Psychiatric epidemiology: selected recent advances and future directions

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Reviewed in this article are selected recent advances and future challenges for psychiatric epidemiology. Major advances in descriptive psychiatric epidemiology in recent years include the development of reliable and valid fully structured diagnostic interviews, the implementation of parallel cross-national surveys of the prevalences and correlates of mental disorders, and the initiation of research in clinical epidemiology. Remaining challenges include the refinement of diagnostic categories and criteria, recognition and evaluation of systematic underreporting bias in surveys of mental disorders, creation and use of accurate assessment tools for studying disorders of children, adolescents, the elderly, and people in less developed countries, and setting up systems to carry out small area estimations for needs assessment and programme planning. Advances in analytical and experimental epidemiology have been more modest. A major challenge is for psychiatric epidemiologists to increase the relevance of their analytical research to their colleagues in preventative psychiatry as well as to social policy analysts. Another challenge is to develop interventions aimed at increasing the proportion of people with mental disorders who receive treatment.

Despite encouraging advances, much work still needs to be conducted before psychiatric epidemiology can realize its potential to improve the mental health of populations.

Keywords: psychiatry; epidemiology, trends; mental disorders, epidemiology; psychopathology; review literature.

Introduction

Epidemiology is concerned with understanding and controlling disease epidemics by investigating empirically the associations between variation in exposure to disease-causing agents external to the individual, variation in the resistance of individuals exposed to the disease-causing agents, and variation in resistance resources in the environments of exposed individuals (1). These investigations are initially carried out by examining natural variations. Hypotheses based on these analyses are then, usually, tested provisionally in naturalistic quasi-experimental situations with matching or statistical controls used to approximate the conditions of an experiment. If the hypotheses stand up to these preliminary tests, they are evaluated in interventions aimed at preventing the onset or altering the course of the disorders.

Psychiatric epidemiology traditionally lags behind other branches of epidemiology because of difficulties encountered in conceptualizing and measuring mental disorders. As a result, much contemporary psychiatric epidemiology continues to be descriptive, focusing on the estimation of disorder prevalences and subtypes (2) at a time when other branches of epidemiology are making progress in documenting risk factors and developing preventive interventions (3). To the extent that

psychiatric epidemiologists study risk, they tend to focus on broad nonspecific risk markers, such as gender and social class, rather than on modifiable risk factors, hence limiting the possibilities for intervention. However, this situation is changing as descriptive issues are being resolved, more analytical questions are being addressed, and preventive interventions are being implemented.

Descriptive psychiatric epidemiology

Adult community epidemiological surveys

Descriptive psychiatric epidemiology has gone through an unprecedented period of growth over the past twenty years. Starting with the Epidemiologic Catchment Area (ECA) study in the USA (2), large surveys of adult mental disorders in the general population have been carried out in numerous countries throughout the world. An important innovation of the ECA was the use of a fully structured research diagnostic interview known as the Diagnostic Interview Schedule (DIS, 4). Methodological studies demonstrated that the DIS yields reliable and valid diagnoses (5), a result that was very important in promoting the ECA–DIS methodology in subsequent general population surveys.

The first expansion of the ECA–DIS methodology was carried out by WHO in collaboration with the US Alcohol, Drug, and Mental Health Administration to include International Statistical Classification of Diseases (ICD) criteria for research and to produce versions of the instrument in many different

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languages. The resulting instrument, the Composite International Diagnostic Interview (CIDI, *6*), first became available in 1990. WHO technical support led to an unprecedented number of major epidemiologic surveys using the CIDI in countries as diverse as Brazil (*7*), Canada (*8*), Germany (*9*), Mexico (*10*), the Netherlands (*11*), and Turkey (*12*).

In 1997, WHO created the International Consortium in Psychiatric Epidemiology (ICPE) to coordinate the comparative analysis of these data (*13*). ICPE also provides technical assistance to researchers planning new CIDI surveys. The WHO World Mental Health 2000 (WMH2000) initiative has grown out of these technical assistance activities. WMH2000 will coordinate general population CIDI surveys in 20 countries in the year 2000, distributed globally in North America (Canada, USA), Latin America (Brazil, Colombia, Mexico, Peru), Europe (Belgium, France, Germany, Italy, the Netherlands, Spain, the Ukraine), the Middle East (Israel), Africa (South Africa), Asia (China, India, Japan) and the Pacific (Indonesia, New Zealand).

Several important results have consistently emerged from the DIS and CIDI surveys.

