jai sri gurudev
Sri Adichunchanagiri Shikshana Trust [R]
Adichunchanagiri Institute of Medical Sciences
Department of Community Medicine

Cohort

Biannual Departmental Newsletter

Contents:

EDITORIAL

Public health challenges: India is presently in a state of transition- economically, demographically and epidemiologically, in terms of health. While the last decade has seen remarkable economic development particularly in terms of gross domestic product (GDP)growth rate, unfortunately this progress is accompanied by growing disparities between the rich and the poor. There is strong evidence to suggest that this income inequality or disparity between the different socio-economic classes is associated with worse health outcomes. Widening the gap between the rich and the poor has damaging health and social consequences. While financial inclusion and social security measures are being implemented by the government to bridge economic inequalities, health sector too must ensure that health disparities between and among social and economic classes are also addressed adequately.

The unprecedented demographic changes underway are likely to contribute to substantially increased labour force. However, it will benefit the country only if the population is healthy. The country at present suffers from the triple burden of diseases- the unfinished agenda of infectious diseases, the challenge of non-communicable diseases, linked with lifestyle changes and emergence of new pathogens causing epidemics and pandemics. In addition, the health infrastructure is already overstretched and needs to be strengthened to enable it confront these challenges in 21st century.

Dr Basavaraj M Ingalgeri
Professor and Head
Department of Community Medicine

REPORT ON WORLD HEALTH DAY NATIONAL LEVEL QUIZ

Every year we celebrate world health day in our institution by organizing various events and health education programs. This year, we got an opportunity to be a part of nationwide quiz organized by IAPSM.

Once we got the date and timings of the elimination round and final quiz, we announced regarding the same in the college after obtaining permission from our Principal. There was an excellent response for the quiz from our college, with a total of 36 teams getting enrolled for the elimination round. Elimination round was conducted on 5th April 2016 at 2.30pm. all 36 teams participated, each member of the team answered the questionnaire separately. Finally four teams who had aggregate high score were selected for the final quiz.

The main quiz was held on 7th april 2016 at 2.30pm. The program was inaugurated by our head of the department, Dr. Basavaraj Ingalgere. He welcomed the gathering and gave a brief introduction about the quiz and called upon the four teams who were qualified for the final round. The quiz was conducted by Dr.Sheethal MP, after giving the instruction about the quiz, the four rounds were started. There were around 86 people who witnessed the quiz which included students of various terms. All the department faculty (Dr Shashikiran, Dr Radha R, Dr Shashikanth Krishna, Dr Shashank KJ, Dr Gagan S and Dr Chethan TK) and medico-social workers (Mr Prakash and Mr Yathish) actively participated in smooth conduct of the quiz.

At the end of the quiz prize distribution was done by The Principal. Cash prize of Rs. 1500 with certificate was awarded for winners, 1000 Rs. with certificate for second winners and the rest of the team got certificates.

Winners of quiz	
Megharaj	6th term
Santhosh	6th term
Kottraih	6th term

Dr Shashikantha S K,
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Department of Community Medicine

THE RESURGENCE OF A NEGLECTED DISEASE: ZIKA VIRUS INFECTION

Introduction

Zika Virus(ZIKV) is a member of the Spondweni Sero-complex of the genus Flavivirus and family Flaviviridae. Other mosquito borne viruses of same family are yellow fever, dengue, St.louis encephalitis, West nile and Japanese encephalitis. In North-East Brazil, an alert was issued on May 7, 2015, by Pan American Health Organization about potential ZIKA transmission. Between February 1, 2014 and January 17, 2016 around 18 countries and territories in the Americas have confirmed autochthonous circulation of ZIKA. Microcephaly of the newborn is one of the major complications of ZIKA infection during pregnancy. As of epidemiological week 1 of 2016, there were 3530 microcephaly cases recorded including 46 deaths in Brazil compared to an average of 163 microcephaly cases between 2010 and 2016.

