



Mental health & non communicable diseases – an introduction

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Comorbidity a major challenge for health services

Prevalence of comorbidity has increased rapidly and continues to grow, but underestimated

- Increase in life expectancy
- Changes in life style
- Environmental factors – air pollution
- Rapid urbanization
- Medical factors, including iatrogenic disease
- Stigma of mental illness makes patients hide
- Fragmentation of medical services which result in late recognition of comorbid diseases and failure to treat them timely

Unique issues related to comorbidity

- The prevalence and incidence of comorbidity of physical and mental disorders grows with age and successes of medicine saving lives, but not curing diseases
- The problems are not simple addition related to diseases involved, as they worsen the prognosis of all diseases involved to a significantly greater extent, their complications more frequent and their treatment more complicated.
- Co morbidity is more common than single disorders in clinical practice.

Unique issues related to comorbidity

- No medical discipline has a clear strategy of action concerning comorbidity of disease which does not belong to their speciality, which accompanies a disease of their speciality, at primary, secondary or tertiary level or in local, national or international health systems.
- The current trend of super specialization and fragmentation of medicine makes matters worse.
- Primary health care professionals are aware of the problems related to comorbidity, however, most have not received any specific training in the use of skills in dealing with comorbidity.
- Co morbidity ignored in
 - Care
 - Education
 - Research – due to confounding variables

Severe Mental Disorders and Non Communicable Diseases.

Mental illness is a risk factor for NCDs;

- its presence increases the chance that an individual will also suffer from one or more chronic illnesses.
- individuals with mental health conditions are less likely to seek help for NCDs, and
- symptoms may affect adherence to treatment as well as prognosis.
- The major modifiable risk factors for NCD, such as physical inactivity, unhealthy diet, tobacco use and harmful use of alcohol, are exacerbated by poor mental health.

The excess and early deaths are not primarily due to suicide, but to physical diseases that

- occur more frequently,
- are not prevented adequately,
- are not identified early enough and
- are not treated effectively.
- This disparity is not confined to some regions and countries, but seems to be a global reality.

Interplay of multiple risk factors & diseases

	NCD risk factor	Actual NCD	Communicable Disease	Mental Health
NCD risk factor	Person who smokes & is Obese	Person with Diabetes who smokes	Obese person with HIV/AIDS	Smoking & Alcohol consumption in SMI
Actual NCD		Person with Diabetes & Hypertension	Person with Diabetes & TB	Diabetes & Depression or SMI
Communicable Disease			Person with HIV/AIDS & TB	Person with HIV/AIDS & mental disorders

The 'syndemic' framework

- The term syndemic refers to synergistic health problems that affect the health of a population within the context of persistent social and economic inequalities.
- Syndemic theory has been applied to **comorbid health problems** in poor immigrant communities in high-income countries with limited translation, and in low-income or middle-income countries.

More medical illness in psychiatric patients

- People with mental health problems ignore physical health
- Do not follow healthy lifestyle, hygiene & disease prevention.
- Deprivation, discrimination & poverty
- Abuse drugs, alcohol & substances, tobacco more in person with mental health problem
- Iatrogenic & adverse drug effects of psychotropic medications

Aetiology of psychiatric disorder – an example of cancer

- Direct biological effect of the medical disease
- Psychological reaction to disease
- Due to treatment of the medical condition – medications, surgery, radiotherapy
- Having one condition makes a person more likely to develop another.
- Unrelated to each other, co existent
- Common cause for both disorders

Under-recognition of depression in cancer

- Poor relationships & communication between staff & patient. Tacit collusion that mental illness will vanish once physical illness gets cured, hence focus on physical illness
- Patients reluctant to voice emotional complaints for fear of seeming weak or ungrateful ; stigma
- Professionals reluctant to inquire - lack of time,
- Lack of skill, [? lack of will],
- Emotional self protection
- Attributing physical symptoms to physical [medical] illness.
- Assuming emotional and psychological distress is inevitable and untreatable

The presence of depression affects survival in cancer patients

- A study of breast cancer patients documented that, at 5-year follow-up, women with higher levels of depression had a significantly reduced likelihood of survival (Watson et al., 1999).
- In a population-based study with over 10,000 participants, cancer patients with depression had a significantly greater risk of death at 8-year follow-up than those who were not depressed (Onitilo et al., 2006).
- A mediator of the relationship between depression and cancer survival is non-adherence to treatment, which is higher when patients are depressed (DiMatteo et al., 2000).

