGS:

Educational institutions and residential arrangements such as hostels are spaces where children are sequestered from family ties and community membership, leading to their inhibition, quite implicitly though, from larger social interaction. Consequently, the residents of these institutional spaces develop long-term dependency on their potential perpetrators. This, of course, is in no way a veneration of families and communities that have their own share in the perpetration of CSA otherwise.

One of the conclusions the present study clearly and convincingly imposes on us is that institutions are becoming vulnerable spaces for sexual abuse of children having special needs of their own. The report of investigation done by Forum against Child Sexual Exploitation team on sexual assault of a deaf and mute girl in the Observation Home, Umerkhadi (OHU), Mumbai is a case in point (Kulkarni, Jesani and D'Souza, 1998).

Sobsey and Doe (1991) discuss ways of understanding sexual abuse against children with disabilities. The study suggests that at macro system level, children and women with disabilities are more likely to be isolated within their own homes and institutional spaces designed for them, thanks to the potential offenders lurking in the backyard. The study further analyzes sexual abuse of children and women with disabilities through the prism of ecological model. This particular model looks at the interaction of a complex set of factors leading to sexual abuse. It draws a distinction between 'Micro System' in which the dynamics of interaction is between offender and victim, and 'Macro system' wherein the interaction between the victim and the perpetrator is in the influential social context.Besides the above, there is "Exosystem" that broadly "consists of influential set of cultural and social beliefs interacting with values placed on power, human rights or individual's belief in justice and punishment)". The study also reports high incidence of abuse by service providers. It was also found during the fieldwork that children with disabilities face higher risk of sexual abuse in institutional spaces such as schools, foster homes and families.

Our discussions during the field work clearly indicate that the unrecognized schools run for children with special needs are increasingly becoming hubs for CSA, where the perpetrators most of the time happen to be non-disabled adult men. KV (name changed), a 13 year-old girl, suffering with congenital vision loss, is from a town in Telangana state. Her father a school drop-out after his 6th standard, is a farmer, and her illiterate mother a homemaker. As there is no special school in their hometown, and the concept of inclusive school being a far-fetched idea in this part of the State, her parents admitted her in SA School for the blind in a town of Rangareddy district. This

so-called special school is reported to have no Government recognition till date but actively admits students. She studied there till the fourth standard. She then shifted to one of the schools in Hyderabad, where I have had a chance to meet her as part of the research (she was in the 7th standard at the time of our interview).

As she could clearly recall during our conversation, the male caretaker in the previous school often subjected her to the worst form of sexual abuse. Taking advantage of his dominant position as a caretaker, he instructed her strictly that she should not disclose any of his actions to others, and KV obliged to his directions. It is interesting to know that KV remembers the exact year in which the abuse was perpetrated on her and the age difference between her abuser and herself. As she informed me with confidence, it was in 2013 that she underwent this trauma, and at the time of the incident the caretaker was 21 years, and she was 9; So the sexual offender in this case was twice as old as the child victim (a little more than that, perhaps).

KV happened to hear about a descriptive news programme on the problem of CSA against children with disabilities, broadcasted sometime in 2016, almost three years after her traumatic experience. She then understood why her male caretaker was so stern in his instructions that she should not talk about it outside. Her male caretaker also informed her in a convincing tone that there was nothing unusual in what he was doing to her, and that she didn't have to bother about it much. As a nine-year-old kid, KV believed in everything her caretaker told her. But when she heard about the child sexual abuse for the first time, now close to her teens, she began to make sense of the filthy part of the past event. Quite disturbed by the new information known to her through a news programme, she revealed everything to her mother in their subsequent meeting, only to be reprimanded by the latter as to why this wasn't brought to her notice immediately at that time. But both the mother — a helpless lady with no education and economic means — and the daughter — still a child in her formative years of schooling — seemed to have made an unstated proclamation to themselves to bury the bitter past. As a consequence, the offender roams free but the victim carries the scars of the bitter past.

Visually-impaired boys, who studied in unrecognized schools, too, narrate quite similar experiences. A visually-impaired boy in one of the Government schools recalled a few sexual abuse incidents perpetrated by the senior male students against the junior girl children. Apparently, the boy was a clear witness to some of those incidents. The school management upon coming to know those events, simply installed CCTV cameras and forgot the whole thing thereafter. There was hardly any legal action taken against the perpetrators.

In-depth interviews reveal that girl children with special needs are often mishandled, if not subjected to sexual abuse all the time in precise terms, by the disabled and non-disabled male teachers alike. In a gruesome incident reported to have occurred some time ago, a disabled male teacher so repeatedly

abused a girl child that she became sick and was sent home, with no information on the actual incident to parents. Given the severity of her sickness, her parents decided to take her away from the school, all this quite in a routine fashion, and she is now a drop-out for no fault of hers. Then the issue went to the notice of the Principal and other staff in the school, who in turn seemed to have protected the teacher under question to negotiate with the girl's parents and pacify them with a small token of monetary inducement. Another girl student studying in the 10th standard was reported to have been sexually abused by the Physical Education Teacher (PET), a non-disabled teacher this time. Everyone in the School knew about it, but no one was ready to publicly denounce it, let alone coming to victim's aid. Since the PET was from the same caste and region as that of the School Principal, he was left scot-free in everything he did. Sensing the mood, the girl simply left the school. Given the proximity the Offender has had with the Principal, the School Management deployed the lady staff working in the hostel to suppress the girl and keep her silent. This is one of the most degradable sexual abuse cases encountered in the field, a predicament of the abuse of power and authority for personal pleasure. In all cases of sexual abuse against girl children with disabilities the Management indulges in blaming the victims on the pretext that they are careless, instead of questioning the sincerity and conscience of perpetrators who happen to be teachers and caretakers.

Foster homes, which are supposed to function as the most sensitive spaces for care, reception and protection of vulnerable children too seem to be facing the trouble of sexual abuse. PV is a girl with multiple disabilities suffering from blindness and intellectual disability. A few years ago police found her helpless in a railway station and handed her over to a man in charge of a reputed foster home in the twin cities of Hyderabad and Secunderabad. The In-charge joined her in a special school and continued to act as a guardian for all practical purposes.

While in her 6th standard, PV attained puberty, and the matron in the school informed the same to the foster home In-charge. When PV returned to the School from the summer vacations subsequent to her attaining the puberty, the Matron observed unusual behavior in her actions. PV started misbehaving with HA in the school like never before. Smelling a rot, the Matron brought the whole matter to the teachers' notice. Having sat with the girl for long hours of counselling sessions, the Matron and concerned school teacher could finally unravel the truth. PV then revealed the truth and talked about the repeated sexual abuse she suffered in the hands of her foster home guardian. The Matron convinced her mother and sent HD to their house for the subsequent vacations. The Matron then held PV back in the residential school, refusing to send her to the foster home guardian. Naturally, Matron's decision to separate PV from him irritated the foster home guardian so much that he threatened to launch a complaint against the school. Given his influence in the Department of

Disabled Welfare and other Government offices, nobody was inclined to stand with the Matron.

It is pertinent to recall the study of Nosek, et al. (2001) that identifies certain types of disabilities that have associated cognitive impairments, such as traumatic brain injury, mental illness and mental retardation. The study reveals that these cognitive impairments have the potential to limit the woman's ability to recognize abuse, and this is exactly what seems to have happened even in PV's case; she could not understand the abuse in the first place and, therefore, subsequently fails to communicate the assault on her in a language convincing to the cognitive other.

As per Juvenile Justice (Care and Protection of Children) Act, 2000, all existing children's residential care facilities are supposed to register themselves with the Government within six months after their establishment or from the date of the enforcement of the said act, enabling the child welfare committees to conduct periodic inspections. But there is no effective mechanism to see the compliance of the said provisions of the Act. Human Rights Watch (2018) in their study finds that lack of effective monitoring of residential care facilities is one of the major problems in handling CSA in India.

Like non-disabled children, differentially able children too run the risk of being abused at familial and neighboring settings. KJ is a girl child with multiple disabilities suffering from congenital sight loss and nerve weakness. While her father (who dropped out of school after 7th standard) is an auto driver, her mother (who completed 10th standard) is a domestic worker. Like PV as described in the preceding paragraphs, KJ also started behaving differently in the school. The school staff put her through a few general counselling sessions. Unlike PV, KJ knew clearly what exactly she underwent and was able to articulate the same to her teachers and other staff. KJ reveals the fact that one of her neighbours during the preceding vacations forced her into sexual abuse, and hence there was a change in her behavior. The Matron in the hostel reported the matter immediately to KJ's family. But her parents, KJ's mother in particular, didn't show much interest initially. It was also revealed later that KJ's mother took money from the perpetrator and remained silent thereby.

The case of MM is far more precarious than all others described so far. MM, a visually-impaired girl student, came back from holidays with pregnancy. Having observed her in the first few days after the re-opening, the School Management called up the family and informed the incident, only to know the worse — that the perpetrators were none other than MM's paternal uncle (her father's younger brother) and an auto driver in the same village. Given the close proximity of perpetrators to the family, MM's parents were least interested in proceeding legally against them. With no inclination to take the risk, the School Management decided that MM was unfit to continue in the school, and therefore sent her back home.

Many a times the case of Child Sexual Abuse is not being reported because of stereotypes created by the society, stigmatization of the victim and victim's family, inhibited nature of parents due to societal norms and secrecy attached to the issue.Children in all the above instances did not realize that the act of perpetrators was a form of sexual abuse, punishable under law. In case of KV, the perpetrator convinced her that the act of sexual abuse was normal. She, however, realized late, perhaps through a news story, that what she underwent was indeed a gross sexual abuse. Similarly, in the case of SB, even after repeated abuse she was not aware of the fact that she was being sexually abused. The instance of MM also reveals the same.

Perpetrators in all the above cases are responsible care takers for the children they abused, and have taken an undue advantage of the vulnerability of the children. Besides, the natural compliance of children also helps the perpetrators of the above kind to easily execute their abusive schemes. Children with intellectual disabilities are at more risk in this case. The case of PV is a clear illustration that the perpetrator took a clear advantage of her low level of perceptibility.

It is often found that the girl children are blamed more than their male counter parts on a false pretext that the former possess deviant behavior. My conversation with a female teacher, Mrs. UA, reveals that children, teachers and other staff members (including women) carry such a mis-conceived notion. The popular notion, henceforth, is that the onus is always on a girl child to protect herself from an abuse irrespective of the level of her age, understanding, knowledge, ability, etc. The said teacher openly told during our conversation: *"the teenage girls in the school develop all kinds of thoughts due to their bodily changes, so they should be careful. It is the mistake of the female victim, but not her male counterpart, for it is she who needs to be careful"*. This statement reflects that men tend to commit crime but girls and women must be careful to protect themselves.

Similarly, the classmate of SB told me, *"SB faced the abuse simply because of her own behavior"*. But when asked about Child Sexual Abuse in detail, Miss SB's friend admitted that she had no idea, whatsoever, about it. The beliefs of this kind often yield ground to male perpetrators to escape from the offense on the pretext that the female victims gave their consent for the act, and they henceforth claim that they should be treated innocent. This clearly shows that children as well as teachers do not realize that sexual abuse of children even with mutual consent is a punishable offence.It is worth pointing out that the low status of being girls and of being disabled often adds to the precarious nature of abuse, for it also means losing out on one's own personhood.

Anthropological writings in India Dube (1967), Srinivas (1942), Karve (1968), Madan (1989), and Mandelbaum (1970) clearly bring out the nature and extent of preference for male children over their female counterparts. This is quite similar to the preference non-disabled receive over their disabled

counterparts. Looking into the facets of such a preference and the marginality it created historically, Usha (1963) points out two extreme ways of treating children with disabilities in the Indian subcontinent: the first one relates to pre-historic times when any child found defective was killed at birth because the general consensus was that it would be futile to provide care and nourishment to someone who would not be able to contribute to the subsistence economy in his later years; and the other practice, perhaps quite contrary to the first one, is found among Todas, where a disabled child is highly revered and cared for. The later practice seems to stem from an altruistic belief that disability is endowed with supernatural attributes, and a child with disability cannot, therefore, be taken for granted (cited in Addlakha, 2013:43). In either case, the fact remains that a person with disability does not enjoy the recognition for what he/she is, but for what his/her disability entails.

If one were to think killing a disabled child at birth is a barbaric tradition confined only to pre-historic age, one is grossly mistaken; A case study by Mehrotra (2004), conducted in rural Haryana, is quite revealing in this context. Participants in the study are reported to have unequivocally stated that they eagerly wait for death or disease to strike their disabled children. Such a murderous thought leads to the neglect of the children, causing other ailments due to malnutrition and inadequate medical care.

Going beyond childhood, what is also at stake is personhood. More often than not, a person with disability becomes the other, a counterpoint to normality; a figure whose very humanity is questionable —a notion that entails nothing less than dehumanizing disability (Murphy, 1990). Besides, women with disabilities in South Asia are also found to face triple discrimination (Thomas and Thomas, 2002), as their gender identity coupled with disability and the social marginalization attached to both pushes them to bottom of the hierarchical pyramid.One of the peculiar challenges we encounter in matters of personhood in the South Asian context is that persons with disabilities don't often fit into the binary of feminine and masculine norms, resulting in their being considered the social other. Within this category, people with cognitive disabilities are further isolated. They are denied legal personhood on the pretext that they are incapable of taking legally binding decisions either on their own behalf or for the interests of others (see Mehrotra and Nayar, 2020:130; Flynn and Arstein-Kerslake, 2014).

It was observed during the fieldwork that perpetrators' social and political background always influence matters of reporting or not reporting sexual abuse against children with special needs. Perpetrators' social category, their proximity to the school management and their network with politicians and higher officials in the city are some of the barriers to document and report the child sexual abuse effectively. In the case of PV, for example, though the perpetrator was identified, no action was taken against him because he was an influential person in the city. The school management finds ways and

means to save the perpetrators on some or the other ground instead of doing justice to the victims. Sometimes even the disability of a perpetrator comes handy for the school management to keep serious cases of child sexual abuse under carpet.

It is learned from the children concerned, matron and teachers that parents often do not come forward to take up the issue of CSA legally. In the case of KV, SB, SH, KJ and MM, parents have not taken any action even after being informed about the abuse and perpetrators. The lack of interest on the part of parents may sometimes stem from inadequate knowledge, social norms prohibiting the disclosure of CSA and the fear of influential perpetrators. Some parents hesitate to report the CSA cases simply because they are afraid of facing the burden of direct proof that may fall on them. Girl children may also be considered dispensable, especially if they are disabled.

CSA against girls with disabilities is very complex in nature when compared to that of their non-disabled counterparts due to the diverse nature of disability, type of perpetrators, parental attitude towards the issue and the challenges involved in providing them sex education. While children with hearing impairment and intellectual disabilities find it hard to explain the incident, let alone reporting it, the visually impaired children fail to recognize the perpetrators, a precondition for any legal action. The identification of perpetrator continues to be a challenge, particularly when there is a legal requirement to furnish the details regarding the date and location of the incident, identity of the perpetrator, etc., which many developmentally disabled and children with sensory disabilities cannot provide.

The issue of sexual abuse and disability is often discussed with reference to victim-stranger rather than victim-trusted focus. Besides, the researcher also finds that the focus is more on the non-disabled perpetrators and disabled victims, almost ignoring the disabled perpetrators and the disabled victims. It is, therefore, apparent that the level of understanding and awareness is a vital factor in disclosing and reporting the child sexual abuse.

CONCLUSION

As it can be inferred from the above, sexual abuse against children with disabilities continues to be an invisible yet an inviolable problem with adverse consequences. . Despite a plethora of policy interventions by the state and central governments, this problem continues to be unabated. One of the prime reasons for stagnation in reporting CSA can be attributed to the gap between law making and ground realities of the general conditions of children with disabilities. Lack of interest among families and school managements to pursue the CSA cases legally further penalizes the disabled CSA victims.

It is only fair to suggest that the issue does not stem from one or two causes; rather it is linked with multiple factors. One of the unstated facts is that the important way of identifying abuse against children with special needs,

children with intellectual disabilities in particular, is the post abuse behavior of the victims. Ironically enough, this peculiar situation gives way to settle the cases of sexual abuse against children with special needs arbitrarily, quite against the interests of the victims. Most of these cases, for example, are solved administratively rather than legally.

The present study, thus, is only an iceberg in the ocean, and far more serious details are likely to emerge if one is ready to spend a little more time and energy to scientifically investigate the issue under reference. As pointed out at some point, the present study is an outcome of compelling circumstances in which the researcher had to intervene besides her regular doctoral work. The case studies presented above are a clear indication that there is a dire necessity for studies of this kind, and what is presented here is only a mere sample of what can be unearthed far deeper.

NOTES

1. Primarily children with visual impairment and intellectual disability.

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REFERENCES

Addlakha, Renu [Eds.] 2013. *Disability studies in India: Global discourses, Local Realities*. New Delhi, Routledge.

Addlakha, Renu, and Mahima Nayar 2017. *Disability and Sexuality: Intersectional Analysis in India (Occasional Paper 63)*. New Delhi, Centre for Women's Development Studies. https://www.cwds.ac.in/wp-content/uploads/2017/11/Occasional-Paper-63-Renu.pdf, accessed January 20, 2019.

Akbaº, Seher, Ahmet Turla, Koray Karabekiroðlu, Ozan Pazvantoðlu, Tülay Keskin, and Omer Böke 2009. Characteristics of sexual abuse in a sample of Turkish children with and without mental retardation, referred for legal appraisal of the psychological repercussions. *Sexuality and Disability*, 27(4): 205-213.DOI....https://link.springer.com/article/10.1007/s11195-009-9139-7 , accessed May 31, 2019.

Baladerian, Nora J. 1991. Sexual abuse of people with developmental disabilities. *Sexuality and Disability*, 9(4): 323-335. DOI: 10.1007/BF01102020. https://link.springer.com/article/10.1007/BF01102020 , accessed January 20, 2019.

Carson, David K., Jennifer M. Foster, and Nishi Tripathi 2013. Child sexual abuse in India: Current issues and research. *Psychological Studies*, 58(3): 318-325. DOI: 10.1007/s12646-013-0198-6. https://link.springer.com/article/10.1007/s12646-013-0198-6, accessed January 19, 2019.

Daruwalla, Nayreen, Shruti Chakravarty, Sangeeta Chatterji, Neena Shah More, Glyn Alcock, Sarah Hawkes, and David Osrin 2013. Violence against women with disability in Mumbai, India: a qualitative study. *Sage open,* 3:1-9.DOI:10.1177/2158244013499144.https://journals.sagepub.com/doi/full/10.1177/2158244013499144, accessed December 25, 2019.

Deb, Sibnath, and Kerryann Walsh 2012. Impact of physical, psychological, and sexual violence on social adjustment of school children in India. *School Psychology International*, 33(4): 391-415. DOI: 10.1177/0143034311425225. https://journals.sagepub.com/doi/abs/10.1177/0143034311425225 , accessed February 20, 2019.

Dube, Shyama Charan 1967. *Indian Village.* New York, Harper and Row.

Flynn, Eilionóir, and Anna, Arstein-Kerslake 2014. Legislating personhood: Realising the right to support in exercising legal capacity. *International Journal of Law in Context*, 10(1): 81-104. DOI: 10.1017/S1744552313000384. https://www.cambridge.org/core/services/aop-cambridgecore/content/view/2FC437F8D19823CD0C3A11A0C54A4CBB/S1744552313000384a.pdf/legislating_personhood_realising_the_right_to_support_in_exercising_legal_capacity.pdf, accessed December 15, 2019.

Ghai, Anita 2002. Disabled women: An excluded agenda of Indian feminism. *Hypatia*, 17(3):49-66. DOI: 10.1111/j.1527-2001.2002.tb00941.x. https://onlinelibrary.wiley.com/doi/full/10.1111/j.1527-2001.2002.tb00941.x, accessed October 30, 2018.

Government of India 2016. *Disabled persons in India: A statistical profile.* http://mospi.nic.in/sites/default/files/publication_reports/Disabled_persons_in_India_2016.pdf, accessed November 13, 2018.

Human Rights Watch report, April 2018. https://www.hrw.org/report/2018/04/03/invisible-victims-sexual-violence/access-justice-women-and-girls-disabilities, accessed November 13, 2018.

Iravani, Mohammad Reza 2011. Child abuse in India. *Asian social science*, 7(3): 150-153. https://pdfs.semanticscholar.org/a775/94aebf33592b65fa2a69eb4e4742875c7ab6.pdf, accessed May 25, 2019.

Juvenile Justice (Care and Protection of Children) Act 2000. https://wcd.nic.in/sites/default/files/jjact2000.pdf , accessed January 10, 2019.

Kacker, Loveleen, Srinivas Varadan, and Pravesh Kumar 2007. *Study on child abuse: India.* Newdelhi, Ministry of Women and child development, Government of India. https://pdfs.semanticscholar.org/28d9/410f24c2bb4169c52a0d454973668c426a10.pdf. accessed November 13, 2018.

Karve, Irawati 1968. *Kinship Organization in India.* Bombay, Asia Publishing House.

Kulkarni, Sudha, Amar Jesani, and Lalitha D'souza 1998. *SEXUAL ASSAULT OF A DEAF MUTE GIRL IN THE OBSERVATION HOME, UMERKHADI (OHU).* Forum Against Child Sexual Exploitation, Mumbai.

Madan, Triloki Nath 1989. *Family and kinship: A study of the Pandits of rural Kashmir.*

USA, Oxford University Press.

Mandelbaum, David G. 1970. *Society in India: Continuity and change.* Berkeley, University of California Press.

Mehrotra, Nilika 2004. Women, disability and social support in rural Haryana. *Economic*

and political weekly, 5640-5644. https://www.jstor.org/stable/pdf/4415982.pdf , accessed October 30, 2018.

Mehrotra, Nilika, and Nayar Mahima 2020. Unregistered Concerns: Violence Against Women with Disabilities in India. In: *Gender and Violence in Historical and Contemporary Perspectives.* ed. by Jyoti Atwal and Iris Flessenkamper. pp. 125-140. India, Routledge.

Murphy, Robert F. 1990. *The Body Silent: The Different World of the Disabled.* New York, WWNorton and Company.

Saini, Narendra 2013. Child abuse and neglect in India: time to act. *Japan Medical Association Journal*, 56(5): 302-309. http://www.med.or.jp/english/journal/pdf/2013_05/302_309.pdf , accessed January 20, 2019.

Shildrick, Margrit 2007. Dangerous discourses: Anxiety, desire, and disability. *Studies in Gender and Sexuality,* 8(3): 221-244. DOI: 10.1080/15240650701226490. https://www.tandfonline.com/doi/full/10.1080/15240650701226490, accessed July 19, 2019.

Sobsey, Dick, and Tanis Doe 1991. Patterns of sexual abuse and assault. *Sexuality and Disability*, 9(3): 243-259. DOI: 10.1007/BF01102395. https://link.springer.com/article/10.1007/BF01102395 , accessed January 20, 2019.

Smith, Nancy, and Sandra Harrell 2013. *Sexual Abuse of Children with Disabilities: A National Snapshot.* Vera Institute of Justice: Centre on Victimization and Safety: US. http://archive.vera.org/sites/default/files/resources/downloads/sexual-abuse-of-children-with-disabilities-national-snapshot.pdf, accessed May 29, 2019.

Srinivas, Mysore Narasimhachar 1942. *Marriage and Family in Mysore.* Bombay, AmsPr Inc.

The Commission for Protection of Child Rights Act 2005. https://wcd.nic.in/sites/default/files/TheGazetteofIndia.pdf, accessed March 2, 2019.

The Mental Healthcare Act 2017. The Gazette of India.http://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf, accessed November 23, 2018.

The Protection of Children from Sexual Offences Act 2012. The Gazette of India. https://wcd.nic.in/sites/default/files/POCSO%20Act%2C%202012.pdf, accessed January 10, 2019.

The Rights of Persons with Disabilities Act 2016. The Gazette of India.http://www.disabilityaffairs.gov.in/upload/uploadfiles/files/RPWD%20ACT%202016.pdf, accessed November 23, 2018.

The UN Convention on the Rights of Persons with Disabilities 2006. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/convention-on-the-rights-of-persons-with-disabilities-2.html, accessed March 2, 2019.

Thomas, Maya, and M. J. Thomas 2002. Status of women with disabilities in South Asia. *Asia Pacific Disability Rehabilitation Journal*, Selected readings in community-based rehabilitation, series,2. pp. 27-34. http://www.aifoeng.it/archives/disability/apdrj/2002_selected_readings_cbr.pdf#page=26 , accessed December 20, 2019.

Vaidya, Shruti 2017. Childhood Sexual Abuse and Disability: A critical study of an invisibilized constituency in India. *Disability and the Global South*, 2(2): 649-666. http://www.repositoriocdpd.net:8080/bitstream/handle/123456789/1666/Art_VaidyaS_ChildhoodSexualAbuseDisability_2015.pdf?sequence=1 , accessed October 24, 2018.

Virani, Pinki 2000. *Bitter chocolate: Child sexual abuse in India.* UK, Penguin.

Wissink, Inge B., Eveline Van Vugt, Xavier Moonen, Geert-Jan J.M. Stams, and Jan, Hendriks 2015. Sexual abuse involving children with an intellectual disability (ID): A narrative review. *Research in Developmental Disabilities*, 36, 20-35. DOI:10.1016/j.ridd.2014.09.007.https://reader.elsevier.com/reader/sd/pii/S089142221400397, 7?token=1E6CF509C12B743638EF19E978AB58338AEEBFFAC24B7D81300E0AD592DF319987CA503619589D0E8C5BB6C0B27A9D97 January 20, 2019.

UNICEF. May 2013. *Children and Young People with Disabilities: Fact Sheet.* https://www.unicef.org/disabilities/files/Fact_Sheet_Children_and_Young_People_with_Disabilities_-_2013.pdf , accessed November 13, 2018.

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Can mid-upper arm circumference be an alternative to body mass index in assessing nutritional status? A study on a group of adolescent Bengali girls from West Bengal

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Abstract: Body Mass Index (BMI) is widely accepted as an indicator of nutritional status among adolescents. Despite being devoid of widely-accepted cut-offs, the Mid-Upper Arm Circumference (MUAC) is also recently gaining importance in assessing nutritional status among the aforementioned group. The present study seeks to answer the question as to how far MUAC is reliable for this sort of assessment as compared with BMI in assessing nutritional status of adolescent girls. The study was conducted among 301 Bengali Hindu Caste Population school-going adolescent girls (aged 11-14 years) residing in the sub-divisional town of Siliguri, District of Darjeeling, West Bengal, India. The girls were the students of one school located under Siliguri sub-division of the area. Height, weight and MUAC were measured using standard procedures. The BMI was accordingly calculated using the standard equation of the World Health Organization. The data obtained was tabulated to elucidate age-wise descriptive statistics. We used MUAC as a screening tool for undernourishment. The overall mean MUAC among the girls was observed to be 20.97±3.04 cm while the mean BMI among them was 18.23±3.39 kg/ m^2. It was observed that 21.93% and 26.25% of the participants were undernourished according to MUAC and BMI cut off values respectively. Evaluation of the screening test revealed that MUAC possessed a sensitivity of 62.02% and a specificity of 92.34%. The linear relationship between BMI and MUAC tended to be positive and strongly correlated ($r=0.849$, $p<0.05$, $r^2=0.721$).The findings can pave the way for an understanding of the suitability of MUAC as an indicator of nutritional status among adolescent girls. However, more studies are required to confirm its reliability over BMI.

Key words : BMI, MUAC, adolescent girls, Bengali, West Bengal.

INTRODUCTION

Adolescence is a unique period of development that initiates at puberty and terminates in early adulthood. It is portrayed as a phase of rapid physical, biological, neuro-developmental and hormonal changes resulting into psychosocial, behavioral and sexual maturation in an individual. Due to increased nutritional needs and low social power, adolescents fall under the ravages of various forms of malnutrition (Chaudhary et al., 2003). According to a report of World Health Organization (1999), girls constitute a vulnerable group among adolescents. This is more pronounced in the developing countries like India where adolescent girls are traditionally married off at an early age and hence exposed to a greater risk of reproductive morbidity and mortality.

The nutritional status of adolescent girls, who are the future mothers (Venkaiah, 2002), bears special importance as they contribute significantly to the overall nutritional status and health of the concerned population or community. Improvements in the nutritional status of adolescent girls can help countries to achieve three of the Millennium Development Goals which are normally accepted as a framework for the measurement of a country's progress. These goals are to — a) eradicate extreme poverty and hunger b) reduce child mortality and c) improve maternal health. In view of rapid growth and maturation of this period which demands extra nutrients and energy-rich foods, as a group, they remain potentially nutritionally vulnerable. Several studies from India have indicated that adolescents continue to be highly affected by undernutrition (e.g. Venkaiah et al., 2002; Desmukh et al., 2006; Malhotra and Passi, 2007; Medhi et al., 2007; Bose and Bisai, 2008; Mondal and Sen 2010a, 2010b; Rajaretnam and Hallad, 2012; Mondal, 2014; Roy et al. 2016; Faizi et al., 2017). Inadequate diet and unfavourable environmental and socio-economic conditions are the principal potential stressors that adversely affect the physical growth and nutritional status of this group (Roy et al., 2016). In fact, adolescent girls are more susceptible to undernutrition as during this period, they are growing at a faster rate after their first year of life. They need protein, iron and other micro- and macro-nutrients to support and sustain the growth spurt and meet the body's increased demand for iron during menstruation.

Currently, it is estimated that adolescents contribute to 1.20 billion of the global population and comprises one of the largest cohorts (243 million) of the Indian population. In India, data on adolescents obtained from the National Family Health Survey-III, District Level Household and Facility Survey-III and Sample Registration System have called to focus attention to their health and social aspects (Sivagurunathan et al., 2015). It needs to be mentioned here that it is only recently that some efforts have been made to include adolescents as beneficiaries in some of the countrywide health care and nutritional intervention programmes (Kapil and Sachdev, 2012). Recently in January 2014, the Government of India has launched the 'Rashtriya Kishor Swasthya Karyakram' that explicitly focuses on the sexual health of adolescents.

Anthropometry still remains the widely used, inexpensive and non-invasive technique available to researchers for assessment of body composition and nutritional status. In a sizeable number of studies, nutritional status of adolescents has been assessed using one of the common anthropometric indices, namely the body mass index (BMI) (e.g. Mondal and Sen, 2010a; Vyas et al., 2014; Babu et al., 2016; Kodali et al., 2016; Nath and Gangopadhyay, 2018; Rani et al., 2018, Kryst et al., 2019). Nevertheless, mid-upper arm circumference (MUAC) has also gained importance and popularity in assessing nutritional status among adolescents in recent years (e.g.Martin et al., 2009; Lille et al., 2019; Das et al., 2020). However, there are still no global standards

to classify malnutrition using this measurement. In fact, many countries and programs have established their own MUAC cut-offs so as to determine eligibility for different program services. As enunciated by the term itself, MUAC refers to the measurement of circumference of the mid-upper arm. It is the circumference of the upper arm (conventionally, left upper arm) measured at the midpoint between the tip of the shoulder and the tip of the elbow (between the olecranon process and the acromion). The technique of measuring MUAC is simpler and less time-consuming than BMI (where one requires measuring both height and weight of the individual). In other words, MUAC requires minimal equipment (only a measuring tape) compared to BMI (which requires an anthropometer rod as well as a weighing machine). In a very recent study, it has been opined that using BMI as a screening measure for malnutrition can be impractical because of logistic requirements (Das et al., 2020). This calls for the easy application of MUAC even on the most debilitated individuals in famines or in case of emergencies. Additionally, in nutritional studies, often MUAC proves to be a more stable and reliable parameter than BMI. This is because BMI exhibits a composite linear dimension that represents overall adiposity in relation to height (Chung, 2015). This can result in more dramatically changes in BMI when compared to MUAC during the period of adolescence. The MUAC is observed to be least affected by changes in adiposity levels, height, weight or accumulation of fluids or even in cases of pregnant adolescents where indices involving height and weight (such as BMI) are ruled out. However, Çiçek et al. (2014) concluded that due to lack of international cut-off values for arm anthropometry among children and adolescents, studies aiming to produce local references may be beneficial. It may be opined here that the establishment of standardized MUAC cutoffs for malnutrition among adolescents could go a long way to help identify individuals who remain at increased risk of death or poor treatment outcomes due to acute undernutrition. As different countries and programs use different MUAC cut-offs, the Food and Nutrition Technical Assistance (FANTA) has started a two-phase research study in collaboration with Tufts University to build the evidence base for the use of standardized MUAC cut-offs as indicators of undernutrition among adolescents. Of course, there have been some studies on the reliability of MUAC among adolescents as a tool for nutritional assessment. In this context, notable studies in India include that of Dasgupta et al. (2010) in Chelta in West Bengal, Jeyakumar et al. (2013) in Pune city, Maharashtra, De (2016) in Paschim Medinipur, West Bengal and Jaiswal et al. (2017) in Bareilly district, Uttar Pradesh.

With the above issues in mind, the present study aimed to study the following:

(i) to evaluate the nutritional status of adolescent girls aged 11-14 years

(ii) to compare BMI with MUAC in assessing the nutritional status of adolescent girls aged 11-14 years

(iii) to evaluate the sensitivity and specificity of MUAC as a tool in assessing nutritional status.

MATERIALS AND METHODS

Source of data

The present cross-sectional study was conducted among 301 school-going adolescent girls belonging to the Bengali Hindu Caste Populations (BHCP), aged between 11-14 years and residing in the Siliguri sub-division of the district of Darjeeling, West Bengal. The students were enrolled in one particular school of this region. The school was selected based on large students' strength, dominance of students belonging to the BHCP and easy accessibility by road, using a purposive sampling method. Before commencement of the study, relevant authorities of the school were acquainted with details regarding the scope of the study with a view to solicit their cooperation. A total of 326 apparently healthy adolescent BHCP girls were approached to participate in the study. Of these 326 girls, 25 of them declined to participate in the same. The overall participation rate was 92.33%. All the selected girls were free from any physical deformities and were not suffering from any diseases at the time of data collection. The age of the girls was ascertained from the school records. Needless to say, participation in the study was purely voluntary and written consents of the girls were obtained prior to data collection. A modified version of the socio-economic scale of Kuppuswamy (Mishra and Singh, 2003) was utilized, so as to ascertain socio-economic status (SES) of the girls.The study was conducted in accordance with the ethical guidelines for human experiments, as laid down by the Helsinki Declaration of 2000 (Touitou et al., 2004). The data was collection from July 2018 to November 2018.

Types of data recorded

Anthropometric measurements of height, weight and MUAC of the girls belonging to the aforementioned age-group and ethnicity were recorded using the standard procedures of Weiner and Lourie (1969). The BMI was calculated using the following standard formula of the World Health Organization:

BMI (kg/m^2) = weight in kilogram/(height in meter)^2

A most commonly used indicator of precision or rather accuracy index (Perini et al., 2005) called Technical Error of Measurement (TEM) was utilized to check the reliability of the anthropometric measurements recorded. For calculation of intra-observer TEM, height, weight and MUAC were recorded from 50 adolescent BHCP girls, other than those selected for the study. The measurements were taken thrice on each individual by the first author (SR). The TEM was calculated using the following equation of Ulijaszek and Kerr (1999):

$TEM=\sqrt{(\sum D^2/2N)}$, D=difference between the measurements, N=number of individuals.

The coefficient of reliability (R) was subsequently calculated from TEM using the following equation:

$R=\{1-(TEM)^2/SD^2\}$, SD=standard deviation of the measurements.

Very high values of R (>0.975) were obtained for intra-observer TEM analysis. All the values of R were appreciably higher than the accepted cut-off value of 0.95 as suggested by Ulijaszek and Kerr (1999). Hence, the anthropometric measurements recorded by SR were considered to be reliable and reproducible and the TEM values were not incorporated for further statistical consideration.

Statistical analysis

The data obtained in the present study was statistically analyzed using statistical constants and relevant statistical tests utilizing the IBM SPSS (Statistical Package for Social Science) Statistics (version 23.0, SPSS Inc., Chicago, IL). A p value of<0.05 was considered to be statistically significant.