History

The literal meaning of Zika is "Overgrown" in the Luganda language spoken by the natives of Uganda. It was first isolated from the overgrown lush forests of Uganda called "Zika Forest" from a sentinel rhesus 766 macaque monkey in 1947. A year later in 1948, it was isolated from Aedes africanus mosquitoes in the same forest during research on jungle yellow fever. Serological studies showed that human could also be infected. Transmission of ZIKA from Aedes aegypti mosquitoes to mice and monkey was demonstrated in the laboratory in 1956. Later on ZIKA was also isolated from humans in Nigeria in 1968. After that serological studies and virus isolations have demonstrated that the virus has a wide geographic distribution, including Eastern and Western Africa, the Indian Subcontinent, South east Asia, and most

recently Micronesia. Subsequently, an outbreak broke out in French Polynesia with 10,000 cases in 2013 out of which approximately 70 cases showed neurological (Guillian Barre's syndrome, meningoencephalitis) or autoimmune (thrombocytopenic purpura, Leukopenia) complications. These complications are due to primary or secondary co-infection with other Flavivirus, especially dengue virus. Vector A. aegypti and A.polynesiensis were responsible for this transmission. Sporadic cases of ZIK-V infection are also reported since last few years in other countries such as Thailand, Cambodia, Indonesia and New Caledonia. In February 2014 in Chile, a case of ZIK-V infection was detected which coincided with the presence of other foci of transmission in the Pacific islands: French Polynesia, New Caledonia and the Cook Islands.

Clinical manifestations

Transmission of ZIK-V is due to the bite of an infected mosquito of the genus Aedes in the urban areas(A.aegypti). Disease symptoms appear after an incubation period of 3-12 days. Infection may present as asymptomatic or with the moderate clinical picture. Symptomatic cases appear acutely with fever, non-purulent conjunctivitis, headache, myalgia, arthralgia, asthenia, maculopapular rash, edema in lower limbs and less frequently retro-orbital pain, anorexia, vomiting, diarrhea or abdominal pain. These symptoms are self-limiting and lasts for 4-7 dys. In pregnant patients, ZIK-V infection can lead to miscarriages an in newborn it may cause microcephaly, cerebral calcifications, macular neuroretinal atrophy and loss of foval reflex.

Lab detection

The immunofluoroscence or enzyme-linked immunosorbent assay is used to detect specific IgM or IgG antibodies against ZIK-V. These tests are positive after 5-6 days of infection.

Case management:

Symptomatic treatment should be given after excluding other severe conditions such as dengue, malaria and bacterial infections. No vaccine or specific antiviral treatment for ZIK-V infection is available. Treatment includes, symptomatic and supportive care, use of paracetamol to relive fever and antihistamines to control pruritus. Patienys should drink plenty of fluids to replenish fluid lost from sweating, vomiting and other insensible losses. Recently, an Indian biotech firm from Hyderabad has claimed to produce two candidate vaccines for ZIK-V, which awaiting animal and human trials.

Patient isolation

Patients should avoid being bitten by A.mosquitoes during the 1st week of illness (viremic phase). Staying under bed net or remaining in a place with intact window/door screens is highly recommended. Physicians and healthcare workers who attend to ZIKV infected patients should protect themselves against mosquito bite by using insect repellant IR3535 or Icaridin.

Prevention and Control measures

An effective and operational integrated management strategy for the prevention and control of dengue provides basis for adequate preparedness to ZIKV. Integrated vector management should be instituted to prepare against ZIKV. Potassium permanganate, either and temperature >60 deg C are more effective against the ZIKV than 10% ethanol. Application of repellat containing DEFT, IR3535 or Iricaridin to exposed skin.

Travelers

Travelers should be made aware of the symptoms of dengue, Chikungunya or ZIKV in order to assist them in identifying it promptly during their trip.

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PUBLICATIONS BY STAFF & PG STUDENTS

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4. K SS, P SM. Prevalence of depression among post graduate residents in a tertiary health care institute, Haryana. Int J Med Sci Public Health. (2016), [cited October 03, 2016]; 5(10): 2139-2142.doi:10.5455/ijmsph.2016.16032016434.
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11. Shashank K J, Angadi MM. Gender disparity in health and nutritional status among under-five children in a rural field practice area of Shri BM Patil Medical College. Int J Med Sci Public Health 2016;5:217-220.

