

CHAPTER 3

ANTHROPOLOGY

Doctoral Theses

01. ARUN KUMAR

Genetic Association Study of Polymorphisms Related to Liver Enzymes in Population of Telangana.

Supervisors: Prof. MP Sachdeva and Dr. Gagandeep Kaur Walia

Th 26165

Abstract

The elevated liver enzymes in blood may be a signal that the person's liver is not working accurately, injured or damaged liver cells release enzymes in the bloodstream, which can be detected from liver function tests (LFTs). Research has been identified significant associations between liver enzyme markers with many diseases like cardiovascular diseases, diabetes, liver-related diseases, etc. Literature also suggests that 25-51% of people who showed elevated liver enzymes have fatty liver disease. Many genetic variants associated with liver enzyme markers have been identified through genome-wide association studies and confirmed through validation studies. Therefore, we aim to validate the recently discovered genetic variants related to levels of liver enzymes in the genome-wide association studies, and along with this, the secondary aim was to understand the role of biochemical, physiological, somatometric, socio-demographic, and, socio-economic variables in influencing the levels of liver enzyme markers in the population of Telangana, South India. This study was based on a trans-generational epidemiological cohort, i.e., "Andhra Pradesh Child and Parents Study" (APCAPS), and a total of 752 individuals (392 males and, 360 females) aged between 18-75 years were included for the study. A total of seven single nucleotide polymorphisms (SNPs) have been examined in this study. The mean age of the study participants was found to be 42.42 (± 12.39) years, 52.13% were males, and 47.87% were females. The mean levels of liver enzymes markers (ALT, ALP, and GGT) were found to be (10.85, 93.78, and 25.06, respectively) in the present study. Overall, the study participants did not have elevated levels of liver enzymes. The elevated liver enzymes were found to be very small in the present study, only 9% of study participants have higher levels of ALP enzyme and very few individuals were found to have elevated ALT (3.24%) and GGT (4.4%) enzymes. The minor allele frequencies of (MAFs) of selected SNPs; rs738409 of *PNPLA3*, *SAMM50*, rs1976403 of *ALPL*, *NBPF3*, rs1883415 of *ALDH5A1*, *GPLD1*, rs579459 of *ABO*, rs10908458 of *DPM3*, *EFNA1*, *PKLR*, rs1497406 of *RSG1*, *EPHA2* and rs7310409 of *HNF1A*, *C12orf27* were found to be G = 0.37, C = 0.48, A = 0.33, C = 0.12, T = 0.46, G = 0.39 and G = 0.37, respectively. All seven SNPs were found to be overall consistent with HapMap data of Gujarati Indians from Houston (GIH) and Indian Telugu from the UK (ITU). We could validate four out of seven selected genetic variants (SNP rs738409 of *PNPLA3* and *SAMM50*; SNP rs1976403 of *ALPL* and *NBPF3*, SNP rs1883415 of *ALDH5A1*, *GPLD1*, and SNP rs579459 of *ABO*) with liver enzymes markers (ALT and ALP), especially in stratified analyses. No significant association of selected variants has been observed with the GGT liver enzyme marker in the present study. We also find out the significant association of somatometric, physiological, biochemical parameters with liver enzyme markers (ALT, ALP and, GGT) in the studied population. In conclusion, to

our best knowledge, this is the first population-based study from India, which validated these variants with liver enzymes markers. These variants need to be replicated in the same population with more sample size and need to be validated in other populations with a longitudinal approach and larger sample size. This study can help other scholars as a reference study for genetic variants of liver enzymes. Moreover, the validated genetic variants can be used as a target for potential drug therapies in liver-related diseases, like non-alcoholic fatty liver disease, alcoholic fatty liver disease, etc.

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02. BINDHANI (Basanta Kumar)

Sickle Cell Carrier Status and Associated comorbidities: A Study Among Scheduled Castes and Scheduled Tribes of Odisha.