- Mental disorders are among the most prevalent classes of chronic diseases in the general population, with lifetime-to-date prevalences often close to 50% of the population and with 12-month prevalences typically in the 15–25% range (*2*).
- Mental disorders typically have much earlier ages of onset than other chronic diseases. Anxiety disorders have median ages of onset in the early to late teens in most of these surveys, while mood and substance use disorders have median ages of onset in the early to mid twenties (*14*).
- Mental disorders are among the most impairing of all chronic diseases (*15*).
- Respondents with the most severe and disabling mental disorders in these surveys usually meet lifetime criteria for a number of different ICD and Diagnostic and Statistical Manual of Mental Disorders (DSM) syndromes (*16*).
- Only a minority of the respondents in these surveys who meet criteria for a mental disorder report that they received treatment in the preceding year (*17*). The measures of disorder severity included in the surveys are consistently associated with probability of service use, likelihood that service use occurs in the specialty sector, and intensity of treatment, documenting that there is some rationality both in help-seeking and in the allocation of treatment resources. However, the surveys also show that only a minority of patients describe a course of therapy that is even minimally adequate in terms of currently available treatment guidelines (*18*).

The high rates of disorder found in these surveys have led some commentators to raise questions about the plausibility of the prevalence estimates (*19*). As clinical reappraisal studies clearly show that the prevalence estimates in CIDI surveys are not higher than those obtained in blind clinician reinterviews (*20*), concerns about the high prevalence estimates have focused largely on the underlying validity of the ICD and DSM systems. Clinical significance criteria were added to nearly half the diagnoses in the DSM-IV system in response to these concerns to address the perceived problem that the previous diagnostic criteria led to overdiagnosis of disorder among people whose symptoms were clinically insignificant. However, this has led to even more controversy regarding whether the inclusion of these new criteria is legitimate (*21*). This controversy illustrates the point made at the very beginning of this article: problems in conceptualizing and measuring mental illness have hampered progress in psychiatric epidemiology much more than in other branches of epidemiology.

Irrespective of the ultimate resolution of these conceptualization and measurement issues, concerns about high prevalence have led to a new interest in the assessment of severity and impairment in psychiatric epidemiological surveys as well as a view that dimensional assessment of mental disorders and global assessments of "case-level psychiatric morbidity" are more useful than detailed evaluations of many separate ICD or DSM disorders. The new WMH2000 surveys include structured versions of standard disorder-specific, dimensional clinical severity measures and assessments of the functional impairments and disabilities associated with current mental disorders with the aim of developing dimensional and global severity measures. Importantly, the WMH2000 surveys will also carry out identical assessments of the functional impairments and disabilities associated with a representative sample of physical disorders in order to provide comparative information.

Adult clinical epidemiological surveys

The techniques developed in the ECA study to carry out fully structured psychiatric diagnostic interviews have more recently been extended to primary care settings. The first of these studies was the Medical Outcomes Study (MOS), an investigation of a series of chronic diseases, including depression, that documented that depression is associated with levels of functional impairment in a wide range of life domains that are comparable to, if not greater than, those found among patients with physical disorders such as hypertension, diabetes, and arthritis (*22*). Subsequent clinical epidemiological surveys have attempted to evaluate the impairments associated with a broader range of mental disorders in primary care samples. The largest and most influential of these has been the WHO Primary Care Collaborative Study (*23*). These surveys documented that mental disorders are highly prevalent among people who seek help from family physicians, that these disorders are associated with substantial impairment in role functioning, and that most of these disorders go undetected by primary care physicians. A series of

innovative programmes has been developed based on these surveys to help primary care doctors detect and treat mental disorders (*24*).

One of the most important implications of these clinical epidemiological surveys is that untreated comorbid mental disorders might complicate the treatment and management of physical disorders. For example, Roose & Glassman documented that comorbid depression is a powerful predictor of early mortality among survivors of first heart attacks (*25*). Based on this finding, new interventions have been developed to screen for and treat depression among cardiac patients. A number of related, but as-yet-unpublished, clinical epidemiological research initiatives are currently investigating the effects of comorbid mental disorders on the onset, course, and management of other physical disorders. Preliminary studies suggest that at least some of these investigations are likely to yield important practical results (*26*).

Child and adolescent community epidemiological surveys

The adult epidemiological survey finding that mental disorders have early ages of onset has promoted interest in the mental health of children and adolescents. Risk factor research is a good deal more advanced in studies of child and adolescent psychopathology than in studies of adults, but progress in the descriptive epidemiology of child and adolescent mental disorders has been hampered by a more severe version of the same measurement difficulties that plague adult studies. Two reasons hinder studies of younger respondents:

– Childhood disorders are much less "crystallized" than adult disorders, posing special challenges for their assessment; and
– It is impossible to carry out direct interviews with young children, making it necessary to rely on parents and teachers as informants.

Even when children are old enough to be interviewed, questions arise about their ability to understand all questions (*27*), making it useful to retain informant reports from parents and teachers. However, there is a problem in this; parent, teacher, and child reports often diverge (*28*). This creates problems in knowing how to combine the different reports into overall prevalence estimates (*29*). Concerns exist that prevalence estimates are unrealistically high when diagnostic algorithms combine parent, teacher, and child reports using an "or"rule, while diagnostic algorithms that require agreement among raters yield prevalence estimates that are seen as being unrealistically low.

