

## REVIEW ARTICLES

### Psychiatric illness in physicians

S.E.D. SHORTT, PH D, MD

Psychiatric illness and behavioural problems among physicians are reviewed in this paper. Some studies suggest that the medical profession has a high rate of alcoholism, drug abuse and marital discord. As well, physicians appear to commit suicide and to seek admission to psychiatric institutions more frequently than comparable populations. Considered as etiologic factors in psychiatric illness among physicians are the role strain inherent in the profession and the personality development of individual practitioners prior to their entering medical school. The review concludes with suggestions for an improved approach to treatment and prevention.

Cette communication s'intéresse à l'étude des maladies psychiatriques et des troubles du comportement chez les médecins. Quelques études indiquent que le taux d'alcoolisme, d'abus des drogues et de mésentente matrimoniale au sein de la profession médicale est élevé. De même, le suicide et l'hospitalisation dans des institutions psychiatriques semblent plus fréquents chez les médecins que parmi une population comparable. On considère comme facteurs étiologiques des maladies mentales chez les médecins la tension inhérente à la profession et le développement de la personnalité chez les futurs praticiens avant leur entrée à la faculté. En conclusion cette revue suggère de meilleures méthodes de prévention et de traitement de ces problèmes.

For most practitioners medicine is a rewarding career, but for some it becomes a journey through despair. Indeed, psychiatric illness among physicians is serious and not uncommon. Evidence of significant psychiatric disturbance has been found in 10% of medical students<sup>1</sup> and of persons graduating in medicine from Johns Hopkins University between 1948 and 1964.<sup>2</sup> A survey of British Columbia physicians from 1970 to 1974 estimated the incidence of psychiatric illness at 1.27% per year.<sup>3</sup> Despite these figures, our knowledge of the topic is scant, a deficiency that may inhibit our ability to deal effectively with disturbed physicians. In an attempt to rectify the situation this

paper examines the subject, with reference to classic articles in the field and reports appearing since the publication of two important reviews.<sup>4,5</sup>

#### Drug abuse

Drug addiction is an illness to which physicians are inordinately susceptible. Studies in the 1960s suggested that drug abuse was the primary diagnosis in approximately one in five cases of physicians receiving inpatient psychiatric treatment.<sup>6-8</sup> Compared with their social peers, physicians are twice as likely to misuse mood-altering drugs.<sup>9</sup>

Typically the physician becomes addicted in his or her late 30s or early 40s but avoids therapy for 2 to 3 years. Meperidine hydrochloride (Demerol®) is the drug most commonly misused, though mor-

phine and amphetamines are also misused and alcohol is often abused as well.<sup>10,11</sup> Physical disease is frequently cited by the addicts as a cause of the drug abuse, in some cases justifiably<sup>7</sup> and in others without basis.<sup>12</sup> Other causes given by the addicts include overwork,<sup>11</sup> a family tragedy and addiction of the spouse.<sup>10</sup> Many appear to deny their addiction, and premature cessation of therapy is common.<sup>9</sup> However, perhaps three quarters of addicted physicians can be rehabilitated and returned to active, though supervised, practice.<sup>10</sup>

Traditionally the physician's ready access to drugs has been blamed for the high incidence of addiction in the profession. It is strange that a similar misuse of drugs is not well documented among dentists or pharmacists, who, for example, when they commit suicide, do not do so with drugs as often as physicians do.<sup>13</sup> Further, though it has been suggested that the addicted physician frequently demonstrates aspects of the "oral character", it appears that many "relatively well-adjusted physicians"<sup>8</sup> become dependent on drugs and that "doctors at the healthy as well as the pathological end of the continuum show a relative excess of drug use".<sup>9</sup> Clearly the nature of drug abuse among physicians and the characteristics of individual addicts require further study.