The mean MUAC and BMI values were compared at different age points with the corresponding reference values (Fryar et al., 2012) adopted from NHANES (National Health and Nutrition Examination Survey) conducted by Centers for Disease Control and Prevention (CDC), National Centre for Health Statistics (NCHS) during 2007-2010. Student's t-test was performed to compare the mean BMI and MUAC of the present study and reference value at each different age points. One-way analysis of variance (ANOVA) was utilized to understand age-wise differences in mean BMI and MUAC.

Distribution of the girls was calculated on the basis of percentiles. Girls having BMI and MUAC values $<5^{th}$ percentile were considered to be undernourished. Those exhibiting BMI and MUAC values $\geq5^{th}$ percentile were considered as non-undernourished (this group included normal, overweight as well as obese subjects). To assess MUAC as a screening tool for undernutrition, a screening test was performed using crosstabs to evaluate true positive (TP), true negative (TN), false positive (FP) and false negative (FN). The percent of TP, TN, FP and FN was further utilized to calculate sensitivity, specificity, and predictive value of positive test, predictive value of negative test, prevalence and accuracy. The positive likelihood ratio was calculated by dividing sensitivity by (1-specificity) and the negative likelihood ratio was calculated by dividing (1-senstivity) by specificity. Moreover, accuracy was calculated by dividing sum of TP and TN by the sum of TP, TN, FP and FN (Baratloo et al., 2015).

Pearson's correlation test was performed to analyze the correlation between BMI and MUAC. A scatter plot was drawn to observe the linear relationship between them.

RESULTS

Overall mean and standard deviations (SD) of MUAC and BMI among the girls is displayed in Table 1. The overall mean MUAC and BMI of girls were 20.97

cm and 18.23 kg/m^2 respectively. The ANOVA analysis showed no significant statistical differences in age-wise mean BMI and MUAC ($p>0.05$).

Table 1: Overall mean and standard deviation of BMI and MUAC values among the BHCP girls

Variable	N	Mean±SD
MUAC (cm)	301	20.97±3.04
BMI (kg/m^2)	301	18.23±3.39

The next table (Table 2) shows the presence of undernutrition at each age point with respect to BMI and MUAC while comparing with the reference value. Student's t-test confirmed that there existed significant differences between the mean values of BMI and MUAC obtained in the present study and the reference study (Fryar et al., 2012). However, BMI at age 13 years and 14 years were within normal range (i.e., 18.5 kg/m^2 -24.9 kg/m^2) as per the WHO cut-offs of BMI.

Table 2. Age-wise comparison of mean BMI and MUAC values obtained in the present study with the reference values

Age (in years)	No.	BMI (mean±SD)		Difference in mean BMI	MUAC (mean±SD)		Difference in mean MUMC
		Present study	Reference value#		Present study	Reference value#	
11	88	17.96±3.30	20.7±7.10	2.74* (t-value= -7.791)	20.76±3.00	24.6±6.53	3.84* (t-value= -11.984)
12	96	17.75±3.10	21.3±6.31	3.55* (t-value= -11.212)	20.53±3.16	25.4±5.49	4.87* (t-value= -15.096)
13	66	18.84±3.65	22.1±6.03	3.26* (t-value= - 7.261)	21.39±2.91	26.5±5.72	5.11* (t-value= -14.241)
14	51	18.81±3.62	23.5±5.05	4.69* (t-value= - 9.274)	21.61±2.96	27.9±3.97	6.29* (t-value= -15.148)

#Fryar et al. (2012); *differences were observed to be statistically significant ($p<0.05$)

Distribution of the girls on the basis of percentiles is shown in Table 3. Around 21.93% and 26.25% of the girls were observed to be suffering from undernutrition according to MUAC and BMI respectively.

Results of the screening test as calculated using crosstabs is outlined in Table 4. In the present study, 49 girls out of 66 were considered as TP or undernourished according to MUAC and 205 girls as non-undernourished or TN. The TP signified the number of girls who were defined as undernourished (based on BMI) and also defined as undernourished (i.e., positive) by MUAC. The TN signified number of girls who were non-undernourished (as defined by BMI) and also defined as non-undernourished (i.e., negative) by MUAC.

Table 3. Frequency distribution of the girls in relation to their nutritional status based on BMI and MUAC

Nutritional status	MUAC	BMI
<5th percentile (undernourished)	66 (21.93%)	79 (26.25%)
5th – 100th percentile (non-undernourished)	235 (78.07%)	222 (73.75%)
Total	301 (100%)	301 (100%)

Table 4. Results of the screening test for assessment of nutritional status using crosstabs

Undernourished (MUAC)	Undernourished (BMI)		Total
	Yes	No	
Yes	49 (TP)	17 (FP)	66 (TP+FP)
No	30 (FN)	205 (TN)	235 (FN+TN)
Total	79 (TP+FN)	222 (FP+TN)	301 (TP+FP+TN+FN)

Table 5. Evaluation of screening of nutritional status based on MUAC

Measures	Value
Sensitivity	62.02%
Specificity	92.34%
Positive predictive value	74.24%
Negative predictive value	87.23%
Positive likelihood ratio	8.09
Negative likelihood ratio	0.411
Prevalence	26.24%
Accuracy	84.38%

The evaluation measures derived from the screening test was subsequently done. Sensitivity and specificity remain the two most important characteristics of any screening test. Sensitivity of the test in this case referred to the percentage of all undernourished girls who had a positive test whereas specificity was the percentage of all non-undernourished girls who had a negative test. It was observed that the sensitivity and specificity of the screening test in the present study were 62.02% and specificity of 92.34% respectively (Table 5).

Predictive value reflects the diagnostic power of the screening test. Positive predictive value refers to the ability of a test to detect any particular condition

(in this case, undernutrition). The present study exhibited a positive predictive value of 74.24% which was the probability that the subject is undernourished when the test was positive. On the other hand, negative predictive value was the ability of a test to detect the absence of a condition. The present study had a negative predictive value of 87.23% which was the probability that the subject is non-undernourished when the test was negative (Table 5).

Likelihood ratio gives the researcher a quick measure of how much the test improves the likelihood of making a correct diagnosis as either TP or TN. The positive likelihood ratio was 8.09, which showed how much odds of the condition (in this case, undernutrition) increased when the test was positive. The negative likelihood ratio was 0.411 which portrayed how much odds of the condition decreased when the test was negative. The accuracy of a test was its ability to differentiate the undernourished and non-undernourished subjects correctly. The present study had an accuracy of 84.38% (Table 5).

Figure 1. Linear relationship between BMI and MUAC

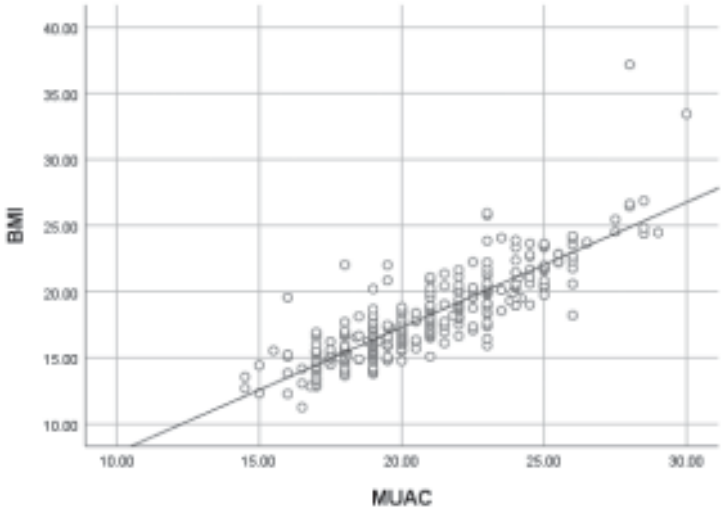

Figure 1 shows the linear relationship between BMI and MUAC which tended to be positive and possessed strong correlation between them ($r=0.849$, $p<0.05$, $r^2=0.721$).

DISCUSSION

The World Health Organization (WHO) believes that the ultimate objective of nutritional assessment is to improve the quality of human health and assess the health conditions by implementing specific nutritional intervention programs. Undernutrition continues to be a major public health issue and a principal cause of ill-health condition in the developing countries, and India is no exception. The assessment of undernutrition bears great significance

in India; where a large proportion of the population suffers from different grades of undernutrition; and adolescents are no exception.

The present study exhibited the prevalence of undernutrition among adolescent BHCP girls at different age points while comparing with the reference values from a survey conducted during 2007-2010. A similar observation was noticed in a study among adolescent boys from a slum at Chetla in Kolkata by Dasgupta et al. (2010) while comparing their data with reference value from NHANES conducted during 2003-06. Uddin et al. (2015) observed a 53% to 76% of undernutrition among adolescents while comparing their data with the NHANES-I percentile values. A study by Chaudhury et al. (2003) among adolescent girls in the rural areas of Varanasi showed that 68.52% of them were undernourished (BMI<18.5 kg/m^2), and average mid arm circumference was 82.81% of the corresponding reference values.

The present study has performed a screening test where undernutrition was assumed as positive and non-undernnutrition as negative. A moderate sensitivity of 62.02% and a very high specificity of 92.34% were observed. This showed that MUAC has predicted undernutrition (in this case, TP) moderately and non-undernutrition (in this case, TN) to a very high percentage. Putting this simply, MUAC in the present study has yielded moderate (62.02%) probability of being positive in the undernourished category. The MUAC has also predicted higher probability of being negative in case of non-undernourished category. A similar study by Jeyakumar et al. (2013) among unmarried adolescent girls in Maharashtra exhibited low sensitivity (28.57%) and a very high specificity (96.46%). However, Dasgupta et al. (2010) observed a very high sensitivity (94.6%) and moderate specificity (71.2%) in their study among adolescent boys.

Apart from sensitivity and specificity, the screening test had also other parameters that are being discussed as well. In the present study, the predictive value of positive test was 74.24% and predicted value of negative test was 87.23%. In other words, MUAC in the present study had yielded higher probability of girls with a positive screening test who were truly undernourished and higher probability of girls with a negative screening test who were truly non-undernourished.

Likelihood ratios have been used for assessing the value of performing a screening/diagnostic test. Likelihood ratios above 10 and below 0.1 were considered to provide strong evidence to rule in or rule out diagnoses respectively in most circumstances (Jaeschke et al., 2002). In other words, larger the positive likelihood ratio, the more informative was the tool (in this case MUAC) and smaller the negative likelihood ratio, the more informative was the tool. In the present study, the positive likelihood ratio was 8.09 and the negative likelihood ratio was 0.41. Moreover, it is also mentioned that findings whose likelihood ratios equal to 1 lack a diagnostic value (McGee, 2002). This further proves that in the present study MUAC has proved to be a

better tool in distinguishing undernourished subjects and non-undernourished subjects. A similar view has also been echoed in a recent study by Das et al. (2020).

There is an emerging body of evidence that MUAC and BMI positively correlate among adolescents (Table 6). As in several studies, the present study observed a strong positive correlation between BMI and MUAC. However, the studies listed in Table 6 signify that there remained a dearth of such studies among particular age groups and in particular ethnic groups or region. This definitely calls for more studies regarding the issue of this correlation for different age groups and at different geographic locations.

Table 6. Correlation between BMI and MUAC as observed in various studies done among adolescents

Study	Area	Subjects	Age range	Correlation
Jeyakumar et al., 2013	Maharashtra, India	Adolescent unmarried girls residing in urban slums	16-18 years	r=0.593 (p=.000)
Dasgupta et al., 2010	Chetla, Kolkata, India	Adolescent school-going boys	10-19 years	r=0.822 (p=0.000000)
Sethi et al., 2019	Chhattisgarh and Odisha	Adolescent girls from four tribal blocks	10-19 years	r=0.78 (overall) r=0.82 (Chhattisgarh) r= 0.77 (Odisha) (p=0.001)
Nath and Gangopadhyay, 2018	Tripura, Agartala, India	Adolescent school-going boys	12-18 years	r= 0.980 p<0.01)
Present study	Siliguri, West Bengal, India	Adolescent BHCP school-going girls	11-14 years	r=0.849 (p=0.000)

CONCLUSION

Adolescents in developing countries like India possess greater risk of the undesirable effects of undernutrition. Therefore, there is a need to identify simpler technique like MUAC to assess undernutrition among this age group. The findings of the present study can pave the way for confirming the reliability of MUAC (over BMI) in assessing nutritional status of adolescent population. Nevertheless, more studies are needed to substantiate its validity.

REFERENCES

Babu, M. S., N. A. Rekha, N. Ashwani and P. Sudarsini. 2016. Adolescent nutritional status among school children in Eluru Town, West Godavari District, Andhra Pradesh. *IOSR- J Dent Med Sci.*15(6) Ver. IV:01-09.

Baratloo, A., M. Hosseini, A. Negida andG. El Ashal. 2015. Part 1: Simple definition andcalculation of accuracy, sensitivity and specificity. *Emerg (Tehran).* 3(2):48-49.

Bose, K and S. Bisai. 2008. Prevalence of undernutrition among rural adolescents of West Bengal, India. *J Trop Pediatr.*54(6):422-423.

Chaudhary, S. C, P. Mishra and K. P. Shukla. 2003. Nutritional status of adolescent girls in rural area of Varanasi.*Indian J Prev Soc Med.* 34(1–2): 53-61.

Chung, S. 2015. Body Mass Index and body composition scaling to height in children and adolescent.*Ann PediatrEndocrinolMetab.* 20(3):125-129.

Cicek, B., A. Öztürk, M. M. Mazýcýoglu and S. Kurtoglu. 2014. Arm anthropometry indices in Turkish children and adolescents: changes over a three-year period. *J Clin Res PediatrEndocrinol.*6(4):216-226.

Das, A., G. Saimala, N. Reddy, P. Mishra, R. Giri, A. Kumar, A. Raj, G. Kumar, S. Chaturvedi, S. Babu, S. Srikantiah and T. Mahapatra. 2020. Mid-upper arm circumference as a substitute of the body mass index for assessment of nutritional status among adult and adolescent females: learning from an improvised Indian state. *Public Health.* 179:68-75.

Dasgupta, A., A. Butt, T. K. Saha, G. Basu, A. Chattopadhyay and A. Mukherjee. 2010. Assessment of malnutrition among adolescents: Can BMI be Replaced by MUAC. *Indian J Community Med.* 35(2):276-279.

De, K. 2016.Assessment of nutritional status of adolescent girls by mid-upper arm circumferences of PaschimMedinipur, India.*Primary Health Care.*6:242.

Deshmukh, P. R., S. S. Gupta,M. S. Bharambe,A. R. Dongre,C. Maliye,S. Kaur,and B.S. Garg. 2006. Nutritional statusof adolescents in rural Wardha. *Indian J Pediatr.* 73(2):139-41.

Faizi N, Z. Khan, I. M. Khan, A. Amir, S. A. Azmi, and N. Khalique. 2017. A study on nutritional status of school-going adolescents in Aligarh, India. *Trop Doct.* 47(3):212-216.

Fryar, C. D., Q. Gu and C. L. Ogden. 2012. Anthropometric reference data for children and adults: United States, 2007-2010. *Vital Health Stat. 11* (252):1-48.

Jaeschke, R., G. Guyatt and J. Lijmer. 2002. Diagnostic tests. In: *Users' guides to the medical literature*. ed by G. Guyatt and D. Rennie, pp. 121-140. Chicago: AMA Press.

Jaiswal, M., R. Bansal and A. Agarwal. 2017. Role of mid-upper arm circumference for determining overweight and obesity in children and adolescents. *J ClinDiagn Res.* 11(8): SC05-SC08.

Jeyakumar, A., P. Ghugre and S. Gadhave. 2013. Mid-upper-arm circumference (MUAC) as a simple measure to assess the nutritional status of adolescent girls as compared with BMI. *ICAN: Infant, Child, & Adolescent Nutrition.* 5(1):22-25.

Kapil, U.and H. P. Sachdev. 2012. Urgent need to orient publichealth response to rapid nutrition transition. *Indian JCommunity Med.* 37(4):207-210.

Kodali, P. B., S. Kopparty, R. Vallavuni and J. R. Kalapala. 2016. Mid-day meal programme and adolescent undernutrition — an epidemiological study in Hyderabad, India. *J PharmPract Community Med.* 2(1):16-20.

Kryst, L., M. Zeglen, I. Wronka, A. Woronkowicz, I. B. Pawlak, R. Das, R. Saha, S. Das and P. Dasgupta. 2019. Anthropometric variations in different BMI and adiposity levels among children, adolescents and young adults in Kolkata, India. *J Biosoc Sci.* 51(4): 603-618.

Lille, M., I. Lema, S. Kaaya, D. Steinberg and J.N. Baumgartner. 2019.Nutritional status among young adolescents attending primary school in Tanzania: contributions of mid-upper arm circumference (MUAC) for adolescent assessment. *BMC Public Health.* 19(1): 1582.

Malhotra, A andS. J. Passi. 2007. Diet quality and nutritionalstatus of rural adolescent girl beneficiaries of ICDS innorth India. *Asia Pac J Clin Nutr.* 16(Suppl 1):8-16.

Martin, A.C, E.M. Pascoe and D.A. Forbes. 2009. Monitoring nutritional status accurately and reliably in adolescents with anorexia nervosa. *J Paediatr Child Health.* 45(1-2):53-57.

McGee, S. 2002. Simplifying Likelihood Ratios.*J Gen Intern Med.* 17(8): 647-650.

Medhi, G.K., N. C. Hazarika and J. Mahanta. 2007. Nutritionalstatus of adolescents among tea garden workers.*Indian J Pediatr.* 74(4)343-347.

Mishra, D. andH. P. Singh. 2003. Kuppuswami's socio-economic status scale- A revision. *Indian J Pediatr.* 70(3):273-274.

Mondal N. 2014. Thinness as major underlying problem among adolescents of Northeast India. *J Nepal Paediatr Soc.* 34(1):39-47.

Mondal, N. and J. Sen. 2010a.Prevalence of undernutrition amongchildren (5-12 years) belonging to three communitiesresiding in a similar habitat in North Bengal, India.*Ann Hum Biol.* 37(2):198- 216.

Mondal, N. and J. Sen. 2010b.Prevalence of stunting and thinness among rural adolescents of Darjeeling district, West Bengal, India.*Italian J Pub Health.* 7(1):54-61.

Nath, M. and S. Gangopadhyay. 2018. Anthropometric assessment of nutritional status of adolescent Tripuri boys of Agartala. *Int J Res Anal Rev.* 5(3): 165-168.

Perini, T. A., G. L. de Oliveira, J. S.Ornellas and F. P. de Oliveira. 2005. Technical error of measurement in anthropometry. *Rev Bras Med Esporte.* 11(1):86-90.

Rajaretnam, T andJ. S. Hallad. 2012. Nutritional status of adolescents in northern Karnataka, India. *J FamilyWelfare.* 58(1):55–67.

Rani, D., J. K. Singh, M. Srivastava, P. Verma, D. Srivastava and S. P. Singh.2018 Assessment of nutritional status of teenage adolescent girls in urban slum of Varanasi.*Int J Curr Res Rev.* 10(20): 6-10.

Roy, S, S. Barman, N. Mondal and J. Sen. 2016. Prevalenceof stunting and thinness among adolescent girls belonging to the Rajbanshi populationof West Bengal, India. *J Nepal Paediatr Soc.* 36(2):147-155.

Sethi, V., N. Gupta, S. Pedgaonkar, A. Saraswat, K. D. Singh, H. U. Rahman HU, A. de Wagt and S. Unisa. 2019. Mid-upper arm circumference cut-offs for screening thinness and severe thinness in Indian adolescent girls aged 10–19 years in field settings. *Public Health Nutr.*22(12):2189-2199.

Sivagurunathan, C., R. Umadevi, R. Rama and S. Gopalakrishnan. 2015. Adolescent health: Present status and its related programmes in India. Are wein the right direction. *J Clin Diagn Res.* 9(3):LE01-LE06

Touitou, .Y, F. Portaluppi, M. H. Smolensky and L. Rensing. 2004. Ethical principles and standards for the conduct of human and animal biological rhythm research. *Chronobiol Int.* 21(1):161-170.

Uddin, M. J., S. K. Nag and S. K. Sil. 2015. Anthropometric assessment of nutritional status of adolescents in rural school of Unokoti district of Tripura, North-East India. *Anthropol.* 19(1): 277-284.

Ulijaszek, S. J. and D.A. Kerr. 1999. Anthropometric measurement error and the assessment of nutritional status. *Br J Nutr.* 82(3):165–177.

Venkaiah, K., K. Damayanti, M. U. Nayak and K. Vijayaraghavan. 2002. Diet and nutritional status of rural adolescents in India. *Eur J ClinNutr.* 56(11): 1119–1125.

Vyas, S., M. Moitra, V. P. Chaudhuri and S. L. Kantharia. 2014. Anthropometric and hypertensive profile of adolescents of Surat city: A cross sectional study. *Nat J Community Med.* 5(3): 262-265.

Weiner, J. S. and J. A. Lourie. 1969. *Human Biology: A Guide to Field Methods.* Oxford-Edinburgh, Blackwell Scientific Publications.

World Health Organ Tech Rep Ser. 1999.Programming for adolescent health and development. *Report of a WHO/UNFPA/UNICEF Study Group on Programming for Adolescent Health.* (886): i-iv, 1-260.

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Tangible resources, intangible systems: A study on environmental perception among the Lodha community of West Bengal, India

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Abstract: The present study is an endeavor to understand how the indigenous community perceives and interprets the environment that regulates customary practices. The study was carried out among the Lodha community of West Bengal. The study includes 90 key respondents, selected from three different villages (Govindapur, Lohomaliya, and Muchiberia) of Jhargram and Paschim Midnapore districts of West Bengal, India. Interview, both isolational and associational were the principal tools of data collection. The perception of environment involves the understanding of the surrounding environment, classification, and utilization of different environmental resources, recent environmental changes, and its variation across different age groups. This study explores the socio-cultural construction of the environment by Lodha community. It implies that the environment is perceived through the visual and psychological attributes. The visually perceived attributes can be linked with tangible aspects of the environment, and psychological attributes encompassing the pattern of resource identification, utilization, 'local laws' of resource conservation, labour organization in terms of acquisition of specialized knowledge, continuity of knowledge through customary networks and distribution of knowledge in terms of age and gender. Moreover, the article tries to explore the possibilities of endogenous development in the changing scenario by rapprochement of persisting knowledge base of the community and the factors deviating the community from their customary practices that has so far been successful in the local context.

Key words : Environmental perception, environmental recognition, environmental change, Inter-generational variation, Lodha tribe

INTRODUCTION

The way people perceive, construct, interpret, and interact to the natural and social environment has been one of the most important goals of cognitive anthropology. A plethora of studies focused on the cultural perception of surrounding environmental aspects such as, plants, animals including all other living beings (Berlin *et al,* 1974; Atran, 1998). The cultural perception of ecology and cognitive interpretation of environment influence the livelihood related decisions (Chatterjee and Das, 2016). The evolved traditional knowledge from cultural perception and ecological adaptation (Brush, 1993; Maffi, 2001) embodies the sustainable resource management techniques. For example, Chatterjee and Das (2016) showed that how the members of Gujjars tribe of Uttaranchal, irrespective of age can easily identify the nutritious grass (fodder) and plants used as fodders for buffalos. Negi (1998) mentioned that

despite lack of rules and community level institutions, the Gujjars efficiently succeeds in local resource management. Nisbett and Norenzayan (2002) argue that "cultural practices encourage and sustain certain kinds of cognitive processes, which then perpetuate the cultural practices." Sengupta (2005) explored new insights about the folk perception and ethno-scientific knowledge through which the tribal people cognize, analyse and construe the 'cognitised environment' within their mental map.

Environmental perception is a multi-dimensional phenomenon, which includes the 'transactional processes' between the individual and environment (Ittelson, 1973). It implicates individual and collective recognition of the environment which is considered as a fundamental potency in shaping the environment through the choice and behaviours of human. Man-environmental relations through the perception approach helps in recognizing the perceived elements and its relation to the biosphere and varies with time and place and from individual to individual. Formalized and rigorously perceived sets of elements within the environment may be regarded as an essential part of culture and scientific knowledge of a particular day or within a period. Consequently, the evolving scientific knowledge about the perceived environment and its elements can be considered as 'objective reality'. In this perspective, the individual's or group's perception about the environment may be linked into the route towards the 'objective' recognition by 'education and information' (Whyte, 1997, p. 11). Different theories and research about environmental perception include the process and development of the mental representation of the surrounded environment (Ricardo and Real, 2005). The complex interplay between environment and human constructs a mental model of environmental perception through which the human not only articulate the nature but also act on it in order to survive in adverse situation and promoting the environmental conservation goals. Environmental perception is conceptualized as the environmental feelings and/or awareness that lead to an act of recognizing the environment through different senses (Zube, 1999). The sensory experience of the environment is denoted as perception that involves both the recognition of environmental stimuli and the evolved actions in response towards the stimuli. An individual senses the environment, make plans, and take the decision concerning the functions through the neural networks (Gregory *et al.*, 2009).

Tribal people who are predominantly dependent on natural resource utilisation for their livelihood, (Quli and Singh, 2010) culture, spirituality (Shah and Sah, 2007) and economic well-being (Miah *et al.,* 2012) are more closely associated with the environment (Posey, 1999; Maffi, 2001; Altman *et al.*, 2011; Grieves, 2009). Environmental resources offer extensive ambit in terms of direct, self, and secondary employment to them (Ajaz-ul-Islam *et al.*, 2013). The economy, culture, tradition, and lifestyle of each tribal community are unique and construed based on the natural resource utilization pattern

(Verma, 1996). The tribal livelihood in India is complex as well as a multidimensional phenomenon and varies with specific geographic location, age, gender, socio-economic determinants, cultural and ecological aspects (Kumar *et al.*, 2009; cited in Ajaz-ul-Islam, 2012). Notwithstanding, the close juxtaposition with the environment, tribal people have perceived 'novel livelihood strategies' which is based on ecological knowledge and has been transmitting from one generation to other (Mishra, 2007). Eventually, the evolved symbiotic relationship between the livelihood pursuits and environmental nexus (Verma, 1996) can be elucidated as 'organic unity,' and this intricate association has bestowed definite support in using natural resources in a sustainable manner (Roy Burman, 1993). Contextually, the tribal habitats have authoritarian compliance and institutionalized rules regarding cultural practices, regulated uses of natural resources as they are well cognizant in using and conserving environmental resources (Gadgil and Berkes, 1991; Singh *et al.*, 1996) without hampering the environmental ecosystem and biodiversity (Sterens, 1997). Being a consumer of environmental resources, the tribal people use specific knowledge system in which they perceive and confer the environment, determine the selection process and pattern of the using methods of the environmental resources.

It is well known that the tribal or indigenous people are closely connected with the environment or nature due to their immense dependence on natural resources for both socio-cultural and economic benefits and well-being (Posey, 1999; Maffi, 2001; Altman *et al.*, 2011; Grieves, 2009; cited in Sangha *et al.*, 2015). The forest dwelling tribal people, who depend on the environmental resources (i.e., land, forest, etc.) possess intimate knowledge about the environmental resource distributions, functional parts of the ecosystem, and the environment-culture relationship. Their knowledge about the ecosystem administers the behaviour regarding distributive use of resources (Stevenson, 1996). The societal approaches of natural resource management (NRM) are a kind of reflection of the values, quality, and ethics of life. Historically, the materialistic life, anthropocentric values, and egoistic values have been associated with western societies. However, the indigenous cultures may reflect the dominant non-materialistic, eco-centric values towards the environment (Banerjee, 2002; Hawke 2012; Mercer *et al.*, 2005; cited in Gratani *et al.*, 2016). The perception of the natural environment through the indigenous culture is considered as an imperative link between 'cultural practices, social connectedness, identity, and health' (Schure, *et al.*, 2013).

This study explored the structural relationship among the human cognition, utilitarian aspects of different domains of environment and cultural practices of Lodha community:

(i) How community perceive the environment and environmental resources?

(ii) How the environmental perception varies in inter-generational perspective?

(iii) What are the recent (in the last 20 years) environmental changes perceived by the community?

MATERIALS AND METHODS

Lodha community

The 'Lodha' community of West Bengal, India was purposively selected for this study. The term 'Lodha' means the 'flesh' (Vidyarthi, 1978). Traditionally, the Lodha community of West Bengal were forest dwellers, highly concentrated in Paschim (West) Midnapore and Jhargram districts of West Bengal, India (Devi, 1983). The Lodhas are also distributed in the states of Odisha, Chhattisgarh, and Bihar. During the British period, the Lodhas who were recognized as 'Criminal Tribe' and used to live in dense forest. Forest played an important role in sustaining livelihood of Lodha community. However, during post-independence period, the Lodhas gradually shifted to settled agriculture with the rehabilitation policy of government. The Lodhas were designated as 'Primitive Tribe' by Dheber Commission for exhibiting distinguish characteristics such as negative population growth and forest-based livelihood practice (Panda, 2015). Presently, the Lodha tribe exhibits the community characteristic and live with other non-tribal communities (like, Mahato) in Jhargram and Paschim Medinipur districts of West Bengal. They communicate through Bengali language. Despite adopting to settled agriculture practice, they depend significantly on the forest resources for their livelihood.

Sampling technique

Two villages from Jhargram district (Govindapur and Lohamaliya village under Patasimul Gram-panchayat) and one village (Muchiberiya village under Manidah Gram-panchayat) of Paschim Medinipur district of West Bengal, were selected for this study because of their numerical dominance. 90 key respondents (30 respondents from each village) were selected from three different age groups (age group-I [15 to 25 years], age group II [26 to 59 years], and age group- III [above 60 years]). Ten respondents from each age group were selected for in-depth interview, and six to eight community members (with equal representation of male and female) from each age groups were selected to conduct the focused group discussion (FGD) in each village.

Data collection and analysis

Data were collected in two phases (first phase in June 2018 to August 2018 and the second phase in March 2019 to May 2019) through in-depth interview, and focused group discussions with selected participants. The duration of each in-depth interview lasted for 30 to 45 minutes. During the fieldwork, the respondents were informed about the purpose of the study and of maintaining anonymity. The interviews were recorded after taking verbal consent from the respondents. Four different tools – open-ended interview questions, folk

taxonomy, resource hierarchy, and Likert scale were used during the data collection process.

In-depth interview was conducted to obtain descriptive information about the perception of environment. Folk classification tool was employed through group discussion with the community members to collect information regarding their cognitive expression towards different environmental resources identification, classification, and utilization pattern. Resource hierarchy, a structured hierarchical flow of resources based on certain characteristics (like: preference or importance, degree of utilisation) was estimated. Resource hierarchy as a tool was used through group discussion with the community members. The ranking of the resources was done based on their perception, accessibility, significance and utilization value (in terms of economic, social, religious, or any other). A five point Likert scale was used to understand the level of perception towards environmental change.

Thematic analysis was employed in the analysis of the data (Neundorf, 2018).

RESULTS

World view of environment: Lodha community

We explored how the members of Lodha community perceive, interpret, evaluate and construct the cognitive model of environment through visual images, emotional attachments and local knowledge (Rollero and Piccoli, 2010, p. 200). Emphasis was given to recognize the abstract perception of the environment of the community irrespective of age and sex. The perception can also be interpreted through the Cohen's (1976) conception of environmental perception, which is based on the evaluative aspects of the environment such as biological value, economic value, psychosocial value, recreational value, aesthetic value, and religious value (Flip *et al.*, 1983).

The Lodhas perceive *Puribesh* (environment) as a unit, which includes all the living-being (*Jibo*) such as, human *(Manush)*, animal *(Poshu)*, insects *(Kitt)*, birds *(Pakhi)*, fish *(Mach)* and plant *(Gachpala)* and non-living elements (*Mrito bostu*) such as, house *(Ghor)*, roads *(Rasta)* and soil *(Mati)*. They differentiated the living elements from the non-living elements based on the presence of life (*Jibon*). All the living-beings have life and they have mobility, except plant. On the contrary, the non-living elements do not have life. One respondent shared his viewpoint during the interview:

> ". . . *puribesh* (environment) includes of both *jibo* (living) and *mrito* (non-living) *bostu* (elements). The *jibo bostu* have life such as, human, animal, plants. The *mrito* elements do not have a life like house, land, soil. We use both the *jibo* and *mrito bostu* of the environment." #R21

The Lodhas perceive environment as the combination of both living and non-living elements. It reflects the interpretative biological aspect of

environment. The environment was also perceived and interpreted as a source of medicine and food that they procure from the forest. The community members significantly depends on forest resources. Therefore, the forest was an essential inclusion within environment. Two respondents shared similar view points on this issue:

> "*Puribesh* means the *bon* (forest). If you go just two kilometers towards the west, you can see the forest areas. However, you have to move two and a half kilometer to reach the dense forest. The valuable plants and animals are found in the forest. We depend on these forest resources; without which we will become extinct. Moreover, we cannot imagine our existence without forest." #R7
>
> Another respondent said *"Puribesh* includes the forest and forest resources. I go to the forest for hunting in a group, i.e., Sunday. These forest resources belong to us. I do care for it as the forest gives so many things to us like fruits, timber, meat, honey, etc. Even, I do use different kinds of the plant to produce traditional medicine." #R10

The psychosocial dimension of the evaluative aspects of environmental perception (see Cohen, [1976]) emerged from the above statements. It appears that despite their shift in occupational pursuits, from hunting gathering to agriculture, the Lodhas significantly depend on forest resources for their survival and give the highest priority among all the perceived environmental resources; the psychological commitment towards the forest and forest resources are quite high. Forest is not only the source of economic dependence but also the source of spiritual belief, power, happiness and well-being. The Lodha community celebrate different forest-based festivals such as *Garam*[1], *Sarna*[2], and *Sharul*[3].

The foregoing discussion on environmental perception revealed a cognitive model of environment of the Lodha community as a whole. The biological classification of environment indicated the cognitive knowledge of environment, while forest and forest resources emanated as psycho-social interpretation of environment. In addition, both the conceptions of environment evidently reflects a constructive mental model of environmental perception of Lodha people.

ENVIRONMENTAL PERCEPTION: FOLK CLASSIFICATION APPROACH

The following are the interpretive and constructive cognitive knowledge on different available environmental resources.

Plant resource

The plant (*Gachpala*) resource which is perceived as a living element grows in *Mati* (soil), having two parts (below the soil and above soil). The plant resource is further classified based on (a) spatial dispersion, (b) nature of woodiness, (c) economic value and (d) medicinal value. Based on spatial dispersion, the plant

resources are classified into two groups such as, locally available plants (scattered in homestead land, grazing land or local forest) and forest plants (dispersed in dense forest). Based on woodiness, the plant resource is classified into three groups such as, grasses (do not have strong stem), herbs (having moderate to strong stems) and woody tree (hard stems). The plant resource that are located in the dense forest are medicinal plants, large woody trees and has a high economic value. The community members confessed of worshipping of large old trees during cultural festivals (*Sarna*, and *Sharul*), about their conservational attitude towards plant resource (by limited harvest of plant resource like woody trees), and indigenous knowledge on identification of some specific plants which carry rich nutritional value.

Animal resources

As part of living elements, animal (*Poshu*) resources (domestic) are considered an important component of the environment because of high economic dependency. The common animal resources are pig, cattle, cow, hen, goat, and duck. The animal resource is categorized into two groups based on (a) nature of breeds and (b) nature of outputs. The community members identify two kinds of breeds, namely local and hybrid. The local breed of animal includes cattle that are employed in agricultural activities. The hybrid variety includes cows which yields high quantity of nutritious milk compared to the local breeds of cows. Based on the nature of outputs, animal resource is further categorized into two types: egg yielding and meat yielding. Local breeds of hen and duck yield good quality eggs and have a high market value. Among all the animal resources, pigs and goats have the highest market value because of their meat yielding quantity. Therefore, it is apparent that the classification based on utilitarian attribute (meat and egg yielding), visual attribute (size; local and hybrid breed of cow), and interpretative attribute (quality of outputs) of different domestic animal as resource was based on the visual attribute and analytical attribute of environmental perception.

