

ARTICLE

## Female Physicians and Substance Abuse Comparisons with Male Physicians Presenting for Assessment

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**Abstract**—As with women in general, the vicissitudes of the female physician who suffers from a substance use disorder have been understudied, and such persons remain underrepresented in treatment. The purpose of the present study is to describe the similarities and differences between female and male physicians presenting for assessment; 108 physicians in total were included in the study, 10 of whom were female. Demographically, we found that the female physicians were more likely to be single and younger than their male counterparts. On clinical indices, females showed less impairment on legal and medical functioning, and better capability in sustaining abstinence and eliminating environmental cues to relapse. Of the women with substance use disorders, higher rates of comorbidity were found than with males. Although there were no significant differences in overall severity, males were more likely to be recommended to more intensive levels of care for either substance use or psychiatric disorders. The female physicians were recommended to a level of care of a lower intensity, but more often to a treatment with a dual-diagnosis focus. These findings are discussed in terms of the vulnerabilities of the female physician, barriers to treatment, tailoring treatment to female needs, and opportunities for prevention and further research. © 1998 Elsevier Science Inc.

**Keywords**—women; women physicians; impaired physicians; substance abuse.

### INTRODUCTION

Despite the fact that they are often misdiagnosed, and underrepresented in both research and in treatment, women constitute a growing number of substance abusers. In reality, one third of all those diagnosed with substance use disorders are women (Naegle, 1988; Williams, Grant, Harford, & Noble, 1989). Likewise, the negative conse-

quences of substance use may be accelerated or “telescoped” in women (Gordis, 1990).

Research on women and substance abuse has yielded several significant findings. Women are likely to demonstrate different patterns of substance abuse for different reasons and to different ends than their male counterparts (Nace, Davis, & Hunter, 1995; Naegle, 1988; Wilsnack & Wilsnack, 1990; Zankowski, 1987). They are more likely to use prescription drugs rather than illicit substances and alcohol (Nelson-Zlupko, Dore, Kaufman, & Kaltenbach, 1995). However, women who are heavy drinkers tend to have similar or greater alcohol-related problems (Wilsnack, Wilsnack, & Klassen, 1984), and are vulnerable to different, as well as more severe medical consequences (Abbott, 1994; Blume, 1990; Cyr & Moulton, 1993), for

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example, higher alcohol cirrhosis mortality rates (Nicholls, Edwards, & Kyle, 1974).

Women with substance use disorders tend to be more depressed (Gomberg, 1994), more likely to use substances in problem-specific ways (Naegle, 1988; Zankowski, 1987), experience greater guilt and shame, and lower self-esteem (Blume, 1990). Generally, as a consequence of substance abuse or dependence, men are more likely to encounter external problems (i.e., legal, employment, and financial), whereas women are more likely to experience internal (i.e., psychological) and social problems (Lex, 1994). Histories of childhood sexual and physical abuse are more prevalent among women with substance use disorders than among other women (Abbott, 1994; Gomberg, 1994; Wallen, 1992; Wilsnack, Wilsnack, & Hiller-Sturmhofel, 1994; Wilsnack et al., 1997). Recent research also suggests a link between domestic violence and increased drinking among women (Wilsnack et al., 1994). Women with substance use disorders are more likely to have family histories of substance abuse (Wilsnack & Wilsnack, 1990). Similarly, women, more so than men, are vulnerable to substance abuse if they have significant others who use alcohol and other substances (Gomberg, 1994; Lex, 1994; Wilsnack et al., 1994; Wilsnack & Wilsnack, 1990).

Alcohol dependence is more prevalent among middle-aged and younger women than among older women (Williams et al., 1989; Wilsnack et al., 1994). Overall, single and divorced women, as well as cohabitating women, are more likely to drink heavily and suffer related problems than married or widowed women (Gomberg, 1994; Shore, 1984). Regardless, women are more likely to suffer relational and marital distress as a result of substance abuse versus male substance abusers who tend to encounter increased legal and occupational difficulties (Naegle, 1988).

