

M.A./M.Sc. Third Semester
Paper Code: AU-6316
End Semester Examination, 2014
ANTHROPOLOGY
Paper: Three (Medical Anthropology)
Time Allowed: Three hours

Maximum Marks : 60

Passing Marks: 24

Note: Attempt questions of all **two** sections as directed. Distribution of marks is given with sections.

Section – ‘A’

2x10=20

Note: Select one of the most appropriate answer from the following objective questions.
Each question carries 2 marks.

1. (i) Applied Medical Anthropology deals with
 - a. Intervention, prevention and policy issues of health
 - b. Analyses the socio-economic forces and power differentials
 - c. Only (a)
 - d. Both (a) and (b)**

- (ii) Ethnomedicine analysis refers to
 - a. Cultural systems of healing
 - b. Indigenous folk system of medicine
 - c. Cognitive parameters of illness
 - d. All of the above**

- (iii) Kuru is
 - a. Fatal culture specific disease
 - b. Disease of brain and nervous system
 - c. Syndrome found among South Fore
 - d. All of the above**

- (iv) Respiratory tract infections are caused due to
 - a. Oxides of nitrogen
 - b. Automobile exhaust
 - c. Wood burning stoves
 - d. All of the above**

- (v) Which one of the following is an example of pandemic disease?
 - a. Spanish flu
 - b. AIDS
 - c. Cancer
 - d. Tuberculosis**

- (vi) Mal de Ojo means
 - a. Common type of soul loss
 - b. Illness resulted from the strong perception
 - c. Evil eye
 - d. All of the above**

- (vii) The effect of any medication on an individual depends on ALL factors EXCEPT

- a. Prescriber
- b. Recipient
- c. Physical Setting
- d. Ecology**

(viii) The negative effect of belief on health is called

- a. Nostalgia effect
- b. Nocebo effect**
- c. Placebo effect
- d. Deterministic effect

(ix) Political Economy of Health means

- a. health services are differentially allocated based on wealth
- b. ways in which policy impacts health
- c. delivery of health services
- d. All of the above**

(x) Majority of diarrhoeal deaths is/ are due to

- a. Unsafe drinking water
- b. Sanitation burden
- c. Lack of hygiene
- d. All of the above**

Section-‘B

4x10=40

Note: Write long answer of the following questions. Attempt any **four** questions.
Each question carries 10 marks.

2. Explain the concept of Health, Illness and Disease.

Answer2: Concept of Health, Illness and Disease

Medical anthropology is one of the most rapidly growing branches of anthropology. It overlaps biological and cultural anthropology and often has a connection with applied anthropology. Medical anthropology concerns itself with human health, the factors that contribute to disease or illness and the ways that human populations deal with disease or illness. Medical anthropologists may consider the physiological variables that are involved with human health and disease, the environmental features that affect human well-being, and the many social and cultural factors that affect human health. They may consider the ways the human body adapts to various environments, the sources of human suffering, or the dynamics of politics and economics that affect people's well-being.

Recent approaches in medical anthropology have departed from the epistemological turn proposed by the interpretive approach. This approach moved the debate from the previous rationalist epistemological stand, to one that conceptualises disease as belonging to the cultural domain. This claim has since been the source of much recent theoretical and empirical work in the field. To better understand the epistemological turn of the interpretive approach, first introduce the trajectory of the concepts of illness and disease in medical anthropology.

Health in the broad sense is ‘quality of life’ rather than only the absence of disease. It is a universal goal even if cultural variations encrust in the way it is defined and achieved. The health situation is often reduced to the extent of registered disease and available health resources. Health is the outcome of a complex set of socio-cultural and economic, as well as physical or biological factors.

According to WHO definition, ‘Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’. Health, illness and disease are inter related.

Illness and its relation with disease has been conceptualised in medical anthropology in various ways. Initially, illness – the subjective experience – was understood as a domain separate from disease – the biological dimension. This particular understanding of illness (which did not differ from the biomedical view) prevailed especially during the 1950s and 60s when medical anthropology had a strong applied emphasis.

