12 Depression, Suicide, and Stigma

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Introduction

Serious and dedicated women practice the art of medicine using their hearts as well as their minds to do this work [1]. As a group, they have what might be called "gravitas" as in their practice of medicine they manage illness, adversity, despair, and defeat – including death – while maintaining hope and inspiration for their patients. These physicians often find themselves simultaneously bravely battling their own problems with mental health while trying to remain productive and effective in their clinical roles. Their symptoms may range from major depression with insomnia to stress arising from the role conflict experienced by many women physicians struggling to juggle the competing demands of work and home responsibilities. These are women with many strengths, which include their practical, proactive, and purpose-driven qualities. They live in a complicated world fraught with challenges related to demands placed on them as partners, mothers, daughters of aging dependent parents, or women living alone trying to manage work-life balance. Unfortunately, their concern about stigma often makes them reluctant to seek psychiatric help when they need it. Their personality strengths may cause them to go it

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alone rather than to seek support and connection. In addition, they are profoundly affected by job-related problems and the inability to control their work schedules. Unfortunately, the literature to date is inadequate regarding women physicians and their unique difficulties. There is a great need for ongoing longitudinal studies of the risks of women physicians for mental illness. What is known about depression, suicidal ideation, suicide, and stigma regarding mental illness and its treatments for women physicians will be explored and illustrated in case vignettes.

Burnout: The Beginning of Mental Illness

Burnout has been described as a psychological syndrome characterized by exhaustion, reduced personal accomplishment, and the state of "depersonalization," or being disconnected from the self as one goes through the motions of living without feeling [2]. Later on, the description of burnout was refined to include cynicism as one of the cardinal signs of the syndrome [3, 4]. Self-reported physician burnout has grown from 40% in 2013 to 51% in 2017 with female physicians reporting a higher rate of burnout than men [5]. Burnout leaves its victims depleted with a negative, pessimistic, and misanthropic outlook on work and life which naturally leads to marginal productivity and diminished empathy which impacts success with both patients and staff. As a result, medical errors, compromised patient safety, and less optimal outcomes occur [5]. The symptoms of burnout constitute a danger signal. Often it can be difficult to differentiate the point where burnout stops and full-blown depression begins. Burnout appears to occupy space along a continuum between mental health at one pole and depression, substance abuse, and suicide at the other. In the center there exists healthy, resilient coping. However, the differentiating core feature of burnout appears to be stress at work. The concept of "job-induced depression" has been suggested as a more effective way to understand and intervene in this toxic syndrome [6, 7]. If it is recognized and treated early enough, progression to depression, substance abuse, and suicide should be preventable (Fig. 12.1).

Fig. 12.1 The impact of burnout and maladaptive coping on progression to psychiatric illness

If left untreated, studies strongly suggest that burnout will lead to suicidal ideation and clinical depression in a subset of burnout sufferers. According to a 2006 to 2007 study of medical students, burnout is experienced by approximately 50% of medical students, 10% of whom experience suicidal ideation during medical school [8]. Since recovery from burnout is associated with a decline in suicidal ideation, there appears to be a strong correlation between burnout and suicidal ideation.

The practice of medicine involves making life and death decisions. This is a profession that is intense and demanding. Delay of gratification is necessary in order to achieve expertise over a lengthy education followed by internship and residency training. Because medicine is practiced at the battlefront of disease and death, doctors judge their own performance harshly and failure can have dire consequences. If the physician's personal limitations are added to the risks of practice, some stumbling blocks are inevitable for doctors as they navigate training, practice, and life.

Vignette 1: The prototype of a burned-out woman physician who later develops clinical depression

Dating back more than 20 years, I treated a 37-year-old depressed woman physician I'll call Dr. Rollins. She was my first physician patient with burnout. In addition to taking care of patients, she had an academic teaching role and administrative responsibilities. At our first appointment she complained that she needed to have her job "fixed," as if it were broken. Her job stress and the onus of responsibility she felt for her patients conflicted with her role at home as a wife and the mother of a 3-year-old daughter. When and how would she be ready to have another baby? During our initial consultation, she admitted she had been sneaking away from home on the weekends to catch up on progress notes for her

practice. This was a secret she hid from her husband. Dr. Rollins was idealistic, caring, perfectionistic, and guilt-ridden. She believed patients and doctors had to have partnerships in order for healthcare to work. “Physicians must try to hear people in order to help people,” she insisted. How her colleagues were seeing new patients for 30-minute evaluations while meeting with established patients for no more than 12-minute office visits confused her. She asked me, “How can they be doing all they should?” If something bad happened to a patient she blamed herself, soul searching while probing, “What could I have done better?” Honesty, integrity, and loyalty were all extremely important to her. When she began to experience intractable insomnia, she knew she had to get help. Her husband complained she was unavailable and preoccupied. There was more emotional distance between them than ever before in their 7 years together. It seemed like he was always angry at her. Because she felt unsupported at work, she was critical of office staff whom she did not trust to do enough for her patients. Only if she did everything herself could she be sure things would be done right. However, she was overwhelmed. Although she thought about suicide, she had never made a plan or attempted it. She would never abandon her daughter to be raised without a mother. Dr. Rollins felt there simply was not sufficient time to keep up with her own learning, teach residents, and see patients. Could she find a way to create time and space for herself, her work, and her family?

Dr. Rollins’ treatment plan began with a leave of absence from work. No longer could she pretend to do it all alone. By the time she entered treatment, she was suffering from major depressive disorder with insomnia and was functioning poorly at both work and home. Treatments included SSRI antidepressant medication together with individual and marital therapy. Focusing on better resolution of the conflicts between work and family was essential [9, 10]. For the first time in their married life, she and her husband, working together constructively, decided to arrange for more help at home. The psychotherapy included work on improving her coping skills, reordering priorities, and decreasing her strong tendency toward self-criticism [11], perfectionism,

and catastrophizing. Instilling a more realistic appraisal of herself and her capacities and limitations, as well as setting more attainable goals, was key to decreasing her stress. In the process, she made time for an abandoned hobby: playing tennis. When she returned to her practice after a 12-week medical leave, she was in remission from her depression, healthier, happier, and wiser.

Though not true for all, there exists a vulnerable subset of women physicians who are at risk for depression and other mental illnesses which, if untreated, may lead to serious symptoms and outcomes including suicide. Women physicians are growing in number and currently constitute over half of all medical school matriculants in the United States [12, 13] and one-third of the current physician workforce [14]. Many physicians who regard medicine as a satisfying career nonetheless report that it is stressful. As we look at women's burnout risks, we cannot ignore that women physicians react to and tolerate stress differently than do men. Also, women may have a higher subjective sense of medical practice as stressful compared to men [15]. Despite the fact that some women accept less than full-time pay and hours as they aim for a "lighter" professional workload, they actually spend more time connecting and communicating with patients, adding extra time to their days in the clinic, and sometimes putting them behind schedule [16]. Their responsibility and commitment to patients and to excellence propels them to extend themselves. Studies have revealed positive patient outcomes including lower mortality of patients treated by women physicians. This may reflect the greater time spent communicating and empathizing with their patients [17, 18]. Although all the reasons why women have a higher subjective sense of medical practice as stressful have not been elucidated, there is likely greater overall pressure on women, who usually have more stress outside the workplace, i.e., at home, than men do [15]. Women continue to bear more responsibility for the care of children than men. In fact, if the number of hours of unpaid labor at home is added to paid and unpaid hours at their jobs practicing medicine, the total number of hours per week worked by women physicians is far greater than those of their male physician counterparts [19].

On Self-Awareness and Acknowledgement of Mental Illness Among Physicians

Physicians are healers. They heal others while often ignoring their own needs and the reality that they are human beings with fallibilities and vulnerabilities. The practice of medicine demands courage and strength as doctors preside over serious and sometimes critical matters that involve life and death. The work evokes feelings and reactions which extract an emotional toll on the doctor. However, the profession of medicine, which until the past few decades has been predominantly male, has been critical of weakness in physicians, especially if they have psychiatric problems. Historically, substance abuse disorders have been more acceptable problems and better tolerated by the medical profession than mental illness. In addition, medical doctors have protected themselves and each other rather than confronted one another about signs and symptoms of mental illness and substance abuse. The stigma associated with mental illness has caused doctors to fear loss of respect in the medical community, trouble with state medical boards, and threats to their livelihood and income. There are multiple reasons why this culture has evolved [15, 20].

Fortunately, with the recent advent of more openness about psychiatric diagnoses, the medical profession has begun to witness a decline in stigma. Physicians' open acknowledgements of mental illness and its treatment appear to lead to greater public acceptance of the benefits of treatment. There is hope and optimism in the disclosures of doctors who have confronted mental illness. If established physicians get treatment, which allows for long, successful lives and careers in medicine, perhaps others will not fear diagnosis and treatment [20].

Vignette 2: About her own illness by Judith C. Engelman, MD

The following vignette was recently shared to a group of medical students by Dr. Engelman.

"I come from a family with bipolar disorder. My mother developed mood swings when I was ten or eleven. They got worse through my adolescence culminating in psychotic manic episodes and heartbreaking atypical depression by the time I was nineteen.

Because my mother refused psychiatric treatment, my physician father tried to treat her himself with antidepressants and tranquilizers to no avail. My mother committed suicide on August 8, 1971.

Mother's younger brother Marve was a grandiose, sociopathic, larger-than-life figure for as long as I can remember. He was married four times, constantly "borrowed" money from his parents which he never paid back. He was in debt to the mob and the IRS and around 1979, he too killed himself by taking an overdose.

My older brother Joel was very handsome and popular. Married with two wonderful daughters, at around age thirty-two, Joel became increasingly psychotic and found "special messages" he perceived were just for him from all kinds of sources. In 1980 he made four serious suicide attempts. Compassionately, my brother Mark moved Joel from Chicago to Arizona, where it fell to us to look after him for the next 28 years. Joel died at age 65 of a stroke as a complication of the type I diabetes he had developed from first generation antipsychotic medications.

Though as a child I was more outgoing, funny and engaging than many of my friends, my first real depression occurred when I was 19. I had been forced to transfer to Ohio State from Northwestern because of finances. I became depressed and paranoid, gained about 20 pounds and slept excessively. After a few months, the depression remitted without treatment. I married in 1970 at age 22 and once again became depressed. This time I got a referral to a psychiatrist, walked into her office and said, "my mother is going to die this year from suicide or homicide and I want you to help me get ready." Sadly, 5 months later, my prediction came true.

I was unhappy in my marriage and unfulfilled in my job. Once I decided to become a doctor, I returned to school to take pre-med courses and my mood steadily improved. I was accepted into medical school and my husband and I divorced in 1974 after 4 years of marriage.

One year later, I fell off a ten-speed bicycle and was, transiently, a quadriplegic! It took me 3 years to regain most of my function but I was left with some neurologic deficits. The year after the accident, I had a major depression with suicidal ideation.

I dropped out of medical school and returned to my psychiatrist who started me on medication, including lithium, to prevent mood swings. She was right, of course, to be concerned that I might develop the disease my mother had, but I was devastated. After 5 months of treatment in 1976, I returned to medical school, found a psychiatrist who took me off the drugs stating that anyone would have become depressed after such a catastrophic accident.

I remained depression-free for a few years. However, inevitably, I became depressed again and again until I finally capitulated to staying on an antidepressant. Though I suspected I had a variant of bipolar disorder, I denied it for years and my prescribers colluded in that denial, not wanting to label me with that "stigma." After my brother Joel died in 2009 I found myself constantly irritable. I finally went to a colleague and asked that lamotrigine be added to my antidepressant. Despite years of ups and downs before lamotrigine, I have felt stable and depression-free ever since starting it. Around 15 years ago, a wonderful child psychiatrist friend of mine suggested that I probably had attention deficit hyperactivity disorder. After further evaluation, I was started on medicine which has really helped me organize my thoughts and finish projects without the stress from procrastination. In addition, it has helped me to be on time for commitments!

As a result of my parents' troubled relationship, I made poor choices in men until I met and married my husband Harry 23 years ago who is "the wind beneath my wings". I also struggled with heartbreaking infertility but now have a wonderful stepson and a loving "daughter by choice" who was 15 when she came into my life.

In 1991, I became a certified Yoga teacher which has helped me with balance, strength and staying centered. I began to meditate in 1976 and I have maintained a meditation practice ever since. In addition, I credit years of therapy, rigorous self-examination, spirituality, a terrific husband and brother, many wonderful family members and great friends for gifting me with such a rich life.

Medicine has been the one constant through all these traumas. My career has always provided me with extraordinary colleagues and friends, joy, intellectual stimulation and a gratifying sense of

"tikkun olam" which is Hebrew "for healing the world." As a physician, my personal struggles have definitely rendered me more empathic and optimistic that we human beings can supervene traumas and challenges with enough determination and support. I have learned that "disorder" does not equate with "dysfunction." I have learned that hope is the single most important gift we can give our patients and that resilience is a muscle we can develop as opposed to something with which we must be born. I have learned that everyone has challenges and that feeling ashamed and stigmatized because of my personal challenges is a waste of time and energy.

Finally, I have learned that sharing my story and/or the wisdom I've gained as a result of the traumas with medical students, residents and colleagues provides a powerful example of hope and triumph over tragedy."

Multiple studies have reported that medical students have high rates of depression and anxiety [8, 21–23]. Estimates are that approximately 11% of medical students experience suicidal ideation [22]. Interestingly, after Dr. Engelman's presentation, about 10% of the students who attended expressed interest in psychiatric treatment (albeit without specified reasons).

On Women's Greater Risk of Depressive Illness

Women in the general population have a 20% risk of suffering a depression in their lifetime in comparison to approximately half that number of men [10]. According to a large survey of women doctors, 19.5% self-disclosed a history of depression [24], virtually the same percentage as the risk for women in the general population. However, when self-reporting psychiatric symptoms, women doctors have a tendency to underreport because of stigma [10, 24, 25]. There is additional data that suggests a much higher risk of depression in women physicians. Among the data, including multiple databases, as high as 39% [25] to 46% [24] of women physicians have a history of depression or meet criteria for a diagnosis of depression [25]. Are women doctors truly more vulnerable to depression than the general population? Why are women so

much more vulnerable to depression than men? There are multiple factors that place women at higher risk for depression, including neurobiological sex differences and environmental stressors [26–28]. In fact, women physicians have more depressive illnesses than their male counterparts [24].