#### Alcoholism

Alcoholism, like drug abuse, is not infrequent among physicians. A

Reprint requests to: Dr. S.E.D. Shortt, Hotel Dieu family medicine centre, 220 Bagot St., Kingston, Ont. K7L 3G2

recent Scottish study found that male doctors were 2.5 times more likely than other men of the same social class to enter hospital because of alcoholism.<sup>14</sup> It is doubtful whether these figures can be explained by the medical profession's greater access to psychiatric help or by the particular frequency of alcoholism in Scotland. Physicians in England appear to enter hospital frequently for the treatment of alcoholism, though no more so than a socially matched control group,<sup>15</sup> and the standardized mortality for cirrhosis of the liver of the physicians is 2.5 times that of the general population.<sup>16</sup> Among hospitalized North American physicians alcoholism is a significant problem,<sup>6,8,17</sup> though it does not appear that they are treated for alcoholism<sup>18</sup> or perhaps abuse alcohol<sup>9</sup> more frequently than a comparable group.

A recent study in the United States has shed light on certain aspects of alcoholic physicians.<sup>19</sup> Perhaps contrary to expectation, such individuals are not necessarily the least talented of the profession; 54% of those studied were from the upper third of their medical classes. Abuse of other drugs was frequently present, as were the usual physical stigmata of chronic alcoholism and a high rate of suicide. Of the sample 49% had been arrested for impaired driving and 38% had been jailed. Nevertheless, 54% had not experienced any change in job status and many stated that their alcoholism had never resulted in injury to their patients. While few had shared their problems with peers, a surprising 78% had requested professional help of their own volition, and 71% of these had remained in treatment for 2 or more years. Unfortunately the tone of the study may be unduly optimistic, for the group examined consisted of "recovered" alcoholics; greater knowledge is required of the untreated and those that have relapses before definitive statements on cause and prognosis are justified.

### **Marital discord**

Often linked to drug abuse and alcoholism are marital and family discord, which may precipitate or

result from psychiatric illness. Among British doctors hospitalized for psychiatric reasons divorce is 20 times more frequent than among nonphysician patients.<sup>7</sup> Similar discrepancies, though of lesser magnitude, have been noted in an American study.<sup>18</sup> Physician patients have been said to show little interest in their children<sup>11</sup> and, compared with controls, tend to remain aloof from family responsibilities and activities.<sup>18</sup> Such evidence of marital disharmony, moreover, is not confined to the physician who is demonstrably ill. On the contrary, a 30-year follow-up study of college students selected for physical and emotional well-being documented a high frequency of unstable marriage, sexual maladjustment and divorce among those who became physicians.<sup>20</sup>

Not only do physicians suffer from these problems, but also their spouses not infrequently find it necessary to seek psychiatric help. A recent Canadian study of hospitalized wives of physicians suggested that such women were typically in their late 30s, though their illness had been present for half a dozen years.<sup>21</sup> Most had married in their early 20s and had had two or three children. Drug and alcohol abuse were common, as were complaints of unsatisfactory sexual relations, thoughts of suicide and somatic disturbances. Depressive neuroses and personality disorders, especially hysterical or passive-aggressive, were the most common diagnoses. These findings agree with those of an earlier American study that, however, noted a higher proportion of psychotic disorders.<sup>22</sup> In both studies the physician husbands were described by their wives as cold, rigid and distant. Of the 70 husbands only 2 had received psychiatric care, and conjoint therapy was not actively sought. In both studies a frequent complaint from the patients was the lack of time spent with their husbands and the relative isolation of the physicians from family affairs. This is in marked contrast to the optimism expressed by medical students' wives, who anticipated little difficulty adjusting to this aspect of their future role.<sup>23</sup>

On the basis of these findings it has been suggested that the under-

lying marital disorder may stem from the personalities of the spouses and the nature of the medical profession. A "dependent, histrionic woman with an inordinate need for affection and nurturing"<sup>21</sup> is attracted to a physician whom she construes as "omnipotent, understanding, and protective".<sup>22</sup> Unfortunately the successful physician may well be detached, aloof and a compulsive worker — precisely the type of husband unable to gratify his wife's demands. Her depressions, addictions and threats may be attempts to assume the role of a patient in order to extract care from her physician husband.

