AIRO JOURNALS
Free / Unpaid
Peer Reviewed
Multidisciplinary
National

ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

Tribal Women Health care at Totopara, West Bengal

NABINA RAY
Research Scholar
AH/Geography/02 (21AHM10PGE110002)
Enrollment No.
GEOGRAPHY
Dr. DURGA MAHOBIA
Supervisor
University: EKLAVYA UNIVERSITY, DAMOH

Abstract:

The idea of wellness and disease has been a major a crucial part in the survival of any society. All communities have always sought to achieve their own systems for identifying and explaining diseases and disease treatment. based on careful observation and comprehension of nature, numerous methods have has been developed to cure illnesses. Toto is the smallest tribal group in India, and the ratio of females to males is steadily decreasing. Women are responsible for the growth of the society and contribute equally to the economy by performing energy-intensive work. However, there is insufficient information regarding their physiological and fitness status. The current study will investigate several traditional medicinal applications of many by the Particularly Vulnerable Tribal Group, plant species (PVTG) Total population of West Bengal's Alipurduar district Bengal. Additionally, efforts have been undertaken to quantify various employing the appropriate statistical methods, medical components. Results were interviews with Toto traditional medicine men and educated members of Toto society. For the study, a total of 32 plant species were identified. to at least 21 different kinds of tragedies.

AIRO JOURNALS
Free / Unpaid
Peer Reviewed
Multidisciplinary
National

ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

Introduction

Toto is the smallest tribe in India, with a distinct tradition, culture, and language. They reside in a small enclave named Totopara in the Jalpaiguri district of West Bengal, India, at the foot of the Himalayas, on the western bank of the Torsa River, just south of the border between Bhutan and West Bengal (Biswas, 2013). Totos were nearly extinct in 1951, when there were just 321 individuals (first census after India's independence and partition), but their population has since grown to over 1387. Although the government is implementing numerous strategies to conserve the Totos (Majumder, 1998), much more in-depth research is necessary to determine their social, psychological, and health concerns. According to research, the Toto have a high Thalassemia carrier rate (45%), which can be ascribed to their custom of marrying within the tribe (Dash Sharma, 2004; Ghosh, Banerjee, & Biswas,2004). Reportedly, Toto women also suffer from sadness and psychiatric illnesses (Ghosh et al., 2004). Due to a lack of sanitation and cleanliness, Toto residents are also reportedly affected by water-borne infections (Dash Sharma, 2004). Poor health conditions and the ongoing erosion of the Toto way of life necessitate immediate action, including study to inform the government and community engagement with the Toto people. It has been discovered that the long-standing custom surrounding knowledge of attitude toward sickness, diagnosis, and treatment, as well as There are still unclaimed/unnoticed pharmacology among several tribes in also in our state. Reading through the literature reveals that there is very little evidence of works on ethnobotany, such as quantitative studies of particular indigenous many regions of our nation have started groups. The goal of the current work is to document and preserve this setting the Toto tribe's traditional herbal knowledge as it exists in Totopara village, District of Alipurduar. One of the most recent districts to be established in West Bengal. The coordinates are 26°29′N 89°34′E. The district spans 3,010 square miles km. and a total of sq. km. of woodland. Geographically speaking, Totopara village is between latitude 89° 20′ and longitude 26° 50′. For a considerable amount of time, aMany indigenous cultures have been discovered migrating to this region, and became the region's indigenous people. The Subdivision has a High Proportion of

Along with their poor socioeconomic and health state, census data from the last several decades (Table 2) indicate a progressive decline in the proportion of girls to males (Dawn, 2014; Das,2011).

AIRO JOURNALS
Free / Unpaid
Peer Reviewed
Multidisciplinary
National
ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

As women are mostly responsible for population expansion, particular attention is required to improve their health. Equally, economic growth among the Toto relies on women engaged in physically demanding work, such as agriculture (Dawn, 2014; Dhargupta,Goswami, Sen, & Majumder, 2009). In 1993, research revealed the overall health state of tribal women in India (Basu, 1993), but did not disclose the health of Toto women in detail; therefore, it is vital to investigate their fitness, as their economic situation may not be sufficient to sustain the nutritional demands of their labor. To yet, there is no comprehensive report on the physiology and health of the Toto people, particularly their physical fitness. The present study provides an evaluation of the fitness and nutritional quality of young Toto women based on morphometric estimates.