12. Shashank K J, Chethan T K .HIV/AIDS stigma and knowledge among high school students in a rural area of Karnataka. National Journal of Research in Community Medicine.2016;5(1):69-75.

13. Shashank K J, Chethan TK. A Study on Breastfeeding Practices among Mothers in Rural Area of Mangalore District: A Cross-sectional Study. Ntl J Community Med 2016; 7(2):134-137.

14. Shashank KJ, Gowda P, Chethan TK . A Crosssectional Study to Asses the Eating Disorder among Female Medical Students in a Rural Medical College of Karnataka State. Ntl J Community Med 2016; 7(6):524-527.

OTHERS

1. Dr Shashikiran M, Associate Professor, attended Revised Basic Course Workshop in Medical Technologies including ATTCOM module conducted by St John's Medical College as Faculty from 27 – 30 Jun 2016.
2. Dr Shashank, Assistant Professor was posted as External Evaluator of RNTCP Programme of Hassan District.

MENTAL HEALTH AND OLDER ADULTS

Key facts

- Globally, the population is ageing rapidly. Between 2015 and 2050, the proportion of the world's population over 60 years will nearly double, from 12% to 22%.
- Mental health and emotional well-being are as important in older age as at any other time of life.
- Neuropsychiatric disorders among the older adults account for 6.6% of the total disability (DALYs) for this age group.
- Approximately 15% of adults aged 60 and over suffer from a mental disorder.

Older adults, those aged 60 or above, make important contributions to society as; family members, volunteers and as active participants in the workforce.

While most have good mental health, many older adults are at risk of **developing mental disorders, neurological disorders or substance use problems as well as other health conditions such as diabetes, hearing loss, and osteoarthritis.**

Global Scenario:

The world's population is ageing rapidly. Between **2015 and 2050**, the proportion of the world's older adults is estimated to almost double from about **12% to 22%.**

In absolute terms, this is an expected increase from **900 million to 2 billion** people over the age of 60. Older people face special physical and mental health challenges which need to be recognized.

Over 20% of adults aged > 60years suffer from a mental or neurological disorder (excluding headache disorders) and 7% of all DALYs among over 60s is attributed to neurological and mental disorders.

These disorders in the elderly population account for 17.4% of Years Lived with Disability (YLDs). The **most common** neuropsychiatric disorders in this age group are **dementia and depression.**

Anxiety disorders affect 4% of the elderly population, substance use problems- 1% and around a quarter of deaths from self-harm are among those aged 60 or above.

Substance abuse problems among the elderly are often overlooked or misdiagnosed.

Mental health problems are under-identified by health-care professionals and older people themselves, and the stigma surrounding mental illness makes people reluctant to seek help.

Indian Scenario:

India is in a phase of demographic transition. There has been a sharp increase in the number of elderly persons between 1991 and 2001 and it has been projected that by the year 2050, the number of elderly people would rise to about 324 million.

India has thus acquired the label of "**an ageing nation**" with **8%** of its population being more than 60 years old. The demographic transition is attributed to the decreasing fertility and mortality rates due to the availability of better health care services. The reduction in mortality is higher as compared with fertility.

There has been a sharp decline in the crude death rate from 28.5 during 1951-1961 to 8.4 in 1996; while the crude birth rate for the same time period fell from 47.3 to 22.8 in 1996. [2]

Over the past decades, India's health program and policies have been focusing on issues like population stabilization, maternal and child health, and disease control. However, current statistics for the elderly in India gives a prelude to a new set of medical, social, and economic problems that could arise if a timely initiative in this direction is not taken by the program managers and policy makers.

Among the population > 60 years of age,

- 10% suffer from impaired physical mobility and
- 10% are hospitalized at any given time, both proportions rising with increasing age.
- In the population > 70 years of age, more than 50% suffer from one or more chronic conditions.

The chronic illnesses usually include hypertension, coronary heart disease, and cancer.