As in surveys of adult disorders, these concerns seem related more to fundamental uncertainties about current diagnostic criteria than to any objective data suggesting that the estimates are in error. However, the situation is more complicated in that the childhood and adolescent years are characterized by a good deal of emotional turbulence, much of which resolves in adulthood. This means that legitimate questions can be raised about the clinical significance of child and adolescent symptoms that are not currently causing a serious impairment, unless a strong case can be made that these symptoms are associated with risk of future clinically significant disorders. The complication is that long-term longitudinal data are needed to confirm current diagnoses. In comparison, it is much easier to reach agreement on the classification of serious emotional disorders among youth in that the level of agreement among informants is much greater when the child's symptoms are severe (*30*).

Challenges for descriptive psychiatric epidemiology

Systematic underreporting

The methodological advances surrounding development of the DIS and other fully structured measures of disorder and severity have addressed many of the measurement problems that previously limited progress in psychiatric epidemiology, while empirical data produced by the new generation of surveys initiated by the ECA study have stimulated healthy debate about deeper conceptual issues regarding the validity of the ICD and DSM classification systems. However, formidable challenges in this area still remain since mental disorders are highly stigmatized conditions that many people want to keep private. Because of their embarrassment or fear of discrimination, their mental disorders can only be defined on the basis of clusters of symptoms they report.

In the case of patients seeking professional treatment, there is reason to believe that self-reports will be fairly complete and honest. However, this is not the case in epidemiological surveys. It is little wonder, then, that concerns have been raised that underreporting is a very serious problem in surveys of this sort (*31*). Consistent with this concern, methodological studies have shown that reports about mental disorders, substance-use problems, and other embarrassing issues, such as abortion, criminal behavior, and homosexuality, are extremely sensitive to subtle variations in context and mode of questioning (*32*).

An important implication is that the prevalences of emotional problems reported in epidemiological surveys should generally be considered lower-bound estimates rather than accurate reflections of the true prevalences in the population. This is true even when interviews are carried out by clinicians, since methodological research has shown that some respondents are less liable to disclose embarrassing information when they are aware that their interviewer is a mental health professional (*33*). This can bias estimates of correlates if there is systematic variation in willingness to disclose symptoms as a function of a putative risk factor. Such a differential willingness hypothesis, for example, has been proposed as a plausible explanation for the widely

observed finding that women report higher rates of anxiety and depression than men (34).

Grappling with the problem of systematic underreporting is a major challenge for the future of psychiatric epidemiology. One way of doing this is to build on the work of survey methodologists, who have developed a number of strategies to increase the accuracy of responses to embarrassing questions. It is also possible to study variations in responses as a function of question sensitivity in split ballot experiments built into epidemiological surveys that manipulate wording, anonymity, mode, or other aspects of the question answering situation in an effort to investigate sensitivity of responses to these manipulations. Finally, it is possible to include standard psychometric measures of social desirability, yay-saying , or lying into epidemiological surveys and to use responses to these measures to investigate the possibility that risk factor associations are biased because of their associations with these measures. All of these strategies need to be explored in future research.

Small-area estimation

Descriptive epidemiological studies are often used by public health agencies to estimate the magnitude of untreated disorders and to study barriers to receiving treatment for purposes of planning future changes in outreach and treatment activities. However, these planning activities are usually carried out much more frequently (typically on an annual basis) than epidemiological surveys (typically no more than once a decade). Furthermore, planning decisions are usually made at a much lower level of geographical aggregation (typically towns, health districts, or states) than the epidemiologic surveys (typically national). It is not feasible to carry out expensive general population epidemiological surveys more frequently or at the levels of geographical aggregation where health resource allocation decisions are made. Therefore, some other approach is needed to increase the usefulness of such surveys for resource allocation planning purposes. As discussed below, a good deal of work along three lines is currently in progress.

- A number of short fully structured measures of psychopathology have been developed to screen for clinically significant mental disorders (23). These instruments can be self-administered in less than ten minutes and yield fairly accurate assessments of overall psychopathology (i.e., the likelihood that the respondent has any clinically significant psychopathology) as well as useful provisional information about differential diagnosis. These characteristics make such screening instruments much more feasible to use in ongoing local data collections than the more comprehensive interviewer-administered instruments such as DIS and CIDI that are typically used in epidemiological surveys.

- A number of ongoing data collection systems that make use of these screening measures have been developed and implemented to screen individuals in need of treatment and chart aggregate trends in the prevalence of unmet need. Systems of this sort are available as part of periodic health-risk appraisal surveys and require management screening surveys carried out by employers and managed health care organizations. The expense is kept to a minimum by using one of several low-cost data collection methods that include: paper and pencil self-administration (typically in mail surveys) coupled with optical scanning of responses; computerized self-administration (typically in a doctor's office); and interactive voice response administration using a digitized voice to ask questions over the telephone and a telephone touch-tone keypad to enter responses.