Area	8.08 km^2
Location	89°20′ E and 26°50′ N
Total population (as per 2011 census)	1387
Total males	737
Total females	650
Growth (2001–2011)	19.88%
Per capita income (rupees per month)	1966.66
Average family size	5.16
Literacy rate	Male: 36.36%; female: 23.53%; total: 30.35%

Table 1: Demographics of Totopara

Data Collection

This small-scale study included 50 young Totowomen from Totopara, Jalpaiguri, West Bengal, with an average age of 23,4 2,91 years. To ease their fears, the complete experimental methodology was explained to them. Consent was obtained from each participant before to conducting the research, and all studies were conducted in accordance with the institution's ethical guidelines. In order to avoid the specific dynamic action (SDA) of food, participants were encouraged to consume their last meal at least 2 hours prior to the test. To prevent seasonal influence on fitness, all trials were conducted and measurements were taken at temperatures of 20–25 C and relative humidity of approximately 45–50% during the winter season in India. To reduce experimenter

AIRO JOURNALS
Free / Unpaid
Peer Reviewed
Multidisciplinary
National
ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

bias, each measurement was done three times, and the final result was the mean of the three measurements.

	Population		Total population	Sex ratio (female/1000 male)	Decadal growth rate
	Male	Female			
1901 (Census)	72	99	171	1375	–
1911 (Census)	125	110	255	880	49.12
1921 (Census)	140	131	271	936	6.27
1931 (Census)	130	204	334	1569	23.25
1941 (Census)	159	162	321	1019	−3.89
1951 (Census)	161	160	321	994	−2.18
1962 (ISI)[a]	206	189	616	917	96.18
1971 (Census)	275	269	675	978	9.58
1981 (Census)	362	350	762	967	12.74
1991 (Census)	470	457	922	972	21.16
2001 (Census)	620	575	1157	927	25.49
2011 (Census)	737	650	1387	882	19.88

Table 2:

Using an anthropometric tape, circumference measurements were collected at the midline of the upper arm (MUAC), thigh (TC), calf muscle (CC), waist (WC), and buttock (BC). WC and BC are utilized to predict body fat percentage. Eleven derived variables were accounted for: body surface area (BSA), body mass index (BMI), body adiposity index (BAI), fat mass (FM), fat mass index (FMI), fat free mass (FFM), fat freemass index (FFMI), waist-to-height ratio (WHTR), waist-to-hip ratio (WHR), MUAC-to-height ratio (MHR), and conicity index (CI). All anthropometric measurements were taken using standard methods (Roy, 1991) and calculated using standard formulas (Sengupta & Krajewska-Kulak,2014). The results were presented as the mean (SD). To analyze the data for correlation and linear regression, SPSS v.15.0 and MS-Excel v.2013 were utilized. A p-value less than 0.001 was considered statistically significant (Das & Das, 2005).

AIRO JOURNALS
Free / Unpaid
Peer Reviewed
Multidisciplinary
National
ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

	Toto women	
	Mean	SD
Age (years)	23.4	2.91
Body composition		
BMI (kg/m^2)	18.6	2.82
PBF (%)	16.5	1.84
BSA (m^2)	1.40	0.15
Physiological parameters		
Resting heart rate (beats/min)	75.3	4.08
Systolic blood pressure (mm of Hg)	114.3	2.04
Diastolic blood pressure (mm of Hg)	76.0	3.15
PFI (%)	82.2	4.62
Anaerobic power (kg m^{-1} s^{-1})	14.7	3.09
$VO_{2\ max}$ (ml kg^{-1} min^{-1})	34.2	3.48
Energy expenditure (kcal min^{-2})	4.80	0.48
Adipocity measures		
Fat mass (kg)	8.35	3.93
Fat mass index (kg/m^2)	3.48	1.71
Fat free mass (kg)	36.2	4.11
Fat free mass index (kg/m^2)	15.10	1.62
Body adipocity index (BAI)	21.09	4.32
Waist-to-hip ratio (WHR)	0.86	0.03
Waist-to-height ratio (WHTR)	0.43	0.02
MUAC-for-height (MHR)	0.13	0.02
C-index	1.04	0.02
Morphometric characters		
Mid upper arm circumference (cm)	21.5	2.40
Thigh circumference (cm)	40.4	3.09
Calf circumference (cm)	28.8	2.37
Waist circumference (cm)	67.1	4.50
Buttock circumference (cm)	77.1	2.04

Note: Values are mean ± SD (n =50).