Medical anthropology – then an emerging field – played a role in facilitating medical science’s understanding of ‘other cultures’. Indeed, the main aim of medical anthropology was, then, to contribute to and improve the efficiency of public health campaigns implemented in third world countries, following the Second World War.

Disease under this scope was understood and treated as ‘paradigmatically biological’, and unchallenged by the anthropological inquiry. The anthropological knowledge remained at the time in the terrain of culture and culture was understood in this tradition as separate from the biological dimension of disease.

An example of this theoretical stand can be found in the ecological approach, which sees illness representations as ‘cultural beliefs’. Culture in this perspective plays an adaptive role in relation to disease. Medical systems within the ecological approach are understood as the sum of cumulative socio-cultural adaptive strategies while culture was conceived as ‘a set of adaptive responses to diseases’. Under the ecological approach, the division between disease and illness became separated realms and continues to exist as such.

Subsequent perspectives in medical anthropology, such as the cognitive approach, maintained the distinction between disease and illness. Illness representations in this perspective are seen as perceptions; as a domain structured by language and culture which convey “the apparent order in the natural and social world” (Good 1994, quoted by Meyer 2003). Culture would explain illness conceptions and beliefs around health and illness, which in turn, explain human behaviour. However, disease was still considered to belong to the medical domain.

The concept of explanatory models of illness proposed by Kleinman to elicit what he referred to as the ‘native’s point of view’, introduced a radical change of perspective in the understanding of the relation between the cultural domain and the domain of disease. Kleinman’s explanatory model also pertains to the domain of disease. He argued that *disease is not an entity but an explanatory model*. Disease, in this perspective, belongs to culture in particular to “the specialized culture of medicine. And culture is not only a means of representing disease but is essential to its very constitution as a human reality” .

3. Write short note on

a. Culture Specific Diseases

b. Occupational health problems

Answer 3a: Culture Specific Diseases

Considering this distinction between disease and illness, which indicates that there are multiple perspectives on ill health, it follows that there are different kinds of illnesses in different societies. Unique disorders experienced in particular cultures are called culture bound syndromes. Culture bound syndromes are found in all parts of the world, including the US; characteristics of culture bound syndromes are the uniqueness of the condition to particular places, and the recognition by the society of the legitimacy of the illness even though observable clinical causes may not be present. In other words, culture bound syndromes provide another example of the presence of illness (an individual's experience of it) without a disease (biomedical pathogen). Despite the fact that these illnesses might have no pathogenic causes from the perspective of biomedical doctors, it would be inaccurate to think of them as "imaginary."

Many people experience perfectly real symptoms and become ill or regain health within the framework of particular culture bound illnesses. In some extreme cases, people can actually die from culture bound illnesses. One of these cases is called magical death by the researchers who have observed it. It is also known as "voodoo death" (Cannon 1942), having variants in several parts of the world, and is not unique to one cultural group. **Culture bound syndromes** take many forms, and have been documented in all parts of the world. One good example is the eating disorder that we know as anorexia, which is a condition only found in the US and other westernized countries, and found mainly among middle and upper-class girls. Apparently caused by the fear of becoming fat, the condition also appears to be related to anorectics' expression of unique identities, and the mechanism by which they seek to control their lives through the control of the body and food (Banks 1994). The disorder sometimes reaches near starvation proportions, and can even result in death when the body processes begin to shut down from the imposed physical stress placed on the system.