Employed women tend to drink more alcohol than unemployed women, although their rates of substance use are still far lower than men (Shore, 1992; Shore, 1997). Role deprivation or role loss may place women at an increased risk for substance abuse (Wilsnack & Cheloha, 1987). Multiple roles, however, often lead to increased self-esteem and social support, and may prevent substance abuse problems (Shore, 1984; Wilsnack et al., 1994). Being female in a male-dominated occupation may, however, lead to increased alcohol intake and negative consequences (Wilsnack et al., 1994). Because women may have different motivators for and barriers to treatment than men (Beckman, 1994), specialized treatment for women has been found to be more effective than traditional substance treatment programs in treating women with substance use disorders (Shore, 1994; Reed, 1985; Zankowski, 1987).

The bulk of the research on substance use disorders and physicians has been based on male physicians, and little attention has been paid to female physicians and their specific treatment needs. On average, five of the major studies of treatment of the impaired physician had a female sample of 8.02% (Carlson, Dilts, & Radcliff, 1994; Ikeda & Pelton, 1990; Nelson, Matthews, Girard, &

Bloom, 1996; Shore, 1987; Talbott, 1987). The range was 3.9% in the Talbott Georgia study, to 12% in the Carlson et al. Colorado project. Yet, women represent a substantial and growing percentage of all physicians. In 1990, 12% of all physicians were women, however, in 1994, women represented 19% of all physicians (Frank, Rothenberg, Brown, & Maibach, 1997; Randolph, Seidman, & Pasko, 1996).

Over 10 years ago, Brewster (1986) acknowledged that most studies have ignored this growing segment of the physician population. The available literature on female physicians and substance abuse suggests that female physicians may display similar use patterns to women in more traditional female roles. For instance, one study found that female physicians were more likely to use sedative hypnotics, whereas male physicians had more alcohol-related problems. Male physicians were also found to have greater legal problems than female physicians (Nace et al., 1995). But, in the national survey of physicians reported by Hughes et al. (1992), of 5426 physicians, 17.7% of whom were female, comparable rates of substance use were found, although men had significantly greater marijuana use. Of some more contradiction, yet alarm, is a study by Stinson, DeBakey, and Steffens (1992), who, based on the 1988 National Health Interview survey, found female physicians to be at almost twice the risk estimate (vs. males) for *DSM-III-R* Alcohol Abuse and/or Dependence diagnoses (3.48 vs. 1.88%, respectively). Nonetheless, prevalence risk for physicians of both sexes was significantly lower than for the average of all labor force categories.

Disordered female physicians are in a unique role and may have gender-specific as well as job-specific treatment needs. Role strain, role deprivation, and gender-role conflicts have been hypothesized to be salient factors in female substance abuse (Nichols, 1985), and female physicians may be particularly vulnerable to role strain, role deprivation, and identity conflicts as a result of their position in a male-dominated and time-intensive field (Lorber, 1993; Richman, 1992).

The current research provides clinical data from male and female physicians presenting for assessment. The data presented describe gender differences and similarities on a number of demographic characteristics, on levels of behavioral, psychiatric, and substance abuse impairment, and on aspects of recommended treatments. The study was designed to add to our understanding of both female substance abuse and substance use and other problems among female physicians, as well as to explore their problem patterns and possible treatment needs.

## METHOD

### Design

This study employed a single assessment of dependent variables, with the data gathered using a systematic med-

ical record review procedure. Data were aggregated by variable and analyzed with gender as the independent variable.

### Instruments

A chart review form was constructed for this investigation. The form extracted five types of information from the medical record: (a) demographic, including physician specialty; (b) type of referral; (c) level of reliability of self-report information, degree of insight, and level of motivation; (d) clinical findings, including the *DSM-IV* multi-axial system (Axes I, II, and V) (American Psychiatric Association, 1994), and the Severity of Substance-Related Disorder (SSRD) scale (Lyons, Howard, O'Mahoney, & Lish, 1997); and (e) *type* and level of *intensity* of treatment recommendations. Demographic, referral, and treatment recommendation data were collected directly from the records.

Self-report reliability, insight, and motivational indices were based on chart reviewer ratings on three 5-point scales: (a) self-report reliability (degree to which patient appeared forthcoming, candid, and truthful about problem) ranging from 1 = none to 5 = excellent; (b) insight (apparent awareness of an articulation of nature, causes, and effects of problem) ranging from 1 = none to 5 = excellent; and (c) motivational stage (i.e., Prochaska and DiClemente, 1986 Model) ranging from 1 = precontemplative (no intention of change, may lack awareness of problem) to 5 = maintenance (significant action has been taken, with a focus on avoiding relapse, and on maintaining gains). The interrater reliability of chart reviewers' was tested on these three scales using pairs of raters on 20 randomly selected charts ( $r = .89; p \leq .01$ ).