- Statistical methods are being developed to make small area estimations of disorder prevalences and unmet need for services from large-scale population surveys (35). These methods are designed to blend the direct small area data collected in ongoing screening surveys with more in-depth periodic data collected in large-scale epidemiological surveys. Until now there has been no attempt to develop integrated systems to coordinate the collection and integration of these two types of data, although such proposals have been made (36). The development of systems along these lines represents an important challenge for the future of descriptive psychiatric epidemiology.

Developmental psychopathology

There is great interest in refining the definitions of child and adolescent mental disorders in developmental terms. Refinement based on knowledge of the behavioural, cognitive, and emotional problems associated with risk of long-term mental health problems would represent a great advancement. An important challenge for child psychiatric epidemiologists is to develop strategies that can help shortcut this process of discovery until the time when definitive long-term prospective studies have been carried out. As outlined below, there are three options available for doing this.

- Collaborative comparative retrospective or follow-back studies can be developed to capitalize on the number of large child mental health studies carried out two decades or more ago. What little is known from such follow-back studies is that retrospective reports are surprisingly accurate under some circumstances (37).

- Since some retrospective reports will likely be accurate, retrospective case–control studies could be carried out to compare demographically matched young adults with mental disorders to others without such disorders in an effort to obtain provisional information about modifiable determinants of these disorders. Evaluations of the accuracy of recall information in retroactive

studies by using baseline reports as a gold standard could provide information about the bounds of the accuracy of these retrospective reports. Furthermore, hypotheses based on retrospective case–control studies could be confirmed in later prospective studies and experimental interventions.

- The third option is to launch a series of parallel short-term longitudinal and retrospective cohort sequential studies that attempt to cover the full age range from early childhood to adulthood in the period of only a few years. In addition to obtaining overlapping prospective data, respondents in each cohort-specific sample (a combination of parents, teachers, and focal respondents that would vary depending on the age range of the cohort) would be asked retrospectively to recall information from the final waves of data collection that was reported contemporaneously in the baseline assessments. This would allow researchers to evaluate the accuracy of short-term recalled reports and to use this information to evaluate the accuracy of retrospective answers obtained from baseline respondents in contiguous cohorts.

In all of these approaches, it is important that future studies are initially neutral regarding categorical diagnostic distinctions. Dimensional measures of symptoms and syndromes should be favored so that researchers will be able to discover whether thresholds of the sort implied by current diagnostic systems can be justified empirically.

Other special population studies

Although not highlighted above, there are also a number of important challenges in carrying out epidemiological studies in other special populations. Studies of the elderly are complex due to difficulties in determining whether organic exclusion rules should be invoked to disqualify certain mental disorder diagnoses. In studies of the elderly there are the additional problems of assessing both the cognitive capacity of the person being interviewed and the accuracy of their retrospective recall of age of onset and other aspects of illness course. Sample selection bias is another special challenge in general population studies of the elderly due to associations of psychopathology with early mortality and institutionalization.

Epidemiological studies in less developed countries also pose special challenges. Many such countries lack a tradition of free speech and of conducting public opinion surveys, leading to unwillingness to disclose information about mental disorders. This unwillingness usually does not take the form of high rates of refusal to participate in epidemiological surveys, but rather of high rates of agreement accompanied by implausibly low reported rates of disorders. There are also complexities involving local interpretations that make it difficult to know which illness experiences are being

considered. Such difficulties pose special challenges for assessing the existence of psychopathology and especially for differential diagnosis.

Analytical and experimental psychiatric epidemiology

Modifiable determinants of illness onset

Analytical epidemiology uses nonexperimental data to generate, refine, and provisionally test causal hypotheses (38). In contrast, experimental epidemiology tests hypotheses by evaluating the effects of interventions on the prevention or amelioration of disease outcomes. As noted at the beginning of this article, analytical and experimental psychiatric epidemiology are much less well developed than most other branches of epidemiology. This is partly attributable to conceptual and measurement problems, but is also true because of the nature of the causal mechanisms involved in the onset of mental disorders. These causes relate much more strongly to broad measures of environmental adversity than to the comparatively narrow and easily modifiable risk factors (e.g., diet, exercise, smoking) that increase the risk of chronic physical illnesses such as cancer and heart disease.

Important work that focuses on modifiable risk factors for particular disorders is emerging in analytical psychiatric epidemiology. Examples include work linking: obstetrical complications to the risk of childhood-onset schizophrenia (39), exposure to famine during childhood to antisocial personality disorder (40), and early-life exposure to lead to Alzheimer disease (41). Nevertheless, despite these examples, the greater complexity of environmental etiological agents in studies of psychiatric rather than physical disorders has led many psychiatric epidemiologists to focus much of their analytical efforts on broad nonspecific risk factors. There has been a special interest in exposure to stressful life experiences, including various types of childhood adversity and adult stressors, which have been consistently linked to a wide range of child, adolescent, and adult mental disorders. There has also been a great deal of interest in stress-buffering factors such as social support and active coping.