### **Suicide**

With a conscience tortured by the problem of addiction or a family life in disarray the physician frequently experiences profound depression. One result of this emotional turmoil is suicide. In Britain physicians commit suicide 1.5 times more often than other individuals of the same social class.<sup>24</sup> This situation in the United States has been, until recently, much less clear. Studies prior to 1970, which were largely based on incomplete records of the American Medical Association, suggested that the rate of suicide among physicians did not exceed that of the general population.<sup>25,26</sup> Investigations using other sources of information and indicating the opposite results were based on too few cases to warrant firm conclusions. A study of causes of death in Oregon between 1950 and 1961, for example, revealed only eight suicides by doctors,<sup>27</sup> and a review of all suicides in Tulsa, Oklahoma between 1937 and 1956 noted only five such cases.<sup>28</sup> Recent and methodologically rigorous studies have arrived at more accurate estimations. In one study close scrutiny of American Medical Association files, validated when necessary by individual death certificates or physicians' letters, showed that the rate of suicide among physicians was 1.15 times that of the general population for males and 3 times for females.<sup>29</sup> Another study, based on a computerized review of California death certificates for a 3-year period, found that the rate of suicide among doctors of

both sexes was twice that of non-physicians.<sup>13</sup>

Male physicians who commit suicide are usually between 45 and 65 years old, in contrast to female physicians who commit suicide, 40% of whom are under 40.<sup>29</sup> Drug ingestion is the most common method,<sup>13</sup> but male physicians frequently use firearms.<sup>29</sup> It has been suggested that certain specialists, particularly psychiatrists,<sup>26,30</sup> are suicide-prone, though this statement has recently been disputed.<sup>13</sup> Drug addiction and the depression associated with financial or practice difficulties may be implicated as causal factors.<sup>30</sup> However, suicide among male doctors correlates most closely with retirement from practice or divorce,<sup>13</sup> while among female physicians suicide appears to occur most frequently during medical training.<sup>29,31</sup> Suicidal ideas are common among physicians hospitalized for psychiatric reasons.<sup>17</sup> It is clear that prevention requires more detailed investigation into the cause of suicide among physicians.

### Psychiatric care

Almost half the physicians who commit suicide feel that psychiatric treatment has nothing to offer them.<sup>30</sup> Yet many other emotionally disturbed physicians stop short of self-destruction and seek, or are compelled to seek, psychiatric care. The size of the physician psychiatric patient population is difficult to estimate; the ratio of physicians to other psychiatric patients has been reported to vary from 1:2000 at a general hospital to 1:37 at a private clinic.<sup>32</sup> The most informative recent study was of Scottish physicians, who were demonstrated to have twice the rate of admission to psychiatric facilities as other men of the same social class.<sup>33</sup> The figures proved only that Scottish physicians were more likely to receive psychiatric care; they did not establish that the rate of illness was higher among physicians than among their peers. Given, however, the reluctance with which doctors approach psychiatric treatment, it seems probable that the incidence of emotional illness among them is appreciably greater than in the general population.