The *DSM-IV* diagnoses were collected from the records, and included Axis I (clinical disorders), Axis II (personality disorders), and Axis V (global assessment of functioning [GAF]).

The SSRD has been used previously in chart review studies in inpatient psychiatric, community mental health, residential and outpatient substance abuse treatment settings. It was developed as a patient description and outcome management tool, and has been found to be valid in its capacity to predict length of inpatient stay, discharge status, and recommended treatment intensity (Lyons et al., 1997). The SSRD assesses four dimensions, within which there are a total of 18 items related to substance abuse problems. The four dimensions are: (a) Severity and Persistence (severity of disorder, degree of polysubstance abuse, duration of disorder); (b) Impairment (cognitive, self-care, relationship, employment, and family system); (c) Complications to Disorder (emotional, medical, legal, financial, and difficulties with significant other); and (d) Complications to Resources (motivation for treatment, family involvement, effective coping skills, environment cues for substance use, and sustained periods of abstinence). Each of the 18 items is

rated on a 4-point scale, from 0 = no problem, to 3 = extreme problem. Based upon paired reviewer interrater agreement on a sample of 20 charts, the Pearson correlation coefficient reliability index was .84 ( $p \leq .01$ ).

Treatment recommendations were assigned to *type* and *intensity*. There were four discrete *type* categories identified: 1 = substance use treatment, 2 = psychiatric treatment, 3 = dual diagnosis, and 4 = no recommendations. *Intensity* was based on assignment to one of six discrete categories, which were scaled hierarchically according to level of intensity. In cases where multiple treatment recommendation were made. The recommendation with the highest level of intensity was categorized so that each patient received only one designation. The categories were: 0 = no recommendation; 1 = monitoring agency; 2 = self-help, e.g., Alcoholics Anonymous, Narcotics Anonymous, or Cocaine Anonymous; 3 = outpatient therapy, e.g., psychotherapy, medication management, or group; 4 = intensive outpatient, e.g. partial hospitalization or day/evening programs; 5 = residential; and 6 = inpatient hospitalization. The categories were ordered according to the overall therapeutic effort necessary to fulfill the requirements of the recommendation. For instance, outpatient therapy might typically involve weekly 1-hour meetings with a trained clinician, whereas inpatient hospitalization requires the provision of medical attention, nursing support, a wide range of therapies, and hospital accommodations (room and board). Similarly, self-help groups typically involve frequent attendance at meetings, but this category was lower on the scale than outpatient therapy because a trained clinician is not needed to fulfill the requirements of the recommendation and, of course, no direct cost is involved. Treatment intensity, therefore, is reflective of an incremental continuum that is associated with both therapeutic effort and cost (McGovern & Caputo, 1983; Newman & Howard, 1986).

## PROCEDURE

### Clinical Protocol

The Multidisciplinary Assessment Program (MAP) is a comprehensive evaluation service affiliated with a behavioral health component of a university-based hospital in a large Midwestern city. The MAP service was established in 1985 as part of a comprehensive substance use disorder specialty program, and has been developed to assess complex cases, often where the patient-subject is a high-accountability professional, and where a range of substance use, psychiatric, and/or behavioral factors may be involved. Approximately 75% of these case are physicians, the remainder are attorneys, other health-care professionals (i.e., nurses, dentists), and business executives. 50% of the evaluations are performed on patient-subjects from out-of-state. Typically, the MAP evaluations are conducted on an outpatient basis over a 2- to 3-day pe-

riod. Out-of-area patients arrange for overnight accommodations on their own or through the program.