According to Government of India statistics,

- 1/3rd suffer – CVD
- 10% mortality – from Respiratory disorders,
- 10% mortality – infections including TB
- <4% - Neoplasm accounts for 6% and accidents, poisoning, and violence constitute less than 4% of elderly mortality with more or less similar rates for nutritional, metabolic, gastrointestinal, and genito-urinary infections.

Elderly people are highly prone to mental morbidities due to ageing of the brain, problems associated with physical health, cerebral pathology, socio-economic factors such as breakdown of the family support systems, and decrease in economic independence.

The mental disorders that are frequently encountered include dementia and mood disorders. Other disorders include neurotic and personality disorders, drug and alcohol abuse, delirium, and mental psychosis.

The rapid urbanization and societal modernization has brought in its wake a breakdown in family values and the framework of family support, economic insecurity, social isolation, and elderly abuse leading to a host of psychological illnesses. In addition, **widows are prone to face social stigma and ostracism.** The socio-economic problems of the elderly are **aggravated by factors such as the lack of social security and inadequate facilities for health care, rehabilitation, and recreation**. Also, in most of the developing countries, pension and social security is restricted to those who have worked in the public sector or the organized sector of industry. Many surveys have shown that retired elderly people are confronted with the problems of financial insecurity and loneliness.

According to 60th National Sample Survey (January-June 2004)**, the old age dependency ratio was found to be higher in rural areas (125) than in urban areas (103).**

- With regard to the state of economic development, a higher number of males in rural areas, 313 per 1000, were fully dependent as compared with 297 per 1000 males in urban areas.

- For the aged female, an opposite trend was observed (700 per 1000 for females in rural areas compared with 760 for females in urban areas).
- Overall 75% of the economically dependent elderly are supported by their children and grandchildren. Despite this, the elderly still tend to suffer from psychological stress
- Over 81% of the elderly are having increasing stress and psychological problems in modern society, while 77.6% reportting about mother-in-law/daughter-in-law conflicts being on the increase.

The elderly are also prone to abuse in their families or in institutional settings.

This includes

- physical abuse (infliction of pain or injury),
- psychological or emotional abuse (infliction of mental anguish and illegal exploitation), and
- sexual abuse.

A study that examined the extent and correlation of **elder mistreatment** among 400 community-dwelling older adults aged 65 years and above in Chennai found the prevalence rate of mistreatment to be **14%**. **Chronic verbal abuse** was the most common followed by **financial abuse, physical abuse, and neglect**. A significantly higher number of women faced abuse as compared with men; adult children, daughters-in-law, spouses, and sons-in-law were the prominent perpetrators.

The Central and State governments have already made efforts to tackle the problem of economic insecurity by launching policies such as the *National Policy on Older Persons, National Old Age Pension Program, Annapurna Program*, etc. However, the benefits of these programs have been

questioned several times in terms of the meagre budget, improper identification of beneficiaries, lengthy procedures, and irregular payment.

Risk factors for mental health problems among older adults

Multiple social, psychological, and biological factors determine the level of mental health of a person at any point of time. As well as the typical life stressors common to all people, many older adults lose their ability to live independently because of **limited mobility, chronic pain, frailty or other mental or physical problems, and require some form of long-term care.**

In addition, older people are more likely to experience events such as bereavement, a drop in socioeconomic status with retirement, or a disability. All of these factors can result in *isolation, loss of independence, loneliness and psychological distress* in older people.

Mental health has an impact on physical health and vice versa. For example, older adults with physical health conditions such as heart disease have higher rates of depression than those who are medically well. Conversely, untreated depression in an older person with heart disease can negatively affect the outcome of the physical disease.

Older adults are also vulnerable to elder abuse - including physical, psychological, emotional, financial and material abuse; abandonment; neglect; and serious losses of dignity and respect. Current evidence suggests that 1 in 10 older people experience elder abuse. Elder abuse can lead not only to physical injuries, but also to serious, sometimes long-lasting psychological consequences, including depression and anxiety.

