Mental health problems are among the most important contributors to the global burden of disease and disability. Mental and neurological conditions account for 12.3% of disability adjusted life years (DALYS) lost globally and 31% of all years lived with disability at all ages and in both sexes, according to 2000 estimates. These conditions are a concern in industrialised as well as in developing countries, where the mental health situation has shown limited improvement, and may have deteriorated significantly in many communities.

In addition to the millions suffering from defined mental disorders, there are millions of others who, because of extremely difficult conditions or circumstances of life, are at special risk of being affected by mental health problems. These include persons living in extreme poverty, children and adolescents experiencing disrupted nurturing, abandoned elderly, women and children experiencing violence, those traumatized by war and violence, refugees and displaced persons, and many indigenous people.

Research shows that socially constructed differences between women and men in roles and responsibilities, status and power, interact with biological differences between the sexes to contribute to differences in the nature of mental health problems suffered, health seeking behaviour of those affected and responses of the health sector and society as a whole. However, it is important to remember, when reviewing available evidence in this regard, that there are major gaps. More is known about differences between males and females in some mental health problems such as depression and schizophrenia than others; about adult men and women than about adolescents and children; and about the situation in industrialised countries than in the developing world.

**What do we know?**

**Sex differences in prevalence, onset and course of disorders**

Although there do not appear to be sex differences in the overall prevalence of mental and behavioural disorders, there are significant differences in the patterns and symptoms of the disorders. These differences vary across age groups. In childhood, most studies report a higher prevalence of conduct disorders, for example with aggressive and antisocial behaviours, among boys than in girls.

During adolescence, girls have a much higher prevalence of depression and eating disorders, and engage more in suicidal ideation and suicide attempts than boys. Boys experience more problems with anger, engage in high-risk behaviours and commit suicide more frequently than girls. In general, adolescent girls are more prone to symptoms that are directed inwardly, while adolescent boys are more prone to act out.

In adulthood, the prevalence of depression and anxiety is much higher in women, while substance use disorders and antisocial behaviours are higher in men. In the case of severe mental disorders such as schizophrenia and bipolar depression, there are no consistent sex differences in prevalence, but men typically have an earlier onset of schizophrenia, while women are more likely to exhibit serious forms of bipolar depression.

In older age groups, although the incidence rates for Alzheimer’s disease – a degenerative disease of the brain which usually occurs after 65 years of age – is reported to be the same for women and men, women’s longer life expectancy means that there are more women than men living with the condition.

With the exception of China and parts of India, the rate of death by suicide is higher for men than women in almost all parts of the world by an aggregate ratio of 3.5:1. Again, although men die by suicide more frequently than women do, suicide attempts are reported to be consis-
Infertility and hysterectomy have been found by some to a 1999 study covering sites in nine countries.

Comorbidity – the occurrence of more than one disorder concurrently – is associated with increased severity of mental illness and higher levels of disability. Recent studies have found that women had significantly higher lifetime and 12 month comorbidity than men.

**Underlying factors**

*The interaction between biological and social vulnerability*

Genetic and biological factors play some role in the higher prevalence of depressive and anxiety disorders among women. Mood swings related to hormonal changes as a part of the menstrual cycle are documented by some studies.

In the case of antenatal and postnatal depression, the interaction of psychosocial factors with hormonal factors appears to result in an elevated risk. For example, marital disharmony, inadequate social support and poor financial situation are associated with an increased risk of postnatal depression.

Women may also experience considerable psychological distress and disorders associated with reproductive health conditions and problems.

- Infertility and hysterectomy have been found by some studies to increase women’s risk of affective/neurotic syndromes.
- A recent study from the United States finds that adults with bladder control problems, a condition more common in older women than in older men, indicated more emotional distress and symptoms of depression when compared to continent adults. The mental health consequences of other common gynaecological conditions in older women, such as utero-vaginal prolapse, need to be explored further.