Supervisor: Dr. Naorem Kiranmala Devi

Th 26163

Abstract

Sickle cell trait (SCT) is the heterozygous condition of sickle hemoglobin (HbAS) caused by the beta-globin gene mutation. An estimated 300 million people carry the SCT worldwide, with a high concentration in Africa, the Arab Peninsula, India, the Mediterranean, and the southern United States (Tsaras et al., 2009; Key et al., 2015). In India, the prevalence of SCT has been reported in various communities. However, it has been reported to be high (1-40%) among scheduled tribe (ST) and scheduled caste (SC) populations (Roshan et al., 2015). With the current prevalence of sickle cell gene, the estimated incidence of SCD was found to be about 5200 live births each year in India (Saxena et al., 2017). Further, the prevalence and incidence of HbS are mostly undocumented in many pockets of India (Serjeant et al., 2016). In Odisha, the prevalence of sickle cell gene varies between 10% and 15% (Colah et al., 2015). However, very few studies are available on sickle cell hemoglobinopathy in this state (Bindhani et al., 2020). As per the available literature, no state or national level programs exist in states like Odisha, Andhra Pradesh, Telangana, and Madhya Pradesh that work effectively, where the prevalence of sickle cell hemoglobin is reported to be high (up to 40%) (ICMR, 2015). There are many populations and areas of India where there seem to be negligible awareness programs regarding this, which is a very gloomy situation. Some recent reports also suggested that just identifying HbS carriers without any treatment may lead to stigma and social barring. In contrast, the absence of proper screening and counseling programs will lead to a higher genetic load for SCT in the community.

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03. IMNAMEREN
Blood Pressure and its Comorbidities: An 8-Year Anthropogenetic follow-up Study from Haryana.
 Supervisor: Prof. K. N. Sarawathy
Th 26166

Abstract

The human circulatory system is a highly evolved complex network of blood vessels performing several functions for whole-body homeostasis. The blood circulation is assisted by pumping/beating of the heart, resulting into two pressures exerted on the walls of the arteries – systolic blood pressure (SBP) and diastolic blood pressure (DBP). Blood pressure is postulated to have undergone some major advantageous selective pressures throughout the hominin evolution. Those traits or alleles that favoured high blood pressure were selected through successive generations. However, with advancing civilizations and changing lifestyles, the traits or alleles favouring high blood pressure suddenly became a burden to modern humans. Hence, the burden of high blood pressure is suggested to be a product of “gene-environment” mismatch. Defined in the present study according to ACC/AHA guideline (hypertension stage 1 – SBP 130-139 mmHg or DBP 80-89 mmHg; hypertension stage 2 – SBP \geq 140 mmHg or DBP \geq 90 mmHg), hypertension has emerged as the most important risk factor for its associated comorbidities, such as stroke and cardiovascular diseases (CVDs). It is observed that global trend in absolute number of hypertensive individuals doubled between 1990 and 2019, however, the prevalence remained stable, mainly attributed to the decreasing trend of hypertension prevalence in high-income countries. On the other hand, an increasing trend of hypertension prevalence is observed in lower-middle-income countries (LMICs). In India, hypertension has emerged as a major disease burden contributing to increased stroke/CVDs mortality. Like most LMICs, hypertension prevalence in India has increased, with recent national estimates of up to 30%, and it is projected to rise in the future.

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04. JOSHI (Richa)
Land, Governance and Customary Law among the Tharu.
 Supervisors: Prof. S. M. Patnaik and Dr. Avitoli G. Zhimo
Th 26168

Abstract

A hundred years ago the vast majority of the Tarai was covered by thick, malarial jungle and was only inhabited by indigenous groups the Tharu. Land occupies a significant position in social and economic life of the Tharu who are not only dependent on the land but the whole cosmology and belief systems revolves around it giving them a distinct identity. The present study is a vivid paragon of close affinity between land and culture in the tribal realm. It manifests and unveils the question of identity, livelihood, inheritance, ownership, kinship and gender relations. How legal