Forest resources

Among the non living elements of the environment, forest resource was perceived as most important resources due to their high dependence and close psychological commitment to the forest. The Lodhas reported the dynamic use of forest resource and utilization pattern (economic, food, medical, and religious). The large woody trees (Sal, Jackfruit, and Mango) and other non-timber produces, have a high economic value. Forest fruits, leafy plants, and mushroom are harvested and consumed as food. Wild animals (pig, cat, and birds) are hunted by the community members for meat. They also use some selected plants of dense forest as medicinal plants. The members of the Lodha community also practice conservation of some extinct plant spices (including large woody trees), animal species, and some special trees (like Sal and some sacred groves). While speaking about the value of forest, one respondent said:

> "*Bon* (forest) means everything to us. We are getting food, shelter, and medicine from this forest. We collect mushroom in the rainy season, hunt different wild animals and birds, and collect the timber to build our house. We make medicine from different wild plants. Even, we receive money from the forest committee when the log of a tree is sold. We believe that the forest spirit protects us from different evil spirit and we worship the forest. However, we have our internal laws that regulate the use of the forest resource. We need to preserve the resource for our future generation." R#31

The value based dynamic utilization pattern of forest resources and its conservation practice reveals their sustainable forest management skill.

Land resource

The community members perceived and interpreted the land in various local terms, like *Bil* or *Math* or *Jomi*. Based on the utilization pattern, the land is classified in several groups such as (a) homestead land (*Bandalbil / Bandaljomi*), (b) agricultural land (*Chashbil / Chashjomi*), (c) forest land (*Bonjomi*) and (d) barren land (*Poirabil / Vurajomi*). The land surrounding the home as homestead land is used for occasional grazing of the domestic animals (cow and goat). Agricultural land is the most productive land classified further based on water holding capacity such as upland (*Dangabil*) and lowland (*Solbil*). The land with high slope and water holding capacity is designated as upland where different kinds of vegetables are grown. The low land is used to cultivate paddy in rainy season due to high water holding capacity. The land of the forest area is designated as forest land. The local forest land is used for grazing of cattle. The land of *Heribon* (dense forest) is the primary source of dry Sal leaves and are used for making plates. The barren lands are least productive and thus used for holding festivals and meeting place and as playgrounds. The dynamic classification of land resource based on utilization pattern reflects their scientific perception of the environment.

HIERARCHY OF ENVIRONMENTAL RESOURCES

It emerged from the earlier discussion that the 'perceived environment' of the Lodhas includes four kinds of resources: plant, land, animal and forest. The following figure reflects the hierarchical preferences of utilisation of each resource.

The hierarchy of environmental resource indicates that forest resource occupies the top tier, followed by land resource, plant resource, and animal resource. Forest resource occupies the topmost tier because of its multiple utility value, ranging from medicinal, economic, nutritional and religious.The Lodha dominated villages are situated adjacent to the forest areas. Thus forest resources are easily available and accessible to them. Substantial accessibility and utilization of forest resource bestowed a greater extent of cognitive knowledge on forest resources.

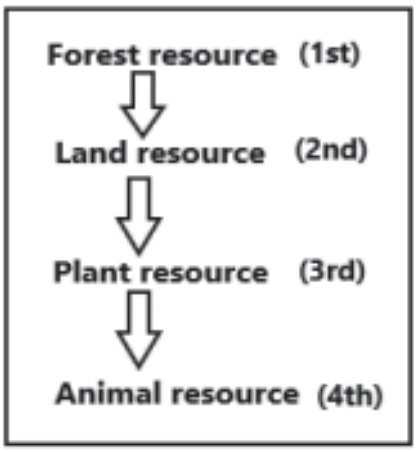

Fig. 1: Hierarchy of environmental resources
*Note: Ranking is based on the level of preference (utilization and economic value) of the community

ENVIRONMENTAL PERCEPTION: INTER-GENERATIONAL VARIATION

Table 1 presents the intergenerational variation in the perception towards environment.The first attribute of environmental perception, (recognition of environment) elaborated the significance of environment to the community members. The second attribute (interpretation of environment) referred description of environment based on perceived elements of environment and their relationship with each other. The third attribute (utilitarian aspect) explained different utilisation pattern of the interpretative environmental resources while the fourth attribute (possession of traditional knowledge) explored the cognitive, scientific, and applied knowledge of environment. The fifth attribute (protection measures taken) reflected the perceptual knowledge on resource availability, sustainable utilisation, and conservational attitude.

The participants of age group-I recognized environment only as support for livelihood. The resources from different domains of environment (plant, land, forest) supported the primary (forest-based) and secondary sources of livelihood (agriculture). Apart from livelihood, environment was recognized as the source of knowledge to the participants of age group-II. Interestingly, the participants of age group-III recognised environment as the forest-based identity, which provides survival base to the community. The interpretative attribute of environmental perception among the participants of both the age groups I and II revealed different perceived environmental resources and encrypted customary laws on forest resources, while those of age group III added the perceived environmental changes in the last two decades. The utilitarian attribute of environmental perception varied across generation. While the utilitarian value of environmental resources was only in terms of economic to the age group-I, it was food, economic, medicinal, and religious

Table 1: Inter-generational variation in perception towards environment

Perceptual attributes of environment	Description of environment (age group-I: 15 to 25 years)	(age group-II: 26 to 59 years)	(age group-III: 60 years and above)
Recognition of environment	The support base of livelihood	The support base of livelihood, source of knowledge	Forest-based identity and, fundamental base of life survival
Interpretation of the environment	Environmental resources and customary laws on the forest	Environmental resources and customary laws on the the forest	Environmental resources, customary laws on the forest and perceived environmental change
Utilitarian aspect	Economic value	Food, economic, medicinal value religious value	Economic, food, medicinal and religious value
Possession of traditional knowledge	Very little	Moderate	Very high
Protection measures taken	Only large trees of dense forest	Large trees and dense forest animals and birds	Large trees, dense forest animals and birds

*Source: Fieldwork, 2018-19

value to the other age groups (II and III). Possession of traditional knowledge was observed to be little, moderate and high among the participants of age group I, age group II and age group III respectively. The different protection measures taken by the community members showed that participants, irrespective of the age groups protect large trees of the dense forest as the part of internal forest customary laws in order to conserve the forest resources. Apart from it selected wild animals and birds, which were reported as extinct spices by community members, are also protected.

PERCEPTION OF ENVIRONMENTAL CHANGE: INTERGENERATIONAL PERSPECTIVE

Global environmental change became a significant concern in the field of environmental perception study. Experiencing the environmental changes through the interaction with the environment can be considered as important attributes in environmental perception.

During the fieldwork, three FGDs were conducted separately with the participants of age groups IV and V to document the perceived environmental changes. The participants of each of these FGDs comprises four male and four female members. The level of perception was measured in a scale ranging from very high perception to very low perception based on the ranking made by the participants. The results (Table 2) reveal that the range of environmental changes perceived by the participants in the last 20 years include erratic

rainfall, arrival of late monsoon, rise in temperature, reduction in forest concentration, encroachment of wild animals in their habitat, rise in the level of pest infestation, decrease in the quality of soil and water body. While the participants from the age group IV perceived erratic rainfall, especially during the summer and winter seasons as change in the environment, the participants from age group V could not predict rain based on their traditional knowledge (airflow from north-east corner). They (age group V) also reported about the late onset of monsoon (delayed by a month) as a perceived environmental change. The participants of both the age groups cited rampant slashing down of large trees decreased the forest reserve which led to the increase in encroachment of wild animals in their habitat. The participants of age group IV highly perceived excessive use of pesticides in agriculture led to the decrease in earthworm population in the agricultural land. As a consequence, the quality of the soil in the agricultural land got degraded. The participants also reasoned extinction of medicinal plants and wild life because of the degradation of forest ecology. Participants of both the age groups have a moderate degree of perception in relating degradation of soil quality and drought with environmental change. The occurrence of severe drought became more frequent in the last ten years. The participants of both the age groups showed low perception in relating degradation of water quality as an indicator of environmental change. Extinction of wild life is another item about which the participants of age group V have a low perception, which is an indicator of environmental change. While the participants of age group IV showed very

Table 2 Intergenerational variation in environmental change perception

Perception level	Description of perceived environmental change	
	Age group IV (30- 59 years)	Age group V(60 years and above)
Very high	Erratic rainfall, late monsoon and reduction in forest trees	Less predictable rainfall and late monsoon, reduction of forest areas and concentration of trees
High	Wild animal attacks, extensive increase of temperature, the decreasing population of earthworm in the agricultural field, a maximum level of pest infestation on an agricultural field	Wild animal attacks, an extensive increase of temperature, extinction of selected medicinal plants, wild birds
Moderate	Degrading quality of soil, drought	Degrading quality of soil, drought
Low	Degrading water quality	Degrading water quality, extinction of selected animal species
Very low	Extinction of selected animal species	Decreasing land productivity

*Note: Respondents from below 30 years of age were considered during this FGD as the aim was to document the environmental change in last 20 years.
**Source: Fieldwork, 2018-19

low perception about extinction of wild life as an indicator of environmental change, for participants of age group V, it is low crop productivity.

DISCUSSIONS

It reveals from the study that the socio-cultural construction of environment, as cognized by tribal community implies that the environment is perceived through the visual and psychological attributes. The visually perceived attribute incorporates the tangible assets of environment i.e., living and non-living elements of environment.

On the contrary, the psychological attribute refers to the forest and forest resources, the primary sources of livelihood of the community members. They have a strong psychological commitment towards forest and forest resources due to substantial dependence. Hence, environment is also perceived and interpreted as 'forest'. The perception of 'forest-based' environmental attribute is also reflected through various environment (forest) centric religious celebration such as *Garam*, *Sarna*, *Sharul*, *Shitala*[1]. During the festivals various forest products (leaf, fruit, stem) and food grains are offered. The community members sing and perform dance to express their feelings and convey their regards to the environment.

Environmental perception was also presented through the folk perception approach. In addition, it reveals that environment was interpreted through different perceived resource elements available in the surrounding environment. The environmental resources (plant resource, land resource, forest resource and animal resource) were classified based on the utilisation pattern, cognitive knowledge and spatial distribution that configure the perception based on dependency attribute. The spatial distribution and woodiness characteristics can be considered as the visual and sensory perception that support the conceptual argument of Rollero and Piccoli, (2010); economic value of plant resource can be considered as the utilitarian perception; the food value, medicinal value and conservational attitude can be designated as the local knowledge towards ecology. The emerged classification of plant resource (such as spatial dispersion, nature of woodiness, economic value and medicinal value), land resource (homestead land, agricultural land, forest land, barren land), forest resource (local forest and dense forest) and animal resource (local and hybrid breed; nature of output) indicated the cognitive expression of folk environmental perception of different domains of environmental resource (Sengupta, 2005). Therefore, it can be argued that high dependence and accessibility of any particular resource domain help in developing the perception on that particular resource. As, the Lodha community bestowed significant preference on forest resource due to substantial accessibility, dependability and vibrant utilitarian value, it directed them of being in the highest possession of knowledge about forest resource domain followed by other resource domains.

Inter-generational variation in environmental perception reveals that the environment was perceived through economic value and livelihood support to age group I and age group II but as identity and life survival base to age group III. Here, we can relate a close psychological commitment with the environment (here forest). Interestingly, due to high economic dependence on environmental resources with less psychological commitment, the respondents of age group-I perceive environment as 'environmental resources and customary laws on the forest' with very little traditional knowledge. The younger generation is much aware about the market value of different environmental resources. To get access to and utilize the environmental resources, especially the forest resource, the younger generation must have to take care of the customary laws of the community. Breaching the customary laws is a punishable offense in the Lodha community. Furthermore, the emergence of modern technologies and assets used for livelihood lead to devaluate the scope of application of traditional knowledge, especially among the younger generation. The dynamic utilization of environmental resources through conservational attitude among the old age group (age group III) reflects the constructive contemplation and strong psychological commitment to the environment.

Documenting the perception towards environment through environmental changes (Bone *et al.*, 2011) reveals the variation in the nature of human-environment relationship across generations (Herman-Mercer *et al.*, 2016). It revealed collective interpretations between the two age groups. The participants of older age group (age group V) made a more constructive analysis of environmental resource depletion, compared to those fron younger age group. Most of the participants of age groups III and V showed their concern with environmental degradation because of their dependence on agriculture and forest produce. Gradual extinction of animal life in the forest still remain a concern for the older age group since it was a part of their livelihood. But for the younger age group, hunting now has become a ritualistic activity only.

The cognitive expression of the Lodha community members on different domains of environmental resources explains a well-articulated mode of indigenous perception and inherent indigenous knowledge of folk thinking. These features perhaps enabled the resource utilization and structured the human experience. Distinctive linguistic expression in categorizing the different forms of environmental resources and perceived environmental changes clearly explicate the reflexive folk perception towards environment. However, this reflexive perception towards environment is not the same across generations.

CONCLUSIONS

There has been a global initiative to assess the environmental change using quantitative tool. But little effort has been made to understand how local people perceives environmental change and manages community action to preserve environment. (Roeschel et *al.*, 2016). Recognizing the perception of

environment and its change among the forest-based people will be helpful in taking affirmative actions in conserving the forest resources at local, regional, and global level. The deteriorating ecological situation, persistent poverty, social, political, and religious tensions and the reduction in biological and cultural diversity present a polycrisis for which new answers are urgently needed (Bertus and Coen, 2006). Contextually, a greater approachability in local dynamics is imperative to ensuring the issue of indigenous people with suitable information and attention (Food and Agricultural Organization, 2009).

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END NOTES

1. *Garam* (or *Baram*) is the main and famous religious festival of Lodha community. It is celebrated during *Chaitra* (March-April) month. The community believe that *Garam* is the most powerful tutelary deity, who resides in the forest. The community members worship the *Garam* deity in *Garamthan* (sacred grove) with utmost respect. The community members believe that Garam deity is the god of wood, who protects the village and forest.
2. *Sarna* festival is one of most important festivals celebrated by Lodha community. The community members believe that the Sal (*Shorea Robusta*) tree is the holly dwelling of *Sarna Devi*, who protects the all community members and forest resources. The oldest Sal tree outskirt of village forest is worshiped. The holy worship place is called *Sarnasthal.*
3. *Sharul* festival is celebrated during the first week of April, when spring comes and Sal tree get new flowers. The *Sharul* is also considered as village deity, who protects the community from all evil sources. The community worship with new Sal flower.
4. *Shitala* is most important village deity after *Garam*. It is believed that *Shitalamata* goddess is the village protector and the source of all good spirits and progress. During May month the community worship *Shitalamata* with utmost respect in local village *mandir* (temple).

REFERENCES

Altman J., Seán Kerins, Janet Hunt, Emilie Ens, Katherine May, Susie Russell, and Bill Fogarty 2011. Indigenous Cultural and Natural Resource Management Futures. https://caepr.cass.anu.edu.au/sites/default/files/docs/TI2011_9_CFOC_Final_Web_0.pdf, accessed on September 29, 2019.

Ajaz-ul-Islam, M., Sulaiman, S. M., Quli, R. R., and Sofi, P. A. 2013. Livelihood Contributions of Forest Resources to the Tribal Communities of Jharkhand. *.Ind. J. of Fund. and App. Lif. Sci.* 3(2): 131-144.

Atran, A. 1998. Folkbiology and the Anthropology of Science: Cognitive Universals and Cultural Particulars. *Beha. and Brain Sci.* 21: 547-609.

Banerjee, Subhabrata Bobby 2002. *"Reinventing Colonialism: Biotechnology, Intellectual Property Rights and the New Economics of Sustainable Development."* Paper presented at the Ninth Biennial Conference of the International Association for the Study of Common Property, Victoria Falls, Zimbabwe, June 17-21, 2002.

Berlin, B., Dennis E. B. and Peter H. R. 2013. *Principles of Tzeltal Plant Classification: An Introduction to the Botanical Ethnography of a Mayan-speaking, People of Highland, Chiapas*. Academic Press. DOI: https://doi.org/10.1016/C2013-0-07678-5, accessed on June 29, 2019.

Biklen, Sari Knopp 1998. *Qualitative Research for Education: An Introduction to Theory and Methods*. Boston, Allyn and Bacon.

Bone, C., Lilian Alessa, Mark Altaweel, Andrew Kliskey, and Richard Lammers 2011. Assessing the Impacts of Local Knowledge and Technology on Climate Change Vulnerability in Remote Communities. *Int. J. of Environmental Res. and Pub. Hea.* 8(3): 733-761.

Brush, S. B. 1993. Indigenous Knowledge of Biological Resources and Intellectual Property Rights: The Role of Anthropology. *American Anthropologist* 81: 841-873.

Chatterjee, D. and Arnab Das 2016. Cognitive Dimension of Cultural Transformation: Mental Models and Environmental Behavior among the Gujjars of Himachal Pradesh, India. *Mankind Quat., 57*(2): 196-226.

Cohen, E. 1976. Environmental Orientations: A Multidimensional Approach to Social Ecology. *Current Anthropology,* 17: 49-61.

Food and Agricultural Organization [FAO] 2009. *Indigenous and Tribal Peoples: Building on Biological and Cultural Diversity for Food and Livelihood Security*. FAO, Roam.

Gadgil, M. and Bereks, Fikret 1991. Traditional Resource Management Systems. *Reso. Man. and Opt.* 18: 127-141.

García-Mira, R., and J. Eulogio Real 2005. Environmental Perception and Cognitive Maps. *Int. Journal of Psy.* 40(1): 1-2.

Monica, G. Stephen G. Sutton, James R. A., Butler Erin, L. Bohensky and Simon Foale 2016. Indigenous Environmental Values as Human Values, *Cognitive Soc. Science.* 2:1, http://dx.doi.org/10.1080/23311886.2016.1185811.

Gregory, K. J., Ian G. Simmons, Anthony J. Brazel, John W. Day, Edward A. Keller, Arthur G. Sylvester and Alejandro Yáñez-Arancibia 2009. Environmental Perception. In, *Environmental Sciences: A Student's Companion*, ed. by Sylvester and Alejandro Yáñez-Arancibia, pp. 379-380. London, SAGE Publications Ltd. DOI: http://dx.doi.org/10.4135/9781446216187, accessed on July 20, 2019.

Grieves, V 2009. Aboriginal Spirituality: Aboriginal Philosophy—The Basis of Aboriginal Social and Emotional Wellbeing. Discussion paper no. 9. Cooperative Research Centre for Aboriginal Health, Casuarina, NT.

Hawke, Shé Mackenzie 2012. Water Literacy: An 'Other wise', Active and Cross-cultural Approach to Pedagogy, Sustainability and Human Rights. *Con.* 26(2): 235-247.

Herman-Mercer, Nicole M, Elli Matkin, Melinda J. Laituri, Ryan C. Toohey, Maggie Massey, Kelly Elder, Paul F. Schuster, and Edda A. Mutter 2016. Changing Times, Changing Stories: Generational Differences in Climate Change Perspectives from Four Remote Indigenous Communities in Subarctic Alaska. *Eco. and Soc.* 21(3): 28.

Ittelson, William. H 1973. *Environment and Cognition.* New York, Seminar Press.

Roeschel, L., Graef, F., Dietrich, O., Schaefer, P. M. 2016. "Individual Perception of Environmental Change as Supplement to Big Data", Policy Brief for GSDR – 2016 for Update,https://sustainabledevelopment.un.org/content/documents/1012061_Roeschel%20et%20al._Individual%20Perception%20of%20Environmental % 20 Change % 20 as%20Supplement %20to% 20Big%20 Data.pdf,accessed on January 18, 2020.

Maffi, Luisa [Ed.] 2001. *On Biocultural Diversity: Linking Language, Knowledge, and the Environment.* Washington, D.C, Smithsonian Institution Press.

Meeram, Sharan B 1998. *Qualitative Research and Case Study Application in Education*. San Francisco, Jossey-Bass.

Mercer D., Linda Christesen, and Michael Buxton 2007. Squandering the Future—Climate Change, Policy Failure and the Water Crisis in Australia. *Fut.* 39(2-3): 272-287.

Miah, D., Sheeladitya Chakma, Masao Koike, and Nur Muhammed 2012. Contribution of Forests to the Livelihood of the Chakma Community in the Chittagong Hill Tracts of Bangladesh. *Journal of For. Res.* 17(6): 449-457.

Negi, R.S. 1998. Symbiotic Relationship between Man Animal and Nature: A Study of the Gujars of Garhwal, In: *Lifestyle and Ecology*, ed. by Vaidyanath Saraswati, pp. 19-59. New Delhi, IGNCA and D.K. Printworld Pvt. Ltd.

Neuendorf, Kimberly A. 2018. Content Analysis and Thematic Analysis. In: *Research Methods for Applied Psychologists: Design, Analysis and Reporting*, ed. by Paula Brough, pp. 211-223, New York, Routledge. DOI: https://doi.org/10.4324/9781315517971, accessed on May, 14, 2019.

Nisbett, R. E. and Norenzayan, Ara. 2002. Culture and Cognition. In: *Steven Handbook of Experimental Psychology: Memory and Cognitive Processes*, ed. by H. Pashler, pp. 561-597. John Wiley & Sons Inc. DOI: https://doi.org/10.1002/0471214426.pas0213, accessed on September 29, 2019.

Patton, Michael Quinn 1990. *Qualitative Evaluation and Research Methods*. Newbury Park, Sage Publications.

Rollero, Chiara and Piccoli, Norma 2010. Place Attachment, Identification and Environment Perception: An Empirical Study. *Jou. of Env. Psy.,* 30:198-205.

Ricardo García Mira and J. Eulogio Real 2005. Environmental Perception and Cognitive Maps, *Inter. Jou. of Psy.* 40(1): 1-2, DOI: 10.1080/00207590444000069, accessed on May, 14, 2019.

Quli S. M. S. and Singh P. K 2010. Choice of Species for Traditional Agroforestry by Tribes in Jharkhand. *Jharkhand Journal of Development and Management Studies***,** 8(1): 3727-3735.

Bertus Haverkort and Coen Reijntjes [Eds.] 2006. *Moving Worldviews: Reshaping Sciences, Policies and Practices for Endogenous Sustainable Development*. Compas, Netherlands.

Roy Burmun, B. K. 1993. Tribal Development in World System Perspective, *Soc. Chan.* 23 (2-3): 27-32.

Sangha, Kamaljit K., Andrew Le Brocque, Robert Costanza, and Yvonne Cadet-James 2015. Ecosystems and Indigenous Well-being: An Integrated Framework. *Glob. Eco. and Con.* 4: 197-206.

Schure, M. B., Molly L. Kile, Anna Harding, Barbara Harper, Stuart Harris, Sandra Uesugi, and R. Turner Goins 2013. Perceptions of the Environment and Health among Members of the Confederated Tribes of the Umatilla Indian Reservation. *Env. Just.* 6(3): 115-120.

Sengupta, Shyamalkanti 2003. *Perception of Folk Environment*, Classique Books, Kolkata.

Shah, A., and D. C. Sah 2007. Poverty among Tribal People in Madhya Pradesh Has anything Changed over Time? *Jou. of Hum. Dev.* 5(2): 249-263.

Singh, Gopal S., K. G. Saxena, K. S. Rao, and S. C. Ram 1996. Traditional Knowledge and Threat of its Extinction in Chhakinal Watershed in North-western Himalaya. *Man in Ind.* 76(1): 1-17.

Stevens, Stanley 1997. *Conservation Through Cultural Survival: Indigenous Peoples and Protected areas*. Washigton D.C., Island Press.

Stevenson, Marc G. 1996. Indigenous Knowledge in Environmental Assessment. *Arc*: 278-291.

Vidyarthi, L. P. 1978. *Rise of Anthropology in India: A Social Science Orientation (Vol-I)*. New Delhi, Concept Publishing Company.

Whyte, A. V. T. 1977. *Guidelines for Field Studies in Environmental Perception*. Paris, UNESCO.

Zube, E. H. 1999 Environmental Perception. In: *Environmental Geology*, ed. by Alexander, pp. 214-216. Springer, Dordrecht. DOI: https://doi.org/10.1007/1-4020-4494-1_120, accessed on May, 14, 2019.

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Homelessness, Contestations and Subjectivities

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Abstract: The publications by the Census of India in 1991, 2001 and 2011 showed an increment in the population of homeless in India, including Delhi. This paper seeks to bring forth the causalities behind homelessness with special reference a group of populations, who were living under a flyover in the open and two institutional spaces in Delhi. The paper further seeks to understand how locating identity, nature of the population, and duration of stay add to the subjectivity in understanding and formulating approaches towards homelessness.

This study utilised a mixed-method approach. Data were collected from 108 households, including 22 single-person households, concentrated in two clusters. An overwhelming majority of the participants of these households migrated (98.1%) to urban streets or open spaces and shelter services to resolve their life situation. Data were collected through ethnographic method, interview schedule, and genealogy method. The result revealed that the phenomena of homelessness include an adaptive process for many in the study population. The findings also call for broadening up of the understanding of homelessness within a policy framework. The research also highlights the need to explore homelessness from a caste perspective at a larger level and to extend it further to a domain of intersection of caste, poverty, and homelessness.

Key words : Migration, Homelessness, Ethnic enclave, Adaptation, Delhi.

INTRODUCTION

Globally, 'homelessness' stands as a challenge to put into effect the 'Right to Housing'[1]. In 1990s, the understanding of the 'Right to housing' was extended to more than just four walls and a roof where legal security of tenure, availability of services, affordability, accessibility, habitability, location, and cultural adequacy were also incorporated (UN-Habitat, 2014: 3-15).

The literary journey around the concept of homelessness has started witnessing subjectivities entering into the field (Somerville, 1992; Cooper, 1995; Culhane *et al.*, 2007). These understandings and subjectivities originate from the underlying idea of 'Home' and therein 'lack' of it in specific situation(s). The idea of home has been conceptualised through various approaches, focussing on the homelessness as well and the need for 'home' to be thoroughly discussed in the latter in order to devise a suitable policy framework.

Etymology of Home(lessness)

Homelessness is considered to be the antithesis of 'home'. The latter has been studied through 'structural' and 'material culture' approach (Bourdieu, 2003; Miller, 2001), processual approach (Douglas, 1991) and cognitive approaches (especially in migration research). Douglas (1991: 287) argued that 'home

certainly cannot be defined by any of its functions'. The 'regularities', which Douglas (1991: 287) pointed at, to some extent help in appreciating the ways of place making and identity grounding.

Globally, homelessness is considered to be lacking housing, 'not having regular or 'customary' access to dwelling or residence' (Clarke, *et al.*, 1995: 102), 'rooflessness, houselessness, insecure or inadequate accommodation' (Edgar, *et al.*, 1999:2; Daly 1994; Tipple and Speak, 2005: 338), an experience of residential instability, lack of right to adequate housing and a range of issues related to adequate housing, such as poverty and conflict situations (Robinson, 2003: 1).

'Home' is also seen as a meaningful space of 'social, personal, physical, political and cultural qualities' which are 'experienced as a whole' (see Despres, 1991; Sixsmith, 1986). It is a place for locating a 'sense of identity', as it moves away from the (infra) structural idea, and absorbed ideas from the sphere of 'affiliative bonds' (Caplow, *et al.*, 1968: 494), and place of 'meaningful social relations' (Cooper, 1995: 4). Home is also signified as not only a physical place but, as the 'centre of activities, source of identity, belonging from the past, a goal for personal and social development, an abstract state of being, and a legal concept' (Moore, 2007: 145).

Culhane, *et al.* (2007) found the temporal factor important in contributing to subjectivity of homelessness while discerning 'Temporary, Episodic, Long Stay and Chronic homelessness' (also see Singh, 2018). Beavis *et al.* (2003) also observed homelessness in terms of 'situational (temporary), episodic and chronic forms of homelessness', considering the housing in the light of duration of stay (Tipple and Speak, 2005: 339).

The human right standpoint also became pivotal in assessing various housing situations and its inputs were also helpful in the understanding homelessness. For example, Cooper (1995: 338) noted 'home' as a place where 'ownership of space lies in having liberty to form and shape it'. Similarly, Somerville (1992: 532) also identified 'home' having components like, "shelter, hearth, heart, privacy, roots, adobe and paradise" turning to structural, cognitive and legal lens. Tipple and Speak (2005: 338) utilized this legal aspect to understand homelessness, pointing at control of activities and defining privacy bringing forth 'a sense of identity' with the place'.

As an Indian phenomena

According to the Census of India, there are three types of households, viz., 'normal', 'houseless' and 'institutional'. The individuals living in these households are called 'normal population', 'houseless population' and 'institutional population', respectively. The Census of India also states that households which do not live in buildings or census houses but, live in the open or roadside, pavements, in hume-pipes, under flyovers and staircases, or in the open in places of worship, *mandaps*, railway platforms, etc., are to be treated as 'Houseless households' (Census of India, 2011: 8-9).

Tipple and Speak (2005: 345) noted that the discourse of homelessness in India was shaped utilising this definition of houseless (in the Indian Census) and through the welfare entitlements, given at various instances. The latter was, however, based on the individual's land holding status when slums and JJ clusters are cleared and entitlement is given against it. They highlighted that irrespective of the quality of housing, if a household has land holding in a regularised area then the household is not considered homeless. The same study also observed that since the names of the pavement dwellers are not documented in the electoral roll and they do not have ration card, this group is not entitled to get the benefit of housing welfare scheme. It included households from the squatters whose settlement has not been recognised as 'slum' (*ibid*, 346). The exclusion practice also included religious nomads (Hindu *sadhus*) and nomads (such as, Banjaras (Gypsies) and Loharas (nomadic blacksmiths)' (*ibid*, 350). They made reference of Somerville's definition of home, and found that the Indian understanding of home is less inclusive as it lacked certain components such as, privacy, roots and sense of heavenly place (*ibid*, 347).

There were 23,175 'Houseless Households'[2] in Delhi (rural and urban) constituting a total population of 47, 076 (Census of India, 2011). The urban sections had a population of 46,724 constituted by 23,078 households (Census of India, 2011). Dupont (2000: 100), while tracing the history of houseless households in Delhi showed that their number doubled between 1981 and 1991 (2000: 100). Dupont pointed towards the underestimation of this population, based on estimates provided by Slum and *Jhuggi-Jhonpri* Department of Delhi Developmental Authority (DDA). The study showed that in 1985 approximately 1% of the total population (i.e., around one lakh) was houseless.

Global and local causalities

Hamilton (2007: 114-116) explained that historically, causes of homelessness ranges from disasters, lacking conformity on condition needed to changing life and ostracism from the family, removal of protection from the head of the family of the divergent individuals leading to dissociation of the family.

Worldwide, the most common reason for homelessness ranges from loss of employment (Lewit, 1996) to due to shifting economics (Hopper, *et al.*, 1985) to poor mental health (Lissner, 1985; Hopper, 1991), to disaster or fire (Lewit, 1996), and many other. Nunez and Fox (1999: 294-295) cited various demographic factors associated with homelessness, namely, race, low educational levels, poor employability, and welfare dependence.

In the Indian context, Gupta *et al.* (1993) attributed homelessness to economic development-induced migration, while the National Institute of Urban Affairs (NIUA) (1986) sought the reason to be the outcome of industrialisation and urbanisation process (Dupont, 2000: 99). Singh *et al.*

(2018**:** 187-189) identified breakdown of family relations, financial difficulties and lacking affordable housing, loss of independent tenancies, forced migration due to economic, and natural calamities, as some of the plausible reasons of homelessness.

The present paper examined the nature of the population under the study and cause(s) of homelessness suffered by it. It also tried to unfold the ways of locating identity among the so-called homeless and makes an attempt to subjectively understand homelessness depending on their duration of stay.

MATERIAL AND METHODS

The list prepared by the Delhi Urban Shelter Improvement Board's (DUSIB) was used in the sampling frame. To select a population cluster, family shelters were filtered and selection of universe was done based on the higher number of individuals residing at the location.

The study was conducted between the period April 2017 and August 2019 in different phase. Data were collected from 108 households, including 22 single-person households, concentrated in two homeless clusters of South Delhi. Population living in both shelters and open pavement were included for this study. The first cluster consisted of 47 households, including 2 single person households. 24 of these households lived at a U- turn (under a flyover) and 23 households lived in a shelter along with 4 single person households, which was a few meters away from this U- turn This cluster constituted 43.5% of the total study population. The second cluster consisted of 57 households which included 16 single person households, constituting a major chunk (56.4%) of the total study population. The total number of population living in both the clusters were 416.

The population living at the U-turn was distributed into two enclosures, accommodating *Pamaria* and *Dusadh* households. The population of these two households hailed from Madhubani district of Bihar and shared a common regional identity and culture. The shelter near these enclosures was represented only by *Pamaria* households. In the second cluster, households from two sub-populations (*Basor* and *Lambadi*) and other households coming from diverse locations were living.

The genealogical method helped in understanding the structure of the households, and the type of relationship between these households. Most of the households of this study were constituted by nuclear families (69%), followed by 5.5% joint families. The other type of households include 'supplemented nuclear family' (n= 2), 'sub nuclear' (n=1) and 'other type' family (n=1).

Data pertaining to migration, its causes, migration network, and concerned details about its pattern were collected using interview schedule. In the supplemented households, through formal or informal interviews, additional members were interviewed about their causes of migration to Usual

Place of Residence (UPR)[3]. The total number of participants was 111. In order to ensure anonymity of the participants, pseudo names were used in the study. The participants were asked questions like 'Was there someone with whom they migrated' or 'to whom they sought assistance before or on migrating to the place' to explore information on migration network. Here, ethnographic method also helped in understanding functioning and relevance of existing migration and kinship network to the people, and especially to new in-migrants. The term 'long term dweller' is used for the households or participants who were living at UPR for at least 1 year and less frequently visited their natives, to distinguish them from temporary and cyclic migrants. The recent settlers were considered to be those households who were living at UPR for less than one year, from the day of data collection.

The ethnographic data in this paper deal with the question of how homeless managed their life, and the way they interacted with people and space (open spaces and shelter). It helped in understanding the pattern of life lived by those in the homeless category, observing their behaviours from close and looking into the process of identity construction within home and homeless spaces. It also helped in understanding how people maintained their social capital and enjoyed cultural adequacy at both the study sites. Formal/informal interviews were also done with people to understand the relevance of UPR at the household level.

RESULTS AND DISCUSSION

The study population and its characteristic features

Table 1 depicts the socio-demographic characteristics of the population. Majority of the populations belonged to Muslim OBC households (48.83%), who migrated from Bihar, followed by the populations from scheduled caste (SC) category (31. 39%), who migrated from U.P., and then by scheduled tribe (ST) category (12.79%), who migrated mostly from A.P. In case of single person households, more than half represents ST (56.25%), followed by OBC (26.08%) and then by SC.

The distribution of the population according to the ethnic group has been presented below.

Table 1. Population distribution

//S.No.	Ethnic group	Category	Place	Households (N)	Individuals (N)
1.	Muslim *Pamaria*	OBC	Bihar	40	6
2.	*Dusadh*	SC	Bihar	6	0
3.	*Lambadi*	ST	A.P.	10	13
4.	*Basor*	SC	U.P.	16	0
5.	*Lala Lalpuria*	General	U.P.	1	0
6.	*Muslim Sheikh*	OBC	Bihar	2	0
7.	*Yadav (Guwala)*	SC	M.P and Bihar	1	1*

Table 1 continued

//S.No.	Ethnic group	Category	Place	Households (N)	Individuals (N)
8.	*Indar Mindar Oraon*	ST	Jharkhand	1	0
9.	*Turi*	SC	Bihar	1	0
10.	Not known**	-	U.P., Punjab and Delhi	4	0
11.	*Majhi*	OBC	WB	1	0
12.	*Chaudhary*	SC	MP	1	2
13.	*Dhanuk*	SC	Chhattisgarh	1	0
14.	*Bedia*	SC	Chhattisgarh	1	1
	Total			86	23

*The person is living with a household having mother and her children but taken separately as they did not marry but are living as a family.

**these households could not inform about their ethnic or caste category

Majority of the study population were wage earners (56.74%), followed by individuals who were engaged in begging (30.34%). Out of the 12.82% of people, who practically were non-earners or with no definite income included most of the children, homemakers or caregivers and non-working or unemployed members. Among wage earners, majority were engaged as construction labour (27.75%), followed by those who were engaged as cleaners (16.65%), domestic help (5.55%) and 6.79% belonged to 'other' category.

Migration: a cause with history

Wage difference is not the main cause of rural to urban migration. As Stark and Katz (1986: 135) pointed out, 'the expected income in the urban area is not larger than the expected income in rural areas'. Similar kind of reflection has been observed in the present study. For example, *Nasra* said, 'At our place, it does not work with only one son. Family members push women to reproduce more in number as a desire for son. In this process, the family becomes large and the earning becomes meagre. Some fellow villagers (*gaon ka log)* used to live and work here (Delhi), and we came along with them in search of job opportunities. When we arrived in Delhi, the wage was Rs. 24 per day.'