Physicians are usually hospitalized in their late 40s or early 50s,<sup>6,8,17</sup> after approximately 16 years of practice.<sup>7</sup> The earliest sign of illness may be a "gradually developing chaotic everyday life".<sup>32</sup> Psychiatric care prior to admission is unusual.<sup>5</sup> Referral is rarely from a general practitioner, but more often from a physician friend or the patient,<sup>18,33</sup> and committal occurs in 5% to 30% of cases.<sup>8,17,18,33</sup> The average stay in hospital varies from less than 2 weeks to more than 5 weeks.<sup>6,17,32</sup> The diagnosis differs according to the type and location of the treatment centre. A Scottish study noted a low incidence of personality and behaviour disorders, while an American group recorded a surprisingly high rate of schizophrenia.<sup>18,33</sup> Nevertheless, it seems reasonable to accept the results of a Pennsylvania study that found over two thirds of the physician patients to be depressed.<sup>17</sup> It is generally agreed that abuse of drugs, including alcohol, is a common secondary diagnosis.<sup>5,8,15,17,33</sup> Typically the patients blame overwork or marital discord for their problems,<sup>17</sup> and they tend to exhibit masochism, hypochondriasis, altruism, reaction formation and suppression as defence mechanisms.<sup>20,34</sup> Although physician patients appear to be discharged more rapidly than nonphysicians,<sup>33</sup> 10% to 25% of physicians insist on leaving hospital prematurely, compared with 1% to 2% of nonphysicians,<sup>17,18,21</sup> and many physicians refuse to cooperate in follow-up treatment.<sup>6,7</sup>

Physicians present particular difficulties as psychiatric inpatients. Many have delayed seeking treatment<sup>7,8,32</sup> and have complicated their condition by self-diagnosis and self-medication.<sup>35</sup> Often little pressure is brought to bear by colleagues or family, who believe, as does the physician, that doctors are capable of evaluating their own emotional status. Once hospitalized, physicians frequently attempt to direct their own therapy, while remaining aloof from other patients.<sup>7,15</sup> This refusal to accept the "sick role"<sup>36</sup> may be given unwitting support by the psychiatrist, who may identify with the physician patient and minimize the extent of the illness.<sup>5,18,37</sup> In fact, a recent study suggested that, for the

physician, being a "special patient" results in inferior care.<sup>34</sup> When compared with controls, physicians had significantly fewer family interviews and involuntary confinements and significantly more suicide attempts, covert out-of-town admissions and drug abuse. As well, physicians tended to have shorter stays in hospital and fewer readmissions, and were treated with a greater number of drugs. All of these factors may suggest that disturbed physicians receive deficient care.

Despite this pessimistic view of psychiatric treatment of doctors, opinions regarding prognosis are mixed. A recent British study suggested that 2 years after discharge one third of physicians will no longer be listed in the medical register, compared with one fifth of a healthy control group.<sup>15</sup> This confirmed the finding of an earlier study with a 1-year follow-up period.<sup>17</sup> Yet, as emphasized by an American study in which fewer than 60% of physician patients continued to practise for 3 years after treatment, the figures are unusually encouraging, given the generally poor prognosis for addiction and schizophrenia (the illnesses of 85% of the physicians in the study).<sup>18</sup> A similar positive therapeutic response, especially in addicted physicians, has been noted in other studies.<sup>8</sup> For physicians who avoid self-destruction and instead seek psychiatric help the prognosis, despite the "special patient" handicap, may be equal to or better than that for nonphysician patients.

### Etiologic factors

How is one to account for the seemingly inordinate frequency of psychiatric illness among physicians? Two basic responses to this question are evident in the literature, the first of which may be termed the "role strain" hypothesis. The role of the doctor, the theory states, is socially defined. Society has certain expectations of the physician, who, being a part of society, shares these ideals. The role, to be adequately fulfilled, demands that the doctor "function at a maximum level of competence at all times";<sup>26</sup> to do less is to negate the role and produce feelings of personal ina-

dequacy and social disapprobation. To correct this inevitable failure the physician may begin to work twice as hard but then will simply find that the failures come with increasing frequency. Overwork here is a symptom rather than a cause of stress<sup>38</sup> and is related to the inherent conflict between the physician's altruistic identity as a healer and the coexistent role as an independent entrepreneur. Moreover, the doctor's ethical credo demands that "he do what he can for everyone who lies within his reach and needs his help".<sup>25</sup> Yet 20th-century developments in medical technology have extended untenably what physicians might do and, therefore, to acquit their role, must do. Physicians ultimately fail to fulfil their own ethical commitments and society's role expectations. Faced with this stressful reality they can make one of two responses: acceptance of their limitations or personally destructive behaviour.