In contrast to the vast literature on women’s reproductive biology and mental health, especially from industrialized countries, there is little research on the contribution of men’s reproductive functioning to their mental health, from either developing or industrialized countries.

**Gender roles**

A large number of studies provide strong evidence that gender based differences contribute significantly to the higher prevalence of depression and anxiety disorders in girls and women when compared to boys and men. For example, the lower self esteem of adolescent girls when compared to boys in the same age group, and their anxiety over their body-image is known to result in a higher prevalence of depression and of eating disorders in adolescent girls when compared to adolescent boys.

The feeling of a lack of autonomy and control over one’s life is known to be associated with depression. Socially determined gender norms, roles and responsibilities place women, far more frequently than men, in situations where they have little control over important decisions concerning their lives.

- Studies from industrialised countries have reported that the frequent exposure of low-income women to uncontrollable life events such as illness and death of children or of husbands, imprisonment, job insecurity, dangerous neighbourhoods and hazardous workplaces places them at a significantly higher risk of depression than men. The same problems in men may be associated with abuse of alcohol or other drugs, and violence.
- A study from China suggests that the distress caused to women by factors such as arranged marriages, unwanted abortions, in-law problems and an enforced nurturing role precipitates psychological disorders.

On the other hand, the socialisation of men to not express their emotions and to be dependent on women for many aspects of domestic life may contribute to high levels of distress among them when faced with situations such as bereavement. Many studies from the US and UK report that a greater proportion of widowers experienced mental and physical health problems than did widows, although both women and men were vulnerable to illnesses and ailments on losing a spouse.

**Gender based violence**

Data, although fragmentary, indicate strong associations between gender based violence and mental health. Depression, anxiety and stress-related syndromes, dependence on psychotropic medications and substance use and suicide are mental health problems associated with violence in women’s lives.

A population-based study from Nicaragua has found that women who had experienced severe abuse during the last year were ten times more likely to experience emotional distress than women who had never experienced abuse. Severity of the abuse appeared to be the major predictor, independently of the time period in which the abuse had taken place. Data from eight countries around the world reveal a highly significant relationship between lifetime experience of physical violence by an intimate partner and suicide ideation (Table 1).

Globally, sexual violence is experienced more by girls and women, and there is a strong association between being sexually abused in childhood and the presence of multiple mental health problems later in life. However, male survivors of childhood sexual abuse were reported by studies from US and the Netherlands, to suffer worse and more complex problems.

**Health seeking behaviour**

There appear to be gender differences in perceptions of distress and in patterns of health-care seeking among those suffering from mental health problems.
• In four large surveys in the US, women reported higher levels of distress than did men, and were more likely to perceive having an emotional problem than men who had a similar level of symptoms. Once men recognised they had a problem, they were as likely as women to use mental health services.

• A study from Finland showed that men tended to use alcohol as a remedy for relief from temporary strain caused by external pressure, and considered the use of psychotropic drugs as indicating loss of autonomy. Women, on the other hand, used psychotropics to restore their capacity to carry out emotionally taxing labour related to their caring work in the private sphere.

• Many studies from industrialised countries report that women are consistently more likely to use outpatient mental health services than are men. Men may seek care at a later stage after the onset of symptoms, or delay until symptoms become severe.

Service delivery issues

The low detection and referral rates for mental disorders in primary care may affect women disproportionately more than they affect men, because women tend to present to primary rather than referral facilities when they have a mental health problem. Gender-related experiences and stereotypes on the part of the physician may influence the diagnosis of depression and the higher rates of prescription of psychotropic drugs to women (Fig. 1). Gender stereotyping may also lead to under-diagnosis of mental health problems in men. Studies from Germany and the US found that elderly women were likely to be given the diagnosis of depression more often than elderly men when presenting with the same symptoms. Another US study found that male sex was one of the attributes associated with a lower likelihood of being diagnosed with a mental health problem by primary care physicians.