framework, bureaucratic structures and customary laws regulate land. Primarily it focusses on authority and symbolic association where a communities unfolds and ground itself. The surrounding nature gives food, shelter resulting in the embedded beliefs, mythical norms and historical traditions in relation to land. The notion of territory and land is deeply ingrained in the minds of natives sustaining in the surroundings from time immemorial. The perception towards land is neither a private property nor a commercial but a natural resource which is equally shared and reciprocated by the people. The traditional practice of land holding and access to land is determined by rule of kinship, patriarchy and cultivation through family land. The land owing among Tharus reflect the relations between intra household, kinship and close genealogical links. The institution of *badaghar* and *mukhiya* system among the Tharus are based on social relations associated with land. Land is a symbol of wealth and reflects importance of an individual in the village. The family and domestic group exercises the control over it for so long that the rights are not challenged, the records are not relevant. The land rights are androcentric and the gendered norms by the customary and traditional practices in relation to land fails to address the question of disinheritance among women. Only a male heir can inherit property and has absolute power in all the decision making matters in household. The structure of the farming leverages more power to men than women at multiple layers and levels where women constantly confront the structure of power leading to the questions which are very central to gender justice. The clearing of forest, eradicating malaria and distributing land to settlers from various geographical locations has resulted Tarai from the least populated area to a majorly populated areas continuously marginalizing the natives socially, economically and politically. Change in population dynamics, consumption behaviour and land cover has caused changes in social organisation of the society. The changes in the nature of land from free resource to a valuable tangible asset led to acquisition and purchase of land. The recording of the land also implies recording the rights and with unfolding of time government has been relying more on technology and digitization. Standalone, the above mentioned ways and various initiatives of state beginning from independence pertaining to updating and maintenance of land records do not give absolute land rights. However, it brings out the new synergy among the manner in which traditional practice of 'remembering the land ownership' exists in the collective mind. The coherent account of maladies and dynamics faced by a community in the neoliberal economy underscores hindrances and challenges faced by the community in sale deeds as well as accessing the credit from the formal financial institutions. Therefore there is a need for compilation, maintenance and updating of the land record which is a panacea to infrastructure bottlenecks.

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05. KAUR (Harmeet)
Migration and access to education: Anthropological Reflections on the Meghwals of Delhi.
 Supervisor: Dr. Avitoli G. Zhimo
Th 26533

Abstract

The Economic Surveys (2017) Predicts and increase in Migration in the Coming Years. Census of India 2001 and 2011 also Proves that internal migration has nearly doubled during this time. With increasing

migration, India will face three significant Challenges in the future, i.e. employment, Urbanization and education of the migrants, and its needs to manage these better than ever. This study attempts to explore the educational experiences of the migrant children who have shifted from Rajasthan to Delhi. The Migrants identified in the presents study are the Meghwal, Belonging to the Scheduled caste category. One of the objectives of the study is to elucidate the migrate population and further emphasizes on studying the various Socio-structural Changes migrants have gone through upon migrating to Delhi.

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06. KONYAK (Eche Wangnyu)
Gender and Embodied Adornments: An Anthropological Study of Dress among the Konyak of Nagaland.
 Supervisor: Dr. Avitoli G. Zhimo
Th 26167

Abstract

Dress has been an essential part of studying material culture in Anthropology. As a topic of research, it has a vast scope for study. There are many aspects that a researcher can work based on the context of the dress. Anthropology contributes to this mounting body of research by giving new life to the study of dress, which for a long time received only passing attention. The present study seeks to understand dress and its significance seen among the Konyak Naga. The thesis is an outcome of the fieldwork carried out in the three Konyak villages of the Mon district in Nagaland, India. This research attempts to study dress in terms of body supplements and body modifications. Body supplements may include clothes and ornaments, while tattooing falls under body modification. The study outlines the cultural and symbolic meanings, continuity and change, and new media's involvement in the commodification of Dress. It unravels the different patterns of dress and their connotation on the wearer, thereby depicting dress as one of the most visible forms that impose social identities. Dress communicates meanings like gender, age, wealth, social affiliations, and social status. As a sub-type of body modification, tattoos are an indelible visual representation that helps distinguish certain groups, villages, clans, or individuals. However, the once honoured tattooed men and women have now been reduced to the status of living museum specimens subjected to the tourists' gaze. The study also engages the notion of 'new media' embedded in globalisation and commodification. It explores the presence of various digital platforms for dispensing knowledge and material products from local to global. But, the negative facets of new media lead to cultural misrepresentation and appropriation, which brings to light the importance of awareness of Intellectual property Rights (IPR) to safeguard cultural heritage.

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Meanings and Consuming Culture 8. Summary and Conclusion. Bibliography and Appendices.