Since it is difficult to devise interventions that can prevent exposure to stress, most experimental interventions aimed at preventing mental disorders have been designed to increase access to stress-buffering resources either in total populations or in high-risk population segments. There are quite a few promising interventions of this sort (42). Unfortunately, however, psychiatric epidemiologists have generally not played central roles in these interventions for the reasons outlined below.

- Most psychiatric epidemiologists are more interested in descriptive and broad-gauge analytical epidemiology than in the detailed analytical investigations required to target and shape preventive interventions. For example, while a great

many epidemiological studies have been carried out on the stress-buffering effects of social support, only a few of these studies have refined their evaluations of social support to investigate what should be included in preventive interventions aimed at providing support to socially isolated people at risk of mental disorder (*43, 44*).

- Community psychologists and other human service professionals who have taken the lead in most mental health preventive interventions come from clinical backgrounds and rely on their clinical experience to design and implement their programmes. Such individuals mistakenly see little need for input from psychiatric epidemiology. Psychiatric epidemiologists must expend much more effort to reach out to their preventionist colleagues in order to make this error clear. A major challenge for the future is for psychiatric epidemiologists to become integrated into these efforts.

There is another class of intervention programmes, much larger than the ones discussed above, which also represent an opportunity for epidemiological collaboration. These are the many government entitlement programmes such as public assistance for the unemployed, social security for retired people, and aid to single mothers with dependent children that exist in most developed countries. These programmes are, of course, much more than mental health preventive interventions, but they have enormous implications for mental health. Although these programmes would profit from the input of psychiatric epidemiologists, this is seldom the case. For the most part, these programmes have been designed by economists and implemented by social workers and other human service professionals who generally see little reason to be concerned with mental health issues.

Modifiable determinants of illness course

It was noted earlier that most mental disorders have early ages of onset, that there are difficulties inherent in defining an onset of the noncrystallized symptom clusters that characterize many children and adolescents with emotional problems, and that these symptom clusters have high base rates in the general population of young people. The idea of focusing prevention efforts on "primary" prevention of mental disorders — that is, the prevention of first onset — is therefore probably unrealistic. A much more feasible approach is to develop early universal, probably school-based, interventions aimed at promoting stress-buffering resources among children that are then supplemented with a series of more targeted secondary preventive interventions aimed at preventing crystallization of nascent emotional problems (*45*).

One observation of potentially great importance in this regard is that the vast majority of adults with serious mental disorders experience a series of comorbid psychopathic syndromes that often include a combination of panic, generalized anxiety, depression, phobia, and substance abuse (*16*). These syndromes differ substantially in their ages of onset. Anxiety, oppositional-defiant, and attention-deficit problems typically are the component syndromes with the earliest ages of onset. Assuming that this cumulation of disorders is of causal significance — a hypothesis urgently in need of evaluation — efforts to intervene among children and adolescents to prevent the cumulation of multiple psychopathological syndromes hold out great promise for reducing the prevalence of serious mental disorders (*46*). The analytical investigation of patterns and determinants of this cumulation of syndromes is a critically understudied area in developmental psychiatric epidemiology.

Genetic epidemiology

In a paper on the future of psychiatric epidemiology, published in 1992, Lee Robins suggested that the greatest hope for breakthroughs in our understanding of the etiology of mental disorders would come from genetic epidemiology (*47*). There is no indication that this promise has begun to be fulfilled in the intervening years. Linkage studies have been unable to identify a single specific gene or gene marker for any major mental disorder after more than ten years of active research. Once such markers are identified, integration of psychiatric epidemiology with population genetics will be valuable in a number of ways (*48*), but, it is not clear when this will occur.

Psychiatric epidemiologists have evinced great interest in behavioral genetics, despite the absence of gene markers for major mental disorders. Much of this interest focuses on twin and extended twin-family studies. Such studies use structural equation modelling techniques to partition variances and covariances into genetic and environmental components (*49*). Although convincing data have been presented in these studies that common mental disorders are heritable (*50*), behavioural genetic research has been disappointing in not advancing far beyond this basic finding. A good part of the reason for this disappointment stems from a misunderstanding on the part of psychiatric epidemiologists not familiar with the methods of behavioural genetics about exactly what these studies are capable of showing.

In this regard, it is important to appreciate that the significant heritability of variables that are thought to be risk factors for mental disorders, such as IQ and personality, means that there will be induced associations between genes and mental disorders even if there are no direct genetic effects on mental disorders over and above the mediating effects of environmental pathways. A critical implication of this is that documentation of heritability does not mean that environmental interventions will be ineffective. This being the case, psychiatric

epidemiologists are increasingly coming to realize that behavioural genetic methods are actually much more useful in studying environmental than genetic influences. Workers in other areas of epidemiology had this insight a good deal earlier than those in psychiatric epidemiology (*51*). Nevertheless, analytical methods designed to control genetic fixed effects in order to identify environmental effects more clearly, such as the discordant MZ twin design (which is a comparison, using a matched pairs design of monozygotic twins who differ on an outcome in order to study the effects of environmental influences while controlling for genetic influences), remain very underused in psychiatric epidemiology.

