Gender Differences in Attitudes toward Alcohol, Tobacco, and Other Drugs

Stephen E. Kauffman, Paula Silver, and John Poulin

A number of differences exist between men and women in use patterns and risk factors for substance abuse. In recent years these differences have received increased attention; however, gender-related attitudes toward substance abuse need additional study. This study examines gender-related differences in beliefs about the causes of the abuse of alcohol, tobacco, and other drugs; the power of various substances of abuse; the prevalence of substance use; and the effectiveness of various interventions. Women were more likely to attribute causality to biological or environmental factors, to perceive drugs as more powerful, to perceive a higher incidence of substance abuse, and to believe prevention and treatment were more effective. Therefore, prevention, assessment, and treatment programs should be designed differently for women than for men.

Key words: attitudes; gender; men; substance abuse; women

The use and abuse of alcohol, tobacco, and other drugs (ATOD) by women is a significant problem. Estimates are that 4.6 million women in the United States are alcohol dependent (Williams, Grant, Hartford, & Noble, 1989) and that 5 percent of American women have used an illicit substance in the past 30 days (National Institute on Drug Abuse, 1990). In addition, young women are the fastest growing group of cigarette smokers (Hynes, 1989).

Although the health and social consequences of substance abuse for women are becoming better understood (Charette, Tate, & Wilson, 1990; Gomberg, 1989; Grant, Dufour, & Hartford, 1988; Halliday & Bush, 1988; Mello, 1988; Orford & Keddie, 1985), far less investigation of gender-related etiological differences in substance abuse has been done. Risk factor analyses have identified many correlational factors and causative determinants (Jones & Battjes, 1985). Individual and social attitudes may affect behavioral choices for substance use as well as responsiveness to treatment interventions; however, attitudes have been less thoroughly investigated than other risk factors, particularly the attitudinal differences between men and women and the implications for gender-specific etiologies and interventions.

Understanding the characteristics of women’s attitudes about ATOD is essential to designing prevention, assessment, and treatment approaches. This article reports the results of a survey of gender-related ATOD attitudes and provides data on differences in...
beliefs about the causes of substance abuse (perceived susceptibility), about the power of different drugs and perceptions of the scope of substance use (perceived severity), and about the effectiveness of various interventions (perceived benefits to treatment).

Health Belief Model

The health belief model, formulated and refined by Hochbaum (1958), Janz and Becker (1984), Kegeles (1980), Kirscht (1986), and Rosenstock (1974a, 1974b), suggests that cognitions or beliefs play a major role in determining an individual’s behavioral responses to health threats. Three principal beliefs appear to influence individual health-related behavioral responses: (1) perceived susceptibility (one’s vulnerability to the threat), (2) perceived severity (seriousness of the threat), and (3) perceived benefits and barriers to taking action. At the same time, three types of modifying factors influence these cognitions: (1) demographic variables, (2) sociopsychological variables, and (3) structural variables. To date, relatively little is known about how gender operates as a modifying factor in beliefs about substance use and abuse and how this might influence the choices women make about ATOD.

Gender-Related Attitudes toward ATOD Use and Abuse

Current empirical evidence suggests that women tend to view substance abuse more negatively and to be less tolerant of it than men. Spigner, Hawkins, and Loren (1993) reported that undergraduate college women evaluated the daily use of alcohol, the experimental and occasional use of hallucinogens, and the use of prescription drugs as being much more risky than did their male counterparts. In a study of adult urban African Americans, Gary and Berry (1985) found that women were more intolerant of substance abuse than men. These conclusions, however, must be viewed as tentative given the limited number of studies focusing on gender-related attitudes.

Attitudinal factors may contribute to shaping the pattern of addictive disorders among women. Although the number of women abusing substances is significant, women appear to be less susceptible to addiction to illicit substances. In the United States men outnumber women as nonmedical users by substantial ratios (National Institute on Drug Abuse, 1990), have more abuse problems (Corrigan, 1987; Leland, 1982), and use more illicit drugs (Fidell, 1982). On the other hand, more women than men use medically prescribed psychotropic drugs, and women are more likely to use drugs over the long term (Canetto, 1991) or abuse them (Corrigan, 1987; Ross, 1989). Women are also more likely to abuse more than one substance (Celentano & McQueen, 1984).