Social consequences

Women may face greater disability than men because of the higher prevalence of depressive and anxiety disorders. Depression could be as disabling or more disabling than several other chronic medical conditions in terms of social functioning, physical functioning, role functioning and days spent in bed. Those with a physical condition as well as depressive symptoms are likely to be at high risk for disability. There are gender differences in this.

• A study from India on schizophrenic patients found that married men were likely to be cared for and financially supported by their wives, while married women were more likely to be deserted, abandoned or divorced by their husbands, and to have experienced physical abuse by their husbands prior to separation.

• On the other hand, studies from industrialised country settings on psychiatric rehabilitation indicate that women may have an advantage over men when it comes to residential independence. The later onset of mental illness in women means that women are more likely to have learnt skills and competencies for independent housekeeping prior to the onset of their mental illness. They are also more likely to have been married and have borne children, and consequently have a greater number of social relationships and a support network that enables independent living.

• Mental illness also places an enormous burden on relatives who care for the patient: emotional burden, financial costs and lost wages as well as diminished quality of life. Socially constructed gender roles make women the principal care-givers in many settings, while giving them less social support to perform this function, leading to low morale and high stress levels.

Table 1: Relationship between domestic violence and contemplation of suicide

Source: WHO Report 2001

<table>
<thead>
<tr>
<th>Experience of physical violence by intimate partner</th>
<th>Brazil1 (n=940)</th>
<th>Chile2 (n=422)</th>
<th>Egypt2 (n=631)</th>
<th>India2 (n=6327)</th>
<th>Indonesia3 (n=765)</th>
<th>Philippines2 (n=1001)</th>
<th>Peru1 (n=1088)</th>
<th>Thailand4 (n=2073)</th>
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What research is needed?

- It is important to go beyond documenting sex differences in rates of mental and neurological disorders. There is a need to examine how gender differences influence women’s and men’s risk and vulnerability, their access to health services, and the social and economic consequences of mental illness, in different settings and social groups and at different points in the life cycle.
- A greater focus is needed on operations research to identify factors that facilitate dealing with distress; results should be applied to design suitable intervention programmes especially at the community and primary care level.
- More research is needed on how gender differences interact with differences in women’s and men’s reproductive biology to influence mental disorders, and also how these modify the effects of different pharmacologic and psychosocial treatments.
- More systematic evidence is needed on how the mental health consequences of intimate partner violence and of sexual abuse in women and men can be addressed, especially in settings where resources are scarce and social norms condone violence.

What are the implications for mental health policies and programmes?

- Mental health policies and programmes should incorporate an understanding of gender issues in a given context, and be developed in consultation with women and men from communities and families and from among service-users. Gender-based barriers to accessing mental health care need to be addressed in programme planning.
- A public health approach to improve primary prevention, and address risk factors, many of which are gender-specific, is needed. This implies going beyond medicalising distress. If gender discrimination, gender-based violence and gender-role stereotyping underlies at least some part of the distress, then these need to be addressed through legislation and specific policies, programmes and interventions.
- Training for building health providers’ capacity to identify and to treat mental disorders in primary health care services needs to integrate a gender analysis. The training should also raise awareness about specific risk factors such as gender-based violence.
- Primary care and maternal health services that are responsive to psychosocial issues and are sensitive to gender differences are well placed to provide cost-effective mental health services. In this context, it may be important to promote the concept of ‘meaningful assistance’ for mental health care needs, including psychosocial counselling and support to cope better with difficult life situations, and not just prescription of drugs.
- Provision of community-based care for chronic mental disorders should be organized to ensure that facilities meet the specific needs of women and men, and that the burden of caring does not fall disproportionately on women.

Figure 1: Average female/male ratio of psychotropic drug use, selected countries

Note: The horizontal bold line at 1.0 indicates where the ratio of female to male use of psychotropic drugs is equal. Above this line women use more such drugs than men. In countries where more than one study was conducted, high and low estimates are provided in darker shade and grey.