Such an abstruse, essentially sociologic, hypothesis is not readily susceptible to the type of verification required by the medical profession. Nevertheless, a few studies have yielded suggestive observations. An Australian investigation found that clinicians, when compared with both nonclinical physicians and American and Scottish nonphysicians, were "significantly more anxious".<sup>39</sup> The anxiety was directly related to fears of inadequacy in fulfilling the professional role. Similarly, among medical students the perceived sources of greatest stress were those related not to social adaptation but to professional inadequacy.<sup>1,40,41</sup> Such concerns may well be inherent in the health care field, as the high rate of suicide in the allied health professions suggests.<sup>13,28</sup> Certainly both sick physicians<sup>10,11,33</sup> and their emotionally disturbed spouses<sup>21,22</sup> attribute much of the blame for their illness to the strain of the profession. It seems a reasonable conclusion, then, that inherent stresses peculiar to the medical profession may account for the inordinate frequency of psychiatric illness among its members.

A second explanation for physicians' high incidence of psychiatric illness might be termed the "susceptible personality" theory. While

less philosophically complex than the role strain hypothesis, it may marshal more objective support. Briefly stated, it takes as its thesis the view that physicians in whom psychiatric illness develops have a vulnerability that antedates their entry to medical school.<sup>4</sup> Individuals of a particular personality type, the obsessive-compulsive, are attracted to medicine or accepted into medical school with disproportionate frequency.<sup>42-44</sup> These individuals are achievement- and endurance-oriented but possess little spontaneous creativity or flexibility.<sup>45,46</sup> Such traits are well rewarded in medical school but ensure frustration in the unstructured world of clinical medicine. The result may be, in some cases, an inability to cope. Complicating this professional inadequacy is the fact that such an individual may find married life difficult<sup>21</sup> and is more predisposed to addiction<sup>11</sup> and depression.<sup>27</sup> At particular risk are medical students<sup>19</sup> and physicians<sup>34</sup> who have a strong family history of mental disturbance. As might be expected, physician patients such as drug abusers have had an unhappy or unstable childhood,<sup>11,20</sup> but a long-term study was unable to show that they differ in this respect from emotionally disturbed, socially matched, non-physician controls.<sup>20</sup> It is clear, however, that the family history, personal development and personality traits of the individual physician are closely related to the presence or absence of psychiatric illness.

These two etiologic explanations for psychiatric illness in physicians represent an old dichotomy — the debate between character and circumstances, environment and heredity. It is, of course, a false duality, for both views must be taken into account. In sum, the stresses peculiar to medicine, in contrast to those of a less demanding profession, precipitate out those who are predisposed to psychiatric illness.

### Prevention and treatment

Each form of psychiatric disturbance — whether drug abuse, alcoholism, marital discord, suicide or depression — demands its own form of prevention. The following

suggestions are meant to apply to psychiatric illness in a general sense.

The problem must initially be approached at its origin: medical school. Admissions committees must select well rounded individuals whose academic achievements complement, rather than substitute for, a stable personality. During the undergraduate years psychiatry must, in contrast to what appears to be the case now,<sup>47,48</sup> sustain its credibility both as a specialty and as a potential source of solace should the need arise. Special attention should be focused on the single woman during her training to reduce the high frequency of suicide.

Specific areas that medical schools must emphasize are the dangers of drug and alcohol abuse to the profession, the counterproductive nature of overwork, the necessity of continuing self-awareness, the need to develop constructive interests outside medicine and the importance of devoting appropriate time to family life.

These themes may be stressed after medical school by medical societies and continuing education programs. Practitioners must be encouraged to monitor their own emotional status continually and realistically. At the same time they must realize their duty to watch for warning signs among colleagues and, more significantly, must recognize that covering up or remaining tactfully silent does no kindness to an ill physician.<sup>49</sup> Practitioners should be urged to cooperate in and initiate studies on such topics as suicide or sources of stress in clinical practice, for only with greater knowledge does prevention become feasible.