07. MONDAL (Atreyo)
Anthropological Study of Growth and Nutritional Status with special Reference to lifestyle Diseases of Migrated Poundra Population of West Bengal.
 Supervisor: Prof. P.R. Mondal
Th 26169

Abstract

The “Poundra” caste, an endogamous group, of West Bengal has its origin mainly in the deltaic region of Sundarbans. The population due to fragile ecosystem has experienced various undulations in the course of life from generation after generation. Due to political disparity during Independence 1947 a large mass of people had to shift from ancestral origin to a new beginning, for which some generations in the population had to cope up with massive hardships. Another group in the same community although without having migration from their origin had to relocate within the same region because of natural calamities from time to time. As a result, enormous inequality was faced with respect to other affluent castes people of nearby areas. With environmental fluctuations, slow pace economy, social deprivations and isolation from the mainstream development due to geographical position and other factors, for decades this “Poundra” community remained in its own cluster hardly incorporating any other caste groups. Result of which made unique cultural and social norms within the community. Marriage like social institution still today is more or less done within the community, thus this caste group became depository of vast indigenous knowledge as an endogamous group with mainstream work of agriculture. In modern days the people of this endogamous group having constitutional safeguards, but are facing different health issues mostly due to changing pattern of employment, lifestyle, adapting to globalization process while coming to mainstream with respect to their earlier mode of living. Another shift of pattern has been seen on low literate clusters where due to high demand of workforce in urban areas they migrate from rural to urban areas incorporating various non-communicable diseases to take its course within this community. The combined effects of income, nutrition, place of residence, difference in knowledge level depending on level of education, gender with blood pressure, obesity and diabetes are the main focus of the present research. Studying this rapid changing lifestyle and demographic transition of this group offer insights by examining various other variables that are causing diseases along with other epidemiological transitional factors

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08. NEGI (SARIKA)
Gender, Poverty and Well Being an Ethnographic Study among Homeless in Urban Delhi.
 Supervisors: Dr. Avitoli G. Zhimo and Prof. S.M. Patnaik
Th 26162

Abstract

In Indian context, homelessness needs to be understood not only from an infrastructural perspective but also by engaging with the cognitive perspectives where rootless and rooted mobility are important points of departures. The subjectivity in experience of homelessness depends on the nature of population where differing duration of stays combined with component of rooted or rootless mobility is shaping these experiences, having poverty as its root cause. Poverty and Well being are multifactorial concepts which are understood and are grounded on several parameters. In this study the intersection of poverty, gender and well being has been focused. The homelessness which itself stands as a symbol of poverty has not been much explored wherein, people and their experiences and subjectivities in their understanding of poverty became an important focal point in the present study. This study being multisited has brought out participant's understanding of poverty and various domain, concerned with economic and non- economic, which affected their well being. Gender as an important dimension highlights out the agential nature of women where with their equal participation in household economy, they were found to trying to meet their well being. The communities understood poverty and associated risk (socio- cultural in nature) differently which shaped their life course and was found to be having a deep correlation with their well being. The households and individuals were engaged in mitigating risks associated with life in poverty where dire situation of female headed and matrifocal household's situation became important aspect. The cases of matrifocal household showed structural difference and the commonalities shared by both i.e. the women headed and matrifocal households such as gender based wage differences, the dual burden of household and economic responsibilities impacting their well being swelling up their struggle. The various mechanisms that these women were engaged in, to resolve their issues, were found to culturally grounded and learned mechanisms

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09. SAHAY (Dharna)
Phenomenon of Emergence of Jatav Elites in NCR of Delhi.
 Supervisors: Prof. S.M. Patnaik and M.K. Singh
Th 26170

Abstract

It has been seen that Caste in Indian society is most powerful feature in determining a man's self-respect and identity. It is complex social institution. Caste is a form of social stratification which determine the social position of an individual at various level. In this way, Occupation, marriage within caste (endogamy), ritual status, social interaction or social life restricted to "own kind" and exclusion is based on their cultural belief of purity and pollution. It is evident that caste is the reason by which many people in India are facing lots of issues and finding ways to get liberate of this rigid system of caste. Not even this, it is the human nature that everyone need

“changes in life”. These changes in life happened when there is urgent need to bring changes in social and cultural status. In this manner, an individual attempts to shift his/her occupation, migration occurred, tries for higher education and make agency that will become push factor in achieving the lost social capital, to regain identity and representation in the form of performances. With this motive, research has been done on one of the Scheduled caste category they are Jatavs and they are listed in the category of Scheduled Caste in the Constitution of India. In the previous studies on Jatavs, it is clear that they are affected by caste system and due to caste system and inequalities, they does not have strong sociocultural background. There are weaknesses in the structure of social, economic and cultural background. On the other hand, government’s reservation policy is proved to be effective for them in upgrading their sociocultural background. It is positive effect of reservation by which Scheduled Caste have migrated to urban areas for acquiring their higher education and establishing new business to improve their social and economic conditions. Therefore, who have achieved distinguished as well as competent designation at a higher level in government, non-government and business sector are called Elites. These elites are residing in urban spaces with upper caste in a mixed society. They are living among upper caste and middle caste for upgrading their social and cultural status.