Most of the people reasoned out that they migrated to the city to get a regular job. These opportunities were not available in their native places. Nasra unfolded this uncertainty in course of her narration and said, 'There (in the native place), we used to work for 4 days and then we wouldn't find any work for the next 3-4 days. We have six children to be taken care of and there are other expenses as well. Moreover, we have two daughters! We could not bear all that with such uncertainty.'

The city offers multiple job opportunities. So, it is easier in the city to switch over from one job to the other, in compelling situation, through social network. For example, Allamun reported that initially he joined the construction industry. Later, his wife and kids joined him in the city. The couple started working at various construction sites in the area and earned

for their living. They also invested money in the construction of their house back in the native village. Sameena, his wife, stated, 'At present, I am unable to work because of old age health issues. So, I have started begging. Previously we both used to do *baldari,* wage work at construction sites. We married off our daughters, and also constructed a four-storied house in the village. My husband has become old and has stopped working in the construction site. Presently he is an ice cream vendor.'

Some Pamaria households, who migrated in the mid1960s at a slum to a nearby place Madan Nagar (pseudo-name) where presently a Central University (name kept anonymous) is located. The slum was demolished for the construction of the university. The slum dwellers were resettled in Shivnagar (pseudo-name), a place located in the fringe of Delhi near Uttam Nagar extension. After the completion of resettlement, some of the people sold off their allotted houses and returned to Madan Nagar. These people found Madan Nagar a convenient place where they could sustain with the economic opportunities and established network.

Allamun used to live in the slum with his family before the incident of demolition. Haseena reported that Allamun was also allotted a house (unreported) at the time of resettlement. Allamun was alcoholic. To meet drinking spree, Allamun sold off his allotted space.

Basor households were also evicted from the slum near the Yamuna's bank. After eviction, some started living on pavement of distant locations. Eventually, these households re-located themselves near the demolished slum area and started living under the flyover. Later, these households were brought to shelters by some NGO. Chotu narrated, 'During my childhood days, we used to live in the slum located on the bank of the river. Later, the slum was demolished and people got scattered. When the slum got demolished, we started living on the pavement (which was near the settlement) for some time. Later, we were compelled to leave that place. So, we shifted to Sarojini Nagar. After some time we came back and started living under the flyover (near the demolished slum), where other households from this shelter were also living. Later, we started being pushed from there as well. Then this NGO (name kept anonymous) came to our rescue. It all started when one of my younger brother died. He was a sensitive person and used to feel hurt even on minor things (*har cheez mann se laga leta tha).* When the police started pushing us away from here, he went into a depression (*usko gum lag gaya)* and because of it only he died. This incident became a headline in the media. Later, this NGO came to the fore front and offered us shelter. Initially, they provided cloak tents erected on the main road, but later in the year 2015 this shelter was handed over to us and to many others.'

In both the clusters, households living under the flyover were brought to shelter by the NGO. While some continued living at the old place, others moved to the shelter after seeking information from their relatives or the nearby

vendors (Table 2). The participants narrated the whole story of their migration from their native villages.

Dukhi narrated her journey to Delhi. She told that one of their fellow villagers used to live in Delhi at the UPR with whom the couple came here. They both worked as construction labour at this place and lived under the flyover for 16 years. She reported that they worked in the city and accumulated money. With this earning they supported their children staying in the village with their grandmother. But now they had to switch over to begging as they had grown old.

The following table explains the causes of migration in the population studied:

Table 2: Primary and secondary causes of migration

Reasons for migration to Delhi	Reason of migration to Usual Place of Residence (UPR)	Male(N)	Female(N)	Total(N)
Brought and lived in the area	Relatives living here	1	-	1
	External source of Information / by nearby people	1	-	1
	Demolition of slum	4	1	5
	Total	6	1	7
To avoid conflict	External source of Information / nearby people	-	1	1
	Relatives staying here	1	4	5
	Total	1	5	6
Conflict over property	Presence of a relative	1	-	1
	Total	1	0	1
Economic	Brought up in the area and have relatives here	-	1	1
	Have relatives here	12	32	44
	Lived in the area and have relatives here	-	1	1
	Conflict	1	-	1
	Employment	1	-	1
	Relatives and villagers living here	1	1	2
	Villagers living here	6	24	30
	Destruction of slum	2	2	4
	External source of information	-	5	5
	Total	23	66	89
Legal case	External source of information	-	2	2
	Total	0	2	2
Health issues	Relatives	1	1	1
Spouse/household members had already moved/ settled here	Relatives and villagers both living here	-	3	3
	Villagers	-	1	1
	Total	-	4	4
Total		32	79	111

'Relative' means extended family and primary kin. External source of information meant when the household was given information of shelter either by the nearby shopkeepers, vendors or NGO personnel or the advocate in case of household with legal case.

From Table 2 it can be inferred that 80.1% (89 out of 111) reported 'economic' reason as a cause of migration. Among those individuals who were brought up in and around UPR, some decided to stay back due to economic reasons while others migrated back to Delhi in search of better opportunities taking advantage of their familiarity with the place and available networks. The second major cause (8.1%) was 'being brought up at and around UPR', followed by 'conflict' with the spouse or family members at the original place of living (5.4%). A small proportion of 3.6% reported migration to Delhi was triggered by migration of spouse or the household members who were already settled in Delhi. Cases of migration due to conflict over property and health concerns constituted a minute proportion (0.9%).

Some households from Pamaria and Basor communities, who experienced eviction following slum demolition cited it as a secondary cause of their inhabitation on the pavement and road (see Table 2). Around 8.1% participants reported demolition of the slum in their respective areas as a reason behind their settlement on pavement or shelter. Households, who lived in the slum before demolishment and were away at the time of the event traced their network, and started living on pavement or under the flyover or in shelter along with others.

Kinship based ties (primary or extended or village kin) was identified by the most of the participants (79.2%) as a reason for choosing UPR for their encampment (see Table 2). The relevance of kinship ties or network to new migrants is not restricted to the process of migration alone. It extends to areas of immediate concern for the migrants after they set their feet here.

Relevance of kinship and migration network

One of the aspects, central to migration and migration studies is social network (see Kuhn, 2004). It facilitates various processes through which migrants adapt to the situation or the dynamics of the migrant space. Apart from deciding about the destination, new migrants, from the moment of their arrival, rely on the social capital of their network for assistance in lodging, job search, monetary support, avoiding conflict and in conflict resolution, habituation, etc. (also see Banerjee, 1983).

Most of the in-migrants in the study population were helped by their support network in fixing a job opportunity for them prior to their migration. Like Naresh Paswan, Ramswarup Paswan, Ranjeet Paswan and Phullo Sahni, many others migrated with their families to the city to earn for a better living. When the household survey was conducted, these four Dusadh households were living together sharing a common premise. The first three of these four families were connected through kinship ties (extended as well as primary), while the fourth, headed by Phullo Devi, was connected to Naresh through village kinship tie. Phullo Devi migrated to Delhi to avoid domestic violence

and joined a previous employer of *Meena* (Naresh's wife). Naresh's wife arranged migration of her own sister's family and helped in getting employment opportunities for the couple (Pinki and Ramswarup) as well. They both started working at the same construction site where Meena was working.

Nelson (1976) sees chain migration as an indication of the lack of assimilation of migrants into the urban environment with their inclination to initiate migration of relatives and/or villagers to build a social network parallel to the native setting. This type of networking leads to the formation of an 'imagined community' (Anderson, 1983). In such communities 'identity' is an important element behind ethnicity manifestation. Ethnicity here 'defines an individual or group and specific set of characters to which the group subscribes and through which one makes a distinction of themselves from others' (Story and Walker, 2016: 138).

The most important of all is that the kinship network facilitates social support and affiliations continuously, even when one moves away. It also (1) connects home and the destination locations (Jewell and Molina, 2009) giving support in the times of need, such as remittance network assisting in sending the money, and (2) brings people from the same culture to a commonplace, constructing an enclave that has characteristics in parallel to the native, giving one a sense of cultural adequacy.

There were several occasions when it was observed how kinship and village ties became a key social capital at the time of illness or any other problem faced by a particular household. Haseena (one of the participants), a single person household, was living under the flyover alone with other households sharing a common enclosure with them. Referring to an incidence of theft which occurred at her place I asked to her, 'doesn't living here alone scare you?' She said, 'she is not scared.' She emphasised it further by telling that her employer has offered her space many times in their house but she preferred living under the flyover. She explained, 'here everyone is like my own family member (*yahan sab apna hi hai*). If I ever fall sick, my fellow neighbours will take care of me'. In August 2018, when my fieldwork was nearing completion at this site, Haseena had viral fever and it was Allamun's family who took all care of her. The enclosures were demolished and technically everyone was living on pavement. They allowed her to sleep at their own space and fed her. *Allamun* once told that Haseena was Sameena's (his wife's) mother's sister (*mausi*). Earlier as well, Allanun's family and Haseena were seen spending time gossiping and sharing tea and tit bits.

Haseena also received favour and support of Firooz and his family who were from her natal village. Firooz belonged to Kaluwahi village, Madhubani, Bihar. They allowed her to stay in their house in a nearby slum and to use other resources (gas, electric appliances and eatables). The family also cared her when she fell sick. They helped her in sending cash and kind to her husband and daughter who were living in a nearby village.

The households from *Dusadh* and *Pamaria communities* had a common regional association. The members of this association speak in *Maithali* language. This linguistic commonness helps the members of this association to share and discuss on household and personal issues. Among the *Lambadi,* shared culture and practices became the pivotal point around which interactions were woven. They got engaged with each other in limited ways such as service received in exchange of service offered, and discussion over local situation and family issues. For them, their language and ritual songs became a comforting communal asset in the city of Delhi. Similarly, people from Chhattisgarh displayed cooperation which moved a level higher than Lambadi, as they exchanged material stuff such as cooking stoves, uncooked meat and rice and in exchange they receive cooked meal.

The kinship and/or communal ties were maintained in the city enclaves in line with the system prevailing in their native places. The households remain connected to their kin and others through telephonic conversations and video chats. For example, Dheeru, a resident of Bilaspur, Chhattisgarh received a call from his son who informed that the process of initiation of allotment of new ration card was initiated by the local authority. He asked his mother to come to the village for the renewal of the ration card. Dheeru informed this matter to Dukhi. On receiving this information, Dukhi called up her sister who lives in the village to confirm the news.

Patterns of migration

Within migration studies, there is also a scope and relevance of examining the question of migrant remittance (see Kuhn, 2004; Yang, 2011; Garip, 2011; Parida, *et al.*, 2015; Cohen, 2011), which depends a great deal on the types of migration like, 'long term migration, temporary or circular migration' (see Rao and Finnoff, 2015; Keshri and Bhagat, 2010). In this section, the focus of discussion will be restricted only on the temporary and/or cyclic, and long-term migrants to understand their reasons for stay and mobility.

Table 3: Patterns of migration of the study population

Households (N)	Duration at Current location	Return migration to native (N)*	Duration of stay at UPR	Long-term immigration (N)**	Duration of stay away from UPR (N)	Circular-migration (N)***
No. of Households	<3months	4	≥1 year	66	Stay for ≤3months	13
No. Of single person households	<3months	0	≥1 year	2	Stay for ≤3months	20

*who went to Delhi but returned to native home within first to sixth month period;
**who did not visit native place in the past 365 days;
***who remained away from Usual Place of Residence (UPR) for more than one month but returned; and repeated it several times. There were 6 households who migrated recently, hence excluded from the study design.

Table 3 depicts the maximum number of long term staying households (64.76%, N=68), living at UPR for the past one year to more than 15 years. Among these households, 32 households were living in and around UPR for 15 years and above. Out of these 32 households, 17 households were having at least one member who was from the second generation of the first migrated family.

There were 33 (31.42%) households who were cyclic migrants. These households, including single person households were visiting Delhi for more than 1 year (equivalent to the duration of long term dwellers) to earn from begging. Some households (15% of the cyclic households) were coming to Delhi for the last 6-20 years. Also, a small section of the households who were living there during the initial phase of my study, later returned to their native villages and did not return for at least another two years, the time I took for the completion of my field work.

As observed, some migrants experienced pull towards the sending states (native states) and push from the receiving state (Delhi), i.e., from pavement or shelter in Delhi to native place again leading to return migration. These push and pull factors, experienced simultaneously or independently, played an important role in the migratory pattern. Initially, the pull towards receiving state centred round availability of work in Delhi to move away from the native place and the economic uncertainty, characteristically reported to be part of rural economy. The push factor, operating at the receiving end (pavement) pointed at local authority's drive to move people away (from street, pavements and other spaces). Some returned to their villages and got resettled. But as some migrants continued their stay with the support of their own people who had acquired a fair amount of knowledge about the city and economic opportunities it could offer, the push effect did not make much of an impact on them. Initially, they experienced problems like, sharing communal sleeping spaces, developing illegitimate relationship at work place, etc. which resulted into thoughts to move out of 'stigmatised and stigmatising space'. Some, while experiencing push from pavement felt a pulling effect towards their native place in search of homely comfort and security.

The long term migrants were also visiting their home but for a short duration and for specific purposes. Some Pamaria households used to visit their native place on *Muharram* and *Bakar Eid* every year. Samina said, 'most of these people go to observe *Muharram* in the village and attend a village fair (*mela*) organised every year beside the river *Kamla* (a river in Madhubani).' Allamun and Jabeer along with their family members visit their villages every year at the time of *Muharram* as well as during *Bakar Eid*, bringing along sacrificial meat (*kurbani ka gosht*).

These celebrations remained the prime way of reinforcing kin and village ties. Visits to village on various other occasions, such as, sowing of seeds and harvesting of crops (for certain households only), of marriage, festivals, and in

arranging a match for their daughters keep them connected with their native land and people and help in retaining their socio-cultural and place identity.

The cyclic migrants visit their villages regularly to avail the benefits of government welfare schemes, and to deposit their earnings in post offices, banks and with particular relatives. For example, among all the three major subpopulations, participants of Lambadi group, who were mostly engaged in begging, visit their native places most frequently and in a cyclic manner. This sub-population mostly had older individuals (>60 years) who were availing old-age pensions for which they were supposed to be present at the pension office at the time of disbursement of pension.

There are cases which depicts the struggle of migrant people for life in such spaces. For example, after migrating from Madhubani to Delhi in 2017, Abdul started living in the shelter with his family. But because of some issues, *Abdul* had a heated argument with the caretaker of the shelter and was compelled to leave. They left the shelter and moved to an enclosure where his village level paternal aunt (*gaon ki bua)*, Jamila was living. Jamila offered them a space where they could sleep and keep their belongings. Once it was raining which made some section of the enclosure quite wet, especially where Firroz (another inmate) and *Abdul*'s family used to sleep. In a disappointed tone Abdul spoke, 'Is it what people migrate for! Look, from everywhere the rain water is pouring in. How can one live at this place! Tomorrow we will return to our native place forever. Many of the migrants of my village and around earned good amount of money from this city. They have also constructed big houses in the village. My wife became attracted to these and moved to Delhi to earn. Our contractor (*thakedar*), under who I work, has run away with our money. People are trying to trace him but till that time we will not be able to survive here. I stitch clothes in the village and earn a good amount, and we can survive with that.' I noted that the next day Abdul and his family returned to their native place and never returned till I was doing my fieldwork.

Such cases necessitate exploration of perspectives towards UPR among both long term dwellers and others, belonging to different timelines, and the way they manage their life in these spaces and (re) locate their identities.

Homelessness and locating identity

In this study, the main categories found to be relevant in unfolding the phenomenon and subjectivities of homelessness were (a) true homeless, living in shelter, pavement or street, neither identify with UPR nor have home to locate identity with i.e. lacking both structural as well as cognitive grounding, (b) the cyclic migrants, temporary homeless, who locate home in their native place and experiencing 'rooted mobility', (c) the migrants who have 'adapted' with the public space, to meet the demand of their life circumstances, experiencing homelessness with 'rooted mobility' (also see Singh, *et al.* 2018; Snow and Anderson, 1987), and may or may not have spent long time at UPR, and (d) the migrants who 'adopted' a public space, initially migrating to UPR

to meet the demand of their life circumstances but later feel 'at home' at UPR, locating identity with it as they have been here since a long time. They may or may not locate home in their native place where the former tend to be more diasporic than migratory.

The first category, just like any other categories, lacks privacy, temporary or long term tenancy security, etc. But, more importantly, it lacks what characterises the next category of cases involving 'rooted mobility'. The household who had lost its home because of the conflict over property, and was living in shelter, hoped to move out once they accumulate enough money to get their own home. They fall under this category.

The NGO's non participatory operations in shelters to manage space, and other agents prevented any attempt on their part to search for an identity at UPR, turning them to the status of true homeless and not allowing them to derive psychological comfort of being at home.

In previous years while working with some clusters of homeless population, it was observed that agencies like, local police and local municipal corporations, while keeping a check on illegal construction, threatened their stay giving no scope to these people to have any permanent grounding here, structural as well as cognitive. Usually, a monthly or weekly check was done against any infrastructural up-gradation to be curtailed and restricted through demolition. Under the city's beautification and sustainable drive, people of the study area were pushed out of the enclosures to the open pavements which threatened their security. They were feeling helpless as these demolished enclosures once acted as a defensive wall in odd hours, and also helped in concealing their settlement from the notice of the public. To an extent, it helped them to steal some privacy amidst publicly exposed living condition.

The second and third categories can be considered from adaptive approach (see Dupont, 2000; Hopper, 1985), where the street was the economic corridor, and different occupations were taken up by the in-migrants and money was accumulated to be invested in various spheres of life. Hopper, et al. (1985: 185) pointed out that it is a strategy of poor who live in the margins of cities. Some took up open spaces and shelters to survive or manage components central to their well-being while others intended to reduce their consumption in order to accumulate. The latter have trimmed money spent on housing, which even in squatters takes away a relevant chunk of wage under uncertainties.

For example, Samina, who was living with her children and mother in one of the enclosures for the past twelve years, reported domestic conflict as a push factor for her to leave her village. They started living on the pavement when the flyover was not constructed, and later moved inside the enclosure after completion of construction. She narrated her life history and pointed out, 'We just live here.....we have a house in my husband's village (*sasural*). I got some property (land) of my husband and constructed a house there. Now

we are constructing a brick built house (*concrete wala ghar*) there.' She certainly found this place as an option to live and manage her life after separation, but even after so many years could not locate her home here and thought of settling in the village.

At the time of the study Samina was sharing the enclosure with her cross cousin's family and her sister's in-laws family and others who were from her natal village. In the nearby slum her brothers used to live, who often used to leave their children under her care. Later, she was joined by her sister, who migrated to this place in search of work. They all created familial and communal space from which all drew comfort.

The present study reveals that many households living at UPR for a long period of time visited their native villages only for specific purposes (such as, during illness, festivals and for attending marriages) and usually for a shorter duration of time. By and large, this is the characteristic of most of the homeless people living in the city. A component of ethnic enclave is sometimes imbibed, created as a result of the chained migration, which could give them some comfort of being at home.

In the present research, most of the households were found to be lying in the third category as most reported the space being 'utilised for living only'. The households were well connected with the village, fellow villagers and distant kin through periodic visits to villages and communication through mobiles. Basor households, like in other sub- population, were also well connected to their native place. Ruby, a lady from the same community, had recently married off one of their daughters in a nearby village and was going back again, looking a match for the next daughter.

There was only one individual (Ajay) who was brought up and located his 'home' at the UPR. Ajay was living in the area with his family since seven years of age and had no connection with his native village. He reported having no plans to move out of the shelter. When asked about his native place, he reported to be having a faint memory of it and told that it was somewhere in U.P. He laughed and said, 'Now this is my home. I have lived here since I was a child. I know everyone, and everyone knows me, including the people from the slum at the back. And, I don't even feel like moving out.'

I was reminded of certain cases from my previous encounters with children who grew up on the street. Some of them compelled their parents to withdraw them from the Children's Home as they loved the open street, a feeling which the Children's Home could not give. They felt good on the street where they had spent early years of their life and enjoyed excursions in the open. In the present study, there were 8.1% of the participants who were brought up around UPR or had previously lived here but did not quite feel 'at home' on the street, especially the one who almost regularly visited the native home. In one occasion, a child said, 'My parents work here. So, we just live here. Our home is in the village.'

The households who were settled in this particular setting for a long period of time have developed a behavioural pattern which they perceived necessary to adapt with this place. It involved appropriation of space, management of artefacts according to the setting, and understanding the distribution of resources. Caplow and Bahr (1973) explicated that even if it began as a condition, 'homelessness endures as a trait if it persists long enough' (see Hopper *et al.*, 1985: 90).

As observed, homelessness begins with a cause (slum demolishment or migration), pushes one to live with scantily spaced or distantly placed make-shift 'home' but, through established networks, either kinship, village or street-based, makes one feel 'at home'. In the new situation they feel the comfort of communal or familial space despite missing some components, such as privacy, authority and the security of tenure. The ethnic or regional ties, as a by-product of network-based migration brings joy of sharing or becoming a part of the cultural practices even in the city, which include celebrating festivals, practising cultural values and beliefs. These create a feeling of cultural adequacy among the inhabitants helping them to re-create their village environment in city. Festivals, celebrated in the city are the best occasion to observe the community engagements. Pamaria households observed *Muharram* collectively and went out to the fest held at Karbala, Lodhi Road in Delhi every year. The Basor households celebrated *Rakshabundhan* with distant relatives who visited them in the shelter especially for the day.

The ontology of homelessness, in the present section points at the multiplicity of the identity. The most important factors which play a vital role in experiencing homelessness is the temporality, i.e., the time spent at the UPR, and the frequency of visits to the native place. As the population has settled at various timelines, there was bound to be some variation in understanding of 'home' among the migrants who were recent settlers compared to the long term dwellers. The recent settlers certainly saw shelters strictly from the lens of service provided by the government as was done by the cyclic migrants, explaining their stay here for a purpose, 'to earn' only while long term dwellers, with the cultural adequacy served by the ethnic cluster could find some sense of being home.

The subjectivites associated with 'feeling at home' on the street and in institutional spaces among homeless migrants have various factors supporting and challenging the 'freedom of home' uniquely. The first consideration is the availability of ethnic or kinship backing in constructing enclave and supporting people or giving them some comfort, which was originally lost in the migration process. Through these networks, the recent settlers also became acclimatised to the practice and the culture of the street. The second factor which posed a challenge was action(s) and perspective of external agents such as, shifting tenders and changing approaches of NGOs to welfare activities to

suit their own purpose and attitude of the municipal authorities and of other agents (such as people travelling through roads, the employers, and relatives of the people living in nearby slum). Apart from the activities of welfare organizations, people passing by these places also construct an image of the people living here attributing an identity to them. They used to project these places as a problematic space and a sign of poverty, alcoholism and related issues, non-hygienic spaces, etc. They used to stop at the spot often and stare deeply into the situation, analysing it from their perspective. The third factor was the nature of migration and time spent at UPR, which differed from cyclic migrants to long term dwellers. These factors interacted invariably with the notion of 'home located in native', while kin or village-based relations gave comfort of 'at home' stay and cultural adequacy in the city.

When we look at the concept from the Census of India point of view, it classifies the population from an infrastructural standpoint only. The concept 'houselessness', essentially lacking conventional housing, privacy, authority, etc. has become fundamental in shaping the concept of homelessness in India but, it turns a blind eye to other possible interpretations. The dichotomy is criticised by Marcus, as he argued that it is utilised by social scientists producing the category close to what has been utilised by the government bureaucracy for poverty (2005: 36).

The subjectivities emerging from the cognitive and processual approach are significant in unfolding the concept as opposed to houselessness. The approach(s) can be employed to other spatialities or geographies also, depending upon the nature of the population which extends to true homeless non- migrant population as well.

CONCLUSION

The study suggests that besides dealing with the problem of houselessness conceptually, it is particularly necessary to analyse the situation producing it from the perspective of the participants, which provides a varied lens with its focus on their orientation, identity construction with space(s) and issues generated from within. Generally, the policy framework connected to the so-called urban homeless population turns a blind eye towards the subjectivities and ignores other possible interpretations, such as, homelessness as an adaptive attribute of migrants coming to Delhi and accepting homeless spaces as adaptational.

There is a need to relate different kinds of homelessness with government policies. Special attention should be paid to issues of self-identification of individuals or households, governing their motives and actions. The homeless migrants in the city are struggling with living expenses with a low wage rate having immunity of native home. The work also calls for the need to explore the intersection between caste and homelessness, as observed from the data collected.

The rehabilitation and their return to the same place because of their transient nature, employment availability and making use of the existing network, subjectivities in experiencing poverty, locating identity and a developing a proper perspective towards stability, comfort and security cannot be overlooked. The immediate need for framing a policy for the true homeless is realised as they lack any form of permanent abode other than the street or shelter, which is not choice-based making a distinction between them and migrants, both experiencing homelessness. Similarly, adopting a policy to resolve the issue of availability of affordable housing, and social and economic security of migrants cannot be delayed indefinitely.

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END NOTES

1. The right to housing was brought to spotlight by Universal Declaration of Human Rights (1948). Later in 1996, 'International Covenant on Economic, Social and Cultural Rights' and 'The Istanbul Declaration and Habitat Agenda' reaffirmed the housing as one of the basic rights (Sattar, 2014: 9).
2. http://censusindia.gov.in/Data_Products/Data_Highlights/Data_Highlights_link/concepts_def_hh.pdf
3. Usual Place of Residence (UPR) is considered to be the place where household/ individual lived or visited continuously for a period of one year or more. Here visited was incorporated, unlike Census of India and NSSO to reflect on the cyclic migrants who do not live at the place for more than 2 month but come back after visit to home in native. In the present study the clusters were the UPR as at least 90% of the household were either living or have been visiting with stipulated duration.

REFERENCES

Banerjee, Biswajit 1983. Social Networks in the Migration Process: Empirical Evidence on Chain Migration in India. *The Journal of Developing Areas*, Vol. 17(2): 185-196. http://www.jstor.org/stable/4191118, accessed February 8, 2016

Bourdieu, Pierre 1970. The Berber House or the World reversed. *Information (International Science Council)*. 9(2): 151- 170. https://doi.org/10.1177/053901847000900213 , accessed November 17, 2018.

Caplow, Theodore, Howard M. --Bahr and David Sternberg 1968. Homelessness. In: *International Encylcopedia of Social Sciences*, Vol. 6. ed. by D. L. Sills, pp. 494- 499. USA, Crowell Collier and The Macmillan Company and The Free Press.

Census of India 2011. Primary census abstract. Office of the Registrar General of India, Ministry of Home Affairs. Government of India.

Clarke, Pamela N., Carol A. Williams, Melanie A. Percy and Yeoun Soo Kim 1995. Health and Life problems of Homeless men and women in the Southeast. *Journal of Community Health,* 12: 101- 110. http://www.jstor.org/stable/3427165, accessed June 28, 2014.

Cohen, Jeffrey H. 2011. Migration, Remittances, and Household Strategies. *Annual Review of Anthropology*, Vol. 40: 103-114. https://www.jstor.org/stable/41287722, accessed December 6, 2018.

Culhane, Dennis P., Stephen Metraux, Jung Min Park, Maryanne Schretzman and Jesse Valente 2007. Testing a Typology of Family Homelessness Based on Patterns of Public Shelter Utilization in Four U.S. Jurisdictions: Implications for Policy and Program Planning. *Housing Policy Debate*, 18(1): 1-28. DOI: 10.1080/10511482.2007.9521591. http://www.tandfonline.com/loi/rhpd20, accessed December 6, 2018.

Després, Carole 1991. The Meaning of Home: Literature review and directions for future research and theoretical development. *Journal of Architectural and Planning Research*, Vol. 8(2): 96-115. https://www.jstor.org/stable/43029026, accessed July 24, 2019.

Douglas, Mary 1991. The Idea of a Home: A Kind of Space. *Social Research,* Vol. 58 (1): 287-307. https://www.jstor.org/stable/40970644, accessed November 7, 2019.

Dupont, Véronique 2000. Mobility Patterns and Economic Strategies of Houseless People in Old Delhi. In: *Urban Space and Human Destinies*. ed. by Véronique Dupont, Emma Tarlo and Denis Vidal, pp. 99-124. Delhi, Manohar and Centre de Sciences Humaines.

Edgar, B., Doherty, J., and Mina- Coull, A. (1999). *Services for Homeless People: Innovation and Change in the European Union*. Bristol: The policy Press.

Garip, Filiz 2012. An Integrated Analysis of Migration and Remittances: Modeling Migration as a Mechanism for Selection. *Population Research and Policy Review*, Vol. 31(5): 637-663.

https://www.jstor.org/stable/42920018, accessed July 24, 2019.

-2014. The Impact of Migration and Remittances on Wealth Accumulation and Distribution in Rural Thailand. *Demography*, Vol. 51(2): 673-698. DOI: 10.1007/s13524-013-0260-y. https://www.jstor.org/stable/42920018, accessed March 6, 2018.

Hamilton, Marilyn 2007. Approaching Homelessness: An Integral re- frame. *World Futures*, 63: 107–126. DOI: 10.1080/02604020601123072. http://dx.doi.org/10.1080/02604020601123072, accessed November 17, 2018.

Hopper, Kim, Ezra Susser and Sarah Conver 1985. Economies of Makeshift: Deindustrialization and Homelessness in New York Ctiy. *Urban Anthropology and Studies of Cultural Systems and World Economic Development*, 14 (1/3): 183- 236. https://www.jstor.org/stable/40553067, accessed November 17, 2018.

Hopper, Kim 1991. Research for What? Lessons from the Study of Homelessness. *Bulletin of the American Academy of Arts and Sciences*, Vol. 44(8): 13-31. https://www.jstor.org/stable/3824677, accessed November 17, 2018.

Jewell, R. Todd and David J. Molina 2009. Mexican Migration to the US: A Comparison of Income and Network Effects. *Eastern Economic Journal*, Vol. 35(2): 144-159. https://www.jstor.org/stable/20642475, accessed November 17, 2018.

Katz, Eliakim and Oded Stark 1986. Labor Migration and Risk Aversion in Less Developed Countries. *Journal of Labor Economics*, Vol. 4(1): 134-149. http://www.jstor.org/stable/2534880, accessed March 5, 2018.

Keshri, Kunal and R. B. Bhagat 2010. Temporary and Seasonal Migration: Regional Pattern, Characteristics and Associated Factors. *Economic and Political Weekly*. january 28, 2012 vol xlvii (4): 81-88. https://www.jstor.org/stable/3824677, accessed November 17, 2018.

Kuhn, Randall 2004. Identities in motion: Social exchange networks and rural- urban migration in Bangladesh. In: *Migration, modernity and social transformation in South Asia*. ed. by Gardner, Katy and Filippo Osella, pp. 311-338. New Delhi, Sage Publication.

Lewit, Eugene M. and Linda Schuurmann Baker 1996. Homeless Families and Children. *The Future of Children*, Vol. 6 (2): 146-158. https://www.jstor.org/stable/1602424, accessed

Lindquist, Christine H., Mark Lagory and Ferris J. Ritchey 1999. The Myth of the Migrant Homeless: An Exploration of the Psychosocial Consequences of Migration. *Sociological Perspectives,* Vol. 42(4): 691-709. https://www.jstor.org/stable/1389580, accessed October 30, 2018.

Lissner, Will 1985. Homelessness and Poverty in Affluent America. *The American Journal of Economics and Sociology*, vol. 44 (4): 389-390. https://www.jstor.org/stable/3486866.

Marcus, Anthony 2005. The Culture of Poverty Revisited: Bringing Back the Working Class. *Anthropologica*, Vol. 47(1): 35-52. https://www.jstor.org/stable/25606216, accessed March 5, 2018.

Miller, Daniel 2001. Behind the closed Doors. In: *Home possessions: Material culture behind the closed doors*. ed. by Daniel Miller, pp. 1-22. Oxford: Berg.

Moore, Jeanne 2007. Polarity or Integration? Towards a fuller understanding of Home and Homelessness. *Journal of Architectural and Planning Research*, 24(2): 143- 159. https://www.jstor.org/stable/43030797, accessed January 8, 2019.

Nelson, Joan M. 1976. Sojourners versus New Urbanites: Causes and Consequences of Temporary. *Economic Development and Cultural Change*, Vol. 24(4): 721-757. https://www.jstor.org/stable/1152946, accessed July 24, 2019.

Nunez, Ralph and Cybelle Fox 1999. A snapshot of Family Homelessness in America. *Political Science Quarterly*, 114(1): 289- 307. https://www.jstor.org/stable/2657740, accessed November 17, 2018.

Parida, Jajati K., Sanjay K. Mohanty and K. Ravi Raman 2015. Remittances, Household Expenditure and Investment in Rural India: Evidence from NSS data. *Indian Economic Review*, Vol. 50(1): 79-104. https://www.jstor.org/stable/43917206, accessed December 6, 2018.

Rao, Smriti and Kade Finnoff 2015. Marriage Migration and Inequality in India, 1983-2008. *Population and Development Review*, Vol. 41(3): 485-505. https://www.jstor.org/stable/24638659, accessed October 30, 2018.

Robinson, C. 2003.Understanding iterative homelessness: The case of people with mental disorders. *Australian Housing and Urban Research Institute (AHURI),* No. 45. accessed August 17, 2019.

Sattar, Sanjukta 2014. Homelessness in India. In *Shelter Magzine* vol. 15(1), Hudco Publication: 82- 96. accessed, September 12, 2018.

Singh, Preeti 2017. Right to housing article 21 in light of Judicial Pronouncements. *International Journal of Law*, 3(6): 115- 119. DOI: doi.org/10.22271/law, accessed Februrary 3, 2019.

Singh, Nishikant, Priyanka Koiri and Sudheer Kumar Shukla 2018. Signposting invisibles: A study of the homeless population in India. *Chinese Sociological Dialogue*, Vol. 3(3): 179–196. DOI: 10.1177/2397200918763087, accessed November 17, 2018.

Sixsmith, Judith 1986. The meaning of Home: An exploratory study of Environmental experience. *Journal of Environmental Psychology*, Vol. 6(4): 281-298. https://doi.org/10.1016/S0272-4944(86)80002-0, accessed June 28, 2014.

Snow, David A. and Leon Anderson 1987. Identity Work among the Homeless: The Verbal Construction and Avowal of Personal Identities'. *American Journal of Sociology*, 92(6): 1336-71. https://www.jstor.org/stable/2779840, accessed November 17, 2018.

Somerville, Peter 1992. Homelessness and the Meaning of Home: Rooflessness or Rootlessness? *International Journal of Urban and Regional Research*, 16(4): 529–539. https://doi.org/10.1111/j.1468-2427.1992.tb00194.x, accessed June 28, 2014.

Story and Walker 2016. The impact of diasporas: markers of identity. *Ethnic and Racial Studies,* Vol. 39(2): 135–141. DOI: 10.1080/01419870.2016.1105999. http://dx.doi.org/10.1080/01419870.2016.1105999, accessed October 19, 2018.

Tipple, Graham and Suzanne Speak 2005. Deûnitions of homelessness in developing countries. *Habitat International*, 29: 337–352. DOI: 10.1016/j.habitatint.2003.11.002.

http://dx.doi.org/10.1016/j.habitatint.2003.11.002, accessed November 17, 2018.

Yang, Dean 2011. Migrant Remittance. *The Journal of Economic Perspectives*, Vol. 25(3): 129-151. https://www.jstor.org/stable/23049426, accessed December 6, 2018.

UN Habitat 2014. The Right to Adequate Housing. Fact sheet 21/ Rev. 1, Office of the United Nations High Commissioner for Human Rights. accessed August 17, 2019.

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An Ethnographic Study of Food Behaviour of Muslim Students at California State University, Long Beach Campus

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Abstract: This ethnographic research examines the ways Muslim students at California State University Long Beach (CSULB) cope with food behavior to meet their specific religious requirements while attending University. Twenty participants - ten female students and ten male students of CSULB were selected through snowball sampling for intensive study. Data were collected by conducting interviews, taking case studies, and canvassing a questionnaire.[1]

The findings of this research reveal how the Muslim students of this campus adjust with eating non-*halal* when there is unavailability of *halal* food within the Campus. This article also explores students' perception that *halal* is not pork and wine; *halal* is slaughtering animal in a specific way; intentionality determining choices being made in terms of eating non-*halal* chicken or beef, facing the prospect of being booked; eating to survive; eating non-*halal* meat under obligations; significance of *halal* which is cleaner and healthier; scientific reason of slaughtering as prescribed in *halal*; not feeling sick or sick of eating non-*halal*; and personal and psychological reasons of eating *halal*. Although the responses did not follow a uniform pattern, yet there was a perceptible desire on the part of the students to find their own way of meeting the situation they were placed in. In this respect, they can claim ingenuity in some form. This research provides valuable insight into how a University with international students coming from different countries with diverse faith and cultural background can best serve the needs of an under-served specific minority group on campus. In the same way the needs of other potentially underserved groups can be met with.