It is worrisome that depression is higher among physicians than the general population, because depression inevitably affects the quality of a physician's work with patients [9]. The suicide rate for physicians is one of the highest in any professional group, as much as twice that of members of the general public [29]. Even though doctors die at a lower rate from major medical illness, they die from suicide at one of the highest rates of any professionals [30]. The suicide rate for female physicians has been estimated to be as high as four times the national rate for women in the general population [31].

Not exclusive to medical doctors, research reveals that there are higher rates of depression in professional women compared to women in the general public [24, 25, 32]. Potentially reflecting how gender differences may impact stress and mortality rates, a Danish study showed a positive relationship between greater life expectancy, high achievement, and higher social class in men but, disturbingly, not in women, for whom the opposite was true. Danish women who attained higher educational level with increasing social class had lower life expectancy [32]. Reasons for this are most likely multifactorial. High-functioning women who have attained greater education and success at work likely have more stress and it is speculated that role conflict and harassment at work are important factors, too [24]. Additional gender-specific stressors that may influence the risk of depression in women physicians include lack of social support, greater household responsibilities, and gender discrimination and isolation, particularly in fields that are predominantly male [19, 33, 34]. Women in medicine face unique challenges that impact their risk of depression. Patient care exposes them to disturbing cases, death and dying, and threats of physical injury or violence, for example, which are potentially traumatic experiences [35]. Studies have revealed that the divergence from the general population risk of depression begins in medical school where depres-

sion is estimated at 27% of both men and women, which is three times that of age-matched norms [36].

The risks for depression in women physicians can be considered by exploring the contributions of biological, psychological, and social factors:

- Cyclic hormone biology
- Trauma
- Neuroticism
- Family history of mental illness
- Risks for lesbian doctors
- Social roles
- The imposter syndrome

Cyclic hormone biology together with periods of radical changes in hormone status including puberty, the premenstrual period, the postpartum period, and perimenopause confer biological risks of mood disorders [37]. Estrogen is known to be psychoactive and to exert a cognitive-enhancing effect in the brains of both women and men [37]. Estrogen also interacts synergistically with both thyroid hormone and serotonin in the brain by binding and enhancing neurotransmitter activity [37, 38]. In some women, the monthly decline in the level of estrogen to its nadir prior to menses is associated with symptoms of irritability, insomnia, and depression during the week before her period. If this cyclic condition is pronounced and interferes with functioning, it is diagnosed as premenstrual dysphoric disorder or PMDD. Although PMDD remits when menses begin, some women, for whom symptoms are sufficiently severe, require treatment with an SSRI. For some, once-monthly premenstrual dosing during the week prior to her cycle eases PMDD. Estrogen and serotonin influence one another in the brain. The female hormones appear to regulate and enhance the serotonin system and response to SSRI medications. Conversely, the serotonergic system and serotonergic medications affect estrogen synthesis and enhance cellular binding of estrogen in the brain [39, 40]. In a similar fashion, treating depressed women who have high-normal TSH levels using thyroid hormone augmentation can boost the efficacy of antidepressant medication

[38]. It can be difficult to achieve remission from MDD for women whose TSH level is elevated at the high-normal end of the range. All women in the perimenopause and menopause have low estrogen levels commensurate with normal aging. A subset of these women may benefit from estrogen augmentation together with an antidepressant regimen [41]. The risks and rewards need to be assessed on an individual-by-individual basis, in particular in those women with family histories of breast cancer.

Vulnerability to *trauma* is greater in females than males and is highest among female children and adolescents. It is estimated that one-third or more of women with histories of intimate relationships have suffered sexual abuse by their partners [42]. Some of these women become physicians. In fact, out of a healthy yearning to master their trauma, histories of childhood abuse may draw some women toward careers in medicine. Physicians with problematic childhoods tend to have poor marriages, drug and alcohol abuse, and psychiatric problems [43]. The allure of treating and healing others is empowering, especially to women who have been vulnerable and without much voice in their own pasts. However, conflicted and unsatisfactory relationships at home and at work are warning signs. Intimate partner violence (IPV) can represent the perpetuation of a pattern of abuse dating back to childhood [44]. Those women physicians who have histories of childhood sexual or emotional abuse and neglect are at significant risk of depression in adulthood [42, 45]. Moreover, if indicated by symptoms of depression, women with current or childhood exposure to violence and trauma are strongly advised to consider evaluation for diagnosis of PTSD and treatment with psychotherapy or psychotherapy plus antidepressant. Psychotherapy is significantly more likely to lead to remission of depression in patients with childhood trauma by addressing and confronting the issues [45]. Additionally, if these women are also physicians, they will benefit from understanding their own histories of abuse and grow to become healthier doctors, partners, and mothers. Their children will benefit, too. Affluent mothers, who are stressed by work demands and are less connected to their children, have children with higher rates of psychopathology and drug abuse [46]. In one study, physician mothers under stress responded to increased

support, including facilitated colleague support groups, which fostered not only their own well-being but positive parenting of their children [47].

Intelligence is usually considered a positive, protective factor, likely related to success and high performance at work and in life. Even in severe mental illness such as schizophrenia, high IQ is associated with improved functioning, specifically, better global functioning and insight, compared to typical schizophrenia [48], perhaps due to improved ability to problem-solve and cope with life's problems, including mental illness. On the other hand, evidence reveals that high verbal IQ predicts the tendency for *neuroticism*, i.e., to mull over and focus on doubts and concerns. Therein lies the potential for higher intelligence to increase the risk for developing anxiety disorders [49]. For example, more advanced levels of ego development in mothers failed to protect them from distress in their roles as mothers. Instead, these women had more rather than fewer psychological difficulties around conflicts in their roles as mother. These mothers demonstrated stronger negative reactions to their own critical feelings about their mothering [50].

For all women who have a *family history of mental illness* including depression, anxiety disorders, bipolar disorder, substance use disorders, or suicide, burnout may be a particularly dangerous step on the path toward onset of a mental illness, which in physicians usually presents as depression or substance use disorders or both [51]. Family histories provide crucial information about a person's risk of depressive illness. The offspring of depressed parents are at higher risk for depression themselves, with additional risks for persistent morbidity including recurrent depression, poor outcomes, and mortality, well into their middle years [52]. A history of childhood sexual abuse and/or emotional abuse and neglect are associated with increased risk of depression, especially chronic depression, in adulthood [45].

Risks for lesbian doctors. Limited data exists regarding lesbian physicians. Lesbian women physicians deserve special consideration because of their elevated risk for depression or sexual abuse compared to their heterosexual women physician colleagues [53]. Lesbian physicians reported being equally or even more satisfied with their

medical careers than heterosexual women [53–55]. According to two sources, between 2 and 3% of female physicians are lesbian. Some studies, but not all, suggest a higher level of alcohol abuse or dependence histories among lesbian physicians. However, with regard to current alcohol consumption practices, there was no difference between lesbian and heterosexual female physicians according to one large comparison study [53]. Acknowledgment of a positive family history of alcohol abuse or dependence was a more frequent finding among lesbian physicians. Significantly, alcohol abuse has been correlated with social discrimination or family marginalization among younger lesbians and gays [53].

According to a study of 4501 women physicians, lesbian physicians were more likely to report histories of depression or sexual abuse than heterosexual women doctors. Lesbian physicians were three times more likely than heterosexual physicians to report histories of sexual abuse, too. For example, in one study, sexual abuse histories had occurred in the lives of 15% of lesbian women physicians compared to only 4% of heterosexual women physicians [53]. In contrast, as high as 20% of females in the general adult population had histories of sexual abuse. It is postulated that these data reflect the tendency for all women physicians to be psychologically healthier than women in the general population. Although some researchers posit that a history of sexual abuse may predispose some women to become lesbian, it is plausible that men may be more likely to abuse girls or women who are not stereotypically heterosexual. Additionally, sexual abuse history has been associated with increased risk of depression in adulthood, a risk which is higher in lesbian physicians in comparison with heterosexual women [45, 53].

Lesbians are more likely to report workplace harassment due to their sexual orientation. Since harassment is often associated with professional dissatisfaction in addition to personal distress, it is crucial to identify workplace harassment, prevent it, and intervene appropriately to sanction the perpetrators. Prior victimization, low self-esteem, and poor social support have been associated with depression in lesbians as well as gay men in the general population [53].

More research is needed in order to better understand the risks for lesbian women physicians, lesbian women in the general pop-

ulation, and women of different races, whether born within or outside the United States, since most data to date is specific to US-born and Caucasian women only [53].

Social roles of girls and women include the care of children and family members as well as friends and colleagues. For women physicians who are also mothers, their combined caretaking roles add more responsibility and can create conflict. Because women often hate saying "no," they are at increased risk for taking on too many patients, projects, and obligations and increasing their risks of burnout and/or resentment of family demands [25]. Women work a greater total number of hours every day performing unpaid labor for their families. If their work at home plus work at the clinic are totaled, women physicians work much longer hours than their male physician counterparts [42].

Depression is more common among women doctors who were not partnered and were childless [24]. According to the findings of the Women Physicians' Health Study [24], women physicians who developed depressive illness were more likely than nondepressed women physicians to also have the following:

- More stress at home
- Worse physical or mental health
- Concurrent history of obesity or chronic fatigue
- Alcohol substance use
- A household gun
- A comorbid diagnosis of an eating disorder or another psychiatric disorder [24].

In addition, other key risk factors for women doctors include working too many hours and having career dissatisfaction, high job stress, and less control of their work schedules [24].

Among women physicians, those who reported depression or suicide attempts had a higher likelihood of personal histories of the following:

- Cigarette smoking, or alcohol or substance abuse
- Sexual abuse or current domestic violence

– More severe harassment at work
– Psychiatric disorders in their families of origin [24].

The imposter syndrome (IS) is more common in women than in men and is characterized by feelings of being a fraud who is unworthy of successes gained because the sufferer believes she is not truly intelligent [56]. In contrast to men, who attribute their successes to their own abilities, women are more prone to believe their successes are due to luck or the transient efforts they have managed to put forth [57]. Historically, it has been found that IS begins to develop in girls due to the family's expectations of her, whether they are high or low. The family expectations have tended to mirror societal expectations of girls in comparison to boys [57]. As women are increasingly accepted into advanced professional education programs and professions such as medicine, it might be anticipated that IS will be less of a problem to girls and women in the future, but that is currently unknown. When the syndrome is present, IS provides insight into the inner struggle of the woman in the performance of her professional role. The symptoms of IS include cynicism, depersonalization, and emotional exhaustion, thus overlapping with, as well as leading to, increased risk for burnout. In the early career years of the developing professional, the imposter syndrome may be part of the normal transition to a new professional identity. As an example, upon graduating from medical school, she is no longer a medical student; now she is a doctor. However, that feeling of inauthenticity, phoniness, or pretense ought to disappear as the women gains experience and incorporates her professional identity into her whole identity.

If the woman doctor chronically believes herself to be less intelligent and less competent than other physicians, IS is likely to become a pathological state. Interestingly, as they progressed through their clinical years, male medical students were observed to grow in self-esteem but that was not true of the female medical students [51]. Male doctors have been observed to be more vulnerable than women doctors to insults or injuries to their sense of self-worth or narcissism [51]. Yet it has been observed that both patients and hospital staff react to male doctors with more respect

and fewer challenges to their authority than is true for female doctors [51]. This respect that men receive from others buffers them from their insecure feelings of self-worth. Alarmingly, the same results have been borne out in a recent pilot project for evaluating emergency medicine (EM) residents. These results are discussed in a lively podcast interview with Dr. Jeannette Wolfe [58]. The results revealed that both male and female EM residents got similarly high grades at the end of PG year I, but by the end of PG year III, the male doctors had much higher evaluations in addition to stronger encouragement from evaluators [59, 60]. One would anticipate that IS would be worse if gender bias, communicated by less confidence in women's abilities and less respect for women as doctors, was routinely signaled to the female doctors. We might expect that a sense of inferiority would increase, despite greater experience, due to negative reactions toward women as doctors. In some specialties, like EM, quick decision-making and authoritative taking-charge are more important than thoughtful, deliberate interactions with patients over longer periods of time, such as the specialty of psychiatry requires.

To date, there is little or no research that compares women to men in medicine with respect to acceptance of criticism, their coachability, and reactivity or defensiveness. For both women and men physicians in training, feedback is more difficult to accept if it is derisive. Moreover, if feedback is excessively negative, it cannot be constructive and subsequently would not be expected to lead to desired growth and change in the physician in training. In addition, women have been socialized to be "communal" and cooperative at the expense of the more "masculine" attribute of "agentic." Consequently, women are trained to be less "aggressive" or decisive and can be penalized when they are, whereas the opposite is true for men [61]. Such experiences undermine women's feeling of mastery and self-esteem. Just as in burnout, individual strategies to cope and adapt are helpful, but understanding the organizational and cultural factors contributing to the higher incidence of IS among women physicians is critical to addressing the problem [62]. Group therapy has been found helpful to women with IS, and the experience of admitting their secret fear of being

a fraud to other women who share the same fear has been found to be therapeutic in overcoming the syndrome [57].

Vignette 3: A depressed woman physician presenting with somatic features, an eating disorder, and anxiety with additional risk factors of a history of childhood psychological abuse, adolescent trauma with resulting PTSD, and being unpartnered

Presentation: Dr. Renata Renzi is a 46-year-old divorced woman cardiologist who presented with gastrointestinal complaints, insomnia, and anxiety. Her work in academic and clinical practice was stressful and she was deeply unhappy that she was still single, years after an early marriage and divorce in her 20s. However, she was consumed with her work, so she thought there was neither time nor energy for dating. Her problems with insomnia and early morning awakening began over the previous summer when she was diagnosed with irritable bowel disorder (IBS). In addition, she had lost ten pounds over that year, which led her to become obsessive about her food choices. Despite developing physical symptoms, she made it clear that she enjoyed her work and had close friendships that were important and rewarding to her.