Barriers to help-seeking

Retrospective epidemiological studies of speed of initial treatment contact show that it often takes many years for people with anxiety, mood, or substance-use disorders to seek professional help after first onset of their disorder (*52*). Furthermore, more recent studies of service use show that only a minority of people with a recent mental disorder obtain treatment (*17*). These are disturbing results, especially in the light of clear evidence that treatments for most common mental disorders are both safe and effective.

Studies of the determinants of help-seeking in the USA show that financial barriers are important impediments to treatment and that treatment rates increase substantially when these barriers are removed (*53*). At the same time, a recent comparative study of help-seeking in the USA and Canada found that the same low proportion of people with mental disorders seek treatment in the two countries even though Canadians enjoy free access to mental health treatment while people in the USA do not (*54*). An investigation of reasons for not seeking treatment carried out in this comparative study found that the typical mentally ill person not in treatment reported a number of reasons for not seeking help, including perceived lack of efficacy of treatment, believing that the problem will eventually go away by itself, and the feeling that he/she wants to handle the problem himself/herself, without outside help.

These and related findings in other epidemiological studies of the help-seeking process strongly suggest that misunderstandings about the nature of mental illness and perceived stigma continue to interfere with the help-seeking process. Public education campaigns have been launched in some countries to address these problems, but these efforts are too recent to have developed a solid knowledge base regarding the effectiveness of communication messages or channels or to have tested emerging hypotheses about other effective outreach possibilities. However, this is likely to be an area of considerable growth over the next decade.

Challenges for analytical and experimental epidemiology

Integration with prevention efforts and social policy analysis

A current challenge is bridging the gap that currently exists between analytical epidemiology and prevention research. Psychiatric epidemiologists also need to become involved in more large-scale social policy research interventions. For example, recent federal welfare reform legislation in the USA has led to a series of state-level natural experiments moving welfare mothers into the labour force. Early evaluations of these experiments by economists clearly show that the previously neglected high rates of mental disorders found among welfare recipients are major impediments to successful transitions into the labour force (*55*). This observation had stimulated debate about the importance of providing mental health services as a central part of welfare-to-work transition programmes. Unfortunately, this debate has had no empirical or conceptual input from psychiatric epidemiologists. It is critical that psychiatric epidemiology becomes more central to this and other emerging social welfare and entitlement programme reform debates and interventions.

The importance of secondary prevention

Most theorizing and research on mental health prevention continues to place either a universal or high-risk focus on primary prevention. Focused secondary preventions overlain on basic universal interventions make much more sense for two reasons. First, it is increasingly recognised that the prodromes of many mental disorders start at such an early age that it is very difficult to envision a broad-based programme that could prevent their occurrence. Second, the complexities of interventions needed to prevent the progression of mental disorders from early manifestations to more serious and chronic cases are so great that it is necessary to focus delivery of these interventions in high-risk segments of the population. Analytical psychiatric epidemiologists need to reorient their research in ways that will facilitate the development and testing of hypotheses focused on secondary preventions of this type.

One very important and currently neglected research paradigm for this purpose is the naturalistic longitudinal study of the determinants of illness course in cohorts of current patients. There have been several very influential large-scale longitudinal naturalistic studies investigating illness course in representative adult patient samples (*56*). Nevertheless, these have been clinical rather than epidemiological studies. Analytical investigations of the predictors of these outcomes are needed to support the development of principled adult secondary preventive interventions.

Understanding the determinants of help-seeking

The problem of unmet need for treatment is much more severe for mental health disorders than for disorders in most other areas of medicine. Standard conceptual models for studying the help-seeking process highlight the importance of health beliefs, including perceived need for treatment, perceived efficacy of treatment, barriers to seeking treatment, and facilitating factors (57). These models have been useful in understanding and modifying the help-seeking process in many different areas of medicine. However, in the case of mental illness, such models could usefully be extended in several ways. For example, it is important to appreciate that during the initial stages of a mental disorder the signs and symptoms are often quite nonspecific, making it difficult for suffers to realize that they are in need of help (58). Another potentially useful way of extending standard conceptual models would begin with the realization that the range of culturally available and acceptable strategies for coping with emotional problems is much more diverse than for physical disorders. For example, alternative and complementary medicine, the use of informal social support networks, other problem-focused strategies aimed at resolving the presumed situational determinants of the emotional problems (e.g., life style change), and cognitive strategies aimed at redefining the situational determinants of the distress so that they lose their sting (e.g. cognitive reappraisal, displacement), are all ways of coping with mental illness. Given the stigma associated with mental illness, it is reasonable to assume that most people will work their way through many, if not all, of these strategies before seeking help from a mental health professional. Insight into the help-seeking process might be increased if epidemiological studies conceptualized professional treatment as the end result of a modifiable process of sorting through a hierarchy of coping strategies in which treatment ranks rather low on the preference hierarchy of many people.