Key words : Muslim Students, non- Muslims, *halal*,[2] non-halal/ *haram*,[3] maqrooh,[4] adjustment, experience, CSULB

INTRODUCTION

Students from diverse cultures come from all over the world to enroll at California State University, Long Beach (CSULB) each year. As an international student, and also as a Muslim student, I had occasions to witness firsthand how some international Muslim students encountered challenges, while some other Muslim students did not take any lead in that direction.

For example, I am from Bangladesh, a Muslim majority country, where wearing a scarf or *burkha* is not enforced by law or eating with a fork and spoon is not a cultural tradition; however, both the practices are maintained by some people of the society in which I grew up. Besides this, eating *halal* food is equally important to all Muslims of the country.

When I arrived in the United States, I did not have in mind that in the United States I would not find food which is *halal* and slaughtered in Islamic

way; cutting an animal's throat into a specific vein, in a clean environment, and in the name of Allah. All of these incidents in the United States made me think about the availability of *halal* food on campus and triggered me doing a research regarding food of Muslim students on the CSULB campus.

Muslim students in Western institutions face many difficulties related to cultural differences and cultural accommodations. One of the difficulties is that the culture of these students is different from the majority from Western cultures at those schools. Unfortunately, even though Muslim students constitute a big segment of population of international students, their religious concerns are poorly addressed. Often, cultural and religious holidays, like the Ramadan fasting season, go unnoticed (Sherry *et al.* 2010).

My research on food focuses on experiences and adjustments of Muslim students based on the availability of *halal* food. This paper also documents CSULB Muslim students' habits regarding *halal* food which prevail over the limited availability of *halal* food on campus. Though Levi-Strauss describes food as culturally shaped and socially controlled (Caplan 1997), CSULB Muslim students also having their own cultural and social food, undergo adjustment with food on the campus. Nevertheless, they still want to eat their own ethnic food. This paper will give the answers to the questions of how much do CSULB Muslim students try to adjust to the environment versus adjust the environment to their desires to eat food, how do they make food choices on campus, if food is not available on campus then how far do they go to eat, if it is not viable to go off campus, then what do they eat as alternate food.

In this research, the key factors that may influence Muslim students' food choices are listed as availability (Alakaam *et al.* 2015), personal choices (Alakaam *et al.* 2015), religious/cultural ideology (Counihan 1992; Alakaam *et al.* 2015; Bonne *et al.* 2007; Caplan 1997) and level of acculturation (Bonne *et al.* 2007).

Scholars have done research on Muslim students as well as international Muslim students in the United States and other countries of the world. They mostly documented how Muslim students adjust to the new educational environment in host institutions, including the United States. For example, as an adjustment process, the Arab community living in Detroit has changed their food habit in absence of traditional foodstuffs (Lockwood and Lockwood 2000). On the other hand, students might have trouble adjusting to new food, clothing, languages, and friendship customs. Recent articles on the adjustment of Muslim students in US institutions are numerous, and they deal with different types of adjustments. In this study, I have focused on the adjustment process that Muslim students at California State University, Long Beach (CSULB) undergo related to food.

The *halal* dietary laws are classified into the following categories: (a) prohibited animals, (b) prohibition of blood, (c) method of slaughtering/ blessing, (d) prohibition of carrion, and (e) prohibition of intoxicants (Regenstein et al.,

2003: 120). In my research, I have tried to find what is meant by *halal* to participant students.

There are studies that reveal how Muslim students can pursue *halal* food tenaciously but at the same time adjust with non-*halal* food (Alakaam et al. 2015; Lockwood and Lockwood 2000; Bonne et al. 2007). Generally speaking, Muslim students were concerned about finding *"halal"* meat, which is limited in the USA (Alakam et al., 2015, 112). On the other hand, "[t]he creation of ethnic culture takes place within the particular constraints of minority life, like homesickness; prejudice; the sense of being different; the urge to assimilate or to resist assimilation; the need to recreate the old world in the new or reject all possible reminders of the previous life". In Detroit, to Arab immigrants, food-ways are quick to adapt and change (Lockwood and Lockwood 2000, 516). Muslim migrants in France have positive personal attitudes in choosing *halal* meat which prevails over the "preference for convenient, readily or easily available food products." They are willing to go farther away and put effort to get *halal* meat (Bonne et al. 2007, 379). Brazilians of Japanese descent make their identities outside of their home country and outside the presumption of a shared culture (Tierney et al., 2012). Muslim students on California State University Long Beach might have used some of the creoles in absence of their ethnic food on campus. My first consideration was what types of food Muslim students eat in absence of their ethnic food, and how far they go to buy *halal* meat.

Food is also a medium for displaying widely varying cultural ideologies. In US culture, food rules express an ideology of life that focuses on how and what is eaten. College students are primarily guided by their own definitions of good and bad food and concerned with being in control of their eating. Counihan (1992) used data from college students' food journals to examine what and how to eat in US culture. For students, eating is not a simple act of fueling the body; it is a moral behavior through which they construct themselves as good or bad human being (Counihan 1992; Alakaam et al. 2015; Bonne et al. 2007; Caplan 1997). Food can be an "important marker of status, one used to validate or deny membership". Whenever there were stratified societies, "food has served as a coefficient of social and economic status" (Mintz 2015).

Commensality, which means family and friends eating meals together, has importance in various cultures (Tierney and Tierney 2012). Like western people, commensality also plays an important part in the lives of Muslim people all around the world. My study will also try to find out the role commensality plays for Muslim students at CSULB.

Thus, the objective of this research is to find out how Muslim students at California State University Long Beach (CSULB) cope with new food behavior and at the same time meet their specific religious requirements while attending University.

MATERIALS AND METHODS

California State University, Long Beach is the third largest campus of the 23 California State Universities. Each year, California State University, Long Beach, admits Muslim students. Muslim students comprise a major proportion of the student community of the University. My research participants consist of twenty Muslim students on the CSULB campus. All the twenty participants were invited to an email survey. Of these twenty participants, eight (four males and four females) were interviewed in-person. Case studies were also collected on two male and two female participants. I stayed with each of them for two days to record their diet and observation on the food items they consumed. The case studies helped me to get more insight on the food behavior of the participants. The age range of all the participants varied from 19 to 25 years. I used the names of the participants in my research as they had no objection to use their names.

The participants were pursuing graduate (8) and undergraduate (12) courses in Economics, Psychology and Marketing, Spanish, Health Science, Nutrition and Dietetics, American Sign Language and Deaf studies, and Applied Mathematics, Mechanical Engineering, Aerospace Engineering in the CSULB. Box 1 shows the details of the participants: country of origin, duration of stay in the USA, citizenship status, eating habits regarding *halal* and non-*halal*, dwelling places and majors that they are studying. The participants were from the countries like Pakistan, Eritrea and Ethiopea, Palestine and Malta, Syria and Turkey, India, Lebanon, Sri Lanka, Egypt, Jordan and Saudi Arabia. Seventeen of them were born and raised in the United States. Out of the two international male participants, one is from Sri Lanka and another from India, who were living in the USA for the last one year preceding the study. One female international student from India has been living in the USA for the last four years preceding the date of the study.

I directly asked my Muslim friends whom I knew beforehand, as well as posted an advertisement on the Muslim Students' Association (MSA) Facebook page if they were willing to take part in my research. In the first step of data analysis, the responses of the participants were grouped into different categories. For example, in the food section there are sub-sections such as (1) what is the dietary pattern of Muslim students in their home country, (2) what is the dietary pattern of Muslim students in the United States, (3) participants' cultural and religious values towards food choices. I initially organized students into groups based on the responses; for example, I put students in one group who reported finding *halal* is not easy in or near campus; another group who reported eating non-*halal* for unavailability of *halal* in the Campus were placed separately and so forth.

FINDINGS

The following case studies describe the experiences and adjustments of Muslim students with food in the CSULB Campus.

The first case study tells how a Muslim student, who was born and brought up in the United States, is adjusting to non-*halal* chicken and beef and food stuffs like, burgers, cereals, doughnuts and chips. The participants also take food outside campus on religious occasions. Muslim students prefer to take *halal* food at the time of religious occasions. The reason is the unavailability of *halal* food on the campus.

The second case study illustrates a Muslim student, born and brought up in the United States, who never gave up her religious beliefs about consuming *halal* food. This leads to a situation of having limited food choices on the campus. This case study also refers to carrying food from home to Campus everyday is burdensome in terms of transportation.

The third case study shows that people make choices about consuming *halal* food

because *halal* food items are expensive.

The fourth case study tells us that non-Muslim students had no idea about *halal* food before.

International Muslim students also had no idea about non *halal* food in the USA. Muslim students who do not eat non-*halal* food go out with non-Muslim American peers to eat *halal* food.

Case I: Experience of having non *halal* food

Anas was a 18-year-old student. His parents were from Egypt, and he was born in the United States. His first language was Egyptian Arabic. He used to eat only *halal* food at home before admitting himself to CSULB for undergraduate program. His parents used to buy *halal* meat from the nearby market place. He was studying Organismal Biology at CSULB, and living in the campus dormitory.

During the month of Ramadan, Muslim students cannot break their fast while they were inside the campus since the campus stores close early. So, they visited either a *halal* store in Long Beach or carry food from home. For example, Anas said "Here in USA, during Ramadan, we break our fast with heavy food like meat. Since there is no *halal* food store inside the campus which remains open till the breaking of fast, we have to go to [the] local Mosque or to a nearby *halal* restaurant. Sometimes we visit 'Nomads Asian Bistro' (a local restaurant) at the occasion of *Eftar* [breaking of fast]".

Anas parents allowed him to take non-*halal* chicken and beef, since *halal* meat is not easily available. However, his parents restrained him from taking pork, since it is a proscribed food item in Islam. When Anas missed his principal

meal he met his requirements by taking snacks like, doughnuts, chips and burgers that are available on the campus.

Case II: Not Having non-*halal* in the United States and willingness to go far to buy *halal* food

Juwairiah was a 21-year-old student. Her parents were from Pakistan but she was born and raised in the United States. Her first language is Urdu. She was studying American Sign Language, Linguistics and Deaf Cultures, with a minor in Child Development and Family Studies. She used to live with her family twenty-nine miles away from the CSULB School. Her father was a chemist and her mother was a homemaker. She never ate non-*halal* meat. She said, 'We go to 'Makkah market', which is 20-25 minutes away from home to buy *halal* meat. "We are certain that the meat we are getting from there will be *halal*; don't even have to ask whether it is *halal* or not. If I wanted culturally appropriate food or *halal* food, I would be willing to drive at least 15 to 20 minutes", she said.

Once there was an event in the Campus named 'Palestine Awareness Week', organized by the Muslim Students' Association. Juwairiah, the President of the Muslim Students' Association, was there at the meeting with other members. They were talking about the food that they would provide the next day. These include maqlube[5], beef pizza, zatar[6],, and a sweet dish.

Juwairiah explained "There is only one store in the campus that sells *halal* meat, and that's 'Opa! Greek', but that is too expensive. Besides, we are looking for Palestine cuisine.'Opa! Greek'. Here Palestinian food is not served. One of our Palestinian friends said that her mom can cook [maqlube] for all 25 registered members of the association".

The above examples show that, due to the non availability of *halal* food stores inside the Campus and nearby localities, students bring food from home, which can be a source of problem (in terms of storing and transporting the food, as well as keeping it at an appropriate temperature).

Case III: Absence of Ethnic Food and Expensive Nature of *halal* Food on campus

Shuruq was a 21-year-old student. She was born in Saudi Arabia and her parents were from Eritrea. She came to the United States with her family when she was six years old. Her first language was Arabic. She was an undergraduate student of Health Science and Community Health Education at CSULB. Her mother worked at Oakley Store and her father had business. She used to live within three miles from the Campus.

Shuruq said, "*Halal* meat is expensive; a pound for *halal* chicken is double than usual chicken. So getting *halal* for every meal is not possible. So we also take non-*halal* meat because we have to survive."

Food items sold in the food court of the campus were completely different from her ethnic food. She opined that bringing food everyday to the campus as burdensome. According to her, "a lot of non-Muslim students buy non-*halal* food available inside the campus. So they do not need to bring food from home."

These examples show that Muslim students eat non-*halal* food since this food item is cheaper and more available than *halal* food. There are no variations of ethnic food, like biriyani[7], borhani, chicken roast from Indian sub-continent as well Saudi Arabia; Maqlooba[8], Injera fit fit[9], and Falafel[10], from Mediteranean countries available in the campus. Vegetarian food items seem not acceptable to the students.

Case IV: International Student

Abdul Ahad Khan was a 24-year-old male student, who came to the United States in

2016. He was an Indian international student studying Aerospace Engineering at California State University, Long Beach. He was living in an apartment, renting a room and was sharing the other rooms with other students from India. He had two younger brothers and a younger sister. His parents were both physicians. They all lived in India.

He usually carries homemade food to the campus, but also takes food available on the campus. He loves to take meat, and that too *halal* meat. He never ate non-*halal* in India and also in the United States. He also said that he was not aware of non-*halal* food being served in restaurants in the USA. Slowly, he got used to the idea that in the United States every food item is not *halal*.

Abdul Ahad explained his eating habits, "In India, we usually buy it [meat] from the store owned by Muslim. If by any chance we buy it from a store owned by *kaafir*[11], then I slaughter it myself." Abdul also said "If any day I don't bring homemade food to the campus, then I Go to Opa! Greek, because this is the only place where *halal* food is available. I buy falafel, chicken, or beef item. He also opined "There should be more *halal* food stores in the campus."

Most of the American people did not have an idea about *halal* food as he explained, "…On my first day in a restaurant in the USA, my rugby mates and my coach ordered non-*halal* food, but when they found that I eat only *halal*, they ordered cheese pizza for me. They honoured my food choice." He also said "If someone eats non-*halal* unintentionally, then it's not a sin. He explained, "One day while dining with some of my American friends in a restaurant, unknowingly, I took one spoonful of soup made up of non-*halal* meat. Suddenly I realized that the restaurant does not serve *halal* food. If we eat non-*halal* meat unknowingly, then it is no sin."

The above cases demonstrate that Muslim students desire to have more *halal* food options on campus.

*Perception of the participants towards **halal** meat*

All students shared what they knew about halal meat, and gave different opinions about what halal meat means to them.

Pork and wine are non-*halal*

All the participants strongly believe that pork and wine are non-*halal* food items. For example, Ali said, "To me, pork is a non-*halal* food item." Yasmeen, like Ali said, "pork is non-*halal* or haram, I do not eat pork."

Halal is animal slaughtering in a specific way

All the participants believe that *halal* is a specific technique of slaughtering of animals, prescribed in Islam. This specific technique drains out the entire blood from the animal's body. As Yasmeen said, "*Halal* meat is basically how the animal is slaughtered. In this process the animal is receives less suffering."

Leena said, "A lot of time people use the words *halal* and zabiha interchangeably. For the sake of this discussion, I would refer to *halal* as zabiha. *Halal* simply means permissible. This process of slaughtering also helps us to know whether the animal was diseased."

Ali said, "We slaughter the animal in the name of God. In our religion it is forbidden to show other animals how you are sacrificing in the name of God. So, the process of slaughtering has to done peacefully and away from the rest of the animals in the herd. As you take an animal from the herd, you make sure that the knife is extremely sharp to the point you are going to place it. It will take two seconds to lay down the animal, you say 'Bismillah[12],' 'Allahu Akbar[13]' and you slaughter the animal."

Abdul Ahad Khan said, "I would say *halal* is a different type of cutting technique used in slaughtering. Before sacrificing an animal, we say that I sacrifice this animal in the name of God. Then we cut the throat one and a half way in case of chicken and two and a half in case of goat. The variability in the type of cut depends on the thickness of the skin of different animals. This particular process of halal allows the entire volume of blood to come out from the body of the animal. As a result, the blood never remains clotted inside the body of the animal and protects the meat from fast decaying."

Box 2 shows, the frequency of variable perception of the participants towards halal.

*Significance of **halal***

Religious (cleaner and healthier)

The significance of *halal* meat is also religious. *Halal* meat is viewed as healthier and cleaner by all the participants. They stated that eating of *halal* meat is prescribed in Islam and all the followers of Islam should follow this religious prescription.

For example Anas said, "Since the entire volume of blood gets drained out in the process of halal, the meat becomes pure, clean and healthy." Ali

also voiced a similar message about the significance of *halal*.

Six of the participants showed strong reservation towards taking of non-*halal* meat.

Abdul Ahad tried to provide a scientific reason behind *halal*. He said, "If you cut the throat of an animal halfway, the esophagus gets severed and so also a nerve. The quick technique of severing of esophagus and nerve does not give the animal much pain. Because of the reflex action of the nerve, the body of the jerks and the whole volume of blood gets drained out from the body. This draining of blood is important to get rid of the toxins (if any) from the body of the animal. In this process, the meat becomes clean and tasty." He further went on saying "there is a difference in colour between *halal* and non-*halal* meat; the latter is darker in colour (because of clotting of blood) than the former."

Intentionality determines choices made

Intentionality determines Muslim students' choices in eating non-*halal* chicken and beef. Eating non-*halal* chicken is taken recourse to if it's the only option left to the people of the book to eat to survive.

Eating non-*halal* chicken and beef

As Ali said, "I eat non-halal chicken and beef, but not pork." Yasmeen was in agreement with Ali and said, "As long as it's not pork, I eat it like chicken or beef."

People of the book

Ali said, "We believe that as long as the people of the book, Christians, Jews and Muslims slaughter the animal in the name of the God, it is *halal* to eat. That's why, majority of the people eat almost everything without any inhibition." Like Ali, Shuruk said, "*Halal* meat is prepared according to the 'people of the book' that stands according to the Christian standard, the Jewish standard or the Muslim standard." Bandar, another participant from Saudi Arabia in a similar tone said, "We don't have to question everything, especially if we buy the food from the Jews or the Christians… 'Ahlu lkitab', the people of the book, as their food are permissible."

Shuruk opined, "I think the ruling is if it's possible for you to eat *halal*, if there's no other option, then you have to eat to survive, you know…"

*Reasons for adjusting with non-**halal***

There are reasons for Muslim students adapting to non-*halal* food in the Campus, though these may not apply to all with the same degree of compulsion.

Lack of availability

Those who eat *halal* meat only, go to Opa! Greek restaurant. However, those who compromise with eating non-*halal* meat, visit other restaurants like, The Nugget, which serves non-*halal* food.

Box 3 provides information on the frequency of the participants who cited limited options of *halal* food on campus.

All of them considered that with the increase in the number of Muslim students on the campus, the demand for *halal* food is increasing. They opined that the authority should promote in opening food stores that will provide *halal* food. For example, Leena said, "Muslim populations are increasing day by day. So also is the demand of *halal* food."

Expensive *halal* food

All the participants said that food in the Campus is too expensive to continue for days together. Participants reported that halal meat is not easy to find in the vicinity of CSULB, and that it is very expensive too. Because of its high price, some Muslims eat non-halal meat. All will not go for halal food only. For example, Leena said, " When it's [halal food] available, it's extremely expensive."

As shown in the Box 4, barring one, all the participants bring food from their homes because foods available on the campus food is very expensive.

Ten of the participants think food that they bring from home is more satisfying and is full of protein. All of them buy only snacks that are available in the Campus and, for more substantial meals they go outside. At times, when they do not bring food from home, they buy meat item from one *halal* store within the Campus (which is very expensive), and vegetable options from other food courts.

Eating of non-*halal* meat under social obligations

There are some social obligations which compel the participants to eat non-*halal* food. These signify influence of peer group, sense of disrespect, adapting to a kind of American food, and non-adaptive attitude towards non-*halal* meat and pork offered by the Americans.

For example, Yasmeen said, "I always do not eat *halal* meat. Like, I am not picky about that. Why? I just think I was raised here in Long Beach and here all the Arabic stores do not sell *halal* food like Anaheim, whether it's fast food or groceries. So, when my dad buys meat for the house, he would go over there for *halal* food. But if I am with my friends in school or elsewhere, I do not have quick access to *halal* food, and I don't like seafood."

Leena said, "Yeah, like I said, I do not ask if it's *halal* or not, because socially that would be disrespectful. In addition to that, I don't always eat *halal*." She also said, "When I am eating food and if it is not slaughtered in the Islamic way, I think it is 'makrooh', which means if you don't follow it you will not be punished, but if you follow it, you will be rewarded. I believe, if something is prepared for you, you should just take it." Like Leena, Ali also said, "Certain animals are totally forbidden to eat in our religion, such as tigers, aligators, etc. If I eat those, I will do 'haram'. I think, I will do 'makrooh' if I eat meat of an animal which is not slaughtered in the Islamic way."

Thus, fourteen students eat non-*halal* food and all students eat American kind of food. All of the students who eat non-*halal* think that they are doing 'makrooh' by not eating animal slaughtered in Islamic way which is not 'haram'.

Zafar said, "I have friends who offered non-*halal* meat at a restaurant. I gently refused to take non-*halal* meat citing religious ground. Later, I ordered for some sea food items.

Similarly, six other participants of the study reported to have refused to take non-*halal* meat offered by American friends.

Box 5 provides the details of the reasons cited by the participants in favour of taking non-*halal* food.

*"Not feeling sick" and "feeling sick" of eating non-**halal** food*

Yasmeen said, "I don't feel sick after taking non-*halal* meat because my physical and mental body are used to it." Like Yasmeen, Leena also said, "Maybe I have tolerance." Juwairiah gave a different explanation. She said, "Psychologically it had happened to me once, when unknowingly I took non *halal* food. I felt sick to my stomach after knowing that I didn't eat *halal*."

None of the participants reported that eating non-*halal* food would make them genuinely ill or sick. Some students said that they would not feel ill or sick because they think their body is used to eating non-*halal* meat.

*Personal and psychological reasons of eating **halal***

Students who eat non-*halal* are happy when they find *halal* food. The meaning of *halal* food is connected with religion and it has been inherited from ancestors stretching back to ancient times.

Leena said, "[When] I am eating food that would be following what my religion teaches me to eat. And it makes me feel more secure that what I'm eating has been slaughtered in a humane way, and animals weren't tortured. I feel better eating *halal* meat than if I go to the street, eat on the McDonalds knowing that how terribly those animals were treated."

These findings show some commonalities and differences between Muslim students' experiences regarding food adjustment. All participants reported that there are not enough options of *halal* food in the University Campus to enable Muslim students to purchase more varieties of food that they like to eat.

DISCUSSION

This study has attempted to understand the coping mechanisms of eating *halal* of Muslim students in California State University, Long Beach. This research suggests some significant findings. The two major themes that emerged from the findings are, (1) dietary restrictions and (2) need for redefinition of *halal* food in the American context. In other words, Muslim students face challenges maintaining their *halal* diet and they may find ways to redefine *halal* as part of their adjustment to living in the US. Dietary

restrictions and facing challenges in maintaining dietary restrictions are not exclusive. Some students experience, or engage in both, while other students may face challenges only in maintaining their *halal* dietary restrictions, or only find ways to redefine *halal* as part of their adaptation to living in the US.

All the participants, regardless of gender difference reported that there is a shortage of *halal* food within the Campus. Although not all Muslim students eat *halal* food here, yet all of them said that eating *halal* has significance in terms of having good health and showing mercy to animals. Eating non-*halal* meat items on campus is not a problem for those who have adapted themselves in doing so, but students who still could not adapt or cope with "Western" types of food that are also non-*halal*, expressed difficulties. In some instances, students eat food that is not recognized as their own cultural food, like "Western food." Usually, traditional food is made by parents at home or by students who have the opportunity to cook where they live. However, not all students get that kind of food in the Campus. Lockwood and Lockwood (2000) found a process of creolization in the food habits of Muslim people in the United States. My findings suggest that this is also true for CSULB's Muslim students, since I found how the participants have modified their definitions of *halal* food in some ways. For example, fourteen participants eat non-*halal* chicken or beef, but none of the participants eats pork.

My research also reveals a mixed set of choices among Muslim students at CSULB, resulting in what we might call "low acculturated Muslims" and "high acculturated Muslims." By "low acculturated" and "high acculturated," I mean Muslim students who are less adjusting to non-*halal* food and more adjusting to non-*halal* food on campus, respectively. Low acculturated students will not eat non-*halal* even if they have a craving for meat. On the other hand, high acculturated students will eat non-*halal* meat if they do not find *halal* food on campus. Regardless of gender difference, all the participants of my study eat *halal* food on campus or off campus.

All participants in this research considered *halal* meat as 'pure'. As Mary Douglas said, purity is "… a good basis for approaching the laws about clean and unclean meats. To be holy is to be whole, to be one; holiness is unity, integrity, perfection of the individual and of the kind. The dietary rules only develop the metaphor of holiness on the same line"(Douglas 1966, 67). All of the participants also said that the importance of eating *halal* meat is not only religious, but also scientific. Though, *zabiha* meat has a scientific significance and all students also believe in the "metaphor of holiness"; they are actually crossing the boundary from rigid lines of eating only *zabiha* meat to eating non-*halal* chicken and beef.

The notion of the participants towards animal slaughtering is similar with the verses of Hebrew Bible. Food restrictions in Hebrew Bible introduce notions regarding the proper method of slaughtering an animal, and conceptions of impurity. Both Leviticus and Deuteronomy permit the consumption of meat

from animals killed in non sacral contexts so long as its blood has been properly drained, and neither expresses concern about who performs the requisite acts of preparation … (Freidenreich 2011, 22).

Commensality fulfills key symbolic and community building roles. At CSULB, Muslim students sometimes eat together in dorms or in programming conducted by the Muslim Students Association (MSA). Although many of these students cannot afford to buy *halal* food because of its high price, they cook at home and bring this home-cooked food to the program to have feast.

CONCLUDING REMARKS

I conclude from this research that food behavior of Muslim students in eating *halal* food is not similar at California State University Long Beach. Not every student is following dietary law as prescribed by religion. There is no structural form to say that a particular region of the world Muslims are adapting in eating non-*halal* on campus. There is a difference in food behavior among the Muslim students of the same country of origin. The result of this study may be useful in providing more facilities to set up *halal* food stores on campus. This study also indicates a need for more research on why, despite of a lot of Muslim students, there is a scarcity of *halal* food in the CSULB Campus.

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END NOTES

1. This paper is based on my Masters thesis, supervised by Professor Dr. Alexandra Jaffe at California State University, Long Beach.
2. In Islam, the halal dietary laws determine which foods are “lawful” or permitted for Muslims to consume. “Halal” is an Arabic word meaning “lawful” or “what is permitted and allowed by the lawgiver (Allah),”
3. “haram” means “unlawful” or “prohibited.” Generally speaking, the laws prohibit the consumption of alcohol, pork, blood, and meat that has not been slaughtered according to Islamic rulings. Dish which includes meat, rice, and vegetables. whereas
4. Maqrooh means ‘not recommended, not liked’ if someone do it, it will not be sinful, but if someone refrain from doing it Allah will reward.
5. Dish which includes eat, rice, and vegetables
6. A type of flat bread
7. A spiced rice dish prepared with meat
8. Meaning is upside down. Make up with rice and vegetables. After cooking put the dish upside down.
9. Meat cooked with sponje like flour dough bread and spices.
10. Crispy fried chickpea

11. Non-Muslim
12. In the name of Allah
13. Allah is the Greatest

REFERENCES

Alakaam, A.A., Diana C. Castellanos, Jessica Bodzio, and Lee Harrison. 2015. The Factors That Influence Dietary Habits Among International Students in the United States. *Journal of International Students* 5: 104-120.

Bonne, K., Iris Vermeir, Florence Bergeaud-Blackler, and Wim Verbeke. 2007. Determinants of Halal Meat Consumption in France. *British Food Journal* 109:367-386.

California State University, Long Beach. 2010. "CSULB Mission Statement." Available at http://web.csulb.edu/divisions/aa/grad_undergrad/senate/documents /mission/, accessed on September 24, 2018.

Caplan, P. 1997. Approaches to the Study of Food, Health and Identity. In: *Food, Health and Identity,* ed. by Pat Caplan, pp. 1-31. New York, Routledge.

Counihan, C.M. 1992. Food Rules in the United States: Individualism, Control, And Hierarchy. *Anthropological Quarterly* 65: 55-66.

Douglas, M. 1966. *Purity and Danger: An Analysis of Concepts of Pollution and Taboo.* London, Routledge & Kegan Paul.

Freidenreich, D.M. 2011. *Foreigners and Their Food: Constructing Otherness in Jewish, Christian, and Islamic Law.* Berkeley, University of California Press.

Linger, D. T. 2001. *No One Home: Brazilian Selves Remade in Japan*. Stanford, Stanford University Press.

Lockwood, W. G. and Yvonne R. Lockwood. 2000. Continuity and adaptation in Arab American foodways." In: *Arab Detroit: From Margin to Mainstream,* ed. by Nabeel Abraham and Andrew Shrylock, pp. 515-59. Detroit, Wayne State University Press.

Ministry of Law. 1957. The Animals Slaughter (Restriction) and Meat Control Act. Avaiable at http://bdlaws.minlaw.gov.bd/print_sections_all.php?id=268, accessed on September 24, 2018.

Mintz, S. 2015. Introduction. In: *Jews and Their Foodways.* Studies in Contemporary Jewry 28, edited by Anat Helman, pp. 1-13. Oxford, Oxford University Press.

Regenstein, J. M., M. M. Chaudry, and C. E. Regenstein. 2003. The Kosher and Halal Food laws. *Comprehensive Reviews in Food Science and Food Safety* 2: 111-127.

Sherry, M., Peter Thomas, and Wing Hong Chui. 2010. International students: A vulnerable student population. *Higher Education* 60: 33-46.

Tierney, R.K. and Emiko Ohnuki Tierney. 2012. Anthropology of Food. In: *The Oxford Handbook of Food History*, ed. by Jeffrey M Pilcher, pp. 121-123. Oxford, Oxford University Press.

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Box 1. Participants Characterization

	Name, education, and marital status	Country, Citizenship status,duration of stay in the USA	Eating halal and/or non-halal	Residence	Major
1	Juwairiah Undergraduate, Unmarried	Pakistan Born in the USA	Never eaten non-halal	With own family	American Sign Language and Linguistics and Deaf Culture
2	Shuruk Emano Undergraduate, Unmarried	Eritrea and Ethiopea Born in USA	Sometimes eat non-halal	With own family	Health Science: Community Health Education
3	Yasmeen Undergraduate, Unmarried	Palestinian and Malties Born in USA	Eat non-halal outside of home	With own family	Applied Mathematics
4	Leena Undergraduate, Unmarried	Syria and Turkey Born in USA	Eats non-halal outside home	With own family	Nutrition and Dietetics
5	Deema Graduate, Unmarried	Palestinian Born in USA	Zabiha: not Always	Renting a room with a family	Spanish
6	Asma International Graduate, Unmarried	India International student, Living for 3 years	Always eaten Zabiha meat	Renting a room with a family	Computer Science
7	Mehreen Graduate, Unmarried	Pakistan Born in USA	Sometimes	With own family	Accounting
8	Dania Graduate, Unmarried	Lebanon Born in USA	Sometimes	With own family	Nursing
9	Sumar Bermani Undergraduate, Unmarried	Lebanon Born in USA	Sometimes	With own family	Economics
10	Faathima Undergraduate, Unmarried	Sri Lanka Born in USA	Never eaten non-halal	With own family	Psychology and Marketing
11	Anas Undergraduate, Unmarried	Egyptian Born in USA	Sometimes	CSULB Dorm	Biology
12	Ali Graduate, Unmarried	Jordan Born in USA	Not always	With own family	Electrical Engineering

Box 1 contd.

	Name, education, and marital status	Country, Citizenship status,duration of stay in the USA	Eating halal and/or non-halal	Residence	Major
13	Abdul Ahad Khan International Graduate, Unmarried	India International student, Living for 2 years	Always	Renting a room in an apartment with other roommates	Aerospace Engineering
14	Zafar International Graduate, Unmarried	Sri Lanka International student, Living for 1 year	Always	With own family	Mechanical Engineering
15	Moustafa Graduate, Unmarried	Pakistan Born in USA	Not always	With own family	Computer Science
16	Shaheryar Undergraduate, Unmarried	Pakistan Born in USA	Not always	With own family	Economics
17	Samer Undergraduate, Unmarried	Lebanon Born in USA	Always	With own family	Marketing
18	Bandar Undergraduate, Unmarried	Saudi Arabia Born in USA	Not always	Renting a room with other roommates	Mechanical Engineering
19	Hadhoodi Undergraduate, Unmarried	Lebanon Born in USA	Always	With family	Computer Engineering
20	Faiyyaz Omarjee Undergraduate, Unmarried	Indian Born in USA	Always	With own family	Psychology

Box 2. Perception of the participants towards *halal*

Halal means *Zabiha*	*Halal* is *Zabiha* and everything except pork and wine	*Halal* is *Zabiha* and also prepared by the people of the book
20	20	03

Box 3. Limited *halal* options on campus

Number of students who went to the stores on campus	Name of food stores on campus	Items that are sold	Meat Halal or non-halal
20	Opa Greek!	Chicken Gyro	*Halal*
20	Nugget	Vegetable Pizza,Tator tots	Non-*halal*
20	El Pollo Loco	Salad, Vegetable-burgers, Fish fillet	Non- *halal*
20	Beach Walk	Vegetable burger, Salald, Fish fillet	Non- *halal*
20	Panda Express	Chow Mein,	Non- *halal*
20	Sbarro	Cheese Pizza	Non- *halal*

Box 4. Frequency of the participants who bring *halal* food on campus

Frequency	From home	Food items they bring
15	Bring food from parental House	Meat curry, fried meat
4	Bring food from their own Apartments	Meat curry, gravy meat
1	Not bring food from home	

Box 5. Reasons for eating Non-*Halal*

Participants (out of total 14 who eat non-*halal*)	Reasons
14	Unavailability of *halal*
14	Impact of peer group in campus
14	High price of *halal*

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In The Womb of the Past: A Bioarchaeological Study on the Health Profile of Children in Pre-historic and Proto-historic India

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Abstract: During the last few decades, bioarchaeological practitioners have been trying to get an integrated picture of the past by applying the biocultural model to study skeletal remains. Research endeavour on biocultural adaptation of the past, based on the adult skeletal remains gained significant recognition in the academia, but the sub-adult skeletal remains never received substantial attention. Other than estimation of age and sex, systematic examination of sub-adult skeletal remains can provide a complete picture of the morbidity pattern and their age-wise prevalence at the time of death of the children of past society. Thus, the interwoven nature of palaeopathology and palaeodemography has been useful for understanding the health profile of the ancient population. For example, pathological lesions like, Harris line, enamel hypoplasia (EH), porotic hyperostosis, periostitis, and so on that caused a detrimental effect on the health of the overall sub-adult population have made a significant appearance with the gradual emergence of agriculture. This research paper aims at providing an insight into the health profile of the children in the Indian archaeological context (up to Chalcolithic period) by using palaeopathological data as a primary tool. The entire work is based on secondary data i.e. published reports and monographs. During the course of this work, no attempt has been made to restudy any skeletal remain. Published work on well represented and well-documented sites like, Mesolithic (Damdama), Neolithic (Budihal), and Chalcolithic Deccan (Dimabad, Nevasa, Inamgaon, Walki, and Kaothe) has been compiled for this work. A gradual shift in the subsistence pattern has left a significant impact on the overall sub-adult population of the past in the form of different pathological lesions. The research involves an examination of the nature of pathological lesions found on the sub-adult skeletons, more precisely the emergence of pathological lesions and their probable biocultural connotation.