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10. SHARMA (Ruchika)
Exploring the Socio-Cultural and Biological Aspects of Polycystic Ovarian Syndrome in Women of District, Kangra Himachal Pradesh.
 Supervisors: Prof. S.M. Patnaik and M.K. Singh
Th 26532

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11. SUNANDA RAJKUMARI
Menopause and Global DNA Methylation vis-à-vis Cardiovascular Health: An 8-Year Population based Follow-up Study form Haryana.
 Supervisor: Prof. K.N. Saraswathy
Th 26164

Abstract

Menopause is a natural phenomenon experienced by women in their midlife. Midlife, typically defined as the age group of 45 to 65 years, hence is a very crucial period of a woman’s life. An overlap of chronological aging and reproductive aging brought about by menopausal transition leads to profound changes in body composition, cardiometabolic health, mood, sleep, cognition and overall functioning of the body. Due to the aforementioned changes, women in midlife and post-menopausal stages find themselves at a heightened risk for major chronic diseases such as

cardiovascular diseases (CVDs). Therefore, CVDs continue to be the leading cause of morbidity and mortality among women affecting 36% of all women worldwide. CVDs and cerebrovascular diseases account for 75-76% of the deaths worldwide among postmenopausal women. Apart from traditional risk factors for cardiovascular diseases such as dyslipidemia, hypertension, diabetes, obesity and smoking, a number of conditions unique to women or such as pre-eclampsia, gestational diabetes, polycystic ovary syndrome, menopause and autoimmune diseases, have also been shown to increase additional CVD risks among women. There are certain characteristics specific to menopause such as age at menopause, type of menopause, endogenous estradiol, menopause-related symptoms, have been evaluated in relation to CVD and its risk factors particularly obesity, hypertension and dyslipidemia. A notable increase in CVD risk among women, commonly observed from menopause onwards, may be attributed to significant physiological changes in the body during menopause. Many traditional CVD risk factors are present among post-menopausal women. The risk factors include changes in body fat distribution from a gynoid to an android pattern, reduced glucose tolerance, abnormal plasma lipids, increased blood pressure, increased sympathetic tone, endothelial dysfunction, and vascular inflammation. Furthermore, cardiovascular risks in women are inadequately addressed, particularly during the menopausal transition, and at postmenopausal stage when vulnerability to cardiovascular events increases. Moreover, those women who had undergone hysterectomy (premature menopause induced by surgical menopause) undergo a sudden removal of the ovaries prematurely and thus leading to a sudden decline in the hormone levels. Such changes may be attributed to a particularly higher risk of CVD among hysterectomized women (surgical menopause) as compared with those women who had experienced natural menopause

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12. TIWARI (NEHA)

Education among Slums of Delhi Policy and Practices.

Supervisor: Dr. M. Kennedy Singh

Th 26171

Abstract

The Present study was conducted in the Nand Nagri Slum area of Seemapuri Delhi. The Study Mainly focussed on the problems of education faced by the slum people in slums of Delhi. This study brings out the actual scenario of the level of education in the slum under study. Education has been considered as one of the Primary goals of millennium Development Goals. In India, we are Provided free and compulsory primary education, which will help in making it a literate nation. Primary schooling is the key to success for each developing Country and covers the age category of 6-14 in our country, this education is made free and mandatory to reach 100 Per cent literacy. In Delhi, the Capital of India, Slums are Usually located close to the railways paths and market locations . the children living in such regions suffer from several issues hampering their education as well as other Comparative activities Delhi being a metro city is a huge source of attraction for people. Children of Slums face many

problems affecting their studies. The Current study aims at finding out the challenges faced by slum children in attaining education with the main focus on primary education. This study will bring out the insights of the ground realities of the problems of education in slums area of Delhi. The policies and programmes introduced by state and central government for the betterment of slum education will also be examined critically.

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