Dr. Renzi was raised in Detroit, the second of three children, and only daughter in a Catholic family. Her father worked for a mortgage company and her mother had been a nurse until the couple started their family. Dr. Renzi's earliest memory was at 3 years old, the year her younger brother was born and her father had his first heart attack. The memory was a frightening one. She vividly recalled the emotional drama of the paramedics taking her father away. During her upbringing, her father was the dominant figure at home, a strict disciplinarian who expected nothing but academic excellence from all his children. Renata was the best student but rebellious during her adolescence. She was fearful of her father who yelled and was verbally abusive to all the children, often threatening to abandon the family. Her mother stayed out of the way while the father raged. Although her mother was referred to as "the calm and gentle one" of the family, as Renata told her story, it became clear that her mother had a tendency to distance

herself emotionally from her children and her husband, thus emotionally abandoning her children. From her mother's example, Renata learned to distance herself emotionally, also. Many years later, she discovered that her mother had struggled with depression. When Renata got pregnant in her junior year of high school, her mother failed to notice that her oldest daughter was in crisis. Renata did not dare to confide in her parents and get their help. Instead, she found a way to get an abortion. From the symptoms she described following the abortion, it is likely she had an undiagnosed and untreated PTSD. She suffered insomnia, weight loss, and anxiety symptoms for 6 months after the abortion.

In young adulthood, Renata became the highest-achieving person in her family when she was accepted into medical school and fulfilled her dream to become a physician. Several years later, when she was in her residency, tragedy struck. Her youngest brother drowned in a boating accident, and with this sudden traumatic loss, Dr. Renzi's insomnia and anxiety returned. This time she entered psychotherapy and was treated with an SSRI. After she recovered fully, she abruptly decided to marry her college sweetheart. Initially it was happy, but her husband became verbally abusive toward her and she soon discovered he was unfaithful, too. Following completion of her residency, she divorced him. Claiming to have few regrets, she focused on embracing the future. By her late 30s, she had established a successful practice and was thriving. However, as she approached age 40, she was ambivalent about having a baby, having no desire to raise a child alone. She didn't acknowledge the loss of that opportunity. She just looked forward.

At our first meeting, Dr. Renzi was polite and cooperative but intensely private to the point of guardedness. She was careful in her use of words. Her mood was moderately depressed. Her face was expressionless with affect that was constricted and almost flat. What was most remarkable was her exclusive focus on her gastrointestinal symptoms. She stayed away from emotional material. Underneath her veneer of control, there was significant hurt. The history of her secret abortion in adolescence was central to understanding her core emotional issues. Out of "necessity," the accidental pregnancy was handled without the support of her parents. She voiced strong fears that her father, in his fury, would

have abandoned her. Dr. Renzi was diagnosed with major depression with somatic features and generalized anxiety disorder. The possible diagnosis of obsessive-compulsive personality disorder was considered due to her personality style and preoccupation with her health and diet. She had never abused substances.

Dr. Renzi's preoccupation with medical and physical symptoms was an initial stumbling block to her psychotherapy. Owning her feelings and discussing emotions were hard for her. Because of her family history, she needed emotional distance in order to feel safe. Medication was the key first step in helping her get better. Her insomnia responded to low-dose trazodone at 25 mg at bedtime plus prn lorazepam, which she needed for only a few weeks. As soon as an SSRI began to exert its antianxiety and antidepressant effects, her depression lifted and the anxiety lessened. Only then, did her fixation on physical symptoms cease. She started to make significant progress with processing her emotional pain and grief. As her appetite returned and she ate less restrictively, she gained back some weight. Over time, she was able to express emotions including sadness about being alone and having no children. She also had lingering anger toward her father. There continued to be significant benefit for her gastrointestinal, mood, and anxiety symptoms from the antidepressant medication. She clearly felt supported in the trust and safety of psychotherapy. In addition, in psychotherapy she had a place to share her secrets, so she did not have to bear them alone. During the period of remission, she began to feel ready to start dating again.

Personality Characteristics of Women Physicians

Physicians have certain personality characteristics which are desirable and highly selected for by medical schools and the profession of medicine [32]. Moreover, these same characteristics may put physicians at higher risk for developing depression. The characteristics include the following:

- Perfectionism and compulsiveness
- A need for control and mastery
- An exaggerated desire for achievement

- A need to please
- A reluctance to say "no"
- Difficulty asking for help
- Self-sufficiency and reliability
- An excessive, distorted sense of responsibility for others and for circumstances beyond their control.

Obsessiveness and compulsiveness as personality traits can be adaptive, for example, as in the case of the doctor who worries about her patients and consequently commits fewer errors in their treatment. However, when exaggerated, these traits are maladaptive and can constitute an illness. The diagnosis of obsessive-compulsive personality disorder (OCPD) is made when there is a marked degree of either or both tendencies accompanied by clinically significant distress or impairment of functioning [63]. In turn, those feelings may lead to depression or anxiety symptoms. With high levels of perfectionism, there is often a tendency to feel guilty for failing to attain one's ideals. In addition, there is inevitable self-doubt in individuals who are always striving for perfection, which exacerbates both obsessiveness and compulsivity.

The need for mastery carries over to their personal lives, too. When the physician mother attempts to balance family and career, the person who comes last is usually herself. Women physicians tend to suppress and ignore their own feelings and may have difficulty making time for themselves [64]. Failure to prioritize self-care is frequent in women doctors. An example is the woman physician patient who confided to her psychotherapist: "I haven't had a drink of water or gone to the bathroom all day!"

Setting their own needs aside and denying themselves self-care must become a priority to avoid the inevitable consequences of burnout and depression. There is often a belief that they should not be vulnerable themselves. They should be able to do it all. Practical solutions, such as hiring a nanny to take care of the kids or asking their partners to start dinner, are essential for these physician mothers. If they can lighten their loads, these women feel less stressed and helpless so they can be better doctors, wives, and attentive mothers to their children.

In addition to their altruism and evolved moral compass, women physicians are often intellectually smart, inventive, and action-oriented, which in combination may cause them vulnerability to developing existential depression. If the life's work of these idealistic women gets derailed from a core sense of purpose – whether that is caring for patients or doing research – these doctors may soul-search and question themselves, "Why did I go to medical school?"

The following two measures of personality have been found to be common among physicians:

(a) Need for approval (also referred to as dependency)
(b) Self-critical perfectionism.

Both of these traits are associated with dysfunctional beliefs and, in turn, developing depression. In research conducted in Norway, physicians' "need for approval" and "perfectionism" were assessed via a survey and use of a scale called the Dysfunctional Attitudes Scale (DAS). Interestingly, men doctors more frequently fell into the perfectionistic/self-critical type, whereas female doctors were most often in the dependency/need for approval type [51]. Significantly, the presence of high levels of self-criticism as students was associated with depressive illness at 2 and 10 years later, especially in male doctors. Self-criticism is pernicious if not harnessed because it affects the regulation of self-esteem, also referred to as narcissism. In male medical students and interns, vulnerability to their concept of self predicted the development of problem drinking. In other words, they drank more alcohol because they felt bad about themselves [51]. In turn, the doctors with less harsh self-assessment ultimately developed fewer depressive illnesses. Doctors do bear a heavy burden in caring for others. Yet, since they are human, doctors can and do make errors. If self-esteem and sense of self-worth are only as strong as everyday success and validation, self-confidence is likely to be more fragile. This fragility and development of feelings of worthlessness may lead to vulnerability for both depression and suicide.

In the other group, predominantly women doctors with high needs for approval, disturbances in interpersonal relationships were associated with depressive symptoms. For example, a break-up with a boyfriend might be the trigger for depression. It has been postulated that medicine, because it is a helping profession, likely attracts students with higher dependency needs [51]. The high level of interpersonal connection with patients in medical practice may satisfy the doctors' needs for approval. In addition, there are inherent rewards in having satisfying relationships with patients. For some individuals with self-esteem issues, pursuit of an advanced degree, such as an MD, may be partially motivated by the wish to prove to one's self and the world that, ultimately, they are worthy of respect and admiration. Additionally, identity as a physician appears to be central to the self-worth of many physicians. For women physicians, the gender bias problem is problematic since women doctors do not enjoy as much respect from patients and colleagues as men do, especially within certain disciplines [19].

The Effects of a Toxic Workplace

The work environment has become a focus of concern for practitioners of medicine, in particular regarding women physicians. Work stress associated with the profession of medicine has consequences for the quality of healthcare in addition to the impact on the well-being of physicians and their ability to do their work [27]. Very significantly, a physician who commits suicide is more likely to have had a job-related problem than any other problem including the death of a loved one or a non-work-related crisis [21].

In the past, many doctors practiced medicine in the setting of a solo private practice. Increasingly, today's doctors work in salaried practice within medical practice groups or institutions, in particular women doctors [27]. Consequently, there is more regimentation of procedures and there is greater emphasis on administrative duties. In particular, the requirements of documenting medical treatment have grown and become dependent on the electronic medical record (EMR) [3]. Insurance companies

together with hierarchical medical care institutions are setting the standards of both care and documentation which leads to conflict about how best to utilize limited time.

Four job-related stressors have been found to predict high levels of job dissatisfaction:

- Demands of the job and patients' expectations
- Interference with family life
- Constant interruptions at work and at home
- Lack of mental well-being about work [65].

The stress of working long hours is associated with higher rates of sleep disorders to which female physicians are more vulnerable than male physicians [66]. In addition, suicidal thinking is increased in physicians who are working long hours or are enduring degrading experiences or harassment [67]. Among female physicians, recent suicidal thoughts, and thinking about the methods by which to commit suicide, were found to be predictive of suicide risk [68]. This study's finding is in keeping with other research on suicidal ideation which has found a sensitive connection between suicidal ideation and the risk of committing suicide. Since physicians are more likely to underreport than overreport suicidal ideation because of fears of stigma, these findings may underrepresent actual suicidal thinking among doctors. In contrast, for both women and men physicians, high job satisfaction was associated with fewer work stressors and, consequently, more positive attitudes toward medical practice and the delivery of healthcare [27]. For women physicians, adequate time for their families and their personal lives was an important predictor of overall satisfaction with their work. Both men and women reported that time pressures in their practice were a source of considerable stress. That includes not only the total number of hours they worked, but, in addition, the time needed to take call, to keep up with professional knowledge [27], and to make time for their families. For women, having enough time with both patients and colleagues was an additional predictor of job satisfaction [27].

There are key protective factors which predict job satisfaction in women doctors:

- a manageable-sized workload, the ability to flexibly control the work schedule, and
- access to social support, specifically, participation in meetings to discuss stressful situations at work [68]

It is crucial that the sources of social support be confidential and nonjudgmental. The subjective perception of workplace stress is important. As an illustration, in a study of Italian doctors, *control of their work schedule* was more important to job satisfaction than the actual number of hours worked. Significantly, Italian physicians who were able to set their own work hours, influence the amount of work assigned to them, and confidentially discuss work-related problems had a lower risk of suicidal thinking. Even with higher work demands, long work hours, and less vacation, doctors fared better if they had more control over scheduling their work hours and the amount of work they were responsible for completing [67]. Consequently, it appears that it is the inability to control the work schedule that jeopardizes the mental health of practitioners. Women physicians who work their preferred number of hours are able to achieve the best balance of work and personal goals. For married women physicians in dual-career marriages, working their desired number of hours, whether they were full time or part time, was the most important factor in achieving positive outcomes. These women who worked their ideal number of hours had better job role quality, better marital role quality, lower burnout, and higher life satisfaction [69].

There is a useful model and formula available, the demand-control-support (DCS) model, which measures stress on individual physicians [67]. It provides a useful way to assess stress levels using the following factors that affect a physician's workload:

- Demand for work
- Control of the workload and schedule
- Social support in the workplace

Analysis of the DCS model results highlights that conflicting responsibilities and demands in the workplace are associated with feelings of less control, higher psychological demands, and job strain. It is job strain that confers a significant risk for the development of mental illness [67].

There may, however, be sex differences in the impact of any given type of social support. In a study of opposite sex twin pairs, men and women showed different responses to social support [70]. Among women, higher levels of support were strongly related to decreased risk for major depressive disorder (MDD), whereas that relationship was modest and nonsignificant for the men. It was a consistent finding that interpersonal relationships are more central to women and valued more highly by women than is true for men. It has been postulated that the explanation for these differences could be related to how female children are reared. Alternatively, it could be a sex-specific evolutionary adaptation. Females appear to both need and provide more social support than do males. This fact holds true with other mammals, too. In experiments with rats, the neurobiological and behavioral effects of shocking the feet of female rats were attenuated by social housing. If the female rats had companions in the cage with them during the shock trauma, the rats fared better. This benefit did not extend to the male rats who dealt no better with the trauma of shock when alone in their cage or in the company of fellow rats [20].

Just as social support can decrease the risk of depression in women, harassment can increase its risk. Studies of female physicians at work reveal a striking finding associated with harassment. Consistently, recent degrading experiences in the workplace were associated with suicidal thoughts [68]. This finding was not exclusive to doctors. Notably, bullying and harassment, also called mobbing, are associated with increased risk of suicide in the general population at work, too [67].

The existence of gender bias in some medical specialties and some departments represents yet another layer of stress for women doctors in certain fields, especially male-dominated fields like surgery and emergency department medicine [33, 58]. A woman physician's risk of developing depression becomes greatly elevated if there is a perfect storm of genetic risk, an abusive family

history, current abuse, certain personality characteristics, and current workplace stress and harassment.

There is clearly a need for more research in this area and there are many interventions which can change the course of events to steer women to better outcomes. In the treatment section of this chapter, interventions that can interrupt unhealthy outcomes and lead women doctors to better support and treatment will be explored.

Suicide and Understanding Suicide Risk for Women Doctors

Women in the general population attempt suicide two to three times more frequently than men. In contrast, women physicians make fewer attempts on their lives but succeed at killing themselves more often than other women [24]. This is true despite the fact that women physicians suffer depression at a 20% lifetime prevalence which is the same as other women. Why do women physicians have more success at committing suicide than other women? Simply, they have medical knowledge as well as access to lethal medications. Moreover, although chilling to contemplate, women doctors may have less ambivalence about killing themselves when they put their suicidal plans in motion. Ambivalence is that grain of doubt about ending it all that can, and does, save lives. It is psychiatric distress that can shatter hope. With or without a diagnosis of depression, psychological distress is shared by suicide victims [21].