Because women tend to view substance abuse more negatively than men do, the social stigma associated with illicit substance abuse may operate as a deterrent for women and may lead them to choose more “socially acceptable” substances. Also, because women are overrepresented in clinical populations being treated for mood disorders (Schwartz & Schwartz, 1993), they are more exposed to the risk of prescription drug abuse (Abbott, 1994). In addition, the higher risk of prescription drug abuse by women may also result from their socialized dependence and trust in medical practitioners as well as practitioners’ bias against recognizing addictive disorders among women (Nichols, 1985).

For women, interpersonal relationships appear to be a major factor precipitating substance use, especially with regard to initial use patterns that lead to addictive disorders (Wilke, 1994). Women often begin using certain drugs, such as heroin, in the context of an intimate relationship (Gerstein, Judd, & Rovner, 1979). Previously nonalcoholic young women typically begin as “social drinkers” (Charette et al., 1990).

After the addiction process has begun, men and women typically select different settings for ATOD use, possibly reflecting the differences in social acceptance of male and female substance abuse. Women are more likely to seek private or social isolation for ATOD use (Matteo, 1988), and men tend more often to use substances in public (Marsh & Miller, 1985). These behavior patterns may reflect society’s tolerance of male substance abusers and the greater social stigma of female substance abusers (Canetto, 1991; Kagle, 1987; Wilke, 1994).
Psychosocial factors associated with ATOD use and abuse also appear to be different for men and women. In a review of the literature, Nelson-Zlupko, Kauffman, and Dore (1995) reported that addicted women are more likely than addicted men to suffer from affective disorders (Blume, 1990; Kane-Cavaiola & Rullo-Cooney, 1991); are more likely to experience guilt, anxiety, and depression (Reed, 1985; Underhill, 1986; Wilsnack, Wilsnack, & Klassen, 1984), although this finding is not consistent (Flannery, Vazsonyi, Torquati, & Fridrich, 1994); and typically have lower self-esteem (Flannery et al., 1994). Addicted women are more likely to have lower life expectations, less education, fewer job skills, and fewer financial resources (Brady, Grice, Dustan, & Randall, 1993; Marsh & Miller, 1985; Reed, 1985).

The characteristics of psychodynamic and psychosocial consequences of addictive disorders among women suggest the need for more gender-specific assessment and treatment approaches. As pointed out by Wilke (1994), most standardized assessment tools, such as the Michigan Alcoholism Screening Test (Selzer, 1971), the MacAndrew Alcoholism Scale (MacAndrew, 1965), and the Addiction Severity Index (McClellan, Luborsky, O’Brien, & Woody, 1980), are standardized on largely male populations or reflect a male-as-norm bias. Similarly, most treatment programs are designed by and for men and fail to address adequately the psychodynamic characteristics of addictive disorders among women (Finkelstein, 1994). For example, the self-help Alcoholics Anonymous (AA) movement was founded and developed by men and reflects male attitudes about substance abuse. AA is based on the assumption that prerequisites of recovery are the user’s acceptance of his powerlessness, self-sacrifice, and dependency, the very psychosocial conflicts that may lead to the depression often associated with substance abuse disorders among women (Blume, 1992; Wilke, 1994).

Women in recovery may be better helped by groups that focus on building self-esteem and perceptions of personal power and that challenge the sex-role stereotyping and power differentials experienced by women (Abbott, 1994; Wilke, 1994).

Method
Sample
The sample included 1,019 adult citizens of Delaware County, Pennsylvania. Delaware County, one of five suburban counties in the Philadelphia metropolitan area, is characterized by a wide socioeconomic range that includes the City of Chester (the third most impoverished municipality in the nation), numerous middle-class and affluent suburban communities, and small rural districts.

The sample was stratified to ensure nearly equal representation by gender and geographic area. The county was divided into four geographic areas based on mental health catchment areas. About equal numbers of respondents were interviewed (251 to 261) for each area. In addition, men were oversampled so that equal proportions of men and women were interviewed. The sample is representative of the Delaware County adult population with a sampling error of ±3 percent. No weighting of the stratified groups was used in the analysis. The intention of the stratification procedure was to ensure equal representation by gender and geographic area. In a separate analysis (not discussed in this article), the demographic characteristics of the sample closely matched that of the county.