When prevention fails, the physician must be encouraged to seek psychiatric therapy early in the course of the illness. The stigma of such care must be removed and, further, the care must be designed to accommodate the physician's "special status". The doctor, after all, is not a patient like the rest;<sup>50</sup> what is similar is the illness. To ignore the physician's professional identity is to refuse to recognize a host of management problems and, in some cases, the key to diagnosis.

## Conclusion

Most of the studies quoted in this review, one senses, reveal only the surface of the problem. For example, more than one third of the physicians who committed suicide in one series had had no psychiatric therapy before death.<sup>30</sup> Such people may be the sick who are not seen — individuals who cope with chronic depression or anxiety but for whom life is a continuing agony. To save these doctors from their existential misery, and to minimize psychiatric morbidity in this profession in future, all physicians must be acutely aware of their own vulnerability and that of their colleagues.

## References

1. RASKIN M: Psychiatric crises of medical students and the implications for subsequent adjustment. *J Med Educ* 47: 210, 1972
2. THOMAS CB: What becomes of medical students: the dark side. *Johns Hopkins Med J* 138: 185, 1976
3. WATTERSON DJ: Psychiatric illness in the medical profession: incidence in relation to sex and field of practice. *Can Med Assoc J* 115: 311, 1976
4. WARING EM: Psychiatric illness in physicians: a review. *Compr Psychiatry* 15: 519, 1974
5. MURRAY RM: Psychiatric illness in doctors. *Lancet* 1: 1211, 1974
6. DUFFY JC, LITIN EM: Psychiatric morbidity of physicians. *JAMA* 189: 989, 1964
7. A'BROOK MF, HAILSTONE JD, McLAUCHLAN IEJ: Psychiatric illness in the medical profession. *Br J Psychiatry* 113: 1013, 1967
8. VINCENT MO, ROBINSON EA, LATT L: Physicians as patients: private psychiatric hospital experience. *Can Med Assoc J* 100: 403, 1969
9. VAILLANT GE, BRIGHTON JR, McARTHUR C: Physicians' use of mood-altering drugs. A 20-year follow-up report. *N Engl J Med* 282: 365, 1970
10. GREEN RC JR, CARROLL GJ, BUXTON WD: Drug addiction among physicians. The Virginia experience. *JAMA* 236: 1372, 1976
11. MODLIN HC, MONTES A: Narcotics addiction in physicians. *Am J Psychiatry* 121: 358, 1964
12. PUTNAM PL, ELLINWOOD EH JR: Narcotic addiction among physicians: a ten-year follow-up. *Am J Psychiatry* 122: 745, 1966
13. ROSE KD, ROSOW I: Physicians who kill themselves. *Arch Gen Psychiatry* 29: 800, 1973
14. MURRAY RM: Alcoholism amongst male doctors in Scotland. *Lancet* 2: 729, 1976
15. FRANKLIN RA: One hundred doctors at the Retreat: a contribution to the subject of mental disorder in the medical profession. *Br J Psychiatry* 131: 11, 1977
16. GLATT MM: Alcoholism among doctors (C). *Lancet* 2: 342, 1974
17. JONES RE: A study of 100 physician psychiatric inpatients. *Am J Psychiatry* 134: 1119, 1977
18. SMALL IF, SMALL JG, ASSUE CM, et al: The fate of the mentally ill physician. *Am J Psychiatry* 125: 1333, 1969
19. BISSELL L, JONES RW: The alcoholic physician: a survey. *Am J Psychiatry* 133: 1142, 1976