Table 3:

The biological variables Importantly, the PFI was discovered to be much greater in young Toto women (82.2 4.62), when the cutoff values are between 61 and 70. The systolicblood pressure (mm of Hg) and diastolic blood pressure (mm of Hg) were observed to be lower in the Toto women, while the anaerobic power (kg m1s1) and VO2max (ml kg1min2) were observed to be higher and the energy expenditure (kcal min2) for a given task was observed to be significantly lower in the young Toto women. Extreme physical exertion necessitates massive skeletal muscle contractions that necessitate energy expenditure. Individuals who expend less energy than others for a particular type of task are considered more fit.

AIRO JOURNALS
Free / Unpaid
Peer Reviewed
Multidisciplinary
National
ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

48% of Toto women were mildly underweight (BMI 18.49), 20% were significantly underweight (BMI 17.0–18.49), and 4% were severely underweight. The overall prevalence of obesity (BMI > 30.00) was virtually absent among young Toto women (BMI 16.0–16.99). All of these estimates are based on anthropometry and the International Classification of BMI cut-off points, which are indirect methods.

Result and Discussion

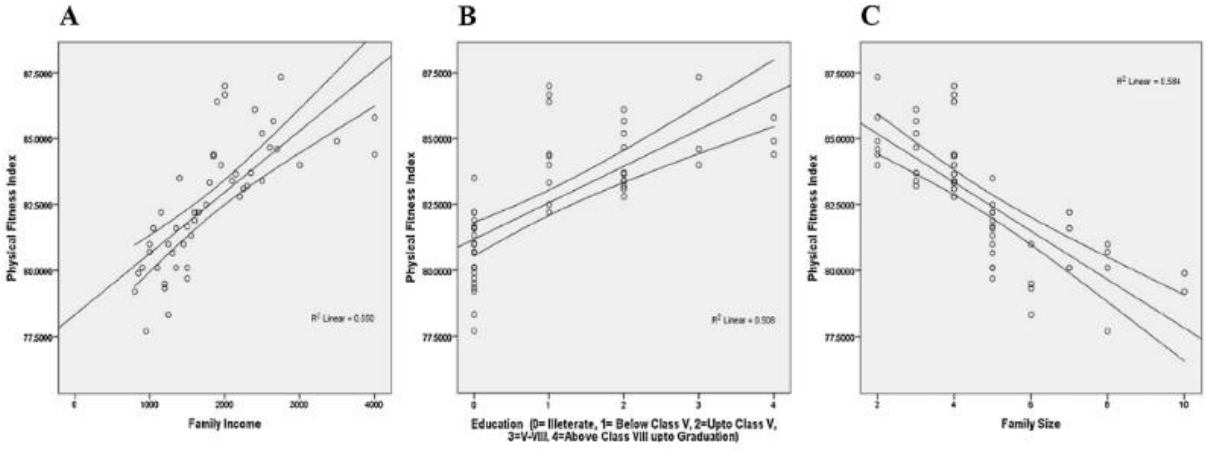
The result has been presented in tabular form showing graphs and charts with scientific as well as local name.

Table 1 details the socio-demographic characteristics of the Toto community, whereas Table 2 depicts the population distribution and sex ratios of the Toto tribe as of 2011. In recent years, there has been a startling fall in the number of females per thousand males, despite the fact that the overall population is increasing. The third table contains physiological data in addition to morphometric and adiposity measurements. Young Toto women have a height (cm) and weight (kg) of 154.8 3.21 and 44.6 3.06, respectively. It also illustrates comparative characteristics of physical variables (BSA and BMI). Not only do the results reveal that Toto women have a lower body mass index relative to their height (according to WHO weight-to-height charts), but the fat distribution in females is also lower than the cut-off values. As advised by Dudeja et al. for PBF (30.0%), Dasgupta and Hazra for WC (72 cm), and Rahim et al. for WHR (0.85), the obesity cutoff thresholds were adopted. The adiposity assessments reveal a decreased fat percentage in young Toto women, as indicated by the body adiposity index (21.09 4.32) In young Toto women, the fat mass (kg) and conicity index (CI) were found to be significantly lower.