One culture bound syndrome, found throughout Latin America, is called susto, translated into English as "fright." It affects certain segments of the population (poorer, more marginalized) more frequently and signals that the victim is spiritually vulnerable (Baer 2003). Susto can affect children or adults, and the symptoms vary by age or individual, but generally the condition causes people to feel weak and listless. People with susto become pale, and they experience appetite loss and sleep problems. They are also able to identify a particular experience when they were first frightened—such as an accident, a fall, exposure to harmful wind or air, or an encounter with some kind of malignant spirit (usually at night). As a result of this experience the soul becomes separated from the body and this saps the energy of susto-sufferers and sickens them. In these instances, a ritual healer must call back the person's soul, and attempt to reunite it

with the patient. Very often the healer is successful in this endeavor, so that it is uncommon, though possible, to die from susto. Both patients and healers understand that this kind of illness is untreatable by a biomedical doctor or through the use of pharmaceuticals. Instead it must be treated ritually, by calling back the person's soul during a specific ritual, using bells and voices to bring the spirit back.

Answer 3b: Occupational health problems

An "occupational disease" is any disease contracted primarily as a result of an exposure to risk factors arising from work activity. "Work-related diseases" have multiple causes, where factors in the work environment may play a role, together with other risk factors, in the development of such diseases.

The WHO Global Plan of Action on Workers' Health called for improving the diagnosis, reporting and registration of occupational diseases and building capacities for estimating the occupational burden of diseases.

WHO's activities regarding occupational and work-related diseases include:

- Carrying our estimates of the global burden of disease from major occupational risks, such as injuries, airborne exposures, carcinogens, ergonomic stressors, noise and other specific risks.
- Incorporating occupational diseases and their causes in the 11th revision of the International Statistical Classification of Diseases and Related Health Problems.
- Working with ILO to develop diagnostic and exposure criteria for occupational diseases and to enable primary and secondary health care providers to detect and report such diseases.

For example:

- Biological hazards, such as TB, Hepatitis, HIV/AIDS, SARS;
- Chemical hazards, such as, glutaraldehyde, ethylene oxide;
- Physical hazards, such as noise, radiation, slips trips and falls;
- Ergonomic hazards, such as heavy lifting;
- Psychosocial hazards, such as shiftwork, violence and stress;
- Fire and explosion hazards, such as using oxygen, alcohol sanitizing gels; and
- Electrical hazards, such as frayed electrical cords.

4. Elucidate the factors related to Tribal Health and Medicine.

Answer 4: Tribal Health and Medicine

Health is a function, not only of medical care, but also of the overall integrated development of society - cultural, economic, educational, social and political. The health status of a society is intimately related to its value system, philosophical and cultural traditions, and social, economic and political organisation. Each of these aspects has a deep influence on health, which in turn influences all these aspects. Hence, it is not possible to raise the health status and quality of life of people unless such efforts are integrated with the wider effort to bring about overall transformation of a society.

Health development can be integrated with the larger programme of overall development in such a manner that the two become mutually self-supporting. Good health and good society go together. This is possible only when supportive services such as nutrition and improvements in the environment and in education reach a higher level.

The health problems need special attention in the context of tribal communities of India. Available research studies point out that the tribal population has distinctive health problems which are mainly governed by their habitat, difficult terrains and ecologically variable niches. The health, nutrition and medico-genetic problems of diverse tribal groups have been found to be unique and present a formidable challenge for which appropriate solutions have to be found out by planning and evolving relevant research studies.

Primitive tribal groups of India have special health problems and genetic abnormalities like sickle cell anaemia, G-6-PD red cell enzyme deficiency and sexually transmitted diseases. (Commissioner Report for Scheduled Tribe and Scheduled Caste, 1986-87). Insanitary conditions, ignorance, lack of personal hygiene and health education are the main factors responsible for their ill health. Some primitive tribal communities are facing extinction like the Onges, Jarwas and Shompens of Andaman and Nicobar Islands.

Some of the problems as indicated by investigations include

- (a) Endemic diseases like malaria, introduced from outside or otherwise like tuberculosis, influenza, dysentery, high infant mortality and malnutrition,
- (b) Venereal diseases, induced abortion, inbreeding, addiction to opium, custom of eating tubers of DIOSCERA and
- (c) Disturbed sex ratio leading to shortage of women.

