

Anthropology of Cardiometabolic Adversities

National Seminar
organized by

Department of Anthropology
University of Delhi

25-26 September 2015

**NATIONAL SEMINAR ON
ANTHROPOLOGY OF CARDIOMETABOLIC ADVERSITIES**

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RAPPORTEURS' REPORT

Session I. Biological and social considerations in Cardiometabolic Research was chaired by **Prof. A.K. Kalla and Dr. Avitoli G. Zhimo.**

In Session 1, two plenary lectures – one by Prof. Sanjay Chaturvedi and another by Prof.V.R.Rao; one oral presentation by Dr. Pulakesh Purkaiit and three flash presentations were presented.

Prof. Sanjay Chaturvedi (*Head, Department of Community Medicine and University College of medicine*) presented on ‘Societal and environmental drivers of childhood obesity in India’. He highlighted the role of India specific evidences of food consumption from market and media in governing childhood obesity. **Prof. VR. Rao** (*Professor, Department of Anthropology, University of Delhi*) presented on ‘Rare vs common alleles, simple vs. complex diseases and next generation sequencing: some of our experiences in Hypertrophic cardiomyopathy’. He highlighted the importance of anthropological approaches to understand disease processes and importance of high throughput technology in genetic research Along with this, the role of modifiers in disease phenotype was discussed.

Oral presentation by **Dr. Pulakes Purkaiit** was on ‘Angiotensin gene SNP’s and haplotype: risk traits for hypertension in Bengali population of west Bengal’. He presented results from data on 9 SNP’s and their haplotypes of AGT gene on hypertensive patients and controls from West Bengal thereby highlighting its importance in the occurrence of CVDs.

Flash presentation by **Ms. Shipra Joshi** presented on ‘Role of genetics and homocysteine induced effect on HTN: a study among lacto-vegetarian north Indian population’. She concluded with result that neither Hcy nor the gene MTHFR was found to be associated with HTN among

the Hindu Jats of Haryana. **Mrs. Soumi Das** presented a paper on ‘Demographic, clinical and genetic profile on Indian dilated cardiomyopathy patients’. She laid stress on the need of candidate gene screening and next generation sequencing among dilated cardiomyopathy patients. **Mrs. Mitali Kapoor** presented a review paper on ‘Clinical and genetic aspects of cardiomyopathies’. She highlighted the role of genes, environmental and modifiers in the causation of cardiomyopathies. Also, she highlighted the variable expressivity and penetrance effect of various genes in the disease, thus leading to development of novel disease-modifying therapies.

Session II. Psychological aspects of cardiometabolic research and adversities was chaired by Prof. S.M. Patnaik and Dr. M. Kennedy Singh.

A total three plenary lectures and one oral presentation were presented during the session along with seven e-posters.

Dr. Manju Mehta (*Former Professor, Clinical Psychology, AIIMS, New Delhi*) presented a paper titled “Stress as Risk Factor in Cardiovascular Disorders”. The presenter highlighted the point that there is positive correlation between personality, stress and risk for cardiovascular disorders. Presenter recommended that proper stress management, regular practice of yoga and exercises can be helpful in reducing negative impact of stress.

Prof P.C.Joshi (*Professor, Department of Anthropology, University of Delhi*) presented on the paper titled “Depression and Cardiovascular Disease”. The presenter discussed that depression is very closely associated with cardiovascular diseases. Presenter recommended that psychological intervention in the communities and increasing awareness about the psychological factors can be required for promoting the people’s health in the future.

Dr. Ravinder Singh (*Associate Professor & Head, Department of Medical Anthropology, Institute of Human Behavior and Allied Sciences, Faculty of Medical Sciences, University of Delhi*) presented on the paper titled “Stroke: Loss of *self* and new *neural* Identities: A Challenge to Urban Lifestyle”. The presenter discussed that stroke is one of the leading causes of death and disability in India and after Stroke rehabilitation plans are not well developed in India due to lack of trained staff. He elaborated the trajectory of stroke patients’ treatment in the hospital as well as in the family, burden of stroke and the availability of rehabilitation health services for such patients.

Oral presentation by **Dr. Mitashree Srivastava** (*Assistance Professor, Department of Anthropology, University of Delhi*) on the topic 'From "Mornings" to "Mournings": Anthropological Perspectives on the Role of "Monday's" in Manifestation of Cardio-metabolic Adversities. The presenter discuss some personal experiences and some findings which reveals that "Mondays", if not always but often tend to act as a "catalyst" for the recurring manifestations of cardio-metabolic problems at offices which can be avoided by nurturing a healthier work place culture.

Session III. E-poster presentations' session was chaired by Dr. Manoj Singh & Dr. R.P. Mitra.

A total seven E posters were presented by research scholars during the session.