Women physicians are much less likely to be in treatment for mental illness for reasons including failure of insight into their own illness or because they fear stigma. These are women who also possess a strong wish to overcome mental illness on their own [25]. Depending on licensure renewal requirements, which vary by state or country, the diagnosis of a mental illness could be potentially damaging to medical licensing [15, 64, 71]. In addition, physicians believe they should be able to avoid getting depressed. They should be strong enough and self-sufficient enough to manage independently [64]. Current depressed mood,

defined as 2 weeks prior to death, is a risk factor for suicide even in the absence of a known depressive disorder. Toxicology data reveals that physicians who die from suicide show very low rates of treatment with antidepressants [21]. These results are strong evidence that physicians with depression go untreated [25]. Instead of getting appropriate treatment, as high as 20% of depressed women physicians admitted they had self-prescribed antidepressant medication which may be an underestimate. In addition, they may have a colleague prescribe to them [21] or have ready access to drugs at hospitals or clinics [25].

Depression increases professional stress at the same time as it decreases job satisfaction among physicians [72]. The converse is also true. Problems at work contribute to anxiety, depression, and suicidal ideation in physicians. Therefore, it follows that the combination of problems at work and depressed mood plays a central role in physician suicides [21]. Because the physician identity is so important to a doctor's core sense of self and self-esteem, disruption at work is very threatening and leads to distress. Suicide by poisoning is the most frequent means of suicide for women doctors, but self-inflicted gunshot wound is the most frequent cause of suicide among all physicians, as it is the preferred means of male physicians who outnumber women in completed number of suicides. Although the data from the National Violent Death Reporting System is the most comprehensive reporting on physician suicides to date, the number of women doctor victims was small, with only 15% of the total of 203 physician suicides recorded [21].

Depression alone does not adequately explain suicidal ideation and intent. Even among suicidal subjects from the general population of individuals who have neither history nor diagnosis of depression, psychological pain was most highly associated with both current and lifetime suicidal ideation and attempts [73]. Studies suggest that widening the risk factors to include a triad of factors provides better predictability of suicide risk: (1) psychological pain, (2) depression, and (3) hopelessness. Using three factors more accurately predicts suicide risk than using only two measures, for example, depression and hopelessness [73].

Interpreting Suicide Data

The suicide data available is shocking, but it is also confounding. Some research studies reveal that suicides of men and women physicians are two times that of the general population with a similar risk to both men and women physicians [74]. Other studies report alarmingly higher rates of suicide among women physicians. Among the findings is that women physicians commit suicide up to twice as often as men doctors [52] but as much as four times the rate of women in the general population [75]. Since deaths by suicide occur at younger ages than are usual for female life expectancy, the calculation of life expectancy of women doctors is affected [76]. Yet studies of both women and men doctors reveal they are healthier, take better care of their health, and die of medical diseases at a lower rate than is true of the general population [32, 77]. Since women are known to outlive men, it would be a glaring anomaly if the overall life expectancy of women physicians was 10 years shorter than that of men doctors. Yet some research makes claims that this is so [76]. In actuality, the death rate of women doctors is low except due to premature death from suicide. Suicide death data is usually captured in studies with small sample sizes of women compared to large pools of men doctors. Comparing small numbers of women to large numbers of men likely overestimates the suicide rate of women doctors [78]. Nor are the raw numbers necessarily age-corrected. The question is how to interpret these findings. Mistakes with data collection and interpretation are well known in epidemiology. *"Simple comparison of age at death is therefore not appropriate since the denominators for calculating the death rates of men and women are not the same."* Non-age-corrected rates of suicide are deceptive and may lead to faulty conclusions [19]. Larger studies are needed to help clarify whether women physicians' suicide rate is truly elevated compared to men physicians [78].

There is a big cost to our society and our health-care system as well as to families if women doctors are incurring increased risk of early death to suicide. Since more women doctors have entered medicine in the past several decades, the composition and the culture of medicine has been affected. How those women doctors are

faring and how the general public of patients is adapting to more women physicians are important issues. It is likely that the practice of medicine has been positively affected by the women who have entered the field. In comparison to men doctors, women doctors appear to communicate and connect differently and/or better to their patients, not necessarily related to the amount of time spent with individual patients. This may reflect that patients feel more caring and empathy from female physicians but it is related to higher satisfaction with women doctors by patients [16, 18, 79]. Moreover, there is some evidence that patients treated by women physicians have better mortality and morbidity outcomes than patients of male physicians [17]. Women doctors are undoubtedly affected by their participation in the practice of medicine, often in positive ways since practice is highly rewarding to most women doctors. However, a particularly ominous result of practice may be that women doctors are highly stressed, which increases their risk of suffering from mental illness and suicide. There is variability of suicide risk according to practice specialties, too. Psychiatrists have the highest suicide rate and pediatricians have the lowest according to one study [71] and anesthesiologists have a relatively higher risk in some studies [77]. Being single increased the risk to five times that of a married or cohabiting colleague according to European and US suicide data [21, 74].

Since only Northern European and North American data were used in most studies, it is unknown whether the results can be generalized to more diverse ethnic, racial, and socioeconomic groups. Unfortunately, it is difficult to understand mortality data, because there are too few studies of rates and causes of death in women physicians. More epidemiological studies are needed to understand the severity of mental health problems and mortality by suicide of women physicians.

The Special Case of Preventing and Treating Suicide

In any patient experiencing suicidal thoughts, a consideration of psychiatric hospitalization is crucial in order to save the life of the patient. Combined treatment with psychotherapy and medication

will likely be necessary. Antidepressant medication, mood stabilizers, antipsychotic medications, and ECT have all proved to be instrumental in saving lives and achieving remission while stabilizing suicidal symptoms. Accurately screening and identifying the individuals with high levels of psychological pain could be key to suicide prevention [80].

In the experience of many psychiatrists, suicidal ideation and its discussion in psychotherapy often offer an escape valve from the pain of living life. Talking about these feelings is freeing and can offer the person a way out of their psychological pain so they can tolerate living. "I don't have to live this life if I don't choose to," patients voice. It can be highly therapeutic to hear their doctor acknowledge that ultimate control of living or dying is under the patient's own control. As is true in any course of psychotherapy, the patient may need to reconceptualize how she thinks about living a life she wants while meeting life's obligations. Among the vulnerable population of doctors who aspire to be self-sufficient and who assess themselves with self-critical eyes and high standards, suicide offers a way out of psychological pain. Suicidal patients may harbor anger toward a spouse, a parent, or a therapist who will be punished by the patient's suicidal act. Does the patient feel unworthy or isolated, or have fantasies of martyrdom? A way to comprehend the act of suicide is to envision a final defeat when there is no escape or rescue possible. At that point there is only hopelessness [81, 82].

Suicide prevention using psychotherapy aims to attenuate harsh self-criticism, self-hatred, and disparagement and diminish suffering, restoring a sense of well-being. As mentioned above, these self-critical personality qualities are better addressed early in a medical career or during medical school in order to prevent depression later in life. Cognitive behavioral therapy (CBT) techniques are often helpful for these patients. Newer techniques which incorporate CBT, positive psychology, and mindfulness show promise [41].

Training programs are beginning to address talking about and responding to trainee suicide risk. An example is the online program described in Med Ed Portal [83]. Also, there are programs such as "QPR gatekeeper training" and "Mental Health First Aid" training that teach faculty, learners, and colleagues to recognize

the signs and symptoms of depression or suicidal ideation in order to respond in ways that help affected individuals take steps to obtain appropriate treatment [84, 85].

Stigma

"I would never want to have a mental health diagnosis on my record," to quote from a survey of female physicians [86].

The definition of stigma is, "a mark of shame or discredit," according to Webster's Dictionary. Synonyms for stigma include smudge, stain, and taint, none of which most people want, especially doctors. Shame is a painful emotion which is suffered alone. Since shame leaves us feeling we are bad, trapped, and powerless, it is little mystery that people attempt to avoid it. It makes it difficult to own having an illness or a diagnosis, such as depression if it is accompanied by stigma. But what if she does have a mental health diagnosis? Does getting treatment for depression, seeing a psychiatrist, and taking psychoactive medications brand the doctor with stigma? We want doctors to take care of themselves and to get treatment so they can practice, take care of patients, and enjoy their personal lives, too. Therefore, it is imperative for the culture of medicine to address stigma in medical school and during training. Only if stigma is less will doctors fearlessly take the steps toward proper diagnosis and treatment of mental health disorders. In the following paragraphs, stigma and the noxious effects of shame are examined.

The Burden of Shame

"Like an unskilled doctor, fallen ill, you lose heart and cannot discover by which remedies to cure your own disease," the chorus in "Prometheus Bound" chants to the suffering god [87]. The earliest reference to "Physician, Heal Thyself" dates back to the sixth century BC in Classical Greek literature [87]. According to the myth, the god Prometheus saved humanity with his gift of fire

which he gave to mortal humans in defiance of the orders of Zeus, king of the gods. As punishment, Zeus chained Prometheus to a remote crag, where, like the physician who heals others but cannot heal herself, Prometheus, who had saved humanity, could not save himself.

Sadly, it is hypocritical for the doctor to ignore or neglect her own ailments. Multiple factors likely influence denial of illness or outright avoidance of one's own treatment, especially regarding mental health. These factors include the psychological defense of denial in addition to avoidance of shame and fear of censure.

Psychological Factors and Shame

Doctors have the training and consequently the power to treat and cure illness. In addition, it is deeply satisfying work to heal others. In general, most doctors prefer the role of healer to that of being the patient. Disease and illness are like enemies to be conquered or controlled, but disease and illness also represent the fallibility and weakness of the human body and mind which are more acceptable in our patients who are sick. Moreover, the doctor has superior status and power. Could aversion to illness in one's self be a component of the doctor's very attraction to the field of medicine? Phobic avoidance and intolerance for their own sickness may be operating in the psychology of some physicians [74]. The doctor must see herself as strong and powerful, not vulnerable and ill. Nor does she have time to be sick. Yet the first step toward recovery for the depressed physician must be an acknowledgement that she needs help. Also, she must accept that she cannot treat herself. It is crucial that she avoids getting antidepressant medication samples from a colleague. No hands-on treatment means there is no ownership of responsibility and no oversight of the treatment. Resistance to psychiatric treatment and denial of illness lead to inadequate and bad psychiatric treatment of physicians, a very real danger to the profession.

Avoidance of Shame

As little children learn right from wrong, they experience scolding for mistakes and praise for things well done. Either guilt or shame may follow the reprimands of one's parents. To distinguish between the two, shame is the feeling of humiliating disgrace which occurs after making a mistake. Shame leads to subsequent feelings of being flawed and unworthy of love and belonging [88]. Dr. Brené Brown argues that shame is destructive. On the other hand, guilt is adaptive. It develops when the child feels she deserves blame for mistakes or offenses because she has failed to uphold her own internalized values [88]. When guilt is assumed, there is no disgrace because responsibility for the error has been owned. The parents who scold their children to excess promote the shame response which leads to hiding mistakes rather than owning them. Consider what happens when a doctor makes a mistake of small or considerable consequence in the care of a patient. Let us say a resident wrote an order for the wrong dose of insulin in a hospitalized diabetic patient. The lab reports back a blood glucose either too low or elevated but, in this example, let us say the patient is not unduly harmed. This resident will need to own up to making this error while presenting on rounds where she will likely be questioned by her attending. Undoubtedly, she will be exposed. If she responds with a shame response, her reaction centers on feeling, "I am deficient." The healthier reaction of experiencing guilt allows her to own up to her mistake and move past it, while acknowledging to herself, "I can learn from this. I can do better next time." Dr. William Bynum's research regarding the shame experience among medical residents and medical students has drawn attention to the significant adverse physical and/or psychological effects that shame reactions cause in this population as they are learning to become a doctor [89, 90]. Shaming experiences, especially during transitional periods of medical training, contribute to harsh self-judgments and may play a role in the development of the imposter syndrome and an impaired sense of belonging [89]. Alarmingly, according to psychological research, suicidality has been associated with shaming experiences [89].

Most of us would much rather avoid shame than suffer it. Ultimately, being unworthy is what separates us from human connection. Without that, we are alone, isolated, and, as a consequence, alienated [88]. Dr. Brown's work extends to "shame resilience," which occurs when medical errors or mistakes in judgment are shared with colleagues. Shame resilience actually tames the shame response, making it less toxic and less likely to occur in the future. However, in order to open up and share, the individuals must make themselves vulnerable. Shame resilience theory can be used to help medical students reflect on their most challenging experiences. It requires recognition of shame and its triggers. Becoming aware, telling our stories, and speaking about errors lead to resilience [88–90].

Fear of Censure

What happens if the medical board learns that a physician has been receiving treatment for depression? Is the doctor required to admit treatment on her medical license renewal form? Will her license to practice be denied if she admits treatment? Different states have different standards. In recent years, these standards are evolving toward greater acceptance of treatment for mental illness in physicians and elimination of any questions about mental illness diagnosis and treatment on the medical license renewal form. Fear of losing one's license for having a mental illness often causes doctors to avoid getting diagnosed or treated [20]. It is imperative that a well-functioning, "fit for service" doctor who is undergoing treatment for depression be recognized as healthy, i.e., not pathological. As doctors increasingly share stories about their psychiatric treatment, stigma is decreasing. When treatment contributes to restoration of the physician's psychological health, it also prevents disability. The doctors who warrant the most concern are those who deny and hide their problems while avoiding treatment. Sticking one's head in the sand is not a solution.

On the other hand, if there is a medical board complaint for whatever reason, it can be very stressful. The following vignette is a vivid example of the stress that a medical board complaint or a

malpractice suit brings into the life of the physician. The potential shame and stigma associated with being accused and questioned, in addition to threats to livelihood and income, are deeply problematic for physicians. After all, most doctors are individuals who are drawn to the profession of medicine by strong altruistic wishes to help others and make them well. Adverse events are troubling for both patient and doctor.

It is usual for doctors to strive to be good citizens who are worthy of the profession of medicine. In the case of malpractice suits or medical board complaints, when there is often the assumption of wrong-doing in the care of patient, doctors feel blamed even before any hearing takes place. Legal advice is usually necessary for guidance through the process of making a defense. Inevitably, standing up for oneself and avoiding shame become part of the doctor's objective. While these burdens are being dealt with, the physician continues to take care of obligations to her practice and patients. By the time the case has resolved, the doctor may be feeling jaded, cautious, and even paranoid toward her patients. "If a bad case can ruin my career," the doctor might posit, "am I at risk for another bad outcome?" She might wonder if she should continue working in her profession. Unless she can expect that her patients have as good intentions toward her as she has toward them, there can be no trust. Also, she wants to believe that her medical board is supportive of her as a physician. However, medical errors, poor outcomes, and complaints do occur. In turn, there may be emotional injury to the physician and the so-called "second victim" syndrome [3]. The medical culture is one in which errors are frowned upon and poorly tolerated because the stakes are so high in a field where lives are at risk. The culture is one of "no mistakes allowed" [3].