Conclusions

A number of encouraging advances have occurred in psychiatric epidemiology over the past twenty years. However, uncertainty regarding diagnostic categories and criteria and underreporting due to respondent reluctance to admit symptoms continue to be major sources of difficulty. Additional problems exist in studies of special populations, including the young, the elderly, and people in less developed countries. Innovative methods of minimizing and evaluating the effects of measurement error and especially of systematic underreporting are needed to advance the aims of analytic epidemiology. Psychiatric epidemiologists need to move beyond their current fixation on description and analysis of broad-gauged risk markers to study modifiable intervention targets and to develop collaborations with their colleagues involved in preventing mental illness as well as with social policy analysts, who are currently at the forefront of developing, implementing, and evaluating interventions. ■

Acknowledgements

Résumé

Epidémiologie psychiatrique : progrès récents et perspectives

Exposant dans leurs grandes lignes les enjeux futurs de l'épidémiologie psychiatrique, cet article fait le point des avancées récentes. Les progrès importants enregistrés récemment dans le domaine de l'épidémiologie psychiatrique descriptive sont la mise au point d'entretiens diagnostiques entièrement structurés, fiables et pertinents, et l'utilisation de ces entretiens dans des enquêtes transnationales parallèles sur la prévalence et les variables corrélées des troubles mentaux. Ces enquêtes montrent régulièrement que les troubles mentaux figurent parmi les maladies chroniques les plus répandues dans la population générale ; que les troubles mentaux apparaissent en principe à un âge beaucoup plus précoce que les autres maladies chroniques ; que les troubles mentaux figurent parmi les maladies chroniques les plus incapacitantes ; que les personnes qui souffrent des troubles mentaux les plus graves et les plus incapacitants remplissent, à vie, les critères correspondant à un certain nombre de syndromes différents de la CIM et du DSM; enfin, que seulement une minorité des personnes qui remplissent les critères définissant un trouble mental déclarent avoir été soignées pendant l'année écoulée. Il convient aussi de noter que l'épidémiologie psychiatrique descriptive est à l'origine de travaux de recherche en épidémiologie clinique. Les enquêtes épidémiologiques cliniques conduites dans des services cliniques ou de soins primaires sont utilisées pour évaluer les handicaps comparatifs et le mode d'utilisation des services pour un large éventail de troubles mentaux.

Il subsiste néanmoins plusieurs problèmes à résoudre dans ce domaine.

- La question de l'affinage des catégories et des critères diagnostiques continue de se poser depuis que les problèmes rencontrés pour conceptualiser et mesurer la morbidité ont remis en question la validité fondamentale des systèmes de la CIM et du DSM.

- Une évaluation des biais systématiques de sous-notification dans les enquêtes sur les troubles mentaux s'impose. Compte tenu du fait que les personnes interrogées dans les enquêtes épidémiologiques à grande échelle n'ont guère de raisons de répondre honnêtement aux questions personnelles et embarrassantes et que la notification des troubles mentaux est sensible aux moindres variations du contexte et de la façon dont les questions sont posées, les taux de prévalence des problèmes affectifs qui ressortent de ces enquêtes doivent généralement être considérés comme des sous-estimations.
- Des instruments d'évaluation précis permettant d'étudier les troubles de l'enfance et de l'adolescence et la psychopathologie du développement doivent être créés et utilisés. Leur mise au point a été entravée par l'impossibilité de conduire des entretiens directs avec de jeunes enfants et parce que les troubles de l'enfance sont beaucoup moins cristallisés que les troubles de l'adulte.
- Des systèmes permettant de procéder à des estimations dans des zones limitées et d'évaluer les besoins, de planifier les programmes et de prévoir l'allocation des ressources doivent être mis en place.

Les progrès réalisés dans le domaine de l'épidémiologie analytique et expérimentale ont été plus modestes. Cela tient en partie au fait que les mécanismes à l'origine de l'apparition des troubles mentaux sont beaucoup plus fortement liés à une adversité ambiante marquée qu'à des facteurs de risque aisément modifiables tels que l'alimentation et le tabagisme. Toutefois, les psychopathies concomitantes constituent un domaine de recherche important et prometteur. La réussite des interventions destinées à prévenir les syndromes psychopathologiques multiples chez les enfants et les adolescents devrait permettre de réduire la prévalence de troubles mentaux graves. Plutôt que sur l'apparition des troubles il conviendrait de faire des recherches sur l'évolution des troubles, autre domaine de recherche important, mais négligé jusqu'ici. A l'avenir, les épidémiologistes psychiatriques devront s'attacher à accroître l'utilité de leurs recherches analytiques pour leurs collègues qui participent aux études sur la prévention ou analysent les politiques sociales et qui sont en première ligne pour l'élaboration, la mise en œuvre et l'évaluation des interventions. Il faudra en outre parvenir à mieux comprendre le processus qui conduit à solliciter une aide et élaborer des interventions destinées à accroître la proportion des malades mentaux qui bénéficient d'un traitement.