The health and nutrition problems of the vast tribal population of India are as varied as the tribal groups themselves who present a bewildering diversity and variety in their socio-economic, socio-cultural and ecological settings. Nutritional anaemia is a major problem for women in India and more so in the rural and tribal belt. This is particularly serious in view of the fact that both rural and tribal women have heavy workload and anaemia has profound effect on psychological and physical health.

5. What are the causes and symptoms of Cardio-vascular diseases?

Answer 5: Causes and Symptoms of Cardio-vascular diseases

Cardiovascular disease is the leading cause of death for both men and women in the world. It is important to learn about your heart to help prevent heart disease.

Coronary Artery Disease

Coronary artery disease (CAD) is atherosclerosis, or hardening, of the arteries that provide vital oxygen and nutrients.

The most devastating sign of coronary heart disease is abrupt, unexpected cardiac arrest.

- Cardiac arrest commonly occurs in people who have had previous heart attacks, but it may occur as the first symptom of heart disease.
- Most people exhibit some symptom or discomfort.
- Symptoms usually occur during exercise or activity because the heart muscle's increased demand for nutrients and oxygen is not being met by the blocked coronary blood vessel.

More common symptoms of coronary heart disease include the following. No one person usually has all of these symptoms.

- Chest pain on exertion (angina pectoris), which may be relieved by rest
- Shortness of breath on exertion
- Jaw pain, back pain, or arm pain, especially on left side, either during exertion or at rest
- Palpitations (a sensation of rapid or very strong heart beats in your chest)
- Dizziness, light-headedness, or fainting
- Weakness on exertion or at rest
- Irregular heartbeat

Silent ischemia is a condition in which no symptoms occur even though an electrocardiogram (ECG, or heart tracing) and/or other tests show evidence of ischemia. Arteries may be blocked 50% or more without causing any symptoms.

The other heart diseases include

Abnormal Heart Rhythms

The heart is an amazing organ. It beats in a steady, even rhythm; about 60 to 100 times each minute (that's about 100,000 times each day). But, sometimes your heart gets out of rhythm. An irregular or abnormal heartbeat is called an arrhythmia. An arrhythmia (also called a dysrhythmia) can involve a change in the rhythm, producing an uneven heartbeat, or a change in the rate, causing a very slow or very fast heartbeat.

Heart failure

The term "heart failure" can be frightening. It does not mean the heart has "failed" or stopped working. It means the heart does not pump as well as it should. This then leads to salt and water retention, causing swelling and shortness of breath. The swelling and shortness of breath are the primary symptoms of heart failure.

Heart failure is a major health problem in the U.S., affecting nearly 5 million Americans. About 550,000 people are diagnosed with heart failure each year. It is the leading cause of hospitalization in people older than 65.

Heart Valve Disease

The heart valves lie at the exit of each of your four heart chambers and maintain one-way blood-flow through your heart. Examples of heart valve problems include mitral valve prolapse, aortic stenosis, and mitral valve insufficiency.

Congenital Heart Disease

Congenital heart disease is a type of defect in one or more structures of the heart or blood vessels that occurs before birth. It affects about eight out of every 1,000 children. Congenital heart defects may produce symptoms at birth, during childhood, and sometimes not until adulthood. Heredity may play a role, as well as exposure to the fetus during pregnancy to certain viral infections, alcohol, or drugs.

6. Write short note on

a. Problems of the Aged

b. Anthropology and Biomedicine

Answer 6a: Problems of the Aged

Old age as a period is characterized by economic insecurity, ill health, loneliness, resistance to change and failing physical and mental power. When the aged lose their spouse, friend, job, income or health that cannot be replaced. It brings in them intolerance, rigidity of

attitudes, selfishness and suspicion. This shift in their psychological make-up makes their living and adjustment in a society more problematic.

Old age has emerged a social problem not only due to the rising proportion of the aged people in the population but also to a larger extent due to the rapid changes that have taken place in the social structures which are undergoing changes in industrial societies.