It is clear that when doctors are stressed, the best policy is for them is to reach out to colleagues and gain support and guidance. Yet shame causes people to hide, to keep secrets, and to go it alone which is the wrong tactic for the continued good health of the doctor, especially one who has to face a lawsuit or board complaint. It is likewise bad for the treatment of patients.

Vignette 4. Confronting shame and stigma: a case of a medical board complaint leading to distress, personal crisis, and burnout

Dr. Lindsey was a psychiatrist in private practice. She was in her late 30s and happily married with a teenage daughter. In addition, she looked out for her retired parents who lived nearby. She enjoyed the richness of her rewarding work at a busy psychiatry group practice with several close colleagues. She made time to attend evening professional programs and regularly met with her colleagues to discuss cases and share patient care. Many of her patients were physicians. Among them was a 36-year-old woman Internist, Dr. Scott, who had a mood disorder and ADHD and had been under the care of Dr. Lindsey for 2 years. She was compliant with the treatment plan and progressing well, meeting every 2 weeks for psychotherapy sessions which included medication management. On occasion, Dr. Scott requested that her fiancé accompany her to appointments. They were planning a wedding in the coming year and wanted to have a child together. When her fiancé suddenly broke off the engagement, Dr. Scott was distraught. She became anxious and developed insomnia. After imploring her fiancé to enter couples' therapy with her, he agreed. Dr. Lindsey referred them to a couple's therapist. Soon thereafter, Dr. Scott began to cancel or "no-show" for her appointments. Despite reminders from Dr. Lindsey's office, over an eight-week period Dr. Scott failed to come in for an appointment. Out of concern for her patient, Dr. Lindsey instructed her office to inform Dr. Scott that her stimulant ADHD medication, a controlled substance, could not be renewed without another appointment.

At that point, a drama began to unfold. In the middle of a busy afternoon during her office hours, Dr. Lindsey was interrupted by two officers from the DEA. They informed her that the DEA suspected Dr. Scott was forging prescriptions for controlled substances, including a stimulant. It was inconceivable to Dr. Lindsey that this was true! She trusted this patient who was a good physician and, she believed, a good person. The officers informed Dr. Lindsey that under no circumstances was she allowed to tell her patient about the DEA investigation. Naturally, this conflicted with her therapeutic alliance with her patient. What should she do

and where could she turn for advice? She felt it was contrary to the principles of good patient care to hide this information from her patient. However, she was scared for herself. She called her malpractice insurer for advice about finding a lawyer to help navigate the issues. Also, she turned to several of her trusted colleagues. They did not know what advice to give her, but they did provide her with support. Within the next few days, the situation unraveled further. The patient's fiancé contacted Dr. Lindsey, revealing that Dr. Scott had made a suicide attempt with an overdose of alcohol and prescription medications. Would Dr. Lindsey meet her at the emergency department, her fiancé asked? Out of moral obligation she wanted to see her patient, despite her conflicted interests. In compliance with, but also out of fear of, the DEA officers Dr. Lindsey did not reveal the DEA officers' visit to her office. The patient was grateful to see her doctor and admitted to her that she had been in a state of confusion and regretted her suicide gesture. She did not want to die. That was the last time Dr. Lindsey saw her patient. Immediately, Dr. Scott was required to relinquish her license while she completed an inpatient program for impaired physicians. Within days of these events, Dr. Lindsey was notified by mail of a complaint registered with the medical board concerning her care in this case. When she inquired who had lodged the complaint, she was told that information could not be disclosed. The source of the complaint was held in confidence. This was shocking, but what she subsequently learned was devastating. Serendipitously, Dr. Lindsey was told, in confidence, that it was the patient herself who had made the complaint to the medical board. The patient whom she had helped through difficult times over a two-year treatment history had betrayed her. She struggled with an explanation for why her patient would want to wound her.

Dr. Lindsey worked with her lawyer to prepare a defense for herself at the medical board hearing. Her lawyer was knowledgeable and kind. First and foremost, he advised, they needed to gather expert opinions about state-of-the-art treatment of patients with ADHD and mood disorders. To the best of their ability, Dr. Lindsey and her lawyer demonstrated that the best treatment had been offered to this patient and that her patient had done well

until the point at which she stopped treatment. Through this frightening and difficult time over the next several months, she awaited her hearing. Although Dr. Lindsey was an optimistic, resilient woman, nothing she had been taught or experienced in medical school or her residency prepared her for this experience. Her strong conscience had always dictated that she perform to her best ability. In addition, she cared deeply for her patients. She knew herself as a person who needed approval, a personality characteristic which is typical of women physicians. However, this crisis caused her to feel deep disapproval of herself. In turn, these feelings led to existential questions about her career. She developed difficulties falling asleep at night. "What could and should she have done differently?," she asked herself. She recognized unwelcome emotions similar to those she had experienced in her early 20s with the sudden, traumatic death of her brother in a car accident. Similar to the emotions following her brother's death, she feared the threat of new losses: her reputation, her practice, her career, and her income. For the first time in her career, she felt negative about the practice of medicine and saw risks where she had never seen them before. Now she was forced to consider that her patients, the people she cared for and about, could become adversaries. Her husband, trusted colleagues, and a course of psychotherapy provided support and help as she worked through this crisis in her career. In addition, under advice from her lawyer, she learned more about defensive medicine and improving her documentation practices. If she had become more cynical about practice, she had also become less naive.

The day of the hearing finally arrived. There, the medical board's accusers had a face. The panel was composed of all male physicians. She felt like she was being tried for the crime of being a bad doctor. To her great relief, the panel did conclude what she knew to be true: Dr. Lindsey had performed treatment of her patient up to the standards of care. She gradually moved forward with her life and returned to normalcy, once again enjoying her practice. Her sense of shame diminished over time. Although deeply affected by what had happened, she had a new awareness of risk. Eventually, Dr. Lindsey faced her sole regret about the case: she had failed to be open and genuine with her patient at the

time of her patient's suicide attempt. That was a mistake Dr. Lindsey had to own and never repeat. She strongly suspected that the DEA officers who scared her into secrecy about the investigation had likewise scared Dr. Scott into a state of desperation. She would never know whether her patient had truly forged prescriptions, nor would she ever find out why Dr. Scott reported her to the medical board. Once the DEA was involved, Dr. Lindsey had to worry about herself first and put her patient last, a bad situation for both doctor and patient.

A medical board is composed of a panel of physicians. The hearings are outside the legal system, functioning like a private court which polices the medical profession in order to protect the public within each state. Historically, medical boards have taken harsh or even punitive stands against doctors while performing their duties. However, it is critically important for the medical profession to protect its physician members and ensure that medical boards are not only prudent, but judicious in their complex task of safeguarding the public while supporting doctors.

Prevention of Burnout and Depression and How to Build Resilience: Fostering the Practical, Proactive, and Purpose-Driven Qualities of Women Physicians

It is critical for medical schools and residency training programs to play a key role in the preparation of physicians for stable, lifelong practice [36, 91]. By decreasing unnecessary sources of competition and stress in medical school, such as moving to a pass/fail grading system [36, 92–94] and improving the learning environment with role models who provide mentorship in addition to supervision, resilience will be inspired and burnout averted [95]. Students and trainees are more likely to engage in self-care when the learning environment is supportive [96]. In turn, the care of patients will not become so burdensome if the doctor takes care of herself better and tends to her own needs. This is an ideal that should continue beyond medical school, promoting growth in addition to resilience in the physician's professional and personal

life. Prevention is especially important as a cultural philosophy for the population of medical professionals who are the guardians of patients' health. Striving for good mental and physical health can become a natural part of the physician's role and provides a good example for patients.

Mentors can foster improved self-awareness in medical students and physicians in training by encouraging proactive self-care. As a group, physicians possess an exaggerated sense of responsibility and push themselves hard. When they have more to do, they may push still harder, sometimes at a high personal cost. Yet it is imperative that physicians do not defy their own needs. The poorly groomed physician is an example of failure to attend to herself. Patients notice. Likewise, physicians have an obligation to reach out to fellow physicians when changes in personality are witnessed, including abuse of alcohol or other substances and carelessness or disenchantment at work. These are among the warning signals that a colleague's mental health is in trouble. Reaching out to reassure a troubled colleague to seek help is important. We must all do it!

Physician well-being can be assessed and tracked anonymously in order to interrupt burnout and prevent depression and suicide [97]. From existing research, it is clear that relationships, religion/spirituality, self-care practices, work attitudes, and life philosophies are the five general strategies which have been used successfully by physicians to promote their own personal well-being [98]. A positive relationship has been found between employment of these strategies and achievement of well-being [99]. Meeting basic human needs and participating in their own self-care are essential to ensure that women physicians are secure, healthy, and high-functioning individuals. To summarize, those basic needs and wellness strategies include the following:

- Good nutrition.
- Restorative sleep of adequate duration, 7–9 hours each night with times of bedtime and rising fairly constant.
- Regular exercise of at least 150 minutes a week to improve physical fitness and cognitive functioning as well as to decrease stress and depression [100].

- Social and emotional support and sharing of feelings and responsibilities in positive relationships with family, friends, and colleagues. Intimate involvement with a spouse and family members effectively combats depersonalization [98].
- A sense of purpose in one's personal and professional life, which includes some measure of control over one's work schedule, setting limits as well as active participation in leadership at one's institution.
- Achievement of flow in one's work/life integration. For example, participating in hobbies or interests which involves the arts, sports, or research is associated with increased joy and satisfaction in life [101].
- Ensuring and planning for financial security.
- Finding spirituality and/or religion [101]. Self-awareness practices such as meditation, yoga, time spent outdoors in nature, and mindfulness exercises all promote conscious awareness, and wellness [99, 101, 102].
- Seeking out mentorship, support groups, or mental health services when difficulties occur including consulting with a psychiatrist when burnout, depression, or substance abuse become problems [21].

Organization-Focused Interventions to Prevent Burnout and Depression Are an Essential Part of the Solution

Although individual physicians can and must take steps to promote their own wellness and prevent burnout, it is not likely to be sufficient to prevent burnout and achieve a sustainable and productive career [5]. Organizations must also do their part to engage in a responsible process to create healthier work environments. Effective organizational strategies for change include having a supportive community, providing meaningful work, and creating an environment of fairness, choice, and control [5]. For overworked physicians, the temptation may be to opt out of serving on

committees that can create change, but a study from the Mayo Clinic demonstrates that organizational changes are more sustainable if physicians are part of the leadership team involved in determining causes of burnout, implementing change, and monitoring outcomes [5]. Research on burnout and wellness is now moving toward exploring how individual-focused and organization-focused interventions may work synergistically to create a sustainable workforce of resilient and fulfilled physicians, who can provide their communities with the valuable healthcare they deserve [98].

Mentors and wellness officers within medical institutions are important sources of support for women doctors. Both kinds of relationships have the potential to enhance the resilience and career development of women doctors.

Mentorship relationships are increasingly seen as an essential part of the woman physician's support system and a source of role models. Lack of professional support has been pointed to as a major problem for women physicians [103]. There are fewer women in medicine to serve as mentors to younger and more junior women. Also, women experience more role conflict due to their multiple roles as mothers and wives as well as doctors [104]. Mentors provide the support of a more senior professional who can help with navigating career and balance of life questions, having already made their way through earlier-career times of confusion and distress about choices. Often women delay their career paths while having babies and raising children. The leadership examples provided by mature women mentors are especially important in academic medicine where there may be a "publish or perish" mentality and the reality of obstacles to attainment of senior leadership positions. Ultimately, building job satisfaction is key. As long as there is a fraction of a woman's time at work that fuels an interest or passion – whether in research, teaching residents, or the clinic – her overall job satisfaction improves substantially. In any profession there will be the routine "bread and butter" of a job which may be less interesting, but if the woman has control over her schedule and time in various job roles, she may be more content in her job, be able to direct a percentage of her time to meaningful work activities, and offer more to her insti-

tution. Although many women work equally well with either a male or female mentor in a traditional dyadic mentorship relationship, it is apparent that a supportive mentor-lead group model is advantageous for younger women mentees [103].

Chief wellness officers in large medical organizations have a clear-cut role to canvass, troubleshoot, and prevent distress in the doctors within their organizations [105]. It is important for women doctors to feel that their employer cares about them and their career progression and promotion in addition to the clinical work they do. Chief wellness officers must ensure that female talent is not lost to the organization. For example, what happens if the woman doctor's child is too sick for her day care center? Does the institution support her and help find her alternative care? Does the institution offer fair and creative solutions to competition for scarce opportunities or resources among medical staff? In addition, a recent study found that women document in the electronic medical record (EMR) during home hours more than men and have longer notes, likely another factor contributing to higher burnout in women [106]. Ways to save time for the doctors such as employing scribes for transcribing progress notes in the EMR or providing nursing or medical assistant staff to help triage and respond to inbox messages simultaneously improves the institution's medical care. By decreasing the administrative burden of physicians, there will be more time available for patient care. The role of the wellness officer must include solutions to systemic problems in the host institution such as morale and departmental infighting. A dissatisfied and distressed medical staff likely contributes to a toxic work environment. Having a dedicated wellness officer who proactively considers these problems, especially the problems facing women doctors, not only improves medical care, but it provides more opportunities for collegial collaboration and career satisfaction [101].

Treatments for Mental Illness

On the path between burnout and depression (Fig. 12.2), the physician must become a patient in order to get better.