Ms. Jayashree Mazumder presented a paper titled "MTHFR C677T Gene Polymorphism among the Rajputs of Rajasthan. She discusses the role of Methylene tetrahydrofolate reductase (MTHFR C677T) gene polymorphism in the causation of cardiovascular disease and also showed the frequency of MTHFR gene among the Rajputs of Rajasthan. **Mr. Rajeev** presented a paper titled "Tobacco use and Body Mass Index: A Study among Bhil's of Rajasthan" and highlighted the point that there is association between tobacco and BMI. **Ms. Varsha presented** a paper titled "Morpho-Physiological Changes in Rajputs of Rajasthan. Her study revealed that among Rajput boys ectomorphic component is dominant, which indicates their linear physique. **Ms. Ekta Arya** presented a paper titled "Menopause and Cardiovascular Adversities: A Genetic Study among Bhils of Rajasthan. She highlighted that increasing epidemic of cardiovascular adversities following menopause and suggested that cardiovascular disease in females should not be taken casually. **Mr. Ankur Krishnan** presented a paper titled "Ethical Issues in Biomedical Research on Human Participants". He discussed the research criterion that needs to be upheld but also a moral responsibility of each researcher as a human being. He further highlight ethical guidelines for the betterment of human beings in a social and natural environment. **Ms. Simmi Saini** presented a paper titled "Angiotensin Converting Enzyme Gene Insertion/Deletion Polymorphism among the Tribal and Non-tribal Populations of Rajasthan". She discussed on the genotypic distribution *ACE ins/del* gene polymorphism. **Ms. Urvashi Gupta** presented a paper titled "Status of MTHFR Gene Polymorphism among Bhils of Rajasthan". She reported the genotypic frequency of MTHFR gene.

Session IV. Ethical and Cultural Issues related to cardiometabolic adversities was chaired by Prof. I.S. Marwah & Dr. B. Murry

Two plenary lectures by Prof. S.M. Patnaik and Dr. R.P.Mitra; two oral presentations by Dr. S.Yaiphaba Meitei and four flash presentations were presented.

Plenary lecture by **Prof. S.M. Patnaik** (*Department of Anthropology, University of Delhi*) highlighted the issues of ethics in the modern day world and also discussed how contemporary anthropologists were concerned with philosophical and academic dimensions of ethical debate. **Dr.R.P. Mitra** (*Department of Anthropology, University of Delhi*) discussed the cultural and evolutionary aspects of cardiometabolic adversities.

Oral presentation by **Dr. S.Yaiphaba Meitei** (*Department of Anthropology, Manipur University*) on 'Hypertension in the young ages- a new paradigm' discussed the importance of studying hypertension not only in adults but also among youngsters. **Dr. Shivani Chandel** (*Department of Anthropology, University of Delhi*) presented on 'Reducing cardiometabolic risk factors through participatory workplace interventions' and discussed how deduction in sedentary time, increase in breaks can help reduce adversities.

In the Flash presentations, **Mr. Gagandeep Singh** presented a review paper titled 'Environmental factors affecting cardiovascular diseases' and discussed physical, biological and psycho-social factors affecting cardiovascular diseases. **Ms. Astha Bansal** presented a paper titled 'Assessment of metabolic syndrome among Sunni muslims of Delhi' and discussed the prevalence of same and its risk for CVD's. **Mr. Masan Kambo Newmei** presented on 'bioethical issues in medical anthropology' and discussed on the major issues such as moral sensitivity and philosophies of bioethics in fieldwork. **Ms. Rupalika** presented a paper titled 'homocysteine and MTHFR C677T gene polymorphism among Bhils of Rajasthan' and found no association between homocysteine and T allele of MTHFR C677T gene polymorphism.

Session V. Genetics and genomics of cardiovascular adversities was chaired by Prof. V.R. Rao & Dr. Shivani Chandel

In the plenary lecture, **Dr. Tushar Roy** presented a paper on 'cardiovascular diseases in India- Rising incidence, risk factors and its control'. He discussed about the increasing incidence of

cardiovascular disease in India and the intervention strategies that should be undertaken to reduce the burden for the same.

The oral presentation by **Dr. Priyanka Rani Garg** highlighted the importance of non-traditional risk factors assessment for planning better therapeutic strategies for cardiovascular disease risk prevention.

Further, seven flash presentations were presented in this session. Herein **Ms. Suchita Rawat** discussed the impact of tobacco smoking on cardiovascular adversities among the jats of haryana. Ms Divya Mishra reported the prevalence of cardiovascular disease risk factors among the Bhils of Rajasthan. The genetic studies by **Ms. Gangaina Kameih** examined the ACE gene polymorphisms among the Baigas and Panikas of Madhya Pradesh & by **Mr. Motilal Yadav** examined the genetic polymorphisms of ACE, AGT and MTHFR among the Yadav population of Bihar. **Mrs. Nidhi Sharma** examined the association of Angiotensin M235T polymorphism with metabolic syndrome among the Brahmins of Delhi and NCR. Further, two association studies from North-East India - firstly by **Ms. Varhlunchhungi** examined the association of genetics of hyperhomocysteinemia among the Meities of Manipur. **Mr. Somorjit Singh** examined the association of FTO gene polymorphism with obesity among the tribal population of Manipur.