Malgré des progrès encourageants, un important travail reste à faire avant que l'épidémiologie psychiatrique ne donne toute la mesure de sa capacité à améliorer la santé mentale des populations.

Resumen

Epidemiología psiquiátrica: algunos avances recientes y futuras orientaciones

En este artículo se revisan algunos avances recientes en el contexto de los retos futuros que tiene ante sí la epidemiología psiquiátrica. Entre los importantes avances recientes de la epidemiología psiquiátrica descriptiva cabe citar el desarrollo de entrevistas diagnósticas fiables y válidas plenamente estructuradas y la utilización de esas entrevistas en encuestas transnacionales paralelas de la prevalencia de los trastornos mentales y los factores con ellos relacionados. Entre los resultados sistemáticamente notificados en esos estudios cabe citar los siguientes: los trastornos mentales son uno de los grupos de dolencias más prevalentes entre las enfermedades crónicas que afectan a la población general; los trastornos mentales aparecen normalmente a edades mucho más tempranas que otras enfermedades crónicas; los trastornos mentales son una de las enfermedades crónicas más incapacitantes; los individuos que presentan los trastornos mentales más graves y discapacitantes suelen satisfacer durante toda la vida los criterios con que se definen varios síndromes en la CIE y en el Manual Diagnóstico y Estadístico de Trastornos Mentales (DSM); y sólo una pequeña parte de quienes se ajustan a los criterios que caracterizan un trastorno mental señalan que han recibido tratamiento durante el año precedente. También cabe destacar el impacto de la epidemiología psiquiátrica descriptiva en el inicio de investigaciones de epidemiología clínica. Diversos estudios de epidemiología clínica realizados en entornos de atención clínica y primaria están siendo utilizados para comparar el efecto incapacitante y las pautas de uso de servicios correspondientes a un amplio espectro de trastornos mentales.

Sin embargo, en este terreno sigue habiendo varios retos:
- El perfeccionamiento de las categorías y los criterios diagnósticos sigue siendo una cuestión pendiente, ya que los problemas que plantean la conceptualización y la medición de las enfermedades han desencadenado una polémica sobre la validez de los sistemas de la CIE y del DSM.
- Es necesario evaluar el sesgo sistemático de subnotificación de que adolecen los estudios sobre los trastornos mentales. Considerando que en los estudios epidemiológicos realizados a gran escala los encuestados están poco motivados para informar con sinceridad sobre algunas cuestiones personales y embarazosas, y que los resultados de los informes sobre enfermedades mentales son sensibles a pequeñas variaciones del contexto y de la manera de formular las preguntas, las prevalencias de problemas emocionales halladas en dichos estudios deberían considerarse en general como estimaciones del límite inferior para la población.
- Es necesario crear y aplicar instrumentos precisos de evaluación para estudiar los trastornos y la psicopatología del desarrollo de los niños y los adolescentes. El desarrollo de esos instrumentos se ha visto dificultado por la imposibilidad de entrevistar directamente a niños de corta edad y por el hecho

de que los trastornos infantiles están mucho menos cristalizados que los trastornos del adulto.

• Es necesario crear sistemas que permitan llevar a cabo estimaciones a pequeña escala a efectos de evaluación de las necesidades, planificación de programas y planificación de la asignación de recursos.

Los progresos de la epidemiología analítica y experimental han sido más moderados. Ello se debe en parte al hecho de que los mecanismos causales implicados en la aparición de trastornos mentales están relacionados mucho más con parámetros generales de la adversidad ambiental que con factores de riesgo concretos y fácilmente modificables como son la alimentación y el tabaquismo. Sin embargo, un área de investigación importante y potencialmente fructífera son los síndromes psicopáticos comórbidos. Las intervenciones aplicadas eficazmente en niños y adolescentes para prevenir el desarrollo de numerosos síndromes psicopatológicos permiten albergar grandes esperanzas de

reducir la prevalencia de trastornos mentales graves. Además, el estudio de los determinantes de la evolución de los trastornos, y no tanto de su aparición, constituye un campo de investigación interesante y sin embargo descuidado. Un futuro e importante reto para los epidemiólogos psiquiátricos consistirá en realizar investigaciones analíticas que sean más pertinentes para aquellos de sus colegas que participan en estudios de prevención o en el análisis de políticas sociales, en la primera línea del desarrollo, la aplicación y la evaluación de las intervenciones. Otro gran desafío consiste en profundizar en el conocimiento de los procesos de búsqueda de ayuda y concebir intervenciones que permitan aumentar la proporción de personas con trastornos mentales sometidas a tratamiento.

Pese a los alentadores progresos realizados, queda mucho trabajo por hacer para que la epidemiología psiquiátrica actualice su potencial de mejora de la salud mental de las poblaciones.

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