Healthy MD	>	MD Under Duress	>	MD Should be a Patient	>	MD Must be a Patient
*good sleep & nutrition		*distracted		*cynicism; depersonalization		*worthless & hopeless
*exercise/meditation		*insomnia/fatigue		*mood disturbance		*impaired functioning
Active Self-Care	>	Stress Symptoms	>	Burnout	>	Major Depression

Fig. 12.2 A guide for evaluating symptoms of stress and mental illness: when to refer the doctor for treatment

In the process of caring for patients and getting involved in the problems of their lives, physicians are also simultaneously navigating their own problems. In order to do a good job, doctors need to be mentally and physically healthy. If personal problems become too big and unwieldy, doctors do not function optimally. Burnout emerges as the physician "comes undone," leading to cynicism, carelessness, and ineffectiveness at work. Since treating patients requires understanding their problems, caring for and about them requires compassion and mercy toward them. The philosopher Martha Nussbaum says it well in her description of how people become more human and merciful while they are reading fiction [86]. The concerned reader of a novel is drawn into the lives of the characters and, in the process, develops deep understanding. The reader puts on the skin of the characters and enters their minds in an attempt to understand them and their dilemmas. The reader gets involved personally. Likewise, for physicians, as we listen closely to the problems of our patients, we identify with them and come to appreciate the "complex narrative of human effort in a world full of obstacles" [86]. Dr. Abraham Verghese captured this idea when he wrote, *"I've never bought this idea of taking a therapeutic distance. If I see a student or house staff cry, I take great faith in that. That's a great person, they're going to be a great doctor."*

Women physicians are practical, proactive, and purpose-driven human beings. These three essential qualities empower women physicians to find solutions and solve problems. These qualities are necessary for taking care of others. For many physicians, medicine is a calling. But the path to becoming a doctor often takes every ounce of what the woman has. The resolve and commitment of women doctors are enormous. After graduating from medical school, she may be dismayed with the complexities of today's

corporate medicine which she views as inhumane and, perhaps, misogynous. However, when the doctor cannot do the job she was trained for, the job she may have felt born to do, existential despair may emerge. Her idealistic expectations may be unrealistic but reality may be daunting. During the third decade of life, while a woman is going through medical school, she will likely be searching for a partner, committing to a relationship and considering starting a family. Medical school teaches her to prioritize. It is not hard to imagine why ignoring one's own needs becomes expedient. The physician pays attention to the care of her patients ahead of her own needs. She may put the needs of her partner or child ahead of her own, too, and consequently have inadequate support. Alternatively, it may be a challenge for some woman physicians to relinquish management of all the details of her home life to a husband, partner, or extended family. Will she allow someone else to prepare the meals, help bathe the kids, and fold the laundry? Yet, if she can have the home life she wants and needs for stability and predictability, it will not only help to prevent her from burning out, it will make her a better doctor [21]. How she solves these problems depends on the support system available to her, how much money she can pay for outside help, whether she can work fewer clinic or administrative hours, and whether she needs to publish. If her family or a babysitter provides the extra support at home that she needs, she will function better.

Since the emergence of unhealthy coping patterns is more likely during periods of duress, recognizing personal challenges and psychological conflicts early can limit problems before they get too big. In this case, self-awareness constitutes prevention. Whether the problems are caused by family of origin and so-called "dysfunctional family" issues or genetic vulnerability for an illness like depression or alcoholism, admitting the risk gives the physician more control and better solutions. Individual psychotherapy can be used like a tool to help the physician patient avoid pitfalls. Although not every doctor requires psychotherapy, if there has been a history of trauma, abuse, or mental illness in the doctor or her family of origin, psychotherapy can expand her self-awareness allowing her to deal with maladaptive

coping patterns, such as tolerating abusive interpersonal relationships at work or at home. In addition, psychotherapy aids the doctor's overall personal growth and development. At the beginning of any psychological treatment, the complex issue of who is in charge – the psychotherapist or the patient – must be confronted and navigated by the psychotherapist. In order to be treated, the woman doctor must surrender some measure of control to the therapist. In turn, the therapist becomes "the doctor" and the doctor becomes "the patient." This can feel alien and uncomfortable in the beginning. However, as the woman doctor, as patient, experiences a supportive therapeutic alliance with her psychotherapist, she will deepen her mastery over her own struggles and, in the process, develop trust. Physician mothers face different psychological challenges than women physicians who have no children. If she is single and alone, the woman doctor may need to find and build a supportive group of friends and colleagues in order to avoid loneliness and isolation. For those women who desire children but find themselves without, there may be a need to address disappointment and the loss of that chance to be a mother. Infertility and miscarriages of pregnancies may force the woman to enter therapy and work on resolving their disappointments. Charting a path forward in life, some women physicians with no children find that the mothering role is fulfilled by working with patients or actively participating in the lives of stepchildren or nieces and nephews. In addition, mentoring younger women doctors is deeply satisfying of these needs. Because psychotherapy fosters growth and change, it is highly beneficial to those women who are struggling with their roles or challenges in life [21].

The Role of Psychiatry

If a woman doctor becomes mentally ill, a psychiatric consult is essential to determine what caused the illness and how to treat it using psychopharmacology and/or psychotherapy.

Psychotherapy and Psychopharmacologic Treatments

Psychotherapy can improve coping strengths and prevent burnout even before there are signs of mental illness. What type of psychotherapy is best for an individual depends on multiple factors including the diagnosis, severity of symptoms, and the personality and cognitive style of the patient. If the patient is in crisis, emergency intervention and hospitalization may be necessary to stabilize the crisis before treatment can begin in a setting away from home and family. For those with mild depression, evidence-based psychotherapies like cognitive behavioral therapy or CBT [75] (see below) are the treatment of choice, without medication, although medication plus CBT is another alternative way to begin treatment even for mild depression. However, exercise added to CBT has been shown to ease the symptoms of mild-to-moderate depression [107]. Moreover, according to a recent large study, physical activity may help ward off depression [100]. If symptoms are more marked, moderate to severe, using antidepressant medication may be necessary before the patient is able to do psychotherapy work [107]. Together, antidepressant medication with psychotherapy has a high likelihood of improving patients' psychosocial functioning while decreasing their symptoms of depressed mood and additional symptoms such as irritability, anxiety, and insomnia. Although the level of experience of the psychotherapist may be a factor in the outcome of psychotherapy, it has been difficult to determine this is true in studies of outcomes to date. However, attainment of insight, an important component of psychodynamic psychotherapy work, but also cognitive behavioral therapy, does lead to improved patient outcomes and the achievement of beneficial change [108]. Personality disorders such as obsessive-compulsive (OCPD) complicate the treatment and outcome of patients with depression. Combining psychotherapy and antidepressant medication has been found to be more effective for this population with diagnoses of both personality disorder and mood disorder. In addition, the combined therapy helps sustain improvement over the long term [109].

The reduction of symptoms and attainment of remission from depression and anxiety are the goals of psychotherapy. In addition, it contributes to benefits in overall functioning of the patient and prevention of relapse, fostering growth in the capacity to cope more adaptively. All of the individual psychotherapies help individuals to become more integrated and authentic, capable of personal responsibility and improved relationships with others. In addition, the exploration of what in life has meaning to them, including within their work, is a key ambition of psychotherapy. Attaining more conscious awareness of oneself is key to growth. As people get healthier, they are able to maintain a view of the world that is more benevolent, i.e., less threatening, allowing a more honest and flexible self in relation to others [110]. The different psychotherapies listed below are ones which are likely to be most accessible and useful to women physicians. They are the techniques of psychotherapy which have been well-researched and found effective. Most well-trained therapists who are psychiatrists, psychologists (PhDs or PsyDs), and masters' level clinicians use a combination of theoretical principles and perspectives in their work with patients.

Cognitive behavioral therapy (CBT) targets maladaptive thoughts and behavioral patterns. It has potential benefit for individuals with mild to moderate depression and is recommended by the American Psychiatric Association (APA) as an initial treatment for these patients [109]. The aim of CBT is to alter depressive cognitive patterns such as pessimistic thinking. Cognitive therapy begins by identifying the distorted thinking so that a therapeutic reframing of the negative, distorted outlook may be possible. Cognitive behavioral therapy does not include close examination of emotional issues and confronts limited utility when deeper work is indicated for recovery.

Psychodynamic psychotherapy, also called insight-oriented or supportive-expressive psychotherapy [111], is especially beneficial to those individuals who need to explore past traumas or a history of abuse. It is also valuable to anyone who is maladaptively repeating patterns from earlier family dynamics in their current life. The aim of the work is to understand one's unique developmental and family history and one's emotions, relation-

ships, and patterns of behavior that may be self-defeating. Successful treatment allows for the exploration of unconscious factors and leads to expanded self-knowledge, in turn diminishing unhappiness and conflicts. Mentalization, an important dimension of psychodynamic therapy, centers around developing and improving the capacity to "think about thinking" as a means to understanding oneself and others. It was first described in 1960 by the psychoanalyst, Peter Fonagy [112]. Evolving an ability to understand misunderstandings when they occur helps individuals to be empathic while navigating relationships and interpersonal conflict. However, individuals who have suffered physical, psychological, and sexual abuse may have a complicated and disorganized attachment to parents or caregivers and consequently [113] have difficulty maintaining a stable sense of self, which is a goal of mentalization therapy [110].

In addition, *relational psychotherapy* techniques may be particularly helpful to the women doctors who suffer from disconnection and isolation. As this form of therapy focuses on achieving satisfying, healthy relationships with others, it also helps with managing life stress. Because women are socialized to be nurturers, relationships are key to their psychological health. Benefits, such as understanding the behaviors which cause disconnection from others, lead to increased self-awareness and increased self-esteem. In addition, gaining greater awareness of power dynamics within relationships, including gender and racial issues, benefits women [114].

Group Psychotherapy and Support Groups

Group psychotherapy and support groups deserve special consideration for women physicians based on women's needs for supportive relationships with other women and the health benefits they derive from those connections. Since women are genetically and socially oriented to relationships, it makes sense that developing supportive networks within work or outside work could benefit the women, in addition to their families, their patients, their colleagues, and their institutions. The Authentic Connections

Groups (ACG) for medical professional mothers at the Mayo Clinic in Arizona demonstrated encouraging results that persisted and further improved 3 months after completion of the psychiatrist-led group therapy sessions. During the course of guided group therapy for 12 weeks, the women explored and discovered solutions to problems caused by the duality of motherhood and practicing medicine with consequent declines in their levels of the stress hormone, cortisol. During the group sessions, the mothers developed secure relationships of trust with fellow group members as they solved shared problems. Several women in each group also requested mental health referrals for themselves and/or their children. Many acknowledged that they would likely not have asked for additional help were it not for the group [47].

The high rates of burnout, anxiety, depression, and suicide in women physicians is often related to feelings of isolation and being overburdened [5]. It is perhaps unsurprising that stressed mothers might have stressed family systems and children as well.

A report, published in the American Psychological Association's Journal of Abnormal Psychology, looked at survey data from more than 600,000 adolescents and young adults [115]. Over the past decade, the rates of depression, anxiety, and suicidal ideation and attempts have increased alarmingly among people age 26 and younger with the highest increase being among children from higher-income families. Parental stress contributes to increased pressure on children to achieve as well as the isolation from their parents that these children experience. Furthermore, it was during their children's middle school years that mothers reported their lowest life satisfaction and lowest sense of fulfillment with their highest level of stress, loneliness, and emptiness [116].

For many ACG physician mother participants, it was their love for their children that inspired these mothers to invest in change. The ACG mothers' mandate was to develop a "go to committee" for support, mentoring, and validation. They were reminded of the evidence that it was the quality of their time with their children, not quantity, that contributed to the mental health of the children. Participants were encouraged to set up weekly "check-in" times with their committee to address their own needs and parenting concerns or just to share a glass of wine [117]. These four factors

surfaced as critical in mitigating mothers' stress and they were independent of the mother's marital status:

- Unconditional acceptance
- Feeling comforted when needed
- Authenticity in relationships
- Friendship satisfaction

The fact that Mayo Clinic supported this intervention during regular working hours enabled these busy professional moms to participate in groups, which measurably decreased professional burnout. The results of this low-cost study benefited the mothers, their children and family, and the hospital. Tait Shanafelt, MD, the current chief wellness officer at Stanford, has documented the value to organizations of investing in physician well-being including positive business consequences [118]. Upwards of 54% of physicians experience burnout [119] with consequent increased physician turnover, poorly delivered healthcare, and decreased revenues. What is more difficult to quantify are the lives that are saved as a result of decreased isolation from proactive interventions. Additionally, satisfaction with marriage – not simply being married – was associated with maternal well-being. However, the most compelling factor overall in maternal well-being was satisfaction with friendships [97, 101]. These research-based insights can be utilized within supportive group-based interventions [99] aimed at fostering the resilience of mothers in their everyday lives. The Authentic Connections Group is a great example of the synergy created in the group therapy setting especially when it includes mentoring and support.

Support groups may provide benefits to women physicians whether they are struggling or highly functional. Unlike group therapy, there is no professional leader of the support group process. Instead, support groups bring together people with a common problem in an informal, protected space. Today, there are several programmatic and problem-focused support groups, the most well-known of which is Alcoholics Anonymous (AA), the first 12-step support group program. Al-Anon came later to pro-

vide a forum for families of alcoholics. These support groups can be helpful to individuals with psychiatric diagnoses like depression which are complicated by comorbid conditions such as alcoholism which confer risk not only to themselves, but to their family relationships and their jobs, too. Additional support groups exist for overeaters, sex addicts, gamblers, debtors, and the codependent. Parents Without Partners and groups for divorced or grieving individuals have sprung up because of the universal human need for support. Participating in a support group allows individuals to identify with others who have similar problems, giving voice to their struggles in a safe setting. As a consequence, the loneliness, isolation, and shame of a problem like overeating is diminished.

In a similar way, informal groups of women, particularly long-term groups where there are close connections, serve to protect women and provide them with trusted, authentic relationships within which they can be understood and supported. A group of ten women developed out of the need of one distressed professional woman who felt isolated in her job at a large male-dominated international firm. Twenty years ago, she invited women with different professional backgrounds – psychologists, psychiatrists, academics, lawyers, and women from the business world – to participate in a non-work-based group which met to discuss topics of mutual interest, in particular, women's personal and leadership challenges. Over the years, these busy women from different parts of the United States read books and watched movies in preparation for their meetings twice a year. In the process of these shared experiences, their children grew through adolescence and into young adulthood, their parents aged and died, and some of the women members got divorced and remarried. Relationships with significant others, colleagues, friends, and children were discussed along with the inevitable problems of living life. As a participant of this alliance, I can attest the bonds which developed among the women were strong ones because the group was authentic, voicing vulnerable feelings and getting validation. Meeting together became almost sacred because of the safety and truth of living life together.