The evaluation is coordinated by a clinician, usually with a master's degree and significant experience in both addiction and psychiatric treatment. This clinical coordinator orients the patient to the assessment process, obtains the necessary waivers of confidentiality (if indicated) and release of information, contacts collaterals and the referral source, and obtains a detailed substance use and psychosocial history. It should be noted that in virtually all cases, multiple collateral information is obtained to support, dispute, or verify self-report data. An internist meets with the patient to obtain a history, perform a physical examination, and then integrates these findings with urine and blood toxicology results collected earlier. A board-certified psychiatrist conducts a psychiatric interview for the purposes of ascertaining a multi-axial diagnosis and recommending treatments, if appropriate. Lastly, a clinical psychologist conducts a psychological assessment and administers, scores, and interprets a battery of psychological tests designed to assess psychopathology, personality organization, and cognitive/neuropsychological impairment. Each professional generates a written report, and then all meet to discuss their findings. An integrated diagnostic picture is formed, and a course of action is recommended, both of which are included in a final summary report. If treatment is indicated, a type and level of intensity is typically recommended, along with several specific sites, programs, or locations where such treatment is offered. Patients or their referral source then make the final decision where (or if) treatment is to be pursued.

### Research Protocol

The chart reviewers, three graduate students in a doctoral program in clinical psychology, received approximately 20 hours of training using the chart review instruments described. The conceptual format of the instruments was presented and several chart-cases were discussed using the instruments. A pair of raters scored 20 records, and a satisfactory level of interrater agreement was achieved. Single raters then scored the remaining charts. Raters were blind to any other information that was not included in the chart. Chart ratings were conducted over a 4-week period, with each chart taking 30 to 60 minutes to rate. The data described here are abstracted from MAP evaluations performed from 1994 through early 1996, and the data are presented in aggregate and not by individual, in order to protect patient confidentiality.

## RESULTS

### Demographic and Specialty Characteristics

Of the 108 physicians who were assessed during the study period, 10 (9.3%) were female and 98 (90.7%)

were male. The average age of the physicians by gender comparison showed females to be younger ( $M = 41.40$ ,  $SD = 7.67$ ) than men ( $M = 46.39$ ,  $SD = 9.93$ ). Although this difference is not statistically significant (to be so the difference would need to be  $\pm 11.4$  years), it does suggest that women tend to be younger at presentation.

The race variable depicts comparability across gender for the Caucasian group, but an African American female in the sample ( $n = 1$ , 10%) inflates the percentage to threefold the number of African American males ( $n = 3$ , 3.1%). There are no Asian or Hispanic females in this sample (Table 1).

Marital status finds a significant difference between the gender groups in that 6, or 60%, of the females are single (i.e., never married) versus only 10, or 10.2%, of the men. Including those who have been divorced, widowed, separated, and married, 88 (89.8%) of the men have at some point been married, in contrast to 3 (30%) of the women.

Specialties of the physicians by gender are also presented. The female specialties are representative of the population of U.S. physicians, whereas the male specialties are overrepresented in Family Practice, Emergency Medicine, and Psychiatry (Randolph et al., 1996).

### Referral, Reliability, Insight, and Motivational Variables

For the female physicians, 6 (60%) were referred by state medical societies, a rate similar to males (65.3%). Employers (20%) and licensing boards (10%) accounted for the remaining sources for women, and the same sources were 15.3% and 14.3%, respectively, for men. The re-

**TABLE 1**  
Demographic Characteristics of Female and Male Physicians ( $N = 108$ )

Characteristics	Female	Male
Age— $M$ ( $SD$ )	41.40 (07.67)	46.39 (09.93)
Race— $n$ (%)		
African American	1 (10.0)	3 (03.1)
Asian	0 (00.0)	7 (07.1)
Hispanic	0 (00.0)	1 (01.0)
Caucasian	9 (90.0)	87 (88.8)
Marital status— $n$ (%)		
Single	6 (60.0)	10 (10.2)
Married	3 (30.0)	65 (66.3)
Widowed	1 (10.0)	3 (03.1)
Divorced	0 (00.0)	19 (19.4)
Separated	0 (00.0)	1 (01.0)
Specialty— $n$ (%)		
Family practice	4 (40.0)	27 (27.6)
Internal medicine	3 (30.0)	10 (10.2)
Emergency medicine	1 (10.0)	10 (10.2)
Psychiatry	1 (10.0)	9 (09.2)
Neurology	1 (10.0)	1 (01.0)
Other	0 (00.0)	41 (41.8)
Gender— $n$ (%)	10 (09.3)	98 (90.7)