The most widespread biological condition affecting those 65+ years age group and older is coronary heart disease, followed by stroke, cancer, pneumonia and the flu. Accidents, especially falls that result in hip fractures, are also unfortunately common in the elderly.

A lot of our elders are coping with at least one of the following conditions, and many are dealing with two or more of the following:

Heart conditions (hypertension, vascular disease, congestive heart failure, high blood pressure and coronary artery disease), Dementia, including Alzheimer's disease, Depression Incontinence (urine and stool), Arthritis, Osteoporosis, Diabetes, Breathing problems, Frequent falls, which can lead to fractures, Parkinson's disease, Cancer, Eye problems (cataracts, glaucoma, Macular Degeneration).

- As the body changes, a slowed reaction time, which is especially important when judging if a person can drive.
- Thinner skin, which can lead to breakdowns and wounds that don't heal quickly
- A weakened immune system, which can make fighting off viruses, bacteria and diseases difficult
- Diminished sense of taste or smell, especially for smokers, which can lead to diminished appetite and dehydration

Answer 6b: Anthropology and Biomedicine

Biomedicine is a branch of medical science that applies biological and other natural-science principles to clinical practice. The branch of anthropology that applies the principles of science, especially that applies to biology and physiology. Biomedicine also can relate to many other categories in health and biological related fields.

It includes many biomedical disciplines and areas of specialty that typically contain the "bio-" prefix such as:

- molecular biology, biochemistry, biophysics, biotechnology, cell biology, embryology,
- nanobiotechnology, biological engineering, laboratory medical biology,
- cytogenetics, genetics, gene therapy,
- bioinformatics, biostatistics, systems biology,

- microbiology, virology, parasitology,
- physiology, pathology,
- toxicology, and many others that generally concern life sciences as applied to medicine.

Medical biology is the cornerstone of modern health care and laboratory diagnostics. It concerns a wide range of scientific and technological approaches: from an in vitro diagnostics to the in vitro fertilization, from the molecular mechanisms of a cystic fibrosis to the population dynamics of the HIV virus, from the understanding molecular interactions to the study of the carcinogenesis from a single-nucleotide polymorphism (SNP) to the gene therapy.

Medical biology based on molecular biology combines all issues of developing molecular medicine¹ into large-scale structural and functional relationships of the human genome, transcriptome, proteome, physiome and metabolome with the particular point of view of devising new technologies for prediction, diagnosis and therapy.

Biomedicine involves the study of physiological processes with methods from biology, chemistry and physics. Approaches range from understanding molecular interactions to the study of the consequences at the in vivo level. These processes are studied with the particular point of view of devising new strategies for diagnosis and therapy.

7. Explain the major issues in International Health.

Answer 7: International Health

The term global health has been replaced with such earlier names as *international health* and *tropical medicine*. These labels reflect the evolution in scale and scope of the subject and of the work of diverse agencies, including CDC, since the 1960s and of their broader mission and activities. The concept of global health has evolved during the past 50 years from a narrow view of ecologically and geographically restricted health challenges to a broad and comprehensive approach to health in the world as a whole.

Tropical medicine developed in the late 19th and early 20th centuries, an era when many countries of the Southern Hemisphere were colonized by countries of the Northern Hemisphere. It focused on diseases associated with warm climates, many of which were parasitic (e.g., malaria, sleeping sickness, and schistosomiasis). Together with epidemic-prone viral or bacterial diseases, such as yellow fever, typhoid, and dysentery, these tropical diseases were recognized early on as common causes of death and major threats to public health. To prevent and treat these diseases, training in tropical medicine became a priority for institutes preparing northern professionals for overseas service.

The term *international health* became widely used after colonial independence and was accompanied by a change in focus toward aid and humanitarian assistance to countries of the developing world. Infectious and parasitic diseases, maternal and child health, and nutrition were the most common components of these early international health efforts.