Key words : Bioarchaeology, palaeopathology, sub-adult, palaeodemography, Enamel hypoplasia, Harris line

INTRODUCTION

The systematic investigation of the past has always been a prime area of interest for researchers. The skeletal remains of the ancient population play a significant role in understanding the physical environment they lived in; on the other hand, material remains are essential for the understanding of the cultural aspect of the past society. Over a few decades, bioarchaeological practitioners are trying to get an integrated picture of the past by applying the biocultural model to study skeletal remains. Before 1977, skeletal remains recovered from archaeological excavations were significant for racial

classification and ethnic identification. Over the last few decades, the study of human skeletal remains in archaeological context has gained massive attention for understanding the bio-cultural adaptation of the past. The irreplaceable thirst to know the bio-cultural adaptation of the past eventually gave birth to bioarchaeology. As a discipline, bioarchaeology acts as a building block which unites the biological and social aspect in an archaeological context to get a comprehensive picture of social identities. Hence it is, "an intradisciplinary biocultural approach with a cross-cultural perspective" (Armelagos::2003:27). The origin of bioarchaeological research is deeply rooted in human osteology, where the main focus revolves around the anatomical interpretation of human skeletal remains (Larsen, 2002). Although originated from osteology and skeletal biology, bioarchaeology as a discipline moved beyond the traditional skeleton studies and tried to understand the ancient population focusing on health, disease, diet, trauma, stress, violence, and palaeodemography in connection with its cultural environment.

For the comprehensive understanding of the bio-cultural adaptation of the past, adult skeletal remains gained a significant preference. However, the study of skeletal remains of children remained deceptive and ignored despite being an integrated part of past society (Baxter, 2005; Halcrow and Tayles, 2011). Sub-adult specimens were always neglected and discarded, and never considered useful for further investigation because of "…the cartilaginous state of epiphyses and the incomplete ossiûcation of sutures, as well as the fragility of the bones themselves usually results in crushing and disarticulation. In any event, the skeletons of young subjects are of comparatively little anthropological value" (Hooton:: 1930:15). However, the significance of studying children in archaeological context by incorporating both biological and social aspect has rapidly grown over the past few years (Halcrow and Tayles, 2008). Systematic analysis of the sub-adult skeleton became quite essential and useful for assessing the bio-cultural stress and overall health of the population. Child centric research in archaeology emerged during the late 1980s with the work of Grete Lillehammer and eventually became a major research area in the global platform (Lillehammer, 1989). Before that, children were never incorporated in traditional archaeological research and treated as an "unknowable component of past social groups" (Baxter,2005:9).

Post-1990s witnessed a promising start in the child-centric research from the archaeological context. The perception that children were "passive receptor", "undervalued" (Wileman, 2005:7-11), peripheral, etc. started facing counter interpretations. Scholars started considering children as "an independent agent in the past" (Lewis, 2007:3). Other than mere age estimation, areas like growth studies, palaeodemographic studies, palaeopathological studies, isotope analysis, and ancient DNA analysis started gaining importance under the rubrics of childhood study (Lewis, 2007).

ARCHAEOLOGICAL CHILDREN: WHO ARE THEY?

Defining children in archaeological context has always been a tedious job for the archaeological practitioners (both social archaeologists and bioarchaeologists). The term 'sub-adult' has gained substantial recognition in bioarchaeological literature, which recognizes both the biological and the social aspects of childhood (Halcrow and Tayles, 2011: 334). Literature sources on bioarchaeology reveal that children have been treated as a prime indicator to understand the biocultural adaptation of the past at a macro level. For the proper age estimation of sub-adult skeletal remains, scholars mainly depend on the 'biological markers' like, ossification of bones, eruption of the teeth, and overall growth pattern of the skeleton (Perry, 2006; Fahlander, 2011). Based on the osteological development, Fahlander (2011) has provided a comprehensive account of different categories of age given by distinct scholars (Table 1).

Table 1. Different age categories after Gustafsson and Lundin 2004::81(c.f. Fahlander 2011::17)

	Martin and Saller, 1957	Sjovold, 1978	Sellevold et al. 1984	Arcini ,1999
Fetus	-	-	-	0?
Infans	-	0-1 year	-	0-9 months
Infans I	0-6/7 years	0-7 years	0-6 years	1-6 years
Infans II	6/7-14/15 years	5-14 years	6-12/14 years	7-14 years
Juvenilis	14/15-18/20 years	10-24 years	12/14-17/19 years	15-19 years
Adultus	18/20-35/40 years	18-44 years	20-35 years	20-39 years
Maturus	35/40-50/60 years	35-64 years	35-55 years	40-59 years
Senilis	-	50-79 years	> 60 years	> 60 years

To a large extent, terminologies like "sub-adult", "nonadult", "juvenile" and "child" are somewhat overlapping and synonymously used to describe an age group before attaining adulthood (Halcrow and Tayles, 2008). Bioarchaeologists rely on the age estimation of the sub-adult skeleton based on the dental or skeletal (long bone) maturation. While discussing the different stages of development and age categories, Lewis (2007), has given a set of different terminologies aligned with age group (Table 2).

Table 2. Age terminology (After Lewis 2007: 2)

Term	Period
Embryo	First 8 weeks of intra-uterine life
Fetus	From 8 weeks of intra-uterine life to birth
Still birth	Infant born dead after 28 weeks gestation
Perinatal, perinate	Around birth, from 24 weeks gestation to 7 postnatal days
Neonatal, neonate	Birth to 27 postnatal days
Post-neonatal	28–346 postnatal days (1 year)
Infant	Birth to 1 year
Non-adult	≤17 years
Child	1–14.6 years
Adolescent	14.6–17.0 years
Adult	>17 years

Hence, in bioarchaeological endeavor the term children is described as 'sub-adult', an age category that usually comes below 14 years.

BIOARCHAEOLOGY OF CHILDREN IN INDIA: A NEW PARADIGM

Indian Archaeology has witnessed the importance of studying human skeletal remains in archaeological contexts during the early 1980s (Mushrif, 2014). Due to the immature ossification, the sub-adult skeletal remains have faced perennial negligence. Over the period, a gradual interest emerged among the scholars to study incomplete, even fragmented juvenile remains to understand the status of the "little ancestors" in the past in the Indian context.

While discussing the status of bioarchaeological research on children in the Indian context, Walimbe (2016:: 485) stated,

"immature remains comprise a significant portion of the archaeological human skeletal series in the Indian subcontinent, a fact which may be to some extent attributed to the differential preservation in burial urns, which provided a protective cover to delicate bones against the pressure of surrounding soil sediments. The study of sub-adults is an important component of biocultural studies in India because children are most sensitive to adverse genetic, nutritional, epidemiological, and environmental factors and metabolic upsets. Their death at a young age means that there was less time to recover and for their bones to remodel the evidence of developmental stressors. Research on children and childhood has been an important aspect of work on Southern Neolithic and Deccan Chalcolithic cultures, which demonstrate the biocultural adaptive strategies of ancient pastoral groups in response to changing ecosystems."

Palaeopathology plays a vital role in bioarchaeological research in the Indian context. The key focus of this area revolves around the comprehensive understanding of the growth and development of disease under certain biological and cultural circumstances. The study of cranial, postcranial, and dental remains play a crucial role for the better understanding of health, nutrition, disease, pathological infection.

ARCHAEOLOGICAL SITES AND SAMPLES UNDER STUDY

Quite a large number of sub-adult skeletal remains have been recovered from different corners of India, showing different cultural timeline. The earliest evidence of child burial has come from the Mesolithic cultural period and continues up to the Medieval period. In comparison with other cultural stages and sites, Chalcolithic Deccan reveals the maximum number of sub-adult skeletal remains, which shows a wide variety of pathological lesions.

Therefore most well-represented, well-reported, and thoroughly studied sites were selected for this purpose. The skeletal remains of Mesolithic (Damdama), Neolithic (Budihal), and the entire Deccan Chalcolithic skeletal series, over-represented by the sub-adult population, has been considered for this study. It is important to mention here that the Harappan skeletal remains were studied by several scholars over the last few years (Gupta et al. 1960; Sarkar, 1972; and Robbins, 2017, 2019). However, the entire series does not show any prominent and consolidated reporting on child pathology. It is evident from the following table (Table.3), out of 416 buried skeletal remains, 289 skeletal remains come under the sub-adult category, representing 69.74% of the entire series. Out of those 289 sub-adults, 96 individuals were identified with different pathological lesions. However, few of the sub-adult remains were too fragile for any pathological observation, whereas some of the remains were devoid of any pathological lesions (Luckas and Walimbe, 1986; Walimbe, 1986; Gambhir,1992; Tavares,1997; Mushrif et al. 2000, 2005). An attempt has been made to understand the pattern, frequency, and prevalence of the pathological lesions recorded on the sub-adult skeletal remains and their prevalence across the age group. The entire data was compiled from the secondary sources (from the published reports, monographs, and articles). No direct attempt was taken to re-study the skeletal series.

PATHOLOGICAL LESIONS ON CHILD SKELETON

Different pathological lesions and their association with different groups can give a comprehensive picture of the bio-cultural adaptation of the sub-adults in the past. Age-wise prevalence of certain pathologies and stress markers (both specific and nonspecific) and their overall impact on the child population can provide a clear picture of the natural environment they lived in. The following table shows the nature of pathological lesions documented in the sub-adult skeletal remains.

The pathological data on 96 sub-adult skeletal remains have been placed in the age bracket of 0-11 years, more specifically under three age grades Group A (0-1 year), Group B (1-5 year), and Group C (6-11 year). After analyzing the compiled data from available sources, the following pathological trend has emerged.

The single occurring pathologies show a wide variation (Fig:1). It includes infectious diseases, traumatic lesions, different stress markers, dental

Table: 3. Archaeological sites and samples considered for the present study

Site	Culture	Number of excavated skeletons	Total number of sub-adult skeleton	Percentage of sub-adult(s) in the total studied skeletal series from the excavated site	Total number of affected studied sub-adult individual from the site	Percentage of affected individuals in total studied sub-adult population of the site	Source
Damdama	Mesolithic	47	1	2.12	1	100	Lukacs,2016
Budihal	Neolithic	15	13	86.66	4	30.76	Walimbe and Paddaya, 1999
Dimabad	Chalcolithic	37	36	97.29	4	11.11	Walimbe 1986, Gambhir 1992, Mushrif, and Walimbe 2005
Nevasa	Chalcolithic	75	71	94.66	34	47.88	Mushrif, and Walimbe, 2005
Kaothe	Chalcolithic	5	3	60	2	66.66	Walimbe 1990, Gambhir 1992, Mushrif, and Walimbe, 2005
Inamgaon	Chalcolithic	228	157	68.85	49	31.21	Lukas and Walimbe 1986, Walimbe and, Gambhir 1992, Tavares 1997, Mushrif et al. 2005
Walki	Chalcolithic	9	8	88.88	2	25	Mushrif, and Walimbe 2000.

Map.1. Archaeological sites considered for the present study

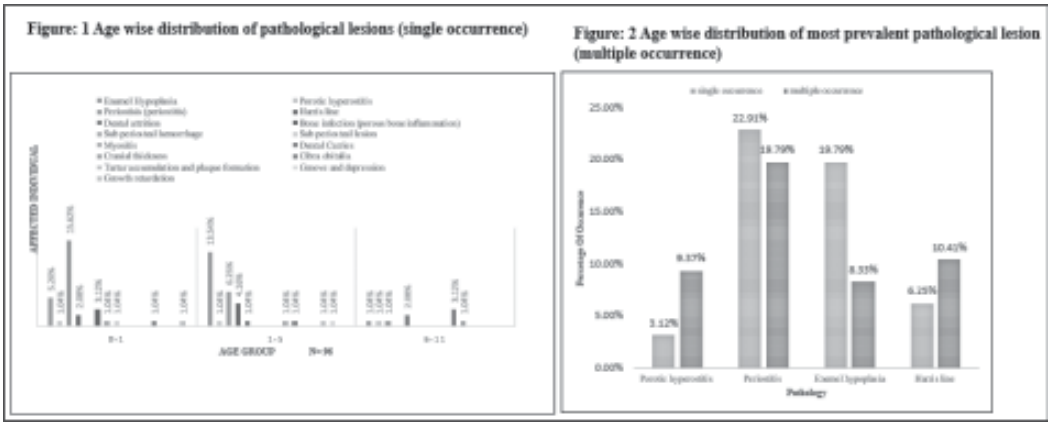
pathologies, and congenital malformations. Age-wise distribution of pathological lesions provides a clear indication of the pattern of episodic illness and its encounter with the environment the sub-adults population lived in. It is interesting to mention that most of the affected individuals fall under 5 years of age. Figure: 2 shows the multiple occurrences of pathological lesions

Table: 4. Major pathological lesions

Site	Culture	Age			Pathology observed	Source
		Group A (0-1 year)	Group B (1-5 years)	Group C (6-11 years)		
Damdama	Mesolithic		3.0-3.5		Enamel hypoplasia	Lukacs, 2016.
		10-12 m			Growth retardation	
		<2 (2 individuals)			Porous bone inflammation on long bones (?)	
Budihal	Neolithic					Walimbe and Paddaya, 1999.
			2.5-3y		Infantile scurvy/ Periostitis, Enamel hypoplasia, growth retardation	
		<3 m			Sub periosteal lesion	
		5 to 6 m			Sub periosteal hemorrhage (?)	Walimbe 1986 ,Gambhir 1992, Mushrif, and Walimbe 2005.
Dimabad	Chalcolithic	2.5-3 m			Enamel hypoplasia	
			4 to 5y		Tartar accumulation and plaque formation.	
			1.6-1.9y		Porotic hyperostosis, Scurvy, Enamel hypoplasia	
			1-1.4y		Porotic hyperostosis, Periostitis	
			4-5 y		Porotic hypreostosis	
		1 y			Harris line, Trauma or green stick	
			3 to 4y			
			2-2.5y		Harris line	
			2.3-2.9y			
			2-2.6y			
		10-12m			Harris line, Periostitis	
			1.6-1.9y			Mushrif ,and Walimbe 2005.
Nevasa	Chalcolithic					
				10 -12y	Vertebral pathology, Dental attrition, Enamel hypoplasia	
		New born			Periostitis, Scratches on the rib fragments	
		3 to 4 m				
		Neonatal			Periostitis	
		9 m				
			2-2.3y			
		New born				
			2-2.5y			
		6-8m				
		7-9m				
		Infant			Bone infection	
		9-10 m				
			1.6- 1.9 y			
		9-12 m				
			1-1.3 y			
			3-4 y		Enamel hypoplasia	
			2.5 y			
			3-4 y			
			1.6-1.8y			
			3.6y			
			1.6-1.8 y			
			3-3.6y			
			1.6-1.8y			
				6-7y	Dental attrition	

Table 4 cotinued

Site	Culture	Age			Pathology observed	Source
		Group A (0-1 year)	Group B (1-5 years)	Group C (6-11 years)		
Kaothe	Chalcolithic	4-5 m			Periostitis	Walimbe 1990. Gambhir 1992. Mushrif, and Walimbe 2005.
			1.4 y		Groove and depression on the buccal surface	
Walki	Chalcolithic		2.3 y		Porotic Hyperostosis, Growth retardationn, Enamel deficiency	Mushrif , and Walimbe 2000.
		0-2 m			Porotic hyperostosis, Harris line	
Inamgaon	Chalcolithic		2.3 y			Walimbe 1986, Walimbe, and Gambhir 1992., Tavares 1997., Mushrif et al. 2005.
			1.5 y		Periostitis	
		0-3 m				
		3-12 m				
		0-3 m				
		3-12 m				
				6-11 y		
				7-11 y		
			1.5 y			
			1-2 y			
		0-3m				
		3-12m				
		3-12 m				
		3-12 m				
		3-12 m				
		3-12m				
		3-12 m			Enamel hypoplasis	
				6-11y		
		3-12 m				
			3-5 y			
			3-5 y		Myositis	
			1-2 y		Porotic hypreostosis , Harris line	
		0-3 m			Porotic hypreostosis, Periostitis	
		3-12 m				
			2-2.6			
			1-2 y		Periostitis , Enamel hypoplasia	
				6-11y	Dental attrition, Periostitis	
				6-11y	Dental attrition	
		3-12 m			Harris line	
		1-3m				
		3-12m				
		0-3 m			Porotic hyperostosis	
			1-5 y		Enamel hypoplasia, Tymphanic thickness	
				7-11 y		
				7-11 y	Dental caries	
				7-11 y		
			1-2y			
		3-12 m			Periostitis, Harris line.	
		4-5 m				
			1-2 y			
			1-1.2 y			
				6-11 y	Periostitis, dental attrition	
				6-11 y		
				7-11y	Cranial thickness	
		0-3 m			Cribra orbitalia	
				5-6 y	Dental carries, Dental attrition, Craniostenosis	
				7-8 y	Yaws, Dental attrition	
		6-8 m			Periostitis, Enamel hypoplasia	
			3-5 y		Dental attrition	



observed in the sub-adults. Among the entire series of affected individuals (n=96), periostitis was the most dominating pathology, which affected the age group A (0-5 year); whereas, age group B (1-5 year) was more susceptible to enamel hypoplasia resulting from nutritional stress, and age group C (6-11 year) seems to be healthier and well adopted with the environment.

The pathological lesions can be explained in terms of

A. Specific and non-specific indicators of physiological stress
B. Pathological markers resulted from infectious diseases
C. Dental pathology
D. Traumatic lesion
E. Congenital malformation

It is quite evident from Fig. 1 that the archaeological children were exposed to multiple pathologies. The pathological lesions are described below.

A. SPECIFIC AND NON-SPECIFIC INDICATORS OF PHYSIOLOGICAL STRESS

The evaluation of stress markers on sub-adult skeletal remains has become a prime area of study for bioarchaeologists. Since the principal focus of palaeopathological research is based on ancient disease present on the skeletal body, therefore, pathological lesions resulting from stress (specific and non-specific) can give powerful insights on the health conditions of the sub-adults in antiquity. A gradual shift in the subsistence pattern of the early human population created an imprint of prolonged stress, which left some prominent signature on the skeletal body in the form of various pathological lesions. Huss-Ashmore et al. (1982:396) stated, “the degree of physiological disruption is a function of both the severity of environmental stressors and the adequacy of host response”. On the other hand, Larsen explained stress as a “physiological disruption resulting from impoverished environmental circumstances”(Larsen 1997:: 6). The skeletal body of the sub-adults can

provide some classic examples of stress resulted from nutritional deprivation, during the weaning stage, and exposure to some new environment. The sub-adult skeletal remains show some evidence of stress markers in the form of different pathological lesions, which are discussed below.

I. *Porotic hyperostitis*

The identification of anemia (both genetic and nutritional) in skeletal remains, especially in sub-adult skeletal remains, frequently assigned with the pathological lesion porotic hyperostosis (Ortner,2003). Other than anemia, infection, metabolic disorder, diarrhea, parasitism are also associated with porotic hyperostosis. (Walker, 1986; Perry, 2006). The occurrence of porotic hyperostosis is quite prevalent and persistent across the globe (Ortner, 2003:102).

The prevalence of porotic hyperostosis increased during the Chalcolithic period (Gambhir,1992; Tavares, 1997; Mushrif et al. 2000, 2005). It is evident from the following figures (Fig:3 and Fig:4) that porotic hyperostosis is more frequent in multiple occurrences. The prevalence of porotic hyperostosis increased with the onset of farming. Porotic hyperostosis and other stress markers (EH, Harris line, and periostitis), give a clear impression of prolonged nutritional stress (caused by poor diet and malnutrition), and contentious infection.

Fig: 3. Distribution pattern of Porotic hyperostitis

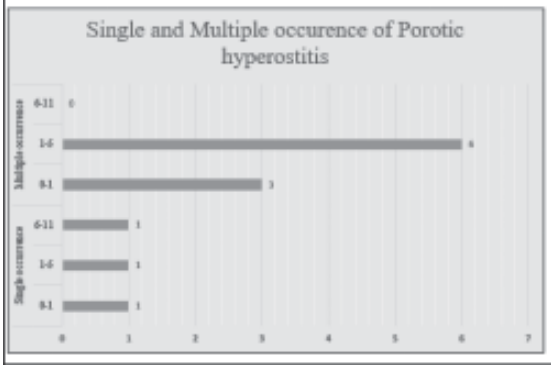
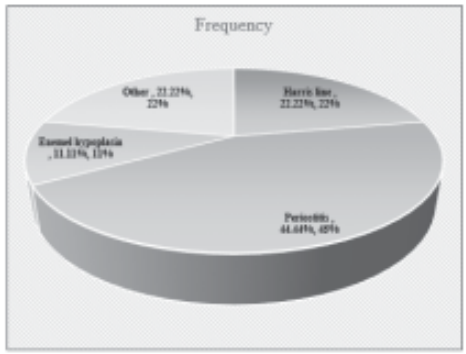


Fig:4. Multiple occurrence of Porotic hyperostitis with other pathologies



II. *Harris line*

Another important and most frequent marker of childhood stress (physiological stress) and growth arrest is the Harris line, named after the physician Harris, who discovered this transverse lines (Larsen,1997; Roberts and Manchester,2005; Walimbe, 2017). Harris lines are radiopaque transverse lines, visible in x-ray on skeletal materials, especially on long bones, which form during childhood because of 'cessation and resumption of bone growth' (Perry,2006). Harris lines are also known as growth recovery lines because it forms during the "recovery phase following growth arrest" (Larsen, 1997:40).

Harris lines are treated as an indicator of nutritional stress resulting from metabolic insult, stress during the weaning period, and diseases. The specific etiology of the radiopaque transverse lines is not clear. However, factors like starvation, septicemia, pneumonia, lead poisoning, rickets, congenital syphilis, scurvy, degenerative bone disease, trauma, osteoporosis, rheumatoid arthritis, boney deformation, and prolonged metabolic insults are considered to be the possibilities behind the development of Harris line during early childhood (Piontek et al. 2001; Lewis, 2007; Walimbe, 2017).

It is evident from the table-4 that Harris line is the most pervasive pathology, which affected the sub-adults of the Chalcolithic period. Figure: 5 shows the pattern of occurrence of the Harris line along with some other pathological lesions. Most of the affected age group comes under the bracket of 0-5 years, giving a clear indication of nutritional deprivation, weaning stress, and infection that caused high mortality. It is quite interesting to mention that the co-occurrence of Harris lines with periostitis and porotic hyperostosis are the prevalent pathological condition found among the sub-adults. However, it is quite tough to establish any direct link between periostitis and Harris line, and porotic hyperostosis and Harris line; but, it can be conjectured that the presence of Harris line along with porotic hyperostosis and periostitis is an important aspect to assess the poor health status of the sub-adults in antiquity.

Fig: 5. Multiple occurrence of Harris line

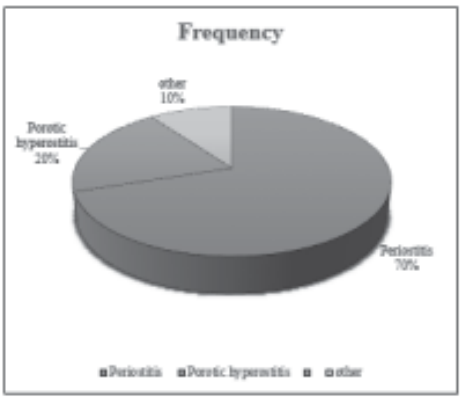
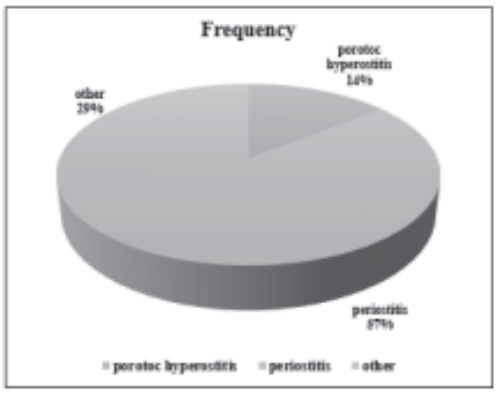


Fig: 6. Multiple occurrence of Enamel hypoplasia



III. *Enamel Hypoplasia*

Enamel hypoplastic defects are the most common stress markers observed in the archaeological skeletons. It is known as a defect in the tooth structure, precisely in the enamel structure (Tavares, 1997). Although the etiology for this specific pathology is unknown, however, factors like acute malnutrition, birth trauma, nutritional stress, fever (Lewis, 2007), and congenital syphilis (Hillson et al., 1998), are usually considered to be the known factors for developing this non-specific metabolic stress.

It appears from Figure.6 that the skeletal remains that fall in the age-grade B (1-5 years) was likely to suffer from enamel hypoplasia (13.54% of the total studied sub-adults). In comparison to the frequency of Harris line, the prevalence of enamel hypoplasia is much higher among the sub-adults. The occurrence of enamel hypoplasia can be noticed from the skeletal remains of the Mesolithic period and eventually the trend became prominent during the Chalcolithic period (Luckas and Walimbe, 1986; Walimbe, 1986; Gambhir, 1992; Tavares, 1997; Walimbe and Paddayya, 1999; Luckas et al., 2001; Mushrif and Walimbe, 2000, 2005; Lukacs, 2016).

Other than the above mentioned pathologies, stress markers like cribra orbitalia, growth retardation, cranial thickness, and subperiosteal hemorrhage and lesions, were also identified. Since the occurrence of these pathological lesions is not prominent, hence it cannot be considered as significant pathology which affected the sub-adults in the past.

B. PATHOLOGICAL MARKERS RESULTING FROM INFECTIOUS DISEASES

The incidence of different infectious diseases caused by pathogens like bacteria and viruses left a prominent marker on the skeletal body of the archaeological population. It is argued that the onset of agricultural practices, mass migration, unhygienic and poor living conditions, and changes in the climatic condition introduced different pathogens and infectious diseases (Larsen, 1997; Tavares, 1997, Robert and Manchester, 2005).

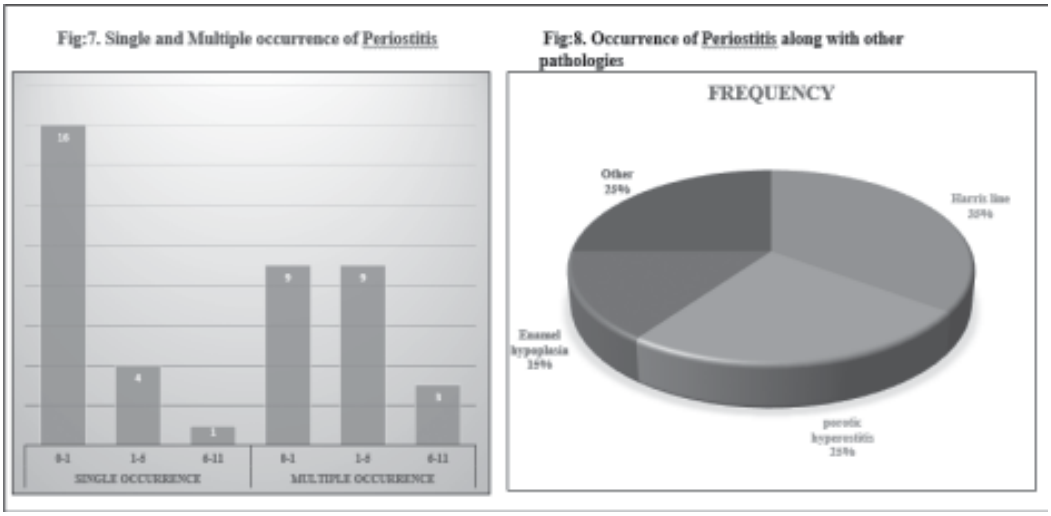
The incidence of infectious diseases started to appear during the beginning of agricultural practices and became more prevalent during the Chalcolithic period (Tavares, 1997). The pathological markers caused by infection are described below.

I. *Periostitis*

Periostitis is widely treated as a pathological lesion found on the skeletal body, either on a specific part of bones or might have multiple occurrences. It is one of the common forms of infection found in the periosteum, caused by some foreign body (Ortner, 2003; Lewis, 2007; Roberts and Manchester, 2010). Some scholars have described periostitis as a prominent indicator of stress, metabolic deprivation, nutritional deficiency, and trauma (Greenfield, 1969; Travers, 1997), whereas in some cases it has been treated as an indicator of infection (Ortner and Putschar, 1985; Lewis,1997; Cook, 2007). This pathology devoid of any specific etiology. However, non-specific bacterial infection (Travers, 1997; Lewis, 1997), traumatic injury (Ortner and Putschar, 1985), and infantile scurvy (Ortner et al., 2001) are the most common factors attributed to this specific pathological lesion. Travers (1997) and Walimbe (1999) postulated that the presence of periostitis on sub-adult skeletal series recovered from India shows the prevalence of infantile scurvy and nutritional stress, whereas, for Mushrif (2005), it can be an outcome of some specific or non-specific infection. The following figures (Fig.7 and Fig.8) show that the prevalence of periostitis is maximum in the entire data.

The presence of periosteal lesion can be seen from the Neolithic period onwards and became very prominent during the Chalcolithic period. It appears from Fig.7, that in the case of the single occurrence of this pathology, infants (0-1 year) were mostly affected. The higher prevalence of periosteal lesion, especially in the earlier phase of life, is a clear indication of nutritional deficiency and chronic infection, which affected the sub-adult population. On the other hand, Fig. 8 shows the pattern of multiple occurrences of periostitis with different pathologies. It can be said that the co-occurrence of porotic hyperostosis and periostitis is a concrete indication of stress resulting from iron deficiency during the early stage of life. On the other hand, the co-occurrence of Harris line and periostitis and enamel hypoplasia and periostitis is a prominent indicator of metabolic insult and nutritional deprivation.

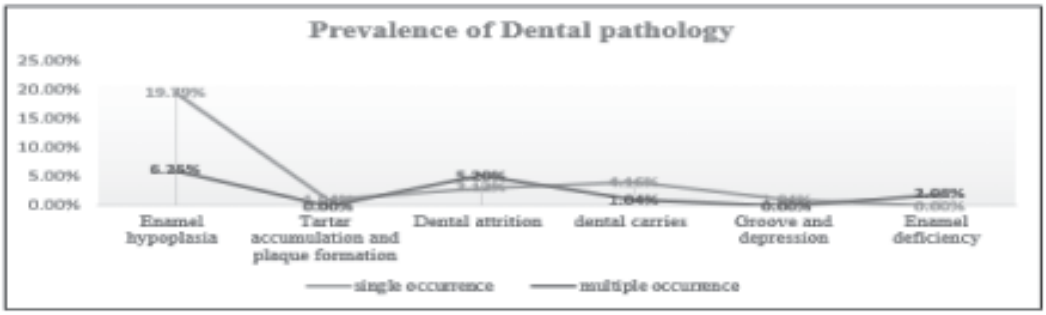
Other than periostitis, cranial yaws is another infection observed among the sub-adults. Since the occurrence is rare, it cannot be considered as a major pathology that affected the sub-adult population.



C. DENTAL PATHOLOGY

By its definition, dental pathology is a scientific study to understand the origin, nature, and course of dental diseases (teeth and jaw) (Lukacs, 1989). The prevalence of infection in the oral cavity has been encountered frequently in the archaeological population. Dental pathologies observed in the entire skeletal series include enamel hypoplasia, dental caries, dental attrition, groove and depression, tartar accumulation and plaque formation, groove and depression and enamel deficiency (Lukacs and Walimbe, 1986; Walimbe, 1986; Gambhir, 1992; Tavares, 1997; Walimbe and Paddyya, 1999; Lukacs *et al.*, 2001; Mushrif and Walimbe, 2000, 2005; Robbins Schug G, 2011; Lukacs, 2016). Figure 9 shows the prevalence of oral pathologies observed among the sub-adult population. The pathologies are described below.

Figure :9. Prevalence of dental pathology



I. *Dental Caries*

Dental caries was comparatively more prevalent among the age group C (6-11 years). The pattern of occurrence of this particular dental pathology is visible in Figure 9. The prevalence of this oral pathology is minimum in its multiple occurrences (1.04%), but, in a single occurrence, the distribution of this pathology is much higher (4.01%). It is very prominent that caries infection is more related to dietary habits and oral hygiene rather than any stress. Since most of the affected individuals fall under the age bracket of age group C (6-11 years), it is likely to be caused by food habits and poor oral hygiene.

II. *Dental attrition*

Dental attrition is one of the most common conditions found in archaeological skeletons. Dental attrition is a 'natural result of masticatory stress upon the dentition in the course of both alimentary and technological activities' (Powell:: 1985:308). Depending on the nature of food, attrition can take place. Factors like oral hygiene, type of food particles, antemortem tooth loss, occupation-related stress, chewing preference of an individual may accelerate dental attrition (Saul and Saul 1989; Mushrif and Walimbe 2005). Figure 9. provides a quick glimpse of the distribution pattern of dental attrition found among the sub-adults. It is quite visible that dental attrition has mostly affected the age group C (6-11 years), whereas the prevalence was quite less in other age categories.

III. *Enamel Hypoplasia*

Enamel hypoplasic lesion is one of the most common pathological lesions observed in archaeological skeletons, corroborating our study. In a single occurrence, it is more dominant (19.79%). The presence of hypoplastic lesions gives a clear indication of episodic stress that occurred during the early phase of childhood. The probable reason for this stress marker could be nutritional deprivation, infection, disease, and the introduction of new cereals, which caused weaning stress.

Other than the above mentioned oral pathologies, tartar accumulation and plaque formation, groove and depression, and enamel deficiency also

appeared, but not on a larger scale. On the other hand, a traumatic lesion in the form of greenstick fracture was also reported (Mushrif and Walimbe, 2005). Although greenstick fracture is frequently observed among the archaeological population, however in the present study, out of 96 sub-adults, only one sub-adult has shown the evidence of this lesion. Other than traumatic lesions, two individuals were identified with rare genetic anomalies like craniostenosis, which is a premature fusion of sutures of skull and myositis where muscle, tendons, and ligaments are ossified, and with time it gets attached to the bone (Tavares, 1997).

HEALTH AND ADAPTIVE SUCCESS: A BIO-CULTURAL ADAPTATION OF THE SUB-ADULTS

A gradual shift in the subsistence pattern played a vital role in the biological as well as the cultural adaptation of the early human population. The impact of socio-economic and environmental changes made the sub-adults more vulnerable to several diseases. The overall changes in the subsistence pattern (from hunting-gathering to settled agriculture) created pressure at the population level. The gradual growth impacted population pressure to a great extent. For Childe (1951::61), "if there are more mouths to feed, there will also be more hands to till the field". During the hunting-gathering period, child care was more intense, whereas agricultural activities compelled the 'lactating mother' to neglect her child (Gambhir, 1992; Tavares, 1997), which made the infants more vulnerable to infections and nutritional stress.

The pathological lesions like, stress markers, traumatic injury, infections, and sometimes congenital malformations (as explained earlier) gradually became very prominent with the emergence of the new physical and cultural environment. For example, the occurrence of enamel hypoplasia can be seen from the onset of Mesolithic culture, which was a 'semi-nomadic foraging pattern of subsistence'. The prevalence of enamel hypoplasia became very prominent during the Chalcolithic phase, which was an early farming community (Dhavalikar et al. 1988; Lukacs, 2016). Dental pathologies like dental caries, tartar accumulation, and plaque formation, and presence of groove and depression became quite prevalent during the Chalcolithic period. Due to the consumption of wild plant food, which was high fibrous in nature and devoid of carbohydrates, helped the early semi-nomadic hunter-gatherers to keep a "disease-free dentition" (Lukacs, 2016). On the other hand, with the gradual development of settled agriculture, the carbohydrate enriched food items became a prime diet causing several dental pathologies among the early farmers. However, other than carbohydrate enriched food, malnutrition, and poor oral hygiene also attributed to oral pathologies (Tavares, 1997). It is interesting to mention that other than enamel hypoplasia, the sub-adults of Mesolithic (Damdama) and Neolithic (Budihal) period did not show any other oral pathology (Walimbe and Paddayya, 1999; Lukcas, 2016).