remainder of the males (5.1%) were referred by court, a mental health professional, or self. On the Self-report reliability, Insight, and Motivational stage items there were no significant differences between gender groups. Women, however, had higher average scores on all three items: on the Reliability item, the female mean was 3.00 (*SD* = 0.86) versus males, *M* = 2.85 (*SD* = 1.10). On Insight, female, *M* = 2.50 (*SD* = 0.92) versus males, *M* = 2.07 (*SD* = 2.07); and on Motivational stage, female, *M* = 2.11 (*SD* = 1.69) versus males, *M* = 1.88 (*SD* = 1.35). These indices suggest the sample has poor to moderate levels of self-report reliability and insight into their problem, and can be placed overall in a contemplative phase of motivation to change.

**Clinical Diagnoses**

The female and male physicians were also compared on Axis I, Axis II, and Axis V diagnoses. Additionally, if nondiagnosible but observable behavioral or conduct problems were present, this was recorded (often a V code). Overall, the sample can be clustered into three primary problem types: active substance use disorders, substance use disorders in remission, and nonsubstance use-related psychiatric/behavioral problems. Of the total sample, 52.7% fell into the first category, 17.6% into the second, and 29.6% into the third. By gender group, these problem types are grossly similar, however, females do exhibit a greater percentage representation in the substance use disorder in remission group (+13.7%).

Within the active substance use disorder group, a disparity between genders is found on comorbidity. All four of the females who had substance use disorders also suffered from a comorbid Axis I disorder (100%), and one woman had both Axis I and Axis II diagnoses. This contrasts with 49.1% of male physicians who had substance use problems with comorbidity. Females also appear more inclined to polysubstance use (Table 2).

In the remission group, two of the three women had no diagnosis or problem other than their remission diagnosis. In contrast, 9 of the 16 males had comorbid disorders (Axis I or II) (56.3%). Physicians with no diagnosis or problem were likely referred for evaluation as part of a follow-up or fitness to return to work assessment.

The gender percentages on the psychiatric/behavioral problems group leaned slightly in favor of women, with two of three of these female physicians suffering from both Axis I and Axis II disorders.

Finally, a *t*-test of Axis V (GAF) gender means found the groups to be equivalent, with a moderately severe level of functional impairment.

**Severity of Substance-Related Disorder (SSRD) Scale**

The results of the SSRD scale scores are presented in Table 3. For the most part, the gender groups show considerable similarity across dimensions and items. The Complications to Disorder and Complications to Resources sections depict some significant group differences. Men suffer significantly greater complications in the medical- and legal-problem do-

**TABLE 2**  
**Clinical Diagnoses by Physician Gender Group**

Category	Female	Male
	<i>n</i> (%)	<i>n</i> (%)
Substance use disorders	4 (40.0)	53 (54.1)
Alcohol	3 (75.0)	32 (60.4)
Opioids	1 (25.0)	14 (26.4)
Two or more substances	3 (75.0)	12 (24.6)
Comorbid Axis I	4 (100)	16 (30.1)
Comorbid Axis II	1 (25.0)	16 (30.1)
Axis I and II	1 (25.0)	10 (18.9)
Total comorbid	4 (100)	24 (45.2)
Substance use disorders in remission	3 (30.0)	16 (16.3)
Axis I	0 (0.0)	6 (37.5)
Axis II	1 (33.3)	3 (18.7)
Axis I and II	0 (0.0)	2 (12.5)
Total comorbid	1 (33.3)	9 (56.3)
No diagnosis/problem	2 (66.6)	7 (43.7)
Psychiatric/behavioral problems, nonsubstance use-related	3 (30.0)	29 (29.5)
Axis I	2 (66.6)	16 (76.1)
Axis II	2 (66.6)	10 (47.6)
Axis I and II	2 (66.6)	8 (38.0)
Total psychiatric disorders	2 (66.6)	18 (62.1)
Behavioral problems	1 (33.3)	3 (14.3)
No diagnosis/problem	0 (0.0)	8 (8.1)
Axis V (GAF)	<i>M</i> = 48.0, <i>SD</i> = 9.89	<i>M</i> = 49.7, <i>SD</i> = 11.50