Small groups of women physicians who meet for social purposes, to discuss books or to play tennis, will also share their worries about spouses, children, and work. If there is safety in their intimacy, the women will develop understanding and support for one another. This is what women physicians need: formal or informal support groups where there is no judgment and where life, support, and resources can be shared. What makes these groups work is the underlying hunger for connection. When women swap day care ideas while laughing together about the small frustrations of a sometimes clueless partner, they face the world with less stress, more joy, and more resourcefulness. When women laugh and cry together, they bare their souls and are no longer alone. That is what works [47].

There is also a place for physician support groups which focus on work and the care of patients. Instead of being alone, if the doctors can discuss stresses in the safety of a compassionate group, they can support one another while sharing difficult clinical cases and finding solutions. For example, Physician Engagement Groups have been demonstrated to decrease burnout in Mayo Clinic physicians [101]. Balint groups [71], the Schwartz Rounds® program [120], story-telling groups, and Doctoring to Heal programs are examples of groups that promote well-being by inviting participating physicians to expand their understanding and awareness of professional issues [101]. Balint groups originated in England with the psychoanalyst, Michael Balint. Their original purpose was to provide supervision for general practitioners who benefitted from discussing psychodynamic factors in the treatment of their patients. The general practitioners discussed with each other and Dr. Balint what caused anxiety and psychosomatic symptoms in patients. The aim was to decrease the number of futile and costly searches for medical explanations of symptoms while identifying causes of illness due to stress or psychiatric problems. This structure provides an example of collaborative care among physicians which improves care for the patient while the doctor receives more support and companionship in her work. Solving such problems as, “When do you fire a patient?” or “What do you do about a conflict of interest in treating someone?” If a doctor becomes afraid of a patient, is threatened by a patient, or

feels the patient violates the doctor's boundaries, that doctor must turn to clinical peers for advice. At times, legal advice must be sought as well. This model provides an appealing example of how group therapy can support practitioners while stimulating the clinical work and fostering interest and pleasure in practice.

Conclusion

The practice of medicine is a calling for many of the women doctors whose altruism and idealism drew them to the field. However, for multiple reasons, women physicians may be at increased risk for burnout, depression, suicide, and stigma. Women physicians have similar risks to women in the general population for depressive illness, about a 20% lifetime risk, which is almost double the risk for men. It is true that all females, including women physicians, have an increased biological risk for depressive illness. That risk includes hormone changes due to the menstrual cycle, pregnancy, lactation, and menopause. Also, women are more vulnerable to the deleterious effects of childhood trauma and abuse which predispose them to depression and anxiety disorders later in life. In addition, all women have increased social risk factors for depression as a result of their burden of responsibility for the care-taking of children and parents. Lesbian women physicians have somewhat increased risk factors for depression compared to heterosexual women, including more family histories of depression, substance abuse, sexual abuse, and harassment.

Alarmingly, the risk of suicide for women physicians has been reported to be two to four times that of women in the general population and, according to different research findings, equal to [30] or twice that of male physicians [24, 25]. There are confounding epidemiological factors which complicate our deriving the true rate of suicide in women doctors. Because there are more men than women physicians in the United States, pools of data on women are small and comparison with the larger data on men physicians leads to distorted and sometimes invalid conclusions. Additionally, data available are exclusively about women from North America and Europe and do not include women born out-

side of the United States who are racially diverse. Moreover, women physicians appear to have a higher risk of suicide than other high-achieving professional women. Having expertise about medications and how to poison themselves, women physicians are more successful at completing suicides than other women. Once they put their suicidal plans into action, it appears that women doctors possess less ambivalence about ending their lives and more determination to do so. Consequently, identifying additional risk factors for women doctors is crucial so that intervention and treatment can prevent illness, disability, and untimely death. Psychological pain together with hopelessness and depression constitute the triad of factors which are key to understanding motivation for suicide. In addition, there are personality characteristics which increase the risks of depression and suicide in addition to job-related stresses and the dangers of a toxic work environment. The personality characteristics selected for in medicine include perfectionism and obsessiveness. Those characteristics are important because attention to detail saves patients' lives. High needs for approval are associated with feeling inauthentic, like an imposter. In fact, the imposter syndrome is more common in women. Other personality risk factors include a strong wish for control, mastery, and autonomy which may predispose women doctors to isolation, difficulty asking for help, and denial of their own needs, all of which culminate in higher levels of psychological pain and hopelessness. Stress at work, including onerous responsibilities to complete electronic medical records, long clinic hours, and little control of schedule, biases against women for promotion, and research opportunities, as well as harassment in the workplace, are of major significance because of their toxic effects on women. In the workplace, women appear to get less respect from patients and colleagues than men do, even during the training years of internship and residency. Moreover, the conflict between family and professional roles and responsibilities means women physicians work longer hours with more stress, especially if they have an inadequate support system at home.

Stigma is an important problem which prevents women doctors from acknowledging depression and getting psychiatric

diagnosis and treatment. Clearly, more efforts must be made to diminish the stigma of mental illness and treatment. Recent increases in the number of physicians who openly reveal their own stories of depression are having a powerful effect on acceptance of treatment. Significant steps are underway in medical school curricula to educate medical students about the importance of early recognition and intervention when psychiatric illness presents. Identifying and discussing the role of shame when mistakes are made or poor outcomes occur in medical practice have a place in limiting the pain of shame and stigma, especially for women physicians who may be at heightened risk if censured by medical boards or if targeted in malpractice suits.

What appears to benefit women physicians most is increased social support, coaching, and mentoring including individual and group psychotherapy and authentic connections with other women colleagues and friends. Their intelligence, tendency to worry, and strong sense of idealism may make women doctors more vulnerable, but these characteristics also make them excellent candidates for successful psychotherapy treatment, coaching, and mentoring. The proactive, practical, and purpose-driven strengths of women physicians can be harnessed and redirected toward helping themselves – not only others. The positive results of group psychotherapy work with physician mothers and the anecdotal stories of individual psychotherapy treatment successes are examples of how resilient this population is when they have opportunities to improve their professional and personal coping skills and attain more balanced lives. Continuing research will better elucidate the risks for women doctors and lead to better prevention and earlier treatment of psychiatric illnesses. What is clear from current research is that women make great physicians. The patients of women doctors may fare better in morbidity and mortality than do the patients of male doctors. However, better support of women physicians in the workplace via organizational, cultural, and systemic change is called for in order to alleviate their stress and improve the professional satisfaction of this admirable population of women professionals.

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References

1. Osler W. The practice of medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head. 2014. Available at: https://stanfordmedicine25.stanford.edu/blog/archive/2014/10-Osler-isms-to-Remember-in-Your-Daily-Practice.html.
2. Freudenberger HJ. Staff burn-out. J Social Issues. 1974;30(1):159–65. Available at: https://spssi.onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-4560.1974.tb00706.x.
3. Stehman CR, Testo Z, Gershaw RS, Kellogg AR. Burnout, drop out, suicide: physician loss in emergency medicine, part I. West J Emerg Med. 2019;20(3):485–94.
4. Maslach C. Maslach burnout inventory-human services survey (MBI-HSS) for medical personnel. 1981. Available at: https://nam.edu/valid-reliable-survey-instruments-measure-burnout-well-work-related-dimensions/.
5. Callahan K, Christman G, Maltby L. Battling burnout: strategies for promoting physician wellness. Adv Pediatr. 2018;65(1):1–17.
6. Bianchi R, Schonfeld IS, Vandel P, Laurent E. On the depressive nature of the "burnout syndrome": a clarification. Eur Psychiatry. 2017;41:109–10.
7. Bianchi R, Schonfeld IS. Defining physician burnout, and differentiating between burnout and depression-I. Mayo Clin Proc. 2017;92(9):1455.
8. Dyrbye LN, Thomas MR, Massie FS, Power DV, Eacker A, Harper W, et al. Burnout and suicidal ideation among U.S. medical students. Ann Intern Med. 2008;149(5):334–41.
9. Firth-Cozens J. Interventions to improve physicians' well-being and patient care. Soc Sci Med. 2001;52(2):215–22.
10. Andrew LB, Brenner BE. Physician suicide. 2018. Available at: https://emedicine.medscape.com/article/806779-overview. Medscape.
11. Spataro BM, Tilstra SA, Rubio DM, McNeil MA. The toxicity of self-blame: sex differences in burnout and coping in internal medicine trainees. J Womens Health (Larchmt). 2016;25(11):1147–52.
12. KFF. State health facts: demographics and the economy. Available at: https://www.kff.org/other/state-indicator/allopathic-medical-school-graduates-by-gender/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D.

13. AAMC. 2018 Fall Applicant and matriculant data tables. 2018. Available at: https://www.aamc.org/system/files/d/1/92-applicant_and_matriculant_data_tables.pdf.
14. AAMC. 2016 Physician specialty data report executive summary. 2016. Available at: https://www.aamc.org/system/files/reports/1/2016physicianspecialtydatareportexecutivesummary.pdf.
15. Dyrbye LN, West CP, Sinsky CA, Goeders LE, Satele DV, Shanafelt TD. Medical licensure questions and physician reluctance to seek care for mental health conditions. Mayo Clin Proc. 2017;92(10):1486–93.
16. Roter DL, Hall JA, Aoki Y. Physician gender effects in medical communication: a meta-analytic review. JAMA. 2002;288(6):756–64.
17. Tsugawa Y, Jena AB, Figueroa JF, Orav EJ, Blumenthal DM, Jha AK. Comparison of hospital mortality and readmission rates for medicare patients treated by male vs female physicians. JAMA Intern Med. 2017;177(2):206–13.
18. Bertakis KD, Helms LJ, Callahan EJ, Azari R, Robbins JA. The influence of gender on physician practice style. Med Care. 1995;33(4):407–16.
19. Jolly S, Griffith KA, DeCastro R, Stewart A, Ubel P, Jagsi R. Gender differences in time spent on parenting and domestic responsibilities by high-achieving young physician-researchers. Ann Intern Med. 2014;160(5):344–53.
20. Gold KJ, Andrew LB, Goldman EB, Schwenk TL. "I would never want to have a mental health diagnosis on my record": a survey of female physicians on mental health diagnosis, treatment, and reporting. Gen Hosp Psychiatry. 2016;43:51–7.
21. Gold KJ, Sen A, Schwenk TL. Details on suicide among US physicians: data from the National Violent Death Reporting System. Gen Hosp Psychiatry. 2013;35(1):45–9.
22. Rotenstein LS, Ramos MA, Torre M, Segal JB, Peluso MJ, Guille C, et al. Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: a systematic review and meta-analysis. JAMA. 2016;316(21):2214–36.
23. Maser B, Danilewitz M, Guerin E, Findlay L, Frank E. Medical student psychological distress and mental illness relative to the general population: a Canadian cross-sectional survey. Acad Med. 2019;94(11):1781–91.
24. Frank E, Dingle AD. Self-reported depression and suicide attempts among U.S. women physicians. Am J Psychiatry. 1999;156(12):1887–94.
25. North CS, Ryall JE. Psychiatric illness in female physicians. Are high rates of depression an occupational hazard? Postgrad Med. 1997;101(5):233–6, 9–40, 42.
26. Cahill L. Sex- and hemisphere-related influences on the neurobiology of emotionally influenced memory. Prog Neuro-Psychopharmacol Biol Psychiatry. 2003;27(8):1235–41.
27. Richardsen AM, Burke RJ. Occupational stress and job satisfaction among physicians: sex differences. Soc Sci Med. 1991;33(10):1179–87.

28. Goldman B. Two minds: the cognitive differences between men and women. Stanford medicine: sex, gender and medicine. 2017.
29. Vogel L. Physician suicide still shrouded in secrecy. CMAJ. 2016;188(17–18):1213.
30. Lindeman S, Laara E, Hirvonen J, Lonnqvist J. Suicide mortality among medical doctors in Finland: are females more prone to suicide than their male colleagues? Psychol Med. 1997;27(5):1219–22.
31. Pompili M, Mancinelli I, Girardi P, Tatarelli R. Letter to the editor on female physicians committing suicide. MedGenMed. 2004;6(2):60.
32. Juel K, Mosbech J, Hansen ES. Mortality and causes of death among Danish medical doctors 1973-1992. Int J Epidemiol. 1999;28(3):456–60.
33. Salles A, Awad M, Goldin L, Krus K, Lee JV, Schwabe MT, et al. Estimating implicit and explicit gender bias among health care professionals and surgeons. JAMA Netw Open. 2019;2(7):e196545.
34. Ly DP, Jena AB. Sex differences in time spent on household activities and care of children among US physicians, 2003-2016. Mayo Clin Proc. 2018;93(10):1484–7.
35. Belkic K, Nedic O. Workplace stressors and lifestyle-related cancer risk factors among female physicians: assessment using the Occupational Stress Index. J Occup Health. 2007;49(1):61–71.
36. Dyrbye LN, Sciolla AF, Dekhtyar M, Rajasekaran S, Allgood JA, Rea M, et al. Medical school strategies to address student well-being: a national survey. Acad Med. 2019;94(6):861–8.
37. Albert PR. Why is depression more prevalent in women? J Psychiatry Neurosci. 2015;40(4):219–21.
38. Cohen BM, Sommer BR, Vuckovic A. Antidepressant-resistant depression in patients with comorbid subclinical hypothyroidism or high-normal TSH levels. Am J Psychiatry. 2018;175(7):598–604.
39. Barth C, Villringer A, Sacher J. Sex hormones affect neurotransmitters and shape the adult female brain during hormonal transition periods. Front Neurosci. 2015;9:37.
40. Hudon Thibeault AA, Sanderson JT, Vaillancourt C. Serotonin-estrogen interactions: what can we learn from pregnancy? Biochimie. 2019;161:88–108.
41. Maki PM, Kornstein SG, Joffe H, Bromberger JT, Freeman EW, Athappilly G, et al. Guidelines for the evaluation and treatment of perimenopausal depression: summary and recommendations. Menopause. 2018;25(10):1069–85.
42. Prosman GJ, Jansen SJ, Lo Fo Wong SH, Lagro-Janssen AL. Prevalence of intimate partner violence among migrant and native women attending general practice and the association between intimate partner violence and depression. Fam Pract. 2011;28(3):267–71.
43. Vaillant GE, Sobowale NC, McArthur C. Some psychologic vulnerabilities of physicians. N Engl J Med. 1972;287(8):372–5.
44. Barrios YV, Gelaye B, Zhong Q, Nicolaidis C, Rondon MB, Garcia PJ, et al. Association of childhood physical and sexual abuse with intimate partner violence, poor general health and depressive symptoms among