Young Toto women's physically rigorous work makes cardiorespiratory fitness, as measured by VO2max and blood pressure fluctuations, vital to their health and well-being (Sengupta &Sahoo, 2013). Both systolic and diastolic blood pressure were found to be lower among young Toto women, suggesting that they engage in long work hours without a sufficient calorie intake. The high VO2max and high PFI value of the young Toto female, which is a primary criterion for assessing cardiopulmonary condition and working abilities, may give the impression that Toto

AIRO JOURNALS
Free / Unpaid
Peer Reviewed
Multidisciplinary
National
ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

women are adapted for long-term, intense work (Tables 3 and 5). Young Toto women are undernourished, as seen by their poor body composition. Since they are subjected to long-duration physical labor, which requires proper energy storage, the lack of it may result in tiredness, and the working tissues may suffer greatly from a lack of persistence. Even though Toto women conduct job requiring strength, they were not found to have more MUAC, TC, CC, WC, and BC, which are utilized to measure energy storage and strength, in the present study (Bhattrai,Bhattacharya, Chaudhuri, & Sengupta, 2014). This incapacity to perform might reduce the productivity of Toto women's daily duties, which in turn has a negative impact on their economic situation and quality of food consumption, prolonging the vicious cycle of malnutrition.



Only 23.53% of Toto community members, notably Toto women, are literate (Sarkar, 2015; Dawn, 2014; Das, 2011). Although the association is not strong enough (R2= 0.508), there is a tendency for women with a high level of education to improve their physical fitness. Family size is also correlated with female fitness levels. The average family size in the Toto community is 5.16 members (Hoque & Ansar,2015). As the number of family members increases, Toto women are seen to be less fit. This can be explained by two factors. First, as the number of male family members increases, the workload of female family members lowers, which may contribute to a decline in fitness. Second, the fundamental cause may be an imbalance between energy intake (poor and/or inadequate nutrition) and energy expenditure (physically demandinglabour). The

ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

results of this study indicate that the poor body composition, large percentage of underweight participants, insufficient energy storage, and consequently the poor health status of young Totowomen may be indicative of a severe deficiency in adequate diet and an unhealthy lifestyle. These findings show an urgent need to promote the health of young Toto women so that the Toto community as a whole can flourish rather than continuing to dwindle..

Conclusion

The previous discussion demonstrates for the first time that Toto women who engage in long-duration, energy-intensive occupations such as manual labor and agriculture are physically fit, and that their occupational workload has a beneficial effect on their fitness level. However, the present study also reveals that over three-quarters of women in the Toto community are malnourished and underweight, which undermines their ability to contribute to the survival and economic development of their tribe. Therefore, precautionary measures must be made to avoid the disease from spreading further among the youthful population.

References

1. Census of India Website:Office of the Registrar General and Census Commissioner, India. [Last accessed on 2021 Jul 4]. Available from: https://www.censusindia.gov.in/2011census/HLO/HH14.html .

2. Finn S, Herne M, Castille D. The value of traditional ecological knowledge for the environmental health sciences and biomedical research. *Environ Health Perspect.* 2017;125:085006. [PMC free article] [PubMed] [Google Scholar]

3. Basu S, Kapoor AK, Basu SK. Knowledge, attitude and practice of family planning among tribals. *J Fam Welf.* 2004;50:7. [Google Scholar]

ISSN:2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor:11.9
Subject: GEOGRAPHY

4. Palzor D. Health care beliefs and practices among Garasia Tribe in Udaipur district of Rajasthan. *University.* 2019. [Last accessed on 2021 Jul 4]. Available from: http://shodhganga.inflibnet.ac.in:8080/jspui/handle/10603/274214 .