Session VI. Social, epidemiological and genetic aspects of cardiovascular disorders was chaired by Prof. A.K. Kalla & Dr. Mitashree Srivastava.

There were 3 plenary lectures, 2 oral presentations, and 4 flash presentations.

Dr. Abdul Kareem presented a paper titled ‘inhibition of iNOS expression could be a potential therapeutic target for CVDs’. He with a hypothesis that post-translational modifications are helpful to prevent CVD using techniques protein modeling and docking. **Dr. P.R. Mondal** presented a paper on ‘ A study on cardiovascular risk factors among a Mendelian population of north India’ and depicted cardiovascular risk factors in Brahmin population of North India with respect to dietary and life style patterns among 386 subjects showing increase lipids leading to be one of the causes. **Dr. K.N.Saraswathie** discussed how we have shifted from hypothesis driven to technology driven research and further talked about the gene MTHFR with the most common mutation C677T, intermediate phenotype with environmental interactions in 2 populations (Jats

and Meitieiis). **Dr Menu Anand** presented on ‘Anthropology of cardiometabolic adversities’ and highlighted the need for having a holistic perspective to deal with challenges in relation to the social work practice model. **Dr Sonali Walia** presented a paper titled ‘A comparative study of childhood and adolescent obesity between South & West Delhi using WHR: a rising health problem leading to CVDs’ and discussed on childhood and adolescent obesity as rising health problem for future CVDs from various public schools with children ranging from 6 to 15 yrs.

In the Flash presentations, **Ms. Shobha Kumari** presented a paper titled ‘ACE levels & gene polymorphism among North Indian population’ and discussed how higher frequency of heterozygote (ID) genotype is indicative of advantage in the population by maintaining lower ACE levels which is protective from cardiovascular diseases. **Ms. Suniti Yadav** presented a paper titled ‘Differential Global DNA methylation levels & adverse cardiovascular variables: a study from rural population of North India’. She discussed on how epigenetic phenomenon is being differentially expressed in two different environmental settings (high & low polluted areas) and also in two different cardiovascular phenotypes (hyperhomocysteinemia & hypertension). **Ms. Tabitha Panmei** presented a paper on ‘ACE ins/del gene polymorphism in tribal population of Manipur’ and discussed the frequency distribution Rongmei, Inpui and Liangmai of Manipur, Northeast India. **Ms. Mamta Thakur** presented a review paper on ‘epigenetics and the burden of CVDs in India’ and discussed on how epigenomics is most promising area that will address some of the gaps in our current knowledge of the interaction between nature and nurture in the development of CVDs.

Session VII. Gene and environment aspects of Cardiometabolic disorders was chaired by Prof V.R. Rao & Dr. Shivani Chandel.

In this session 3 plenary lectures, one oral presentation and 4 flash presentations were presented.

In the plenary lecture, **Dr. B. Murry** presented on ‘gene-environment interaction: some observations from tribal population of Nagaland’ and focused his lecture on the nature versus nurture approach and made important point to develop comprehensive anthropological approach including demographic, genetic and epigenetic aspects to deal with cardiovascular diseases. **Dr. Mithun Sikdar** presented paper on ‘The ethical issues on cardiometabolic adversities in an anthropological perspective’. The presentation highlighted the importance of anthropologists in

ethical committees and that ethical issues should be included in the curriculum. A special lecture by **Dr. Kumkum Srivastava** expressed different aspects of heart as a virtual heart and elaborated the idea of heart in bollywood songs and urdu poetry.

In the oral presentation, **Dr. Seerat Talwar** reviewed the role of epigenetics alterations during pregnancy which may increase the increase the risk of cardiovascular diseases in the fetus in the future.

Further there were 4 flash presentations, **Mrs. Simmi Khan** presented her work on how HDL cholesterol can be an independent risk factor for prediction of metabolic syndrome. **Ms Ketaki Chandiok** presented a paper on ‘effect of menopause on cardiovascular adversities among the rural Jat women of Haryana’ .The study highlighted the utility of assessing menopausal status for cardiovascular risk reduction. **Ms. Gurjinder Kaur** presented a review paper on ‘cardiovascular risk factors and cognitive impairment’ and concluded the adoption of cognitive screenings when cardiovascular risk factors are involved. **Mrs. Jyoti Mishra** presented a review paper on ‘preterm birth and future risk for cardiovascular diseases’ and reported a strong association for the same. The study highlighted the utility of preterm birth as a biomarker for reducing cardiovascular risk