**TABLE 3**  
**Severity of Substance-Related Disorder Scores by Physician Gender Group**

Scale	Female	Male
	<i>M (SD)</i>	<i>M (SD)</i>
Severity and Persistence		
Severity	1.14 (1.34)	1.57 (1.13)
Duration of disorder	1.30 (1.30)	2.04 (0.93)
Degree of polysubstance abuse	0.28 (0.75)	0.41 (0.76)
Impairment		
Self-care	0.00 (0.00)	0.05 (0.22)
Relationship	1.33 (0.70)	1.40 (0.88)
Employment	1.20 (0.42)	1.04 (0.35)
Family system	0.80 (0.44)	0.84 (0.83)
Cognitive	0.00 (0.00)	0.05 (0.22)
Complications to Disorder		
Emotional	1.40 (0.69)	1.38 (0.82)
Medical	0.30 (0.48)	0.63 (0.83)**
Legal	0.10 (0.31)	0.45 (0.76)**
Financial	0.40 (0.84)	0.37 (0.75)
Difficulties w/significant other	1.20 (1.30)	1.18 (0.92)
Complications to Resources		
Motivation	0.88 (1.16)	0.72 (1.07)
Family involvement	1.33 (0.51)	1.19 (0.61)
Effective coping skills	1.20 (0.83)	2.12 (0.81)**
Environment cues to use	1.20 (0.83)	0.73 (1.16)*

\* *t*-Test comparison significant group differences,  $p \leq .05$ .

\*\* *t*-Test comparison significant group differences,  $p \leq .01$ .

main ( $p \leq .01$ ). In the Complications to Resources section, women physicians experience fewer environmental cues to substance use and have demonstrated longer periods of sustained abstinence than their male counterparts ( $p \leq .01$  and  $p \leq .05$ , respectively). Although not statistically significant, severity and duration of disorder items (in the Severity and Persistence section) suggest that the male physicians have a slight edge in degree of severity.

### Treatment Recommendations

Table 4 depicts the treatment recommendation by physician gender group comparison. Recommended treatment *type* does suggest group differences. The females are twice as likely to be referred to dual-diagnosis treatments (i.e., comorbid substance abuse and psychiatric/emotional issues targeted), whereas the male physicians are two to three times more likely to be recommended either

**TABLE 4**  
**Treatment Recommendations for Male and Female Physicians**

Recommendation	Female	Male
	<i>n (%)</i>	<i>n (%)</i>
Treatment type		
Substance use	1 (10.0)	27 (37.8)
Psychiatric	1 (10.0)	24 (24.5)
Dual-diagnosis	6 (60.0)	32 (32.7)
None	2 (20.0)	5 (5.1)
Highest level of recommended intensity		
6: Inpatient hospital	0 (0.0)	1 (1.0)
5: Residential	2 (20.0)	39 (39.8)
4: Intensive outpatient	1 (10.0)	10 (10.2)
3: Outpatient therapy	4 (40.0)	40 (40.8)
2: Self-help group(s)	0 (0.0)	2 (2.0)
1: Monitoring agency	1 (10.0)	1 (1.0)
0: No recommendation	2 (20.0)	5 (5.1)
<i>M (SD)</i>	2.70 (1.82)	3.75 (1.32)*

\* *t*-Test comparison significant group difference,  $p \leq .05$ .

substance use *or* psychiatric treatment experiences. Within treatment recommendation type there are also group differences in *intensity*. The male physicians, consistent with a slightly greater overall severity, more medical and legal problems, and more resource complications, are referred to a level of care approximating an intensive outpatient program. Women, perhaps with the ability to sustain abstinence and with fewer environmental cues to relapse (SSRD measure), are recommended treatment in a low or moderate intensity setting.

## DISCUSSION

This study reveals several important findings that merit discussion. Likewise, it bears several methodological limitations that should be acknowledged. The study involves archival chart review in its collection of data. Although this is the most typical method in physician health research, it is limited in that there are missing data problems, data collected in charts are not necessarily designed for research purposes, and are based on the impressions of clinicians rather than more objective ratings. Additionally, the study occurs at a single point in time (initial evaluation) and at a single site. Optimally, studies of physician health should be prospective and repeated measures in design and multisite in subject sampling. This may also boost the numbers of female physicians to study for comparison purposes. Nonetheless, the data reveal and suggest several important aspects to female physician health concerns.