5. Singh LP, Gupta SD. *Health Seeking Behaviour and Healthcare Services in Rajasthan.* India: A Tribal Community's Perspective; [Last accessed on 2021 Jun 30]. Available from: https://www.popline.org/node/522198 . [Google Scholar]

6. Pati S, Chauhan AS, Panda M, Swain S, Hussain MA. Neonatal care practices in a tribal community of Odisha, India:A cultural perspective. *J Trop Pediatr.* 2014;60:238–44. [PubMed] [Google Scholar]

7. Pandey GD, Roy J, Tiwary RS. Socio-cultural aspects and health care in Pando tribe of Madhya Pradesh. *J Hum Ecol.* 2001;12:391–4. [Google Scholar]

8. Bose K, Banerjee S, Bisai S, Mukhopadhyay A, Bhadra M. Anthropometric profile and chronic energy deficiency among adult santal tribals of Jhargram, West Medinipur District, West Bengal, India:Comparison with other tribal populations of Eastern India. *Ecol Food Nutr.* 2006;45:159–69. [Google Scholar]

9. Sonowal CJ, Praharaj P. Tradition Vs transition:Acceptance of health care systems among the Santhals of Orissa. *Stud Ethno-Med.* 2007;1:135–46. [Google Scholar]

10. Sachdev B. Perspectives on health, health needs and health care services among select nomad tribal populations of Rajasthan, India. *Antrocom Online J Anthro.* 2012;8:9. [Google Scholar]

11. Kumar MM, Pathak VK, Ruikar M. Tribal population in India:A public health challenge and road to future. *J Family Med Prim Care.* 2020;9:508–12. [PMC free article] [PubMed] [Google Scholar]

12. Sengupta A, Sahoo M, Khan A, Shaikh R, Khan R. Maternal health status in tribal India:A 5-year intervention program and its outcome. *Indian J Community Med.* 2020;45:189–93. [PMC free article] [PubMed] [Google Scholar]

ISSN: 2321-3914
Volume: 4 Issue:3
December 2023
Impact Factor: 11.9
Subject: GEOGRAPHY

13. Hussain T, Tripathy SS, Das S, Satapathy P, Das D, Thomas B, et al. Prevalence, risk factors and health seeking behaviour of pulmonary tuberculosis in four tribal dominated districts of Odisha:Comparison with studies in other regions of India. *PLoS One.* 2020;15:e0227083. [PMC free article] [PubMed] [Google Scholar]

Author's Declaration

I as an author of the above research paper/article, hereby, declare that the content of this paper is prepared by me and if any person having copyright issue or patent or anything otherwise related to the content, I shall always be legally responsible for any issue. For the reason of invisibility of my research paper on the website/amendments/updates, I have resubmitted my paper for publication on the same date. If any data or information given by me is not correct, I shall always be legally responsible. With my whole responsibility legally and formally have intimated the publisher (Publisher) that my paper has been checked by my guide (if any) or expert to make it sure that paper is technically right and there is no unaccepted plagiarism and hentriacontane is genuinely mine. If any issue arises related to Plagiarism/ Guide Name/ Educational Qualification/ Designation/ Address of my university/ college/institution/ Structure or Formatting/ Resubmission /Submission /Copyright /Patent/Submission for any higher degree or Job/Primary Data/Secondary Data Issues. I will be solely/entirely responsible for any legal issues. I have been informed that the most of the data from the website is invisible or shuffled or vanished from the database due to some technical fault or hacking and therefore the process of resubmission is there for the scholars/students who finds trouble in getting their paper on the website. At the time of resubmission of my paper I take all the legal and formal responsibilities, If I hide or do not submit the copy of my original documents(Andhra/Driving License/Any Identity Proof and Photo) in spite of demand from the publisher then my paper maybe rejected or removed from the website anytime and may not be consider for verification. I accept the fact that As the content of this paper and the resubmission legal responsibilities and reasons are only mine then the Publisher (Airo International Journal/Airo National Research Journal) is never responsible. I also declare that if publisher finds Any complication or error or anything hidden or implemented otherwise, my papermaybe removed from the website or the watermark of remark/actuality maybe mentioned on my paper. Even if anything is found illegal publisher may also take legal action against me.

NABINA RAY
Dr. DURGA MAHOBIA