20. VAILLANT GE, SOBOWALE NC, McARTHUR C: Some psychologic vulnerabilities of physicians. *N Engl J Med* 287: 372, 1972
21. MILES JE, KRELL R, LIN TY: The doctor's wife: mental illness and marital pattern. *Int J Psychiatry Med* 6: 481, 1975
22. EVANS JL: Psychiatric illness in the physician's wife. *Am J Psychiatry* 122: 159, 1965
23. EAGLE JR, SMITH BM: Stresses of the medical student wife. *J Med Educ* 43: 840, 1968
24. Suicide among doctors (E). *Br Med J* 1: 789, 1964
25. CRAIG AG, PITTS FN: Suicide by physicians. *Dis Nerv Syst* 29: 763, 1968
26. DESOLE DE, SINGER P, ARONSON S: Suicide and role strain among physicians. *Int J Soc Psychiatry* 15: 294, 1969
27. BLACHLY PH, OSTERUD HT, JOSSLIN R: Suicide in professional groups. *N Engl J Med* 268: 1278, 1963
28. POWELL EH: Occupation, status, and suicide: towards a redefinition of anomie. *Am Social Rev* 23: 131, 1958
29. STEPPACHER RC, MAUSNER JS: Suicide in male and female physicians. *JAMA* 228: 323, 1974
30. BLACHLY PH, DISHER W, RODNER G: Suicide by physicians. *Bull Sui-cidol* Dec: 1, 1968
31. EVERSON RB, FRAUMENI JF: Mortality among medical students and young physicians. *J Med Educ* 50: 809, 1975
32. PEARSON MM, STRECKER EA: Physicians as psychiatric patients: private practice experience. *Am J Psychiatry* 116: 915, 1960
33. MURRAY RM: Psychiatric illness in male doctors and controls: an analysis of Scottish hospitals in-patient data. *Br J Psychiatry* 131: 1, 1977
34. WARING EM: Medical professionals with emotional illness: a controlled study of the hazards of being a "special patient". *Psychiatr J U Ottawa* 2: 161, 1977
35. GOLD N: The doctor, his illness and the patient. *Aust NZ J Psychiatry* 6: 209, 1972
36. BITTKER TE: Reaching out to the depressed physician. *JAMA* 236: 1713, 1976
37. OSMOND H, SIEGLER M: Doctors as patients. *Practitioner* 218: 834, 1977
38. MADDISON D: Stress on the doctor and his family. *Med J Aust* 2: 315, 1974
39. CRAMOND WA: Anxiety in medical practice — the doctor's own anxiety. *Aust NZ J Psychiatry* 3: 324, 1969
40. BOYLE BP, COOMBS RH: Personality profiles related to emotional stress in the initial year of medical training. *J Med Educ* 46: 882, 1971
41. COBURN D, JOVAISAS AV: Perceived sources of stress among first-year medical students. *J Med Educ* 50: 589, 1975
42. ELLARD J: The disease of being a doctor. *Med J Aust* 2: 318, 1974
43. MYCKATYN MM, MILES JE: A profile of today's medical student. *Can Med Assoc J* 109: 1118, 1973
44. SCHLAGETER CW, ROSENTHAL V: What are "normal" medical students like? *J Med Educ* 37: 19, 1962
45. BAIRD LL: The characteristics of medical students and their views of the first year. *J Med Educ* 50: 1092, 1975
46. PARLOW J, ROTHMAN AI: Personality traits of first year medical students: trends over six-year period 1967-1972. *Br J Med Educ* 8: 8, 1974
47. LIGHT D JR: The impact of medical school on future psychiatrists. *Am J Psychiatry* 132: 607, 1975
48. KAUSCH DF: Medical students' attitudes towards the mental health field: a longitudinal study. *J Med Educ* 44: 1051, 1969
49. EDWARDS G: The alcoholic doctor. A case of neglect. *Lancet* 2: 1297, 1975
50. SARGENT DA, JENSEN VW, PETTY TA, et al: Preventing physician suicide. The role of family, colleagues, and organized medicine. *JAMA* 237: 143, 1977