pregnant women [published correction appears in PLoS One. 2015;10(3):e0122573]. PLoS One. 2015;10(1):e0116609.
45. Negele A, Kaufhold J, Kallenbach L, Leuzinger-Bohleber M. Childhood trauma and its relation to chronic depression in adulthood. Depress Res Treat. 2015;2015:650804.
46. Luthar SS, Becker BE. Privileged but pressured? A study of affluent youth. Child Dev. 2002;73(5):1593–610.
47. Luthar SS, Curlee A, Tye SJ, Engelman JC, Stonnington CM. Fostering resilience among mothers under stress: "authentic connections groups" for medical professionals. Womens Health Issues. 2017;27(3):382–90.
48. Cernis E, Vassos E, Brebion G, McKenna PJ, Murray RM, David AS, et al. Schizophrenia patients with high intelligence: a clinically distinct sub-type of schizophrenia? Eur Psychiatry. 2015;30(5):628–32.
49. Nolen-Hoeksema S. Women who think too much: how to break free of overthinking and reclaim your life. New York: Henry Holt and Company, LLC; 2003.
50. Luthar SS, Doyle K, Suchman NE, Mayes L. Developmental themes in women's emotional experiences of motherhood. Dev Psychopathol. 2001;13(1):165–82.
51. Vaglum P, Falkum E. Self-criticism, dependency and depressive symptoms in a nationwide sample of Norwegian physicians. J Affect Disord. 1999;52(1–3):153–9.
52. Weissman MM, Wickramaratne P, Gameroff MJ, Warner V, Pilowsky D, Kohad RG, et al. Offspring of depressed parents: 30 years later. Am J Psychiatry. 2016;173(10):1024–32.
53. Brogan DJ, O'Hanlan KA, Elon L, Frank E. Health and professional characteristics of lesbian and heterosexual women physicians. J Am Med Womens Assoc (1972). 2003;58(1):10–9.
54. Brogan D, Frank E, Elon L, O'Hanlan KA. Methodologic concerns in defining lesbian for health research. Epidemiology. 2001;12(1):109–13.
55. Harcourt J. Current issues in lesbian, gay, bisexual, and transgender health. New York: Routledge; 2011.
56. O'Brien McElwee R, Yurak T. The phenomenology of the impostor phenomenon. Individ Differ Res. 2010;9(3):184–97.
57. Clance PR, Imes SA. The impostor phenomenon in high achieving women: dynamics and therapeutic intervention. Psychother Theory Res Pract. 1978;15(3):241–7.
58. Wolfe J. Sex and why. 2018. Available at: https://www.sexandwhy.com/sex-why-episode-9-gender-differences-in-resident-evaluation/ [Internet]; Podcast.
59. Dayal A, O'Connor DM, Qadri U, Arora VM. Comparison of male vs female resident milestone evaluations by faculty during emergency medicine residency training. JAMA Intern Med. 2017;177(5):651–7.
60. Mueller AS, Jenkins TM, Osborne M, Dayal A, O'Connor DM, Arora VM. Gender differences in attending physicians' feedback to residents: a qualitative analysis. J Grad Med Educ. 2017;9(5):577–85.

61. Brescoll VL. Who takes the floor and why: gender, power, and volubility in organizations. Adm Sci Q. 2011;56(4):622–41.
62. Mullangi S, Jagsi R. Imposter syndrome: treat the cause, not the symptom. JAMA. 2019;322(5):403–4.
63. Perry JC. Cluster C Personality disorders. Desk reference to the diagnostic criteria from DSM-5: APA Press; 2013. p. 328. Available at: https://psychiatryonline.org/doi/10.1176/appi.books.9781585625048.gg73.
64. Myers MF, Gabbard GO. The physician as patient: a clinical handbook for mental health professionals: American Psychiatric Publishing, Inc. Arlington, USA; 2008. 252 p.
65. Cooper CL, Rout U, Faragher B. Mental health, job satisfaction, and job stress among general practitioners. BMJ. 1989;298(6670):366–70.
66. Gyorffy Z, Dweik D, Girasek E. Workload, mental health and burnout indicators among female physicians. Hum Resour Health. 2016;14:12.
67. Fridner A, Belkic K, Minucci D, Pavan L, Marini M, Pingel B, et al. Work environment and recent suicidal thoughts among male university hospital physicians in Sweden and Italy: the health and organization among university hospital physicians in Europe (HOUPE) study. Gend Med. 2011;8(4):269–79.
68. Fridner A, Belkic K, Marini M, Minucci D, Pavan L, Schenck-Gustafsson K. Survey on recent suicidal ideation among female university hospital physicians in Sweden and Italy (the HOUPE study): cross-sectional associations with work stressors. Gend Med. 2009;6(1):314–28.
69. Carr PL, Gareis KC, Barnett RC. Characteristics and outcomes for women physicians who work reduced hours. J Womens Health (Larchmt). 2003;12(4):399–405.
70. Kendler KS, Myers J, Prescott CA. Sex differences in the relationship between social support and risk for major depression: a longitudinal study of opposite-sex twin pairs. Am J Psychiatry. 2005;162(2):250–6.
71. Miller NM, McGowen RK. The painful truth: physicians are not invincible. South Med J. 2000;93(10):966–73.
72. Schwenk TL, Gorenflo DW, Leja LM. A survey on the impact of being depressed on the professional status and mental health care of physicians. J Clin Psychiatry. 2008;69(4):617–20.
73. Troister T, Holden RR. Comparing psychache, depression, and hopelessness in their associations with suicidality: a test of Shneidman's theory of suicide. Pers Individ Dif. 2010;49(7):689–93.
74. Aasland OG, Ekeberg O, Schweder T. Suicide rates from 1960 to 1989 in Norwegian physicians compared with other educational groups. Soc Sci Med. 2001;52(2):259–65.
75. DeRubeis RJ, Siegle GJ, Hollon SD. Cognitive therapy versus medication for depression: treatment outcomes and neural mechanisms. Nat Rev Neurosci. 2008;9(10):788–96.
76. Hem E, Haldorsen T, Aasland OG, Tyssen R, Vaglum P, Ekeberg O. Suicide among physicians. Am J Psychiatry. 2005;162(11):2199–200.

77. Hawton K, Clements A, Sakarovitch C, Simkin S, Deeks JJ. Suicide in doctors: a study of risk according to gender, seniority and specialty in medical practitioners in England and Wales, 1979-1995. J Epidemiol Community Health. 2001;55(5):296–300.
78. Schernhammer ES, Colditz GA. Suicide rates among physicians: a quantitative and gender assessment (meta-analysis). Am J Psychiatry. 2004;161(12):2295–302.
79. Wallis CJ, Ravi B, Coburn N, Nam RK, Detsky AS, Satkunasivam R. Comparison of postoperative outcomes among patients treated by male and female surgeons: a population based matched cohort study. BMJ. 2017;359:j4366.
80. Ducasse D, Holden RR, Boyer L, Artero S, Calati R, Guillaume S, et al. Psychological pain in suicidality: a meta-analysis. J Clin Psychiatry. 2018;79(3). https://doi.org/10.4088/JCP.16r10732.
81. Williams JMG. Cry of Pain: Understanding Suicide and Self-Harm. London: Penguin Books; 1997, pp. 1–272.
82. Baumeister RF. Suicide as escape from self. Psychol Rev. 1990;97(1):90–113.
83. Nagy C, Schwabe D, Jones W, Brown A, Shupe M, Mancone A, et al. Time to talk about it: physician depression and suicide video/discussion session for interns, residents, and fellows. MedEdPORTAL. 2016;12. Available at: https://www.mededportal.org/publication/10508/esr/.
84. Mental Health First Aid. Available at: https://www.mentalhealthfirstaid.org.
85. Quinnett P. QPR gatekeeper training for suicide prevention: the model, theory and research. 2012. Available at: https://qprinstitute.com/uploads/qpr-theory-2017.pdf.
86. Aviv R. The philosopher of feelings: Martha Nussbaum's far-reaching ideas illuminate the often ignored elements of human life – aging, inequality, and emotion. The New Yorker, Profiles. 2016.
87. Smyth HW. Prometheus bound – Aeschylus – Ancient Greece – classical texts library, lines 473–5. Available at: www.ancient-literature.com/greece_aeschylus.
88. Brown B. Daring greatly: how the courage to be vulnerable transforms the way we live, love, parent, and lead: Arlington, USA, Gotham Books; 2012.
89. Bynum WE, Artino AR Jr, Uijtdehaage S, Webb AMB, Varpio L. Sentinel emotional events: the nature, triggers, and effects of shame experiences in medical residents. Acad Med. 2019;94(1):85–93.
90. Bynum WE, Adams AV, Edelman CE, Uijtdehaage S, Artino AR Jr, Fox JW. Addressing the elephant in the room: a shame resilience seminar for medical students. Acad Med. 2019;94(8):1132–6.
91. Voltmer E, Kieschke U, Schwappach DL, Wirsching M, Spahn C. Psychosocial health risk factors and resources of medical students and physicians: a cross-sectional study. BMC Med Educ. 2008;8:46.

92. Spring L, Robillard D, Gehlbach L, Simas TA. Impact of pass/fail grading on medical students' well-being and academic outcomes. Med Educ. 2011;45(9):867–77.
93. Rohe DE, Barrier PA, Clark MM, Cook DA, Vickers KS, Decker PA. The benefits of pass-fail grading on stress, mood, and group cohesion in medical students. Mayo Clin Proc. 2006;81(11):1443–8.
94. Kim S, George P. The relationship between preclinical grading and USMLE scores in US allopathic medical schools. Fam Med. 2018;50(2):128–31.
95. van Vendeloo SN, Prins DJ, Verheyen C, Prins JT, van den Heijkant F, van der Heijden F, et al. The learning environment and resident burnout: a national study. Perspect Med Educ. 2018;7(2):120–5.
96. Anonymous. In my experience: how educators can support a medical student with mental illness. Acad Med. 2019;94(11):1638–9.
97. Dyrbye LN, Satele D, Sloan J, Shanafelt TD. Utility of a brief screening tool to identify physicians in distress. J Gen Intern Med. 2013;28(3):421–7.
98. Quill TE, Williamson PR. Healthy approaches to physician stress. Arch Intern Med. 1990;150(9):1857–61.
99. Weiner EL, Swain GR, Wolf B, Gottlieb M. A qualitative study of physicians' own wellness-promotion practices. West J Med. 2001;174(1):19–23.
100. Choi KW, Chen CY, Stein MB, Klimentidis YC, Wang MJ, Koenen KC, et al. Assessment of bidirectional relationships between physical activity and depression among adults: a 2-sample Mendelian randomization study. JAMA Psychiat. 2019;76(4):399–408.
101. Shanafelt TD, Sloan JA, Habermann TM. The well-being of physicians. Am J Med. 2003;114(6):513–9.
102. Kabat-Zinn J. 9 Powerful meditation tips. Available at: https://themindfulnesssummit.com/sessions/9-powerful-meditation-tips-jon-kabat-zinn/.
103. Mayer AP, Files JA, Ko MG, Blair JE. Academic advancement of women in medicine: do socialized gender differences have a role in mentoring? Mayo Clin Proc. 2008;83(2):204–7.
104. Ducker D. Research on women physicians with multiple roles: a feminist perspective. J Am Med Womens Assoc (1972). 1994;49(3):78–84.
105. In a first for U.S. academic medical center, Stanford Medicine hires chief physician wellness officer. 2017. Available at: https://www.google.com/search?client=safari&rls=en&q=In+a+first+for+U.S.+academic+medical+center,+Stanford+Medicine+hires+chief+physician+wellness+officer,+Jun+22+2017,+med.stanford.edu/news/all-news/2017/06/Stanford-medicine&ie=UTF-8&oe=UTF-8 [press release].
106. Gupta K, Murray SG, Sarkar U, Mourad M, Adler-Milstein J. Differences in ambulatory EHR use patterns for male vs. female physicians: case

study. 2019. Available at: https://catalyst.nejm.org/ambulatory-ehr-patterns-physician-gender/.
107. Gelenberg AJ, Reus VI. APA practice guidelines for the treatment of patients with major depressive disorder. 2010. Available at: http://www.psychiatryonline.com/pracGuide/pracGuidTopic_7.aspx.
108. Jennissen S, Huber J, Ehrenthal JC, Schauenburg H, Dinger U. Association between insight and outcome of psychotherapy: systematic review and meta-analysis. Am J Psychiatry. 2018;175(10):961–9.
109. Chand SP, Ravi C, Chakkamparambil B, Prasad A, Vora A. CBT for depression: what the evidence says. Curr Psychiatry. 2018;17(9):14–6, 20–3.
110. Choi-kain LW, Unruh BT. Mentalization-based treatment: a commonsense approach to borderline personality. 2016. Available at: www.psychiatrictimes.com/special-reports/.
111. Luborsky L. Principles of psychoanalytic psychotherapy: a manual for supportive-expressive treatment. New York: Basic Books, Inc.; 1984.
112. Wallin DJ. Attachment in psychotherapy. New York: Guilford Press; 2007. 366 p.
113. Bateman A, Fonagy P. Mentalization-based treatment. Psychoanal Inq. 2013;33(6):595–613.
114. Jordan JV. A relational approach to psychotherapy. Women Therapy. 1995;16(4):51–61.
115. Bahrampour T. Mental health problems rise significantly among young Americans. J Abnormal Psychol. 2019;
116. Luthar SS, Ciciolla L. What it feels like to be a mother: variations by children's developmental stages. Dev Psychol. 2016;52(1):143–54.
117. Luthar SS, Ciciolla L. Who mothers mommy? Factors that contribute to mothers' well-being. Dev Psychol. 2015;51(12):1812–23.
118. Shanafelt T, Goh J, Sinsky C. The business case for investing in physician well-being. JAMA Intern Med. 2017;177(12):1826–32.
119. Messias E, Flynn V. The tired, retired, and recovered physician: professional burnout versus major depressive disorder. Am J Psychiatry. 2018;175(8):716–9.
120. Lown BA, Manning CF. The Schwartz Center Rounds: evaluation of an interdisciplinary approach to enhancing patient-centered communication, teamwork, and provider support. Acad Med. 2010;85(6):1073–81.