Stress markers, on the other hand, left prominent evidence on the sub-adult skeletal remains. Other stress markers like Harris line and enamel hypoplasia, porotic hyperostosis, cribra orbitalia, and growth retardation became quite prevalent during the Chalcolithic period, whereas these pathologies did not make their appearance in the earlier cultural periods. Prolonged reliance on carbohydrate enriched food and less consumption of protein-enriched food led to protein-calorie deficiency, which made the sub-adults vulnerable to chronic infections (Gambhir, 1992; Tavares, 1997; Mushrif, 2005). It was mentioned by Larsen (1997) that agricultural communities were more susceptible to infections in comparison to the hunter-gatherers. The prevalence of periostitis among the Chalcolithic sub-adults (0-1 year in case of single occurrence) give a clear indication of nutritional deprivation and infection. Pathological conditions like cribra orbitalia and porotic hyperostosis frequently attributed to chronic iron deficiency anemia (Ortner, 2003; Lewis, 2007). By looking at the age group, it is easy to conjecture that it was strenuous for the archaeological children to overcome the stress. Other than porotic hyperostosis, the Harris line and growth retardation as a form of prominent stress markers are quite prevalent among the sub-adults. However, the occurrence of growth retardation can be seen from the onset of agro-pastoral life, whereas the Harris line became more frequent among the agriculturalists. Inadequate nutrition, exposure to infection, and weaning stress during the early phase of life were the common causes of retarded growth (Gambhir, 1992; Tavares, 1997). The nutritional deficiency made the sub-adults expose to severe infections and physiological stress, which had a detrimental effect on the overall health profile of the sub-adults. This prolonged stress could be a possible reason for high mortality during the Chalcolithic period.

CONCLUSION

Archaeological studies on sub-adult skeletal remains in the Indian context are still striving to gain proper recognition in the academic milieu. With the emergence of 'ethno-bioarchaeology' (the term was coined by Walker et al. in 1998), new possibilities emerged, which helped scholars to incorporate ethnographic data to get a comprehensive picture of the past. For example, a comparative growth study on the living sub-adults and Chalcolithic sub-adults was conducted by Gambhir (1992), which gave prominent evidence of malnourishment. Similarly, Walimbe (2017) worked on the skeletal remains of the Chalcolithic sub-adults and living sub-adults from the same region focusing on the occurrence of Harris line during childhood, where episodic stress and nutritional deprivation is attributed to the formation of Harris lines.

In the global context, archaeological research on children and childhood has gained popularity over the last few decades; however, in the Indian context, archaeological children are still in its infancy. Being the most

sensitive segment of any society, children are more vulnerable to stress (both physiological and environmental), insults (both culturally and environmentally produced), infection, and trauma. The gradual prevalence of these factors increased the childhood mortality rate in archaeological societies. The occurrence of different pathological lesions like Harris line, porotic hyperostosis, enamel hypoplasia, and periostitis gives clear evidence of stress during the early phase of life, which ultimately caused premature death. The prevalence of different pathologies and their association with different cultural periods can provide a good understanding of the bio-cultural adaptation of the past. With the progression of new sophisticated techniques in the field of palaeopathology, the precise investigation of health, nutrition, growth, and age at death of the sub-adults can open up various aspects of childhood in the past. It is needless to mention that bioarchaeological research on sub-adult skeletal remains has gained attention for its potentiality and multidisciplinary approach. As mentioned earlier, the entire work is completely based on secondary sources, and none of the skeletal remains were studied directly, therefore, it is necessary and highly recommended to reassess the archaeological samples to get a comprehensive aspect of the biological and social identity of the sub-adults in antiquity.

REFERENCES

Armelagos, George J. 2003. Bioarchaeology as Anthropology. Anthropological Papers on the *American Anthropological Association* 13(1): 27-40.

Baxter, Jane Eva. 2005. *The Archaeology of Childhood, Children, Gender and Material Culture.* Walnut Creek, Altamira Press.

Cook, D.C. 2007. Maize and Mississippians in the American Midwest Twenty Years Later. P-10-34. In: *Ancient Health Skeletal indicators of Agricultural and Economic Intensification.* eds by Cohen Mark Nathen, Crave-Kramer, and Gillan M.M. Florida: University press of Florida.

Child,V. Gordon. 1951. *Man Makes Himself.* New York, New American Libray.

Dhavalikar, M.K, H.D. Sankalia, and Z.A. Ansari. eds. 1988. *Excavations at Inamgaon.* Vol.1 part i and ii. Pune, Deccan College.

Fahlander, Fredrik. 2011. Sub-adult or subaltern? Children as serial categories. In: *(Re) Thinking the Little Ancestor: New Perspectives on the Archaeology of Infancy and Childhood.* Ed by Lally Mike, and Moore Alison BAR International Series 2271. pp: 14-23. Oxford, Archaeopress.

Gambhir, Prakash Baliramji. 1992. *A Biological Model for the Growth Pattern of Chalcolithic Population of Western Maharashtra.* Unpublished PhD thesis submitted to Department of Archaeology University of Poona, Pune.

Greenfield, G. B. 1969. *Radiology of Bone Diseases.* Philadelphia, Lippincott.

Gupta P, P.C. Dutta, and A. Basu. 1962. *Human Skeletal Remains From Harappa.* Calcutta, Venus Printing.

Halcrown, Sian E, and Tayles, Nancy. 2008. The Bioarchaeological Investigation of Childhood and Social Age: Problems and Prospects. *Journal of Archaeological Methods and Theory.* 15: 190-215.

Halcrow, Sian E, and Tayles, Nancy. 2011. The Bioarchaeological Investigation of Children and Childhood. In: *Social Bioarchaeology*. Eds by Sabrina C Agarwal, and Bonnie A Glencross. Pp- 333-360. Oxford, Wiley Blackwell.

Halcrow, Sian E, and Ward, Stacey. 2018. Children in Bioarchaeology and Forensic Anthropology. In: *Bioarchaeology and Human Osteology, Section. Encyclopedia of Global Archaeology.* Eds by Soren Blau, Luis Fondebrider, and Douglas H. Ubelaker. Chapter: 143. Gewerbestrasse, Switzerland, Springer International Publishing.

Harrod, Ryan P. 2012. Ethnobioarchaeology. *The SAA Archaeological Record.* Vol. 12 (2): 32-34.

Hillson S, Grigson C. and Bond S. 1998. Dental defects of congenital syphilis. *American Journal of Physical Anthropology.* 107:25–40.

Hooton, E. A. 1930. *The Indians of Pecos Pueblo: A Study of Their Skeletal Remains*. New Haven, CT, Yale University Press.

Huss-Ashmore, R., A. H. Goodman and G. J. Armelagos. 1982 Nutritional Inference from Paleopathology. In: *Advances in Archaeological Method and Theory.* Eds by M. Schiffer. Vol. 5. Pp: 395- 474. New York, Academic Press

Larsen, Clark Spencer. 1997. *Bioarchaeology: Interpreting Behavior from Human Skeleton*. Cambridge, Cambridge University Press.

Larsen, Clark Spencer. 2002. Bioarchaeology: The Lives and Lifestyles of Past People. *Journal of Archaeological Research.* 10(2): 119-166.

Lewis, Mary E. 2007. *The Bioarchaeology of Children Perspectives from Biological and Forensic Anthropology*. Cambridge, Cambridge University Press.

Lillehammer, G. 1989. *A child is born. The child's world in an archaeological perspective.* Norwegian Archaeological Review. 22 : 89–105.

Lukacs, J.R. and S.R. Walimbe. 1986. *Excavations at Inamgaon Vol.11 (I). Physical Anthropology of Human Skeletal Remains. An Osteobiographic Analysis.* Pune, Deccan College.

Lukacs, J.R. 1989. Dental Pathology: Methods for Reconstructing Dietary Patterns. In, *Reconstruction of Life from Skeletons*. Eds by M. Y. Iscan and K.A.R. Kennedy. pp.261-286. New York, Alan R. Liss.

Lukacs, Jhon R, Nelson, Gerg C, and Walimbe, S.R. 2001. Enamel Hypoplasia and Childhood Stress in Prehistory: New Data from India and South West Asia. *Journal of Archaeological Science.* 28: 1159-1169.

Lukacs, John R. 2016. "From the mouth of a child": Dental attributes and health status during childhood in Mesolithic India. *Anthropological Science.* 124(2): 93-105.

Mushrif ,V. and S.R,Walimbe. 2000. A fresh look at the human skeletal remains from Chalcolithic Walki (Maharashtra). *Man and Environment* 25(2): 19-34.

Mushrif, V. and S.R, Walimbe. 2005. *Human Skeletal remains from Chalcolithic Nevasa: Osteobiographic Analysis*. BAR International Series. Oxford, John and Erica Hedges.

Mushrif –Tripathy ,V. 2014. Human Skeletal Studies in India: A review. In: *Archaeological Human Remains Global Perspectives.* Eds by Barra O'Donnabhain, and Maria Cecilia Lozada. pp- 139-154. New York, Springer.

Ortner, Donald J, and Putschar, Walter G. 1981. *Identification of Pathological Conditions in Human Skeletal Remains*. Washington, D.C, Smithsonian Institution Press.

Ortner D, Butler W, Cafarella J, and Milligan L. 2001. Evidence of probable scurvy in sab-adults from archaeological sites in North America. *American Journal of Physical Anthropology.* 114:343–351.

Ortner, Donald J. 2003. *Identification of Pathological Conditions in Human Skeletal Remains.* Second Edition. San Diego, Academic Press.

Perry, Megan A. 2006. Redefining Childhood through Bioarchaeology: Towards an Archaeological and Biological Understanding of Children in Antiquity. *Archaeological Papers of the American Anthropological Association* 15: 89-111.

Piontek J, B, Jerszyñska, and O, Nowak. 2001. Harris lines in sub-adult and adult skeletons from the mediaeval cemetery in Cedynia, Poland. *Variability and Evolution.* Vol. 9: 33-43

Powell, M L. 1985. The analysis of dental wear and caries for dietary reconstruction. In: *The analysis of prehistoric diets.* Eds by Robert I. Gilbert, James H. Mielke. Orlando, Academic Press. pp: 307– 338.

Robbins, Schug Gwen. 2011. Bioarchaeology and Climate Change A view from South Asian Prehistory (Bioarchaeological Interpretations of the Human Past: Local, Regional, and Global Perspectives). Gainesville, University Press of Florida.

Robbins, Schug Gwen and Haviva M Goldman. 2014. Birth is But Our Death Began: A Bioarchaeological Assessment of Skeletal Emaciation in Immature Human Skeletons in the Context of Environmental, Social, and Subsistence Transition. *American Journal of Physical Anthropology* 155(2):243–259.

Robbins Schug Gwen. 2017. A hierarchy of values: The Bioarchaeology of older, complexity, health and hierarchy at Harappa. In: *Bones of Complexity: Bioarchaeological Studies of Social Organization and Skeletal Biology*. Eds by Haagen D. Klaus, Amanda R Harvey, and Mark N. Cohen. Florida, University Press of Florida. pp: 263-289.

Robbins Schug Gwen, Emily K Parnell and Rayan P Harrod. 2019. Changing the Climate: Bioarchaeology Responds to Deterministic Thinking About Human Environmental Interactions in the Past. In : *Bioarchaeologists Speak Out Deep Time Perspectives on Contemporary Issues.* Eds by Jane E Buikstra. pp. 133-160. Arizona, Springer.

Roberts, Charlotte, and Keith Manchester. 2005. *The Archaeology of Disease*. 3rd edition. Gloucestershire, The History Press.

Saul, Frank P, and Saul, Julie Mather. 1989. Osteobiography: A Maya Example. In: *Reconstruction of Life from Skeletons*. Eds by M.Y. Iscan and K.A.R. Kennedy. pp.287-302. New York, Alan R. Liss.

Tavares, Aletha. 1997. *Palaeopathology: Its Implications in the Archaeological Record*. Unpublished PhD thesis submitted to University of Poona Department of Archaeology, Deccan College Postgraduate and Research Institute, Pune.

Walimbe ,S.R. 1986. Palaeodemography of protohistoric Dimabad. In: *Dimabad 1976-79*. Eds by S.A. Sali. pp- 641-740. New Delhi, Archaeological Survey of India.

Walimbe, S.R. 1990. Human skeletal remains. In: *Exacavations at Kaothe*. Eds by M.K. Dhavalikar, V. Shinde, and S. Atre. pp- 111-231. Pune, Postgraduate and Research Institute.

Walimbe, S.R. 1997. Trauma and Deccan Chalcolithic decline: Fallacies and facts. *Man and Environment* 22 (2) : 101-104.

Walimbe ,S.R., and K, Paddayya. 1999. Human skeletal remains from the Neolithic ashmound site at Budihal, Gulbarg district, Karnataka. *Bulletin of the Deccan College.* (58-59): 11-47.

Walimbe, S.R. 2016. Human Skeletal Studies: Changing Trends in Theoretical and Methodological perspectives. In: *A Companion to South Asia in the Past.* Eds by Gwen Robbins Schug, and S.R. Walimbe. pp- 482-495. Oxford, Wiley Blackwell.

Walimbe, S.R. 2017. Incidence of Harris Line in the Protohistoric Sub-adult Population and Among Present- day Children: A Bio- cultural Perspective. *Man and Environment* 42 (2): 68-84.

Walker, P.L. 1986. Porotic Hyperostosis in a Marine-Dependent California Indian Population. *American Journal of Physical Anthropology* 69: 345-354.

Wileman,, Julie. 2005. *Hide and Seek The Archaeology of Childhood*. Gloucestershire, Tempus Publishing Limited.

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Auxological Dynamics of Cephalic Index in Symmetric and Asymmetric Small for Gestational Age Infants

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Abstract: Cephalic Index (CI) is used to categorize human populations into dolichocephalic (long headed), mesocephalic (medium headed), brachycephalic (broad headed). Due to non-availability of longitudinal information on growth of CI of symmetric and asymmetric small for gestational age (SGA) infants, this study aimed to understand postnatal auxological dynamics of CI amongst these babies of Indian origin. One hundred symmetric (boys: 50, girls: 50), 100 asymmetric (boys: 50, girls: 50) and 100 full-term (boys: 50, girls: 50) appropriate for gestational age (AGA) infants born at full-term to parents representing upper socio-economic strata and inhabiting North-western parts of India were studied. Head length and head width were mixed-longitudinally measured at 1, 3, 6, 9 and 12 months of age using standardized anthropometric techniques and instrument. Cephalic Index was calculated as head width/ head length × 100. SGA and AGA infants were categorized into Dolicocephalic (CI: male-71.0-75.9; female- 72.0-76.9), Mesocephalic (CI: male-76-80.9; female-77-81.9), Brachycephalic (CI: male-81-85.4; female- 82-86.4) and hyperbrachycephalic (CI: male-85.5-90.4; female- 86.5-91.9).Mean (SD) at each age level were calculated for Cephalic Index amongst symmetric SGA, asymmetric SGA and AGA infants of the two sexes.CI amongst symmetric and asymmetric SGA and AGA male and female infants increased upto 3-6 months of age whereafter, it declined. Symmetric SGA male infants had significantly (pd”0.01) lesser mean CI than their asymmetric counterparts. While, female symmetric and asymmetric infants had similar CI values. Symmetric SGA and AGA male infants had brachycephalic form of head while, asymmetric SGA male infants were hyper-brachycephalic. Female SGA and AGA infants remained brachycephalic throughout the entire tenure of this study. Our AGA and SGA infants of the two types representing north-western parts of India had larger mean CI and hence possessed broader heads characterized by larger head width during infancy.

Key words : AGA, Asymmetric SGA, Brachycephaly, Cephalic Index, Dolicocephaly, Indian origin, Symmetric SGA

INTRODUCTION

Small for gestational age (SGA), is described as a neonate whose weight at birth is less than 10th percentile for gestational age and sex of the accepted reference standards (Bakketeig, 1998). An infant born as SGA is further classified into symmetrical and asymmetrical subgroups (Villar and Belizan, 1982) depending upon timing and severity of insult. Inhibiting factors which operate early in pregnancy (first trimester) result in birth of a symmetrically growth retarded baby whose weight, length and brain mass (head circumference) are affected. Whereas, a late pregnancy insult results into birth

of an asymmetric SGA infant whose weight as well as length is decreased, but the brain is spared (as head circumference measures normal) (Black et al., 2013, Clayton et al., 2007). The symmetric and asymmetric SGA infants differ in their head size due to "head sparing effect" in asymmetric SGA infants as compared to symmetric ones in whom head growth remains compromised (Kaur et al., 2012).

Cranial measurements provide objective and scientifically precise evaluation of the human calvaria (Pindrik et al., 2016).Out of the several described anthropometric indices, Cephalic index (CI) is considered an objective and highly useful parameter for determining the skull shape [Lindert et al., 2013]. The index is used as an indispensable tool for planning a surgical procedure and to assess its effectiveness [Cohen and Maclean, 2000] relating to skull deformities [Collett et al., 2012]. The cephalic index was defined by Swedish professor of anatomy Anders Retzius (1796-1860) and was first used in Physical Anthropology to classify ancient human skull remains found in Europe (Adebisi, 2008). Human populations were characterized as either dolichocephalic (long headed), mesocephalic (medium headed), or brachycephalic (broad headed).Cephalic index is calculated as ratio of the maximum width of the head to its maximum length multiplied by 100. Though efforts have been made to study growth of head circumference of these two sub-types of SGA however, no serial attempt has been made to study the shape of head of these babies. In the present study we documented the longitudinal pattern of change of Cephalic Index studied amongst symmetric and asymmetric SGA infants inhabiting north-western region of India.

MATERIALS AND METHODS

One hundred symmetric (boys: 50, girls: 50), 100 asymmetric (boys: 50, girls: 50) small for gestational age (SGA) and 100 full-term (boys: 50, girls: 50) appropriate for gestational age (AGA) infants born to parents representing upper socio-economic strata (Aggarwal et al., 2005) and inhabiting North-western parts of India comprised sample for this serial study. Infants with birth weight within 10^{th} to 90^{th} percentile of intrauterine growth curves were considered as AGA, while those having birth weight less than 10^{th} percentile as SGA (Lubchenco et al. 1963). Ponderal Index (PI) was used to categorize SGA babies into symmetric SGA (PI e" 2.2 g/cm^3) and asymmetric SGA (PI < 2.2 g/cm^3) (Miller and Hassanein, 1971). The study protocol was approved by the 'Institutional Ethics Committee' and 'Departmental Review Board'. Enrolment of babies in the study was made after obtaining informed written consent of at least one of the parents of every child.

A thorough health examination of every infant was carried out. Each infant included was duly immunized as per age. Neonates with major congenital/ chromosomal anomalies or with moderate to severe illness detected during study tenure were excluded from the study. Breast feeding amongst all SGA and AGA babies was initiated within 24 hours of birth. By 3 months, 72% of

SGA and 87% of AGA babies were exclusively breast fed and its proportion declined to 32.5% and 46% in SGA and AGA respectively, by 6 months. Though bottle feeding was discouraged yet, 37% of the mothers continued with it at some of the age levels. Semi solid food items in the diet were introduced around 5 months of age in majority of the infants. However, mothers of 3 babies did not give semi solid food items until one year of age, despite repeated advice.

Head length and head width were mixed-longitudinally measured at 1, 3, 6, 9 and 12 months of age using standardized anthropometric techniques (Weiner and Lourie, 1969) and instrument in Growth Laboratory/ Clinic of Advanced Pediatrics Centre, PGIMER, Chandigarh, India. A Spreading caliper (Make: GPM Swiss Made, Least count: 1mm) was employed to measure head length and head width. The maximum head width was measured from glabella (anterior extreme in midsagittal plane at lower margin of the frontal bone, above frontonasal suture, and between superciliary arches) to opisthocranion (posterior extreme in midsagittal plane on superior squamous of occipital bone; may or may not coincide with external occipital protuberance). Maximum head length was measured from the point eurion to eurion (lateral extreme of the skull on either parietal bone or upper temporal bone (avoiding any lower temporal protrusion or bulge). Cephalic Index was calculated as head width/ head length × 100. Head shape of SGA and AGA infants were categorized into dolicocephalic (CI: male-71.0-75.9; female- 72.0-76.9), mesocephalic (CI: male-76-80.9; female-77-81.9), brachycephalic (CI: male-81-85.4; female- 82-86.4) and hyper-brachycephalic (CI: male-85.5-90.4; female- 86.5-91.9) as per classification given by Martin and Saller (1957).

Mean and SD at each age level were calculated for Cephalic Index amongst symmetric SGA, asymmetric SGA and AGA infants of the two sexes. Student's unpaired t-test was used to evaluate magnitude of intra-group (symmetric SGA vs. asymmetric SGA), inter-group (SGA vs. AGA) and gender differences.

RESULTS

The mean and SD computed for cephalic index (CI) amongst symmetric, asymmetric SGA and AGA infants are presented in Tables 1.Cephalic Index amongst symmetric SGA, asymmetric SGA and AGA infants increased up to 3-6 months of age, where after, it decreased continuously. The CI amongst male symmetric SGA, asymmetric SGA and AGA infants respectively measured 84.7, 83.9 and 85.1 at 1 month of age. By 12 months, it measured 83.2, 86.3 and 83.7, respectively. While, CI in symmetric SGA, asymmetric SGA and AGA female infants at one month being 82.6, 84.5and 84.7 increased respectively to 84.7, 85.4 and 85.6 by 12 months of age. CI in asymmetric SGA female infants in general, remained lesser than their male peers depicting statistically significant (pd"0.01) gender difference only at 1 month of age. While, female symmetric SGA and AGA possessed higher CI values as compared to their respective male counterparts beyond 3 months of age however, gender differences never became statistically significant (Table 1).

Table 1: *Mean, SD and Gender Differences for Cephalic Index in Male and Female Symmetric SGA, Asymmetric SGA and AGA Infants*

Age		Male			Female			Gender Differences
(months)		N	Mean	SD	N	Mean	SD	(p-value)
1 month	Asymmetric SGA	50	83.9	3.83	50	84.5	5.19	0.512
	AGA	50	85.1	5.71	48	84.7	3.71	0.683
	Symmetric SGA	50	84.8	4.60	50	82.6	4.96	0.030*
3 month	Asymmetric SGA	46	87.4	3.99	46	84.9	4.97	0.006**
	AGA	50	87.4	5.48	48	85.6	3.22	0.051
	Symmetric SGA	46	85.6	5.47	47	85.5	4.79	0.925
6 month	Asymmetric SGA	40	87.9	4.27	42	85.9	4.52	0.043
	AGA	47	86.0	4.94	47	86.4	4.31	0.715
	Symmetric SGA	44	84.8	6.15	48	85.8	5.72	0.421
9 month	Asymmetric SGA	50	86.9	3.77	47	85.8	4.15	0.174
	AGA	48	84.8	4.70	46	86.4	4.13	0.084
	Symmetric SGA	48	83.7	6.10	48	85.3	5.81	0.192
1 year	Asymmetric SGA	41	86.4	3.77	40	85.4	4.37	0.273
	AGA	49	83.7	4.50	48	85.6	4.06	0.041*
	Symmetric SGA	45	83.3	5.75	49	84.6	5.45	0.228

*pd≤0.05, **pd≤0.01, ***pd≤0.001, df= n-2

The symmetric SGA male infants had significantly (pd”0.01) lesser mean CI than their asymmetric counterparts, beyond 3 months of age. While, female symmetric and asymmetric infants exhibited similar CI values depicting statistically non-significant intra-group (symmetric SGA vs asymmetric SGA) differences (Table 2). Symmetric SGA and AGA male infants retained brachycephalic (CI: 81.0-85.4) form of head throughout infancy while, asymmetric SGA male infants being brachycephalic at 1 month became hyper-brachycephalic (CI: 85.5-90.4) with advancement of age. Female SGA and AGA infants remained brachycephalic (CI: 82.0-86.4) throughout the entire tenure of this study. Interestingly, none of our SGA and AGA infants possessed dolicocephalic or mesocephalic head shape.

DISCUSSION

The cephalic index (CI) amongst both male and female symmetric and asymmetric SGA infants like their normal AGA counterparts demonstrated a regular increase until attainment of a peak value before commencing to decline in magnitude. CI in female asymmetric SGA infants grew sharper than their symmetric SGA peers, except at 3 months. On the contrary, its rapidity was recorded to be significantly higher in male asymmetric SGA babies who grew at significantly sharper rate than their AGA counterparts (Table 1). At present no explanation could be offered to pin-point reason for faster pace of

Table 2: *Inter-group (SGA vs AGA) and Intra-group (Symmetric SGA vs Asymmetric SGA) Differences for Cephalic Index in Male and Female Symmetric SGA, Asymmetric SGA and AGA Infants*

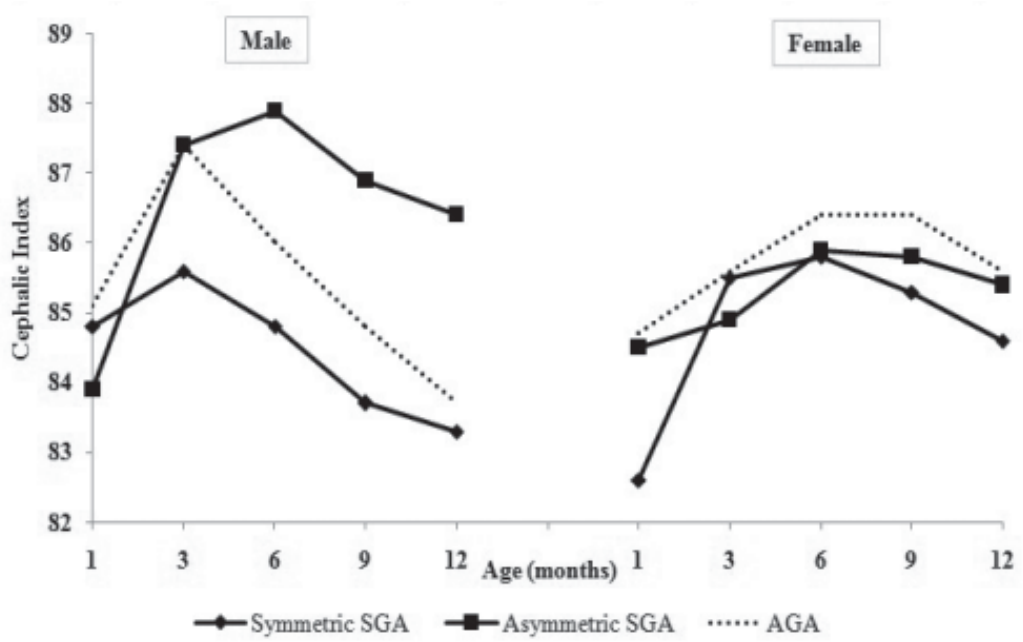
Age	Male			Female		
(months)	Symmetric SGA vs Asymmetric SGA	Symmetric SGA vs AGA	Asymmetric SGA Vs AGA	Symmetric SGA vs Asymmetric SGA	Symmetric SGA vs AGA	Asymmetric SGA Vs AGA
1 month	0.347	0.700	0.220	0.064	0.020*	0.827
3 month	0.074	0.111	1.000	0.491	0.905	0.355
6 month	0.009**	0.286	0.067	0.927	0.565	0.595
9 month	0.002**	0.329	0.002*	0.631	0.295	0.486
12 month	0.005**	0.638	0.003*	0.454	0.359	0.912

*pd≤0.05, **pd≤0.01, ***pd≤0.001, df= n-2

growth recorded for CI in male asymmetric babies. Thereafter, CI increased till 6 months, before experiencing a continuous decline (Fig 1).

Symmetric and asymmetric SGA infants of both the sexes, like their AGA peers, possessed brachycephalic head shape. However, exception was male asymmetric infants who became hyper-brachycephalous (CI: male-85.5-90.4; female- 86.5-91.9) with the advancement of age. This may be attributed to relatively faster growth of head width than head length encountered amongst male asymmetric SGA infants. In the present study, sex does not generally

Fig 1: Cephalic Index in Symmetric SGA, Asymmetric SGA and AGA Infants



appear to affect the head shape as the gender differences amongst both types of SGA and AGA infants never became statistically significant (Table 2). Brachycephalous type of head shape noticed in children from Washington under 12 months of age (Collett et al 2012) and those of other American origin children (Hummel and Fortado, 2005) corroborate with our findings. The hyper-brachycephaly reported amongst Sikkimese (Sinha et al., 2014), Manipuri (Rajlakshmi et al., 2001) and Brazilian (Oliviera et al., 2007) neonates remain incomparable with our study subjects due to lack of similar data for our babies of north-western Indian origin. However, mesocephaly found to be the dominating shape of skull (based on computed tomography) in Caucasian children below 3 years of age (Likus et al., 2014 and Waitzman et al., 1992) remains at variance with our findings as all our infants were brachycephalous. While, newborns of various Nigerian tribes were reported to be dolichocephalic or mesocephalic (Garba et al., 2008). Mesocephaly was the dominant head shape noticed in neonates from Patiala, Punjab by Sikka et al (2016). These population based differences recorded in children could be ethnic in origin which could be accounted for by hereditary and environmental factors. Golalipour et al (2003) also opined that hereditary factors primarily affect the shape of head while, environment has secondary role to play. It is interesting to note that both symmetric and asymmetric SGA babies irrespective of their different etiological origin possess brachycephalous type of head shape like their AGA counterparts which may be attributed to hereditary/genetic factors rather than to intrauterine environmental conditions.

REFERENCES

Adebisi, S.S. 2008. Medical impacts of anthropometric records. *Annals. of African. Medicine*. 7(1): 42-47.

Aggarwal, O.P., S.K. Bhasin, A.K. Sharma, P. Chhabra, K. Aggarwal and O.P. Rajoura, 2005. A new instrument (scale) for measuring the socioeconomic status of a family. *Indian. J. Com. Med*. 30(4):111-4.

Bakketeig, L.S. 1998. Current growth standards, definitions, diagnosis and classification of fetal growth retardation. *Eur. J. Clin. Nutr*. 52:S1-4.

Black, R.E., C.G. Victora, S.P. Walker, Z.A. Bhutta, Z.A., P. Christian, M. Onis, M., et al., and the Maternal and Child Nutrition Study Group. 2013. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet*. 382: 427-451.

Clayton, P.E., S. Cianfarani, P. Czernichow, G. Johannsson, R. Rapaport, A. Rogol. 2007. Management of the child born small for gestational age through to adulthood: A consensus statement of the International Societies of Pediatric Endocrinology and the Growth Hormone Research Society. *J. Clin. Endocrinol. Meta*b. 92(3): 804-810.

Cohen Jr, M.M. and R.E. Maclean. 2000. *Craniosynostosis: Diagnosis, Evaluation and Management*. New York, Oxford University Press.

Collett, B.R., C.L. Heike, I. Atmosukarto, J.R. Starr, M.L. Cunningham, and M.L. Speltz, 2012. Longitudinal, three-dimensional analysis of head shape in children with and without deformational plagiocephaly or brachycephaly. *J. Pediatr*. 160(4): 673–678.

Garba, S.H., Numan, A.I. and Mishara, I.G. 2008. Craniofacial classification of normal newborns in Maiduguri metropolis, Nigeria. *Int. J. Morphol.* 26:407-410.

Golalipour, M.J., Haidari, K., Jahanshahi, M. and Farahani, R.M.J. 2003. The shapes of head and face in normal male newborns in South East of Caspian Sea (Iran-Gorgan) *Anat. Soc. India.* 52(1) 28-31.

Hummel, P. and D. Fortado. 2005. Impacting infant head shapes. *Adv. Neonatal. Care.* 5:329–340.

Kaur, H., A.K. Bhalla and A.K., P. Kumar. 2012. Longitudinal growth of head circumference in term symmetric and asymmetric small for gestational age infants. Early. *Hum. Dev.* 88(7):473-8.

Likus, W., G. Bajor, K. Gruszczyñska. J. Baron, J. Markowski, M. Machnikowska-Soko³owska, D. Milka and T. Lepich. 2014. Cephalic index in the first three years of life: study of children with normal brain development based on computed tomography. *Scientific World Journal.* 502836.

Lubchenco, L.O., C. Hansman, M. Dressler and E. Boyd 1963. Intrauterine growth as estimated from live born birth-weight data at 24 to 42 weeks of gestation. *Pediatrics.* 32:793-800.

Martin, R. and K. Saller. 1957. *Lehrbuch der Anthropol*ogie. Gustav Fischer Verlag, Stuttgart.

Miller, H.C. and K. Hassanein. 1971. Diagnosis of impaired fetal growth in newborn infants. *Pediatrics.* 48:511-22.

Oliveira, H.A., A.C. Paixão, M.O.R. Paixão and V.C.F. Barros 2007. Estudo antropométrico do crânio de recém-nascidos normais em Sergipe. *Arq Neuro-Psiquiatr.* 65(3B):896-9.

Sinha, P. B.K. Tamang, and S. Chakraborty. 2014. Craniofacial anthropometry in newborns of Sikkimese origin. *The Journal of Laryngology and Otology.* 128 (6): 527—530 527-530

Pindrik, J., J. Molenda, R. Uribe-Cardenas, A.H. Dorafshar and E.S. Ahn. 2016. Normative ranges of anthropometric cranial indices and metopic suture closure during infancy. *J. Neurosurg. Pediatr.* 25(6):667-673.

Rajlakshmi, C., M.S. Singh, B. Devi, T.H. Chandramani and L. Singh 2001. Cephalic index of foetuses of Manipuri population—A baseline study. *J. Anat. Soc. India.* 50(1):8-10.

Sikka, A., S. Kaushal and P.V.V. Gopichand 2016. Cephalic index in new-borns: the effect of heredity and sex. *J. Evolution. Med. Dent. Sci.* 5(1):27-29

van Lindert, E.J., Siepel, F.J., Delye, H., Ettema, A.M., Bergé, S.J., Maal, T.J. and W.A. Borstlap. 2013. Validation of cephalic index measurements in scaphocephaly. *Childs. Nerv. Syst.* 29(6):1007-14.

Villar, J. and J.M. Belizan. 1982. The relative contribution of prematurity and fetal growth retardation to low birth weight in developing and developed societies. *Am. J. Obstet. Gynecol.* 143(7):793-8.

Waitzman, A.A., J.C. Posnick, D.C. Armstrong, G.E. Pron. 1992. Craniofacial skeletal measurements based on computer tomography—part II: normal values and growth trends. *The Cleft Palate-Craniofacial Journal.* 29(2): 118–128.

Weiner, J.S. and J.A. Lourie 1969. Human Biology: A Guide to Field Methods. Oxford, Blackwell, International Biological Program.

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BOOK REVIEW

Challenging the prevailing paradigm of displacement and resettlement: risks, impoverishment, legacies, solutions. (2018). Edited by Michael M. Cernea and Julie K. Maldonado. London & New York: Routledge.PP. xxviii+334. ISBN: 978-1-138-06051-7(Paperback). Price: 2,905 INR.Also published in 2019 by Manohar, New Delhi. ISBN-13**:** 978-0367247409at a price 930 INR.

The is an extraordinary book edited by two anthropologists on a theme that no government in the modern world can bypass or avoid. The theme of the book is development caused forced displacement and resettlement (hereafterDFDR). The book is unique because of its depth on the subject as well as geographical and topical coverage. Another unique feature of the book is it did not only deal with the dissection of the problems of huge and almost unavoidable human-made disaster on humanity but also with the solutions of this predicament. About twenty international level scholars from different countries contributed their valuable research findings and analyses on this global problem which caused new poverty under globalisation and in the name of development.Suffice it to say that anthropologists and sociologists were first among the social scientists who collected empirical data and constructed ethnographies on DFDR in different parts of the world. First, the book is extremely and severely critical not only about one or another separate aspect of displacement and resettlement, but also about the *entire paradigm* of the DFDR process, which the authors have collectively critiqued and proposed its replacement with a different paradigm. Second, it is unusual because Michael Cernea, the senior editor of this book who is very well-known in India, (he was for a quarter century the Senior Social Scientist of the World Bank itself in Washington DC), yet he did not hesitate to sharply criticize the Bank. His publications in EPW are also well-known. The fact that Michael Cernea has taken the pain to write this critique publicly reflects his conviction that distortions caused by displacement and the present role of World Bank are also extremely dysfunctional. This too makes it outstanding and very interesting read for the social scientists in India. Furthermore, in the book Cernea advocated a new international paradigm to deal with DFDR in favour of the marginalized people who invariably shared the pains and not the gains of forceful displacement. Interestingly, Cernea's paradigm is being supported by 3 Chinese co-authors of the book who narrated and explained with confidence how China moved ahead of many countries of the globe in successful rehabilitation of the displaced people by setting example for the whole world.