Global health now encompasses tropical medicine and international health but extends beyond them in diverse ways. It broadens the agenda internationally and considers health at the global level. For example, it includes strengthening and supporting systems required to implement health interventions and mechanisms for coordination of public health activities. It includes health education and prevention and extends to oversight of clinical services appropriate for the local impact of disease.

Global health recognizes the reality of globalization and prioritizes public health challenges that transcend individual country boundaries and require collective action, such as threats from infectious agents like HIV, but also from environmental and climate change; rapid and widespread urbanization; and changes in socioeconomic conditions, diet, and lifestyles. Global health is guided by epidemiologic science and research and has as core values concepts of justice, decency, human rights, and health equity. It also recognizes the overwhelming relevance and importance of policy, politics, and diplomacy.

As its name suggests, the Global Fund to Fight AIDS, Tuberculosis, and Malaria was developed to address these three diseases that have so disproportionately affected global health, particularly in sub-Saharan Africa. In addition, the President's Emergency Plan for AIDS Relief (PEPFAR), the largest bilateral health program ever mounted, has contributed an unprecedented U.S.\$32 billion thus far to the fight against HIV/AIDS, including against HIV-associated TB. Currently, approximately 5.2 million HIV-infected persons in low- and middle-income countries are accessing antiretroviral therapy compared with <400,000 in 2003. Despite remaining the leading infectious disease challenge in global health, the HIV/AIDS epidemic has stabilized, and investments in addressing it are beginning to pay visible dividends in other spheres of health.

Important demographic changes during the past 50 years have resulted from changing trends in child, maternal, and adult death rates. These rates reflect changing patterns of disease secondary to economic development and specific public health interventions. These three broad themes provide the framework for CDC's current work around the globe: enhancing public health capacity, increasing health security, and maximizing health impact from programs and interventions.

8. Discuss the influences of Social Inequalities on Health.

Answer 8: Social Inequalities on Health.

The gulf between the poor and rich of the world is widening. Within the UK, the financial gap between the wealthy and the poor is not narrowing and differences in health between social classes I and V are becoming greater. Poverty and social inequality have direct and indirect effects on the social, mental and physical well-being of an individual. It is important to note that poverty and inequality are closely linked. Wilkinson (1997) believed that income inequality produces psychosocial stress, which leads to deteriorating health and higher mortality over time.

However, the association between income inequality and life expectancy is slowly disappearing and is no longer widely accepted. Those who live in deprived communities, where there is under-investment in the social and physical infrastructure, experience poor health, resulting in higher mortality for those of lower socio-economic class. The effects of income inequality also spill over into society, causing stress, frustration and family disruption, which then increase the rates of crime, homicide and violence.

There are several obstacles, deficits and threats to health inherent in poverty. It is the poor who are exposed to dangerous environments, who (if employed) often have stressful, unrewarding and depersonalizing work, who lack the necessities and amenities of life and who, because they are not part of the mainstream of society, are isolated from information and support. The inverse association between socio-economic level and risk of disease is one of the most pervasive and enduring observations in public health. It has been known for a long time that the lowest-income groups are more likely to suffer negative effects of 'risky' health behaviors than their less poor counterparts. These 'maladaptive' behaviors are not necessarily undertaken with a harmful intent, but may be regarded as coping behaviors to provide comfort or relief from stressful lives.

Moreover, people in lower socio-economic classes by virtue of their life circumstances are exposed to more stressors, and with fewer resources to manage them and greater vulnerability to stressors, they are doubly victimized. Poverty is associated with many long-term problems, such as poor health and increased mortality, school failure, crime and substance misuse. The relationship between occupational class and mortality is evident from a survey in the 1970s, which showed that the mortality rate among men aged 20–64 years was almost twice as high for those in class V as for those in class I, and by the early 1990s it was almost three times as high.

Increasing evidence from scientists the world over indicates that many health outcomes from life expectancy to infant mortality and obesity are linked to the level of economic inequality within a given population. Greater economic inequality appears to lead to worse health conditions.