Ways by which depression affects adherence to anti-cancer treatments

- Inability to integrate cancer diagnosis and treatment information
- Reduced motivation towards self-care; difficulty planning
- Negative health beliefs and pessimism about treatment
- Avoidance of health-promoting behaviors
- Social isolation and withdrawal
- Reduced use of community resources
- Greater difficulty tolerating treatment side effects

When the comorbid conditions
camouflage each other
The case of somatization in cancer

Somatization in Cancer

- Somatic concern and preoccupation noted in about 40%
- Somatic symptoms in cancer are inter related and
- One somatic symptom causing other somatic symptoms, e.g., pain causing fatigue, and
- Patients may tolerate somatic symptoms differentially

Bodily symptoms present as -

- Unexplained somatic symptoms,
- Persistent fatigue
- Tiredness in disease free cancer patients
- Pain
- Abnormal sensations & many more

Etiology of Somatization in Cancer

- Both organic & psychological factors
- Anxiety and depressive disorders
- Experiences of somatic symptoms may be exaggerated due to emotional factors
- Due to somatization, physical complaints may be increased or persistent
- Secondary alexithymia
- Manifestation of illness behaviour

Clinical Implications of Somatization in Cancer

- difficulty in deciding cause of symptoms –
 - cancer,
 - chemotherapy, radiotherapy, surgery
 - psychiatric disorder, illness behaviour
 - a combination of these,
- somatic symptoms of depression overlap those of cancer.
- somatic symptoms magnify disability from cancer,
- interfere with treatment adherence and decisions, cause delay in recovery,
- result in poor outcome and recurrence,
- reduce overall well being and quality of life
- Respond to Antidepressants & CBT

Causes of mortality in persons with SMI

Setting	Causes of mortality	Study
Rural population – south India (Schizophrenia)	Cardiovascular, respiratory – 50% of cases	Bagewadi et al, 2016
Hospital setting (45 % with SMI)	Cardiovascular (43.6%), respiratory (14.9%)	Shinde et al, 2014
Addiction patients of a hospital	Road traffic accidents, head injury	Unpublished data from NIMHANS

Metabolic syndrome in schizophrenia

Setting - patients	Pooled Prevalence
Community based studies	10.81 %
Hospital based	33.5 %
Drug naïve	11.86 %

Meta-analysis of 14 Indian studies
(Ganesh et al, 2016)

31.8% of the patients with schizophrenia in a south Indian rural population compared to 28.9% of general population controls were diagnosed to have Metabolic syndrome

(Rawat et al, 2017)

Metabolic syndrome in bipolar disorder

- 40 % of treated bipolar patients of a north Indian hospital
(Grover et al, 2012)
- Bipolar patients (55 %) > schizophrenia patients (34 %) > controls (6 %)
(Grover et al, 2013)
- 6 months of follow-up the prevalence of Metabolic syndrome increased by 8% and 9.4% in the bipolar and the schizophrenia groups
(Malhotra et al, 2013)
- Higher proportion of prevalence of Insulin Resistance in Bipolar drug naive cases vs. controls (26/55 vs. 2/25)
(Guha et al, 2014)

Infectious diseases - STI

Patients	Sero-positivity	Study
Newly admitted patients (n=948) (71 % with SMI) - NIMHANS	HIV (2%), chlamydia (10%), Hepatitis B (3%), syphilis (3%)	(Carey et al, 2007)
Out-patients at CMC Vellore	HIV - 1.03% (national average – 0.7 %, local population – 1.8%)	(Tharyan et al, 2003)
Institutionalized patients with psychosis (n=100), Bareilly	Australia antigen - 11 % Controls – 2 %	(Chaudhury et al, 1994)
Injecting Drug Users	HIV - 9.9%	Integrated Behav & Biol Surveillance (IBBS)-2014-15

Service users at NIMHANS

Patients with SMI	Dyslipidemia	Diabetes	Hypertension	Obesity
Inpatients (n=101)	13	6	4	14
Outpatients (n=50)	7	8	5	8
Day-care users (n=50)	13	7	7	13
Chronic inpatients (n=36)	17	11	14	5

