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Research Paper

Observation of Tibial Length and Comparing with Stature in Meitei Community of Manipur

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ABSTRACT	Manuscript Info.
<p>The northeastern (NE) region of India is inhabited by migrant people from surrounding countries. As per Zhang's (2018) study of Tibetan people, he reported lower limb length is shorter in hilly areas than in plain valley areas. In Manipur also two types of heterogenous people are seen. One of them having a shorter lower limb length while others have long lower limbs.</p>	<ul style="list-style-type: none"> ✓ ISSN No: 2584-184X ✓ Received:12-09-2024 ✓ Accepted:28-11-2024 ✓ Published:10-12-2024 ✓ MRR:2(12):2024;01-03 ✓ ©2024, All Rights Reserved. ✓ Peer Review Process: Yes ✓ Plagiarism Checked: Yes
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KEYWORDS: Tibia length, Body stature, Manipur, Meitei community

INTRODUCTION

As observed in the NE region of India, Manipur is a unique state where Hindu people live in comparison to neighboring states where mostly Christians or Buddhists live. Connection to Hinduism dates back to the Mahabharat age when Arjun married the princess of Manipur. Another important point is when the British made a rigorous measure to convert all tribals to Christianity, Manipur resisted and remained Hindu. It indicates their enlightenment is much more primitive than Christianity.

They may have possibly migrated from North India. But the general population is looking Mongoloid and seemed to be migrated from China, erstwhile Burma, or Asian countries. In the light of Zhang's (2018) research on Tibetan people, unique data emerged that hilly people's leg-length is shorter than people of plain land. In this article, the data is examined by taking tibial length with the length of stature and trying to find two heterogeneous people of Manipur.

Observation:

Table 1: Mean, standard error of means and t-values of right and left tibial lengths for both males and females of Manipur

	Right	Left		
Population	Mean +/- SE	Mean+/- SE	T value	P value
Male	38.31 +/-0.200	38.21 +/-0.194	0.36	>0.05
Female	36.38 +/- 0.202	36.28 +/-0.190	0.36	>0.05

A bilateral comparison of the mean values of left and right tibial length in both sexes was assessed and it was found that right tibial length and left tibial lengths are close to each other and statistically no difference was noted. The tibial lengths in females are comparatively less than in males. This difference may be due to the short stature of females.

Table 2: Mean values of Tibial/stature index in various stature classes

Group/class	Name of class	Male range	MALES frequency	Male mean	Female range	FEMALES frequency	Female mean
I	Pygmies	-	-	-	-	-	-
II	Very short	-	-	-	-	-	-
III	Short	150-159.9	21	21.36	140-148.9	8	20.48
IV	Lower medium	160-163.9	32	21.57	149-152.9	18	21.84
V	Medium	164-166.9	33	23.15	153-155.9	17	22.79
VI	Upper medium	167-169.9	23	23.26	156-158.9	32	23.52
VII	Tall	170-179.9	31	23.67	159-167.9	35	23.59
VIII	Very tall	180-199	--	--	168-186.9	--	--
IX	Giants	--	--	--	--	--	--
Total			140			110	

DISCUSSION

The pioneering work done by Zhang (2018) amongst the Tibetan population that high-altitude people have shorter leg lengths but longer arm lengths compared to the low-land population. The justification behind this asymmetric growth ratio can be found in the works of Swindler (2002) the same feature observed in gorillas who have a massive body structure with longer powerful arms compared to shorter leg lengths. When the arboreal character of the animal is left behind by huge physical body size, they prefer to live on land but not plain land. They grew their arms to the extent that were used to collect food, or defensive organs by holding sticks to fight with other neighboring ferocious animals. From a four-foot animal, they now stand erect. A sweeping change takes place in their brain. Previously balance was maintained by two legs and two arms but when they start erecting gradually balance is shifted to erector spinae, gluteus maximus, hamstrings, and calf muscles. By this evolution, they gained an erect posture but lost the ability to run fast as is present in four-foot animal-like jaguars. The loss of running ability made other significant changes in their behavior. They started depending on vegetarian food/fruits more than collecting nonveg meat which need violent activity like running fast, overcoming the prey, fighting savagely, and killing mercilessly to eat its flesh. Not only change in food habits, they also started family making by living together in a particularly suitable abode to be protected by a group of like-minded animal species. They raise offspring, love them, train them. As a fallout, their forebrain develops to start understanding love, sympathy, and reasoning behind every action, making them ascend on the evolutionary scale.

In the present study, unfortunately, only tibial length is measured and no part of arm bones is included. So what Zhang (2018) and Swindler (2002) found a comprehensive theory we cannot propose here any such theory. But in the table no 6 in the group no. III and IV the tibial lengths are shorter than the stature in comparison to groups V, VI, and VII. In my previous article and thesis, I said the North Eastern Indian region is a place of admixture of mongoloid populations of China, Tibet, Burma, Laos, Thailand with Indian Aryans. In any population study, we can find the descendants of this heterogenous populace in statistics. In groups III and IV we may find aboriginals of mongoloid traits while in groups V, VI, and VII the north Indian traits are visible. In the present era use of motorcycles or motor vehicles is quite abundant in hilly areas. So, the fate of the evolutionary process is debatable in highlanders. A great feature of highlanders is a matriarchal society, which means ladies keep the physical characteristics of a highlander as they raise the family, collect food, and feed the family which need the physical labor of mountaineering but lack the privilege of motorcycle or vehicles.

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