Two things must be stated before I go into the details of the book. First, the global magnitude of displacement caused by development projects. The authors cited World Bank (which is a major international donor agency for development projects) estimates and that is simply horrifying. I quote from chapter 1 by the editors of the book:

> The World Bank estimated in 1994 that 10 million people per year were displaced in developing countries by activity in only three economic sectors (hydropower, urban and transport), producing 100 million people displaced per decade. For the following decade (2001-2010), the estimate along similar criteria but also including additional economic sectors indicated that the number displaced would be 15 million per year, resulting in 150 million displaced people of the first decade of the 21st century.For the current decade (2011-2020), and as the pace of infrastructure building accelerates, the estimated magnitude of forcible displacement is likely, on conservative estimates, to exceed 20 million people per year, which means 200 million people or even more for the decade (Cernea and Maldonado 2018:4).

The second important thing also comes from World Bank's own findings and discussed by the editors of the book under review. The editors categorically stated:

> …no less shocking is the finding that in more than one out of every two projects, both the World Bank and the countries' governments are recognizing that they ignore—— "don't know" —- and can say nothing about whether or not incomes and livelihoods were restored(Ibid:16).

This is the general scenario under which I would now go into the details of the book.

The book is subdivided into two parts and thirteen chapters written by anthropologists, lawyers, economists, public administration specialist, human rights activists, policy makers, independent researchers, and consultants.The chapters of the book covered case studies from Asia, Africa, North and South Americas and Europe. The displacement of populations caused by hydropower projects, mining, transport, urban development, forest conservation and climate change have come under the ambit of this book. Both failures and success stories around resettlement and rehabilitation of impoverished populations have been described and critically analysed in the different chapters of this magnificent volume.

The five chapters under Part I of the book examined in detail the livelihood risks and impacts of forced displacements of human populations caused by hydropower projects (China), mining (Ghana), urbanization (West Africa and India), transport (Uganda), conservation and environmental protection (India). The chapters revealed through the nuanced approach of their respective authors how the success and completion of a development and/or profit-making project gained superior importance than the proper rehabilitation and restoration of the livelihood of the displaced populations. For example, chapter writers John Owen and Deanna Kemp nicely stated risk analysis in mining is 'oriented towards the risks to businesses, not risks to people'.The chapter on India by Asmita Kabra is a remarkable one which showed the dilemmas of conservation displacements and the strength of participatory conservation of forests based on her 18 years of painstaking study in the Kuno wildlife sanctuary of Madhya Pradesh. All the authors of these chapters, however, made sincere attempts to provide corrective measures in the form of recommendations to reduce the sufferings of the displaced through transparent pre-project planning and participation of the affected people in the various stages of the project.

I now come to Part II of the book. This part entitled 'Crafting solutions: resettlement legislation, ethics and accountability' contains eight chapters which covered countries like China, Cambodia, Guatemala, Germany, Sudan and Alaska. The last two chapters of the book dealt with (i) comparative assessment of land acquisition and resettlement laws in 50 countries and (ii) human rights issues around DFDR and the role of World Bank. The most remarkable study on resettlement with development came from the People's Republic of China (PRC) which has been described in adequate detail in two chapters of Part II (chapters 7 & 8). The chapter 7 has been written by Shi Guoqing who is the founder and director of China'sNational Research Center for Resettlement and Social Development Institute and the Dean of Public Administration at Hohai University in China.In his article Professor Shi Guoqing described the evolution of the PRC's laws and practices in the area of DFDR and he frankly admitted that during the 'first three decades of PRC's existence (1949-1980)its approach to DFDR followed an inadequate paradigm which impoverished one-third of the displaced populations.' But then the things have changed gradually over time with the joining of China in the World Bank in 1980. New policies were adopted in the country and a country-wide survey of the displacement scenario was carried out, which revealed the bad legacies of displacement. The passage of China from the bad legacies of DFDR to *resettlement with development* was gradual but spectacular and the involvement of anthropologists and sociologists in this regard also worth mention. Under the direct supervision of Michael Cernea (the senior editor of this book) in the capacity of senior policy advisor of the World Bank and its resettlement specialist William Partridge the Bank's international resettlement policy was first applied in case of the pioneering Bank financed hydro-dam projects in China in early 1990s. For the Ertan dam project,

owing to the requirements of World Bank, China established an international panel of experts on resettlement and environment led by the famous anthropologist Frederick Barth. We learn from the account of Shi Guoqing that PRC's policy shift from resettlement with impoverishment to resettlement with development (RwD) produced early results in two World Bank financed dam and resettlement projects involving relocation of 200,000 people having budgets of 4 billion US dollars. These successful projects helped to alleviate poverty and significantly reduced the risks of impoverishment of the affected population. The important point is the execution of this new RwD policy relied heavily not only on special funding but also on 'the important tools of Social Impact Assessment (SIA) and distinct analysis of risks to social stability, which under Chinese law must be carried out for every Chinese development project' (p.150).*One may here recall that in India the central government in 2014 passed successive ordinances to withhold the application of Social Impact Assessment clause of the new land acquisition law of 2013, a move which had been viewed by experts as the 'weakening of the democratic and constitutional institutions.' The Indian politicians who are being habituated to view China only as a strong and powerful neighbor may learn from the Chinese experience and practice in this regard*(italics mine). Chapter 8 of the book can be viewed as a sequel to the earlier one in which the author Duan Yuefang reported the results of the survey of his fieldwork team in Shangrao city of Jiangxi Province on the actual effects of financing for development and benefit-sharing mechanisms among the people displaced by the construction of 42 large and middle-sized reservoirs. The findings of this field survey showed it was not only the governmental support funds accrued from the profit of electricity generation that was shared among the resettled population but also the overall economic development of the Province that led to the improved quality of life of the displaced people.

The next chapter of Part II of the book (chapter 9) the authors narrated an unprecedented story of Cambodia. In this case study the authors depicted how large number of families were illegally evicted from their land by a powerful real estate lobby and finally with the intervention of the World Bank that suspended all new lending to the country, the rights of the people were restored.Chapters 10 and 11 of the book provided in-depth analysis of the long-term fights of indigenous displaced people by dams in Guatemala and Sudan. Both cases bring out the power of ethnographic and participatory research methodology not only in documenting the sufferings of the displaced people and the gross violation of human rights but also lessons for why pre-project planning in terms of impact assessments should be carried out by the international funding agencies and local governments in a transparent and participatory manner. Chapter 12 on climate-caused forced displacement and resettlement (CFDR) is a unique contribution in this volume, which still remains a hitherto almost untouched area of DFDR research. The authors through a case study done in an Eskimo village in western Alaska tried to understand how to protect the universal and inalienable human and cultural rights of people affected by climate change in the 21st century. Their findings revealed painful and slow relocation process owing to lack of funding and institutional framework in the context of increasing temperature and land erosion. The author of Chapter 13 himself an accomplished lawyer examined the land acquisition laws of 50 developing countries in Asia, Africa and Latin America to find out whether the aforesaid laws provided a robust framework for resettlement with development for the people affected by development-caused displacement or not? The main finding of his study is quite discouraging since he found that except China, India, Laos, the Philippines and Vietnam no country in his sample enacted binding laws with provisions for resettling and reconstructing the livelihoods of the displaced people.The last chapter of the book has taken up the issue of human rights under the DFDR process and the role of World Bank in this regard. The author used the glaring case of Ethiopia in illustrating her arguments. The case of Ethiopia

shows how its government through the "villagization" process in the name of development forced many indigenous and marginalised communities to leave their homes and resettle in new areas with inadequate consultation and compensation. The programme was linked with World Bank funding and the Bank overlooked the gross human rights violation under the "villagization" programme despite having its own safeguard policies.

The good news is the book is reprinted fully in India by Manohar Publishers, New Delhi. The book's front cover is a large photograph from Maharashtra village showing the helplessness of a displaced rural family in the submergence area of a big dam dismantling their home. The book's India Edition is now available in bookstores all over India and in the surrounding countries like Bangladesh, Sri Lanka, Pakistan and Nepal. It is available at a very accessible price, consistent with the Indian book market, which is less expensive than the books published in developed countries.

Finally, the book is a valuable addition not only in the list of the growing literature of DFDR but also should be widely read in social science classrooms, and the corridors of policymaking in India and other developing countries.

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OBITUARY

Dr (Mrs) Tulika Sen
(May 08, 1926 – October 18, 2020)

Dr (Mrs) Tulika Sen breathed her last on October18, 2020 at the age of 94 in her Ballygunge residence after a short span of age-related illness. She was born on May 08,1926 in the District of Dacca in pre-independent India and hailed from a very distinguished family.Her father, Surendra Nath Sen was a judge and her mother, Charubala Sen was a wise housewife who cherished female education. Dr. (Mrs.) Sen was the youngest of her seven siblings, having three brothers and three sisters; the eldest of her brothers was Samarendra Nath (Samar) Sen, an illustrious Indian Diplomat.Her husband, Dr Dilip Kumar Sen was a renowned Anthropologist, who died at an early age in harness;he passed away while serving as the Director, Anthropological SurveyofIndia,Government ofIndia.

Dr. (Mrs) Tulika Sen, very lovingly called as Tulika-di by her students and younger colleagues was a passionate student of Anthropology. She had brilliant results both in her under-graduate and post-graduate courses in Anthropology and was awarded Gold Medal in both occasions. She did her M. Sc. in Anthropology, having specialization in Physical Anthropology from the University of Calcutta in 1948. She also did have the distinction of receiving M. A. degree in Anthropology from Harvard Universityin the year1955. During her study in Harvard University, she had the opportunity to receive mentorship of Professor William W. Howells, an anthropologist of great repute. She was awarded PhD degree in 1971 on human growth study from the University of Calcutta.

She was among the pioneers in the study of Growth, Development and Nutrition of children in India. She was equally involved in research on Demography. Her interest in studies on fertility, mortality, migration and associated factors in respect of global vis-à-vis Indian populations was indeed deep. She played a leading role in the prestigious ICSSR project – 'Physiological and Physical changes in Male and Female Populations in Different Environmental Setting'. Her fields of interest and research are relevant in understanding population and health dynamics in India. Later, her students carried out studies on those areas of research, for example, the effect of birth control program on rural and urban communities in West Bengal, a demographic study on two culturally diverse communities in Calcutta, in the form of Ph. D. dissertations.

She was employed as a Junior Technical Assistant in Anthropological Survey of India from 1949 to 1951. In 1956, she joined ICMR project titled "Growth and Development

of Children of Lucknow", as an Anthropologist and continued working there for two years. From 1958 to 1963 she served as a lecturer in Anthropology in Loreto College, Lucknow. Finally, she joined as a lecturer in the Department of Anthropology, University of Calcutta in 1972 and retired from there as a Reader in 1991.

She was a Life Member of Asiatic Society, Kolkata; The Indian Anthropological Society, Kolkata; Indian Institute of Bio-Social Research And Development(IBRAD), Kolkata; and Gerontological Society of India. She was elected as a Council Member and Anthropological Secretary; Asiatic Society, Kolkata (April 2000 – March 2006). Her publications include three books and papers in reputed journals. Her book on Anthropometry has been quite beneficial to anthropology students.

She was special to the students not only for her excellent teaching but also for her motherly attachments with them. On hearing the news of her sad demise many of her students sent messages describing how she had emotional bonds with them. I take this opportunity to include some of the messages of reminiscences of her dear students. Krishnendu (Professor Krishnendu Bhattacharya, retired as Head of the Department of Anthropology, Sitananda College, Nandigram, Purba Medinipur, West Bengal, recalled his M.Sc (part I) examination held in 1977, when Dr. Mrs. Sen was an invigilator in the examination hall. As time was running out, Krishnendu was visibly anxious in absence of a watch with him. Tulika-di noticed that and placed her own wrist watch on the desk to his relief. Rumjhum (Dr Rumjhum Ray Chaudhuri, an expert in International and National Consultancy on Community Health and Social Development) remembers that when her father expired, Tulika-di visited their house and consoled everyone, especially her grandmother, who was in a deep shock. In her message, Susmita (Susmita Mukhopadhyay, Professor, Biological Anthropology Unit, Indian Statistical Institute, Kolkata), mentions that having been one of her students conducting M.Sc. dissertation under her supervision she had the chance to interact with her throughout her life, and got lots of love and affection from her. Tulika-di took a team of four students to Midnapore for dissertation work, as a part of M.Sc. course. During the tour she celebrated birthday of one of the students by preparing good dishes by her own hand. Not just only students, her colleagues and friends also have valued memories of her. Professor K. C. Malhotra (Retd), Indian Statistical Institute, in his message has narrated, 'I am shocked and deeply saddened. I lost someone whom I respected so much. Will always cherish love and affection, I received from her'.

Anthropology lost an outstanding teacher, a humane academician. Let us all come together to pray for the great soul to rest in peace. Hope her blessings will always be with us to give strength in our future journey, both in academic and in other aspects of our life.

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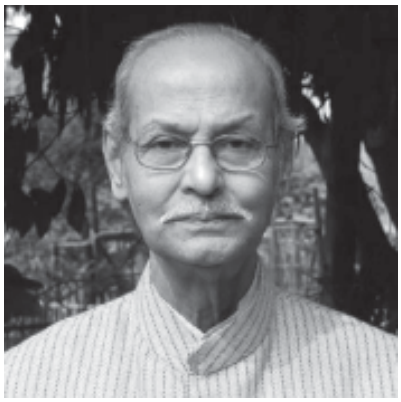
OBITUARY



Prof. Annada Charan Bhagabati
(1939 - 2019)

After completing my post graduation in Anthropology from the University of Calcutta, I first joined the Anthropological Survey of India's regional office at Shillong. I served in this institution for five years and later joined Arunachal University (later became Rajiv Gandhi University) in September, 1995. Since then I have had prolong association with Prof.A.C Bhagabati and in the process he became one of my prime mentors and my *Guru*. My life long association with him remained till he breathed his last in 2019. Perhaps, I started looking at issues and concerns of North East India through his anthropological lenses; listening to his deliberation was a real pleasure as he had the capacity to transcend disciplinary boundaries and could bring audience close to the pleasure and pain of human journey that are diverse, divine, filled with complexities and cohesiveness.

I still remember his words of caution on the very first day when I went to meet him with my wife, Sucheta, at the Vice Chancellor's official residence located within the university campus. In fact, he talked about the challenges of establishing a new Department of Tribal Studies in the context of Arunachal Pradesh. During Prof. Bhagabati's tenure as the Vice Chancellor, I got the opportunity to listen to his deliberations and engage with personal interactions through which I have learned a lot regarding various issues concerning anthropology, people of North East region and beyond. I used to follow his style of presentation, his articulation, and selection of words, analytical abilities and intuitive mindset as well as his variegated initiatives as an academic-administrator, which had led to a vibrant academic ambience in the university. Some senior anthropologists were little disillusioned about Professor Bhagabati when he opened department of Tribal Studies which later upgraded to Arunachal Institute of Tribal Studies (AITS). In fact, the state of Arunachal Pradesh has a rich anthropological research tradition and scholars like Verrier Elwin, Haimendorf, Sachin Roy, Parul Dutta and many other eminent anthropologists contributed immensely for the tribal people of the then NEFA which later became Arunachal Pradesh since it achieved statehood in 1987. Thus, the criticism centered on why Prof. Bhagabati took initiative to open the Department of Tribal Studies and not the Department of Anthropology in AU despite being Anthropologists cum Vice Chancellor. Perhaps, I could understand his philosophy for such initiative or experiment in a bordering tribal state. Prof. Bhagabati's perception towards Tribal Studies and it's linkages with Anthropology was surfaced explicitly in 2010, when he delivered a Golden Jubilee Lecture of Indian Anthropological Society, in Kolkata on the topic, "Anthropology as Tribal Studies: Then and Now".

It may be added that Prof. Bhagabati coined a popular term called 'Ronovians', meaning the people who are a part of Ronohills where RGU is located. This term is still popular in RGU campus, especially among the older generations, even though he left this university in 1998 after completion of his five years tenure.

I would like to quote here some of the valuable information, which Mohona Dutta published in 2011 in an English newspaper called 'The Sentenel'. The article gives us some indication about Prof. Bagabati's early education as well as his association in later years with some of the legendary scholars of his time; Prof. Bhagabati indeed shared this with me in different occasions. Dutta says, "Dr. Bhagabati was brought up in the Sylhet district and studied there till the age of 10. He recalls that since he had changed his medium of instruction more than two times throughout his schooling and college years, his understanding and knowledge of Bengali, Assamese and English language had been profoundly influenced. In 1947 his father, Late Hansanath Bhagabati, a professor of Sanskrit retired and a decision was made to move to Jorhat, he knew he had to brace himself to cope up with the new medium of instruction again. Not that he regrets a bit about the change in the educational as well as the geographical scenery. He picked up the language and excelled in his studies in Jorhat as well. The next change in the line of education came when he joined St. Edmunds's College, Shillong where he had completed his college education. This period he says, was the most significant one as this was the time Elwin, a world-renowned anthropologist who was an advisor to the Government of Assam from NEPHA in 1954. Dr. Bhagabati also mentions names like, Madhab Goswami, K .P. Chattopadhya, Taroknath Das and Nirmal Kumar Bose. His teachers and mentors have throughout been a beacon of knowledge and inspiration. He especially mentions his reverence and affinity towards Nirmal Kumar Kumar Bose who has done really extensive work in the field of anthropology and says that he named his son after the great scholar".

Prof.Bhagabati used to tell me his experience of working with Nirmal Kumar Bose in 1960s among the people of the then NEFA and how he learned from Bose's meticulous approach of doing fieldwork and writing field notes as well as diaries. In fact, he was in possession of field notes of their collective venture in NEFA. He was a voracious reader and if any one flips through his personal library or looks at the books lying on his table, one could understand his wide range of interest which ultimately converge to various facets of human journey.

Prof. Bhagabati was the topper from Gauhati University in B.Sc., Anthropology (Honours) in 1956 and also the topper in M.Sc. from Calcutta University in 1958 for which he received gold medal. He was also the recipient of S.C Mitra Silver medal for securing highest marks in Social and Cultural Anthropology. In 1959, he joined as a lecturer in Anthropology, Gauhati University. Subsequently in 1962, he went to the University of Auckland in New Zealand for his doctoral research as Commonwealth Scholar and worked on the issues concerning rural emigration and urbanisation among the Maoris of Northern New Zealand under the guidance of Ralf Piddington. He also taught at Dibrugarh University and headed the Department of Anthropology from 1977 to 1985. In between, from 1977 to 1979, Prof Bhagabati visited Mexico on ICCR's (GOI) deputation assignment and later Hungary under Indo-Hungarian Cultural Exchange programme. In 1990, being a member of a delegation deputed by HRD Ministry, GOI, he visited Moscow and Leningrad to attend seminars on ethnicity and nationality and also presented a paper at St. Petersburg. Being an Anthropologist, he became the President of North-East India History Association (NEIHA) in 1997 and delivered the Presidential address on Social Formations in North East on the 18th session held at Agartala, Tripura.

In between 1974 to 1998, eight scholars obtained doctoral degree under his supervision from Guahati, Dibrugarh and Assam Agricultural Universities. Throughout his active

academic life, Prof. Bhagabati also delivered several lectures in various universities and institutions in India as well as abroad and also published more than fifty papers in various acclaimed journals, books and other policy documents. I consider myself fortunate enough to coauthor an article on Social Transformation Process in Arunachal Pradesh and an introductory chapter of a policy document for the state of Arunachal Pradesh. Prof. Bhagabati extensively wrote on issues concerning ethnicity, identity, development, social formation, inter-ethnic relations, social transformation, customary laws, indigenous knowledge and methodology largely in the context of North East India (NEI) though he never lost sight of wider issues in the context of our nation. However, many people may not be aware that at the formative phase (between 1958 to 1964) of his academic journey, he published a few papers on the other branches of Anthropology, especially on topics related to biological and prehistoric anthropology with Prof. B.M Das and Prof. M. C. Goswami.

Before taking charge as the Vice Chancellor of RGU in 1993, he was the founder Professor and Director of ICSSR, Institute of Social Change and Development (later renamed as O.K. D. Institute of Social Change & Development) in Guwahati for a year (1992-1993) and later in 2002 he became the Honorary Coordinator and Head of Division of IGNCA (NERC) from where he undertook studies in the domain of Traditional Knowledge Systems and inter-community relations through traditional barter and trade in Assam.

Prof. A. C. Bhagabati received Life Time Achievement Award from IGRMS, which was initiated by Ministry of Culture (MOC), Govt. of India for his contribution to the field of anthropology and museum. It was a great satisfaction for me as an Institutional Head of IGRMS that the Vice Chancellor of Guahati University could hand over the Award in the presence of Prof.Vinay Srivastava, Director, Anthropological Survey of India and many other faculty members, senior scholars, students of Guahati University in an excellent Award Ceremony organized by IGRMS in the department of Anthropology with the active involvement of the members of the department in 2019.

Since 1995 my association with Prof.Bhagabati remained till he breathed his last. This long period of my association with him turned into much more than inter-personal relation as he became my *Guru* and I learned so much from him even beyond academics. Among his large number of friends, I personally felt that he was very fond of Prof. Andre Beteille with whom he used to have telephonic conversation. As usual in 2019, I went to see him from Guahati Airport on the way to my journey to Arunachal. I had a long conversation with his daughter Moana, regarding his health and could meet his son Nirmal for the first time, who came back from USA to see his father. Later, I went to his bedroom where he was lying down and was not in a position to get up by his own. After taking few information about my institution (IGRMS), he quietly told me in Bengali language, “Sarit, ultimately everyone has to leave….”. And momentarily, I could feel that perhaps that would be our last meet. I could spend about half an hour more with him and then left his room and sought his blessings by touching his feet. The day he had passed away, I was in IIT, Guahati to organise a collaborative academic programme in the faculty of Social Sciences but had to leave Guahati in the morning itself for Ranchi to attend an emergency call from my friend. On the same night at Ranchi, I received the sad news of the demise of Prof. Bhagabati’s, an anthropologist who not only made a huge impact in my academic journey but also left a deep imprint on my personal as well as family life and even beyond. I am sure that Indian anthropology will remain ever indebted to this extraordinary scholar and visionary and may initiate some meaningful steps to introduce new generation of anthropologist with his works, which may lead to new researches and new possibilities for understanding the course of the journey of human societies at large.

Instead of being further anecdotal, once more, let me quote Prof. Bhagabati's conversation with Mohona Dutta in 2011 which I referred already at the beginning, "Every low point in the history of civilization can give us a view that things will change and for the better. There is always the silver lining present and the current perennial state of turbulence will give way to a state of calm and balance. Our past can not only provide us lessons for living a life with great standards of existence but also kindle the ember of hope that the future will shine better"(The Sentinel). Perhaps, there can't be a better way to articulate the essence of the life of an anthropologist who was undoubtedly ahead of his time as Moana Bhagabati (his daughter) writes, (Assam Tribune, 29th Nov,2020), "Not that he made a great deal out of his perceptive observant mind, neither did he adopt a professional air of knowledge, which was encyclopedic in its range and depth. In fact, in the same characteristic unassuming way, his profession spilled over into his daily life with such ease, it was difficult to know where the anthropologist's work began and where it ended. Through the lively anecdotes he sought to express his lasting concern for the tussle between tradition and modernity and what this could mean for societies across the world and in India's North East, in particular".

REFERENCES

Moana Bhagabati 2019. The Identity of an Anthropologist, Assam Tribune, epaper November, 29.

Mohona Dutta 2011. Lessons to be learnt from past, The Sentenel, 12th May.

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J. Indian Anthrop. Soc. 55:310-312(2020)

OBITUARY

Prof. Shaunak Kulkarni

The friendly and soft-spokenacademician of the Department of Anthropology at Savitribai Phule Pune University (SPPU), Professor Shaunak Kulkarni passed away on 8th August 2020 at the age of 58 years.Unfortunately, he succumbed to Covid-19 associated lung infections.The faculty members, students and staff at the Department of Anthropology of SPPU are in great shock due to Professor Kulkarni's sad and untimely demise.

A popular teacher in the Department of Anthropology at SPPU was an example of dedication and academic spirit that made him the Professor and Head of the Department. He had been involved in setting up, upgrading and renovating Anthropological Laboratory and Prof. Iravati Karve Anthropology Museum. His passion for the subject of Anthropology never allowed him to be in 'Armchair', but kept him moving in some tribal areas with various research endeavours. He had been to the tribal areas of Mahadeo Koli, Malhar Koli, Thakar, Katkari, Bhil, Pavara, Padvi, Kolam, Pardhan, Kolcha, Korku, Warli, Siddi, Gond and Madia for different projects and for students' ethnographic training.

Prof. Shaunak Kulkarni began his professional career in the Department of Anthropology at the University of Pune (now SPPU) in the year 1988. His initially conducted research projects on the 'Assessment of Nutritional Status of some Tribal Groups of Maharashtra' (UGC), 'Diet and Hair Isotopic Composition' (in collaboration with Oxford University), 'Adolescent Obesity: An Anthropometric Assessment' (B.C.U.D., SPPU), 'Settlement Studies of Three Tribes of Maharashtra: An Ethno-archaeological Approach' (CSSH, SPPU), ' To Document the Use of Various Plants among Tribals of Four Districts of Western Ghats of Maharashtra: An Ethno-Botanical Approach' (BCUD, SPPU) have been fruitful anthropological exercises. He had a passion of making Anthropology popular and in so doing, he delivered lectures in various organizations, and had radio talks.Since the last two years, he was a coordinator of Anthropology- Marathi Vishwakosh, Government of Maharashtra**.** Prof. Kulkarni authored many books in English and Marathi languages, many research papers and articles."Anthropometry Manual", jointly authored by him and Dr. Sanjay Juvekar has been of much benefit toresearchers interested in Human Growth studies. The books like *'Aadim', 'Sanskruti', 'Maharashtratil Aadivasi'* authored by Prof. Shaunak Kulkarni, remain very dear to civil service examinees. Prof. Kulkarni was associated with *'Maharashtra Vruksh Samvardhinee'* and joined the movement of biodiversity conservation, sacred groove preservation and documentation of ethno-botany and ethno-medicines. Likewise, he was also associated with Heritage Drive in Pune. Very few people know that Prof. Kulkarni had a hobby of collecting antique items and his 'aesthetical-anthropological'

vision led him to continuously search and collect the objects of material culture around, few of which he displayed at departmental museum, as well as in his residential living room.

The title of Prof. Shaunak Kulkarni's doctoral research was **"Dental Anthropology of Some Living and Prehistoric Populations in India: A Bio-Cultural Perspective"**. This study was aimed to verify the hypotheses regarding the dental crown reduction process in relation to the rate of technological development and increased efficiency of food preparation techniques. He studied several archaeological populations ranging from Mesolithic to Megalithic cultural levels. Archaeological data was compared with the dental dimensions of four contemporary populations (viz. Maratha, Mahar, Mahadeo Koli and Gond) of Maharashtra. Thus,he completed his Ph.D. in Archaeology at Deccan College Post-Graduate Research Institute under the guidance of Prof. S. R. Walimbein 1992.

Prof. Kulkarni supervised eight students who have been awarded Ph.D.; nine students were conducting Doctoral Research under his supervisionwhen breathed his last. He was also supervising one M.Phil student and one Post-Doctoral Fellow. Our 'Shaunak Sir', was known for his ever smiling, soft-spoken and of co-operative nature. His relation with each student was so informal due to the reverence and enigma attached to his personality. He always gave importance to new areas in anthropological research, facilitated bio-cultural approaches, and promoted applicability of the research. Shaunak Sir used to pay keen attention to each student's progress and the problems confronted during the whole research process and fieldwork. Even the students were not hesitant to consult his / her personal problems with him. He was absolutely concerned especially when a student decided to study some inter-disciplinary research topic, and always co-operated in collaborations with other organizations. He taught his students how to face the problems, rather not sometimes by-passing the problem which he believed would help ultimately to accomplish one's academic task, particularly, Ph.D.

Professor Kulkarni's contribution in anthropology is varied. Beginning from dental anthropology he traversed through the fields of health and nutrition, disease profiles, maternal-fetal health, growth and development, genomic studies and finally on applied biological anthropology.

Some of the doctoral and M. Phil researches that he supervised can be mentioned below having considerable academic value:

"Odontometry, Dental Asymmetry and Morphology: a Comparative Study Among Jain, Muslim and Mahadeo Koli Communities in Pune district"; "A Study of Settlement Pattern, Nutrition and Diseases Among Bhil, Warli and Mahadeo Koli Tribes of Maharashtra: An Ethno-archaeological Approach"; "Indoor Air Pollution and Acute Respiratory Illnesses among Women and Children Using Biomass Fuels at Home: A Study of Mahadeo Koli and Bhil Tribes of Two Tehsils of Maharashtra"; "Impact of Maternal Nutrition on Growth of Fetus with an Anthropological Perspective: a Cross-sectional Study in Pune City"; "Adverse Effect of Use of Smokeless Tobacco on the Health of Pregnant Women"; "Foetus Growth and Pregnancy Outcome with Special Reference to Maternal Diet and Stress: A Bio-cultural Study in Pune city"; "Assessment of Nutritional Status and Health Aspects of Pre-School Children from Selected Areas in Al-Zaideyah Hodaieda Governorate – Yemen"; "Nutritional Aspects of Awaaman and Ghashgaee Tribes of Iran: A Bio-Cultural Study"; "Growth Progression and an Assessment of Nutritional status of Andh Tribal Children of Nanded District in Maharashtra, India: An Anthropometric Study"; "Assessment of Nutritional Status and Health Aspects of Ashram School Going Tribal Students of Pune District"; "Prevalence and Factors Associated with Childhood Obesity: A Study of Affluent Population"; "Physical Growth and Nutritional Status of 6-10 years Meitei Children in Imphal district of Manipur"; "The Study of Phenotypic and Genotypic Variation in Skin Pigmentation

Among Select Populations of Maharashtra"; "Mitochondrial DNA Diversity Among Select Tribal Populations of Maharashtra," and "Setting Up an Interventional Model to Combat Nutritional Challenges of Street Children in Pune City".

Many of the abovementioned researches remained incomplete at the time of Shaunak Sir's passing away. I sincerely hope that these researches will be completed by his respective students in order to pay homage to their mentor. Yet there are few research students who were in their initial stage of Doctoral research. All these along with Masters students owe a lot to Prof. Shaunak Kulkarni. He was very particular and used to have time plan for each item of his work, whether he was in charge of examinations, or working as a Head of the Department. He literally worked day and night to successfully organize The Indian Anthropology Congress of INCAA in February 2019, meant for the exchange of research ideas and the annual get together of the academia practicing Anthropology. And hence, sudden exit of Prof. Shaunak Kulkarni shocked all his near and dear ones. In this lockdown situation, hardly anyone could meet him; this was another saddening thing. I did never ever imagine that I would be writing the obituaryof Prof. Shaunak Kulkarni.

It is an immense irreparable loss for Dr. Mrs. Shalmali Kulkarni and his children, Kshitija and Purva. May God give them enough courage to overcome the trauma due to this vacuum-creating loss.

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A Note of Appreciation

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Editor, translator, or compiler in addition to author

Barthes, Roland 2009. Mythologies. [Selected and Translated by Annette Lavers.] London, Vintage Books.

Radhakrishnana, S. [Translator and notes] 1970. The Bhagavadgita. Bombay, Blackie & Sons.

Chapter or other part of a book

Choi, Hyup 2012. Korean Anthropology in Historical Perspective. In: Alternative Voices of Anthropology, ed. by Ajit K. Danda and Rajat K. Das, pp. 117-135. Kolkata, The Indian Anthropological Society.

Books in vernacular language

Devi, Mahasweta 1418B (2011). *Aranyer Adhikar* (Right of the Forest). Kolkata, Karuna Prakashani. [Bengali].

Book published electronically

Kurland, Philip B. and Ralph Lerner (eds.) 1987. The Founders' Constitution. Chicago, University of Chicago Press. http://press-pubs.uchicago.edu/founders/, accessed on January 13, 2016.

Journal article

Article in a print journal

Kar, R. K. 2012. The Concept of Culture vis-à-vis Cultural System. J. Indian Anth. Soc. 47: 117-127.

Prabhu, V. and Tanuja Kalita 2013. Ethics and Legality of Euthanasia in Indian Context. EJAIB 23: 46-50.

Article in an online journal

Kossinets, Gueorgi, and Duncan J. Watts 2009. Origins of Homophily in an Evolving Social Network. Am. J. Sociol. 115: 405–50. DOI : 10.1086/599247. http:// www.journals.uchicago.edu/toc/ajs/ current, accessed on February 28, 2010.

Article in a newspaper or popular magazine

Mendelsohn, Daniel 2010. "But Enough about Me," New Yorker. January 25.

Stolberg, Sheryl Gay, and Robert Pear 2010. "Wary Centrists Posing Challenge in Health Care Vote," New York Times. February 27. http://www.nytimes.com/2010/02/28/us/ politics/28health.html, accessed on February 28, 2010.

Bandyopadhyay, Sumahan 2011. *'Hul Maha: Asamapta Andoloner Shapath Diwas,'* (Rebellion Day : Promise on the Day of an Unending Revolution), Akdin, July 1, Page 4 [Bengali].

Book review

Ray, Subha 2009. *Morphology of Primates and Human Evolution.* By Professor R. P. Srivastava. J. Indian Anth. Soc. 44: 250-252.

Thesis or dissertation

Keot, Baijayanta 2007. *Folklore and Nationalism with Special Reference to Assam.* Ph. D. thesis submitted to Department of Cultural Studies, Tezpur University, Assam.

Paper presented at a meeting or conference

Adelman, Rachel 2009. *"Such Stuff as Dreams Are Made On': God's Footstool in the Aramaic Targumim and Midrashic Tradition."* Paper presented at the Annual Meeting for the Society of Biblical Literature, New Orleans, Louisiana, November 21–24.

Website

American Anthropological Association 1998. Code of Ethics of the American Anthropological Association. http://www.aaanet.org/committees/ethics/ethcode.htm, accessed on March 29, 2017.

McCutcheon, W. A. 1983. Industrial Archaeology: A Case Study in Northern Ireland, World Archaeology. 15: 161-172 http://www.jstor.org/stable/124649, accessed on February 23, 2012.

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Appeal for Donations for the Purpose of creating a "CORPUS FUND" for The Indian Anthropological Society [IAS]

Dear Members,

On behalf of the Council of The Indian Anthropological Society (IAS), I would like to humbly reach you for an appeal for donation in order to create a Corpus Fund of the Society, as decided in the last Annual General Meeting (AGM) held on 28 July 2018. However, we have taken considerable time to reach you since we waited for having permission from the Income Tax department to enjoy tax exemption under section 80G.

The necessity of creation of the Corpus Fund was felt unanimously with a view to meet the increasing expenditure burden for continuation of academic and administrative activities of the IAS.

We all are aware that our official organ, Journal of the Indian Anthropological Society has crossed fifty years of glorious existence and can be considered one of the best Indian anthropological journals with international reach. We need to modernize this journal to the maximum extent possible in this digital age and therefore we need monetary resources to accomplish this goal.

IAS has made several plans in the last AGM to make better use of its apartment and initiate several training programmes for the benefit of post graduate and doctoral students of Anthropology and allied disciplines. In order to make the plans successful we need to further develop the infrastructure of the Society apartment as early as possible. Hence, monetary support becomes essential.

The existing resources of the IAS are not at all commensurate with the requirements and therefore fund generation activities get high priority. Needless to say that IAS needs to explore different sources for fund generation, viz. external funding agencies, CSR funds, research projects, and so on.

The contribution of the IAS members, however, on creating a Corpus Fund of the IAS can be considered as the most important option that nurtures the idea of primarily saving and promoting the oldest professional body of anthropologists of our country by ourselves that has been created by the pioneers of Indian Anthropology.

Friends, at this juncture of completion of the hundred years of formal teaching of anthropology of India, let the members of IAS take a pledge that we will do justice to the demand of the discipline and create an environment that will be conducive to produce conscientious and humane anthropologists in this country.

I am sure you will support the cause and generously contribute in the creation of the Corpus Fund of the IAS.

You are requested to please transfer the amount you choose to donate in the Current Account of the State Bank of India, Garcha Branch [A/c No. 39060437735, IFSC: SBIN0003692, MICR: 00002036 A/c holders name: INDIAN ANTHROPOLOGICAL SOCIETY] and inform us regarding your transaction details by sending an e-mail in the e-mail id. provided below.

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We look forward to your positive response at your earliest.

Sincerely,

Barun Mukhopadhyay
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Kolkata
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