Women physicians presenting for assessment are slightly younger, unmarried, show less impairment on medical and legal functioning, and, if substance use disordered—suffer more psychiatric comorbidity. Additionally, of the women with a substance use disorder in remission, a greater number (vs. men) had no other diagnosable disorder or problem, suggesting a comprehensive and positive outcome from prior treatments. Furthermore, in contrast to males, the female physicians have shown better capability to sustain abstinence and to eliminate cues to relapse from their work/home environments. Finally, consistent with these problem constellations, women tend to be referred to treatment in a less intensive setting and with a dual-diagnosis focus. In spite of these differences, women also show considerable similarities to their male counterparts. They are similar in percentages in overall presentation in type of case: active substance use disorder, substance use disorder in remission, and/or psychiatric/behavioral problems. They are similar in indices of overall severity (GAF, SSRD severity score), and in terms of drug choice (alcohol, opioids). They are, however, more likely to use more than one substance in a problematic manner.

This study included slightly more women than the average of the five major physician health studies (average = 8.02%; this study = 9.3%). Since gender contrasts were not a focus of these studies, further comparisons cannot

be made. Much as the Hughes et al. (1992) survey did find, we found the use of type of substances to be quite similar between the sexes. The incidence of higher comorbid substance use and psychiatric disorders is consistent with the literature, which also suggests that women suffer greater emotional distress in conjunction with addiction (Lex, 1994). The notion that women's problems are internal/psychological versus males (external/environmental) is also supported by no major differences in overall severity but on legal and medical complications.

The marital status differences between male and female physicians in this sample are most striking; 60% of the women have never been married, compared to 10.2% of the men. Richman (1992), citing the work of Wilsnack and Cheloha (1987), commented on the notion of role deprivation for the female physician as one possible factor in a vulnerability to psychological or substance use distress. Within the context of a male-dominated and time-intensive profession, women may be driven to prove themselves equal and capable and make less time for social and recreational aspects of life. This imbalance leaves them at risk for a deprivation of not only social roles with friends and family, but potentially a loss of the marital and parental role. These roles, which may or may not be aspired for, nonetheless, provide role definition and often an imbedded interpersonal network of support. Whether or not the gratifications and esteem of the increased work role counterbalances the loss of these other roles, remains an open question for female physicians (Richman, 1992). In our sample, being a woman and single seems to be of significance. Further research should explore this as a risk factor and, if it emerges to be one, facilitation of social support networks for women physicians may serve a useful and preventative function.

There is also some suggestion in the data that the women have benefitted from previous substance abuse treatment, that is, of the three substance abuse in remission subjects, only one had continuing problems. Coupled with the SSRD dimensions of capability to sustain abstinence and to reduce environmental cues for relapse, women seem suitable for treatment, as indicated, at less intensive levels of care (i.e., a low or moderate intensity outpatient program). However, the capability of such a program to assess and treat comorbid disorders is clearly essential. Particular psychiatric focus may need to be on mood and personality disorders, and also eating disorders—two Axis I bulimic disorders were observed in this sample.

Some studies have examined the benefits of women's specialty programs for substance abuse and have found them to be more effective than standard programs (Nelson-Zlupko et al., 1995; Reed, 1985). In our treatment program, which treats a large number of physicians, males and females have historically not been separated in modalities or formalized experiences. There is not an indication to offer some separate experiences, however, with a more direct focus on some of the unique risks and

experiences. This indication is certainly raised by this data, as well as our own clinical experiences with some women physicians, who may be more withdrawn, rivalrous, shameful, or have tendencies to re-enact sexualized/romantic relationships in therapeutic contexts. Furthermore, some separate and focused treatment experiences may simply be preferred by some women.

Future research must carefully examine the issues raised by this study, such as risk and protective factors, common and distinctive vulnerabilities, differential presentations, treatment needs, and outcomes. Methodologies must be improved, sampling both larger numbers of women in treatment, and women physicians in general. One large-scale national survey of women physician health is underway and should provide useful data over time (Frank et al., 1997). Many of these substance use, psychiatric, and behavioral problems could possibly be treated at an earlier stage or prevented completely by improved educational and gender-sensitive lifestyle courses at the medical school level. The option to use effective treatments should not be resisted by our female physicians or by women in general, who have historically been so reluctant to do so for fear of shame, rejection, and stigma.

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