Service users at NIMHANS

Patients with SMI	Nutritional deficiencies	Hypothyroidism	Hepatitis B	Tuberculosis	Cancer
Inpatients (n=101)	41- B12 17-anemia	6	-	-	-
Outpatients (n=50)	7- B12 3-anemia	2	-	-	1 – ca breast
Day-care users (n=50)	11-B12 4-D 3- anemia	13	-	1	2 – ovarian cysts
Chronic inpatients (n=36)	4-B12 2-D 7- anemia	11	5	3	1-Ovary 2 men - Leukoplakia

A look at multimorbidities

- Cases diagnosed as depression [200]
 - Comorbid psychiatric disorder 30%
 - Tobacco, alcohol 11%
 - More than 2 psychiatric disorders 10%
 - Comorbid medical disorder 32%
 - Hypothyroid [10%] DM & HT [7% each]
 - More than 2 medical disorders 12%
- Cases diagnosed as somatoform disorders [100]
 - Comorbid medical disorder 25%
 - Hypothyroid [5%] DM [5%] & HT [6%]
 - More than 2 medical disorders 5%

Interventions

- Psychoeducation - importance of adaptive lifestyle
- Physical activity – assessment & optimizing
- Advise about aerobic physical exercises
- Yoga Therapy
- Diet Counselling
- Optimization of antipsychotic medications
- Add on medications: metformin, topiramate and similar others
- Referrals - Physicians, Endocrinologists, Gynecologists, Dentists

Policy issues

- Prioritization of comorbidity
- Reducing excess mortality in persons with severe mental disorders should become part of the broader health agenda.
- Top-level integration of various programmes should be set as a precedent for making strides in addressing complex, multifactorial health problems.

Health care delivery

- Health programme managers should promote awareness of the problem amongst health care providers and equip them with training, support and supervision to deliver comprehensive care.
- Health care providers should be especially attuned not to overlook somatic concerns and to pay attention to the lifestyle behaviours of persons with SMI.
- Persons with severe mental disorder should have access to the same care offered to people with other health conditions, including the same basic health screenings as the general population (e.g., for cardiovascular risk and cancer).

Research challenges & priorities

- Problems of the representativeness of the study samples;
- Availability and reliability of the information about the occurrence of mental disorders, the causes of death and the presence of the various risk and protective factors in the samples studied;
- Difficulties in clarifying the relative impact of the various categories of risk and protective factors and the way these factors interact with each other.
- Prevalence and patterns of comorbidities in SMI need to be derived and evaluated
- Direct and Indirect costs of comorbidities in SMI also need to be studied
- NMHS, 2016 – missed an opportunity to examine

Comorbidity multiaxial classification

- I Psychiatric disorder
- II Medical disorder/s
- III Tobacco &/or Alcohol/ substance use
- IV Social, family support
- V Life style – obesity, poor nutrition

The advantages of comorbidity in healthcare systems

- Persons with medical health problems can be assessed for mental health issues
- Persons with mental health problems can be screened for undiagnosed medical disorders.
- At least, people are seeking help for health.
- Survival of the sickest !
- Medical, nursing & health education would soon have to alter their training methods. Teaching single disorders will be history; all disorders will be comorbid or multimorbid.

Ethics of comorbidity !

- Which disorder to treat first ? Which is more important?
- Who decides this – patient, family or doctor?
- Who will be the main healthcare provider?
- Where should the hospitalisation/admission be ?
- Investigations or over/under investigations
- Structure of psychiatric institutes makes it impossible for exercises.
- Multiple referrals – too many cooks !

Training UGs & PGs about comorbidities

Training outcomes include –

- Acceptance of biopsychosocial model of health & awareness of issues in comorbidity
- Knowledge of what to manage and how, and what to refer
- Communication and interpersonal skills

Curriculum should include the following six themes

- The interdependence of body and mind; how the psychological can impact the physical and vice versa
- Presentations of illness that can confound diagnosis; MUS
- Risk factors for mental health difficulties in physical illness, chronic conditions
- Learner's own physical and mental health: knowing one's self and being aware of assumptions and judgments.
- Risk factors for physical health difficulties in people with mental illness
- Consultation skills to identify and plan management of comorbidity

Directions for future work : medical education

- Delivery of healthcare education needs changes.
- Problem based learning was seen as an educational method that would lead to better understanding of the problems and solutions, but this has been neglected for comorbidity.
- Teachers are usually specialists of their own fields, and are distant or even disdainful of other specialists.
- Scope of multisystem managements – yoga, meditation, behavioural methods.

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