Dementia and depression among the elderly as public health issues

Dementia

Dementia is a syndrome in which there is deterioration in memory, thinking, behaviour and the ability to perform everyday activities. It mainly affects older people, although it is not a normal part of ageing.

50 million people worldwide are living with dementia. The total number of people with dementia is projected to increase to 80 million in 2030 and 130 million in 2050, with majority of sufferers living in low and middle income countries(LMIC).

There are significant social and economic issues in terms of the direct costs of medical, social and informal care associated with dementia. Moreover, physical, emotional and economic pressures can cause great stress to families. Support is needed from the health, social, financial and legal systems for both people with dementia and their caregivers.

Depression

Depression can cause great suffering and leads to impaired functioning in daily life. Unipolar depression occurs in 7% of the general elderly population and it accounts for 6% of YLDs among over 60 year olds.

Depression is both underdiagnosed and undertreated in primary care settings. Symptoms of depression in older adults are often overlooked and untreated because they coincide with other problems encountered by older adults.

Older adults with depressive symptoms have poorer functioning compared to those with chronic medical conditions such as lung disease, hypertension or diabetes.

Depression also increases the perception of poor health, the utilization of medical services and health care costs.

Treatment and care strategies

It is important to prepare health providers and societies to meet the specific needs of older populations, including:

- training for health professionals in care for older persons;
- preventing and managing age-associated chronic diseases including mental, neurological and substance use disorders;
- designing sustainable policies on long-term and palliative care; and
- developing age-friendly services and settings.

In India, Strategies to Improve the Quality-of-Life of the Elderly: The Role of the Health Care System

❖ **Health promotion**

The mental health of older adults can be improved through promoting Active and Healthy Ageing. Mental health-specific health promotion for older adults involves creating living conditions and environments that support wellbeing and allow people to lead healthy and integrated lifestyles. Promoting mental health depends largely on strategies which ensure the elderly have the necessary resources to meet their basic needs, such as:

- providing security and freedom;
- adequate housing through supportive housing policy;
- social support for older populations and their caregivers;
- health and social programmes targeted at vulnerable groups such as those who live alone and rural populations or who suffer from a chronic or relapsing mental or physical illness;
- programmes to prevent and deal with elder abuse; and

- community development programmes.

❖ **Interventions**

Prompt recognition and treatment of mental, neurological and substance use disorders in older adults is essential. Both psychosocial interventions and medicines are recommended.

There is no medication currently available to cure dementia but much can be done to support and improve the lives of people with dementia and their caregivers and families, such as:

- early diagnosis, in order to promote early and optimal management;
- optimizing physical and psychological health and well-being;
- identifying and treating accompanying physical illness;
- detecting and managing challenging behavioural and psychological symptoms; and
- providing information and long-term support to caregivers.

Mental health care in the community

Good general health and social care is important for promoting older people's health, preventing disease and managing chronic illnesses. *Training all health providers in working with issues and disorders related to ageing is therefore important*.

Effective, community-level primary mental health care for older people is crucial.

It is equally important to focus on the long-term care of older adults suffering from mental disorders, as well as to provide caregivers with education, training and support.

An appropriate and supportive legislative environment based on internationally accepted human rights standards is required to ensure the highest quality of services to people with mental illness and their caregivers.

WHO response

- WHO's programmes for Active and Healthy Ageing have created a global framework for action at country level.
- WHO supports governments in the goal of strengthening and promoting mental health in older adults and to integrate effective strategies into policies and plans.
- WHO recognizes dementia as a public health challenge and has published the report, "Dementia: a public health priority", to advocate for action at international and national levels. Dementia, along with depression and other priority mental disorders are included in the WHO Mental Health Gap Action Programme (mhGAP). This programme aims to improve care for mental, neurological and substance use disorders through providing guidance and tools to develop health services in resource poor areas.
- WHO organized the First Ministerial Conference on Global Action Against Dementia in March 2015, which fostered awareness of the public health and economic challenges posed by dementia, a better understanding of the roles and responsibilities of Member States and stakeholders, and led to a "Call for Action" supported by the conference participants.

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