More than half of the 1,019 respondents were men (50.9 percent), and almost 40.7 percent had children living at home (Table 1). About one-quarter (25.9 percent) had yearly incomes of $25,000 or less, and more than one-third (37.1 percent) had incomes of $25,000 to $49,999. About one-third (33.7 percent) had
graduated from college, and nearly half (45.4 percent) had only a high school diploma or did not graduate. The majority were married (57.3 percent) and were between the ages of 30 and 49 (47.4 percent). However, not all respondents answered all of the demographic questions.

**Interview and Questionnaire**

The sample was selected through random-digit telephone dialing. Interviews were conducted from November 26 to December 12, 1991, and all calls were made during evening hours Monday through Friday and all hours on the weekend. Interviews took an average of 15 minutes to complete.

The questionnaire consisted of 26 closed-ended questions about perceptions of substance use and abuse in respondents’ communities. Eight author-constructed indexes were used that were developed as part of a communitywide ATOD needs assessment based on the types of information requested by the research funding agency. No external validation measures were used.

**Causes of ATOD Abuse.** Six items rating causes of ATOD abuse were used to create three indexes. For each item respondents indicated if the factor was not a cause, was a minor cause, or was a major cause.

Lack of moral character and willpower were classified as individual causes. An individual index was created summing the two items and dividing by two (α = .64). Genetic predisposition and family history were classified as biological causes. A biological index was created summing the two items and dividing by two (α = .55). Life stress and relationship problems were classified as environmental causes. An environmental index was created summing the two items and dividing by two (α = .56).

**Power of ATOD.** Respondents rated eight substances—beer, wine, wine coolers, liquor, cigarettes, marijuana, cocaine, and Valium and other similar prescription drugs—as not a drug at all, as a mild drug, as a somewhat powerful drug, or as a very powerful drug. From these responses, two indexes were created: (1) an alcohol power index, by summing the alcohol items and dividing by four (α = .82), and (2) a drug power index, by summing the drug items and dividing by three (α = .60). Cigarettes were a single-item measure.

**ATOD Use.** Respondents rated their perceptions of the percentage of their communities that regularly used the eight substances on the following four-point scale: 1 = less than 25 percent, 2 = 25 percent to 49 percent, 3 = 50 percent to 74 percent, and 4 = 75 percent or more. From these responses, two indexes were created: (1) an alcohol use index, by summing the alcohol items and dividing by four (α = .80), and (2) a drug use index, by summing the drug items and dividing by three (α = .73). Cigarettes were a single-item measure.

**ATOD Program Effectiveness.** The perceived effectiveness of seven prevention and four treatment programs were rated on four-point scales: 1 = not at all effective, 2 = mildly effective, 3 = somewhat effective, or 4 = very effective. Town watch, parent training, alternative youth activities, red ribbon campaigns, community action, leadership education, and safe home programs were classified as prevention programs. A prevention effectiveness index was created by
summing the items and dividing by seven ($\alpha = .86$). Residential treatment, support groups, family counseling, and individual counseling were classified as treatment programs. A treatment effectiveness index was created by summing the items and dividing by four ($\alpha = .64$).

**Data Analysis**

Regression analyses were used to examine the impact of gender on the dependent measures. The coefficients presented in Table 2 and Table 3 are standardized beta coefficients generated through the regression analysis and represent the strength of the associations between the variables once the influence of the additional predictor variables have been statistically controlled (Duncan, 1975). The control variables included in the equations were education, income, age, employment status, and marital status. The beta coefficients were tested for significance at the $p < .05$ level using analysis of variance.

**Study Limitations**

Secondary analyses of existing data were used for this study. The data were originally collected as part of a countywide needs assessment. The variables included on the questionnaire were not designed specifically for this study. The indexes have generally acceptable reliability estimates. The alpha coefficients range from .55 to .86. The validity of the measures, however, is unknown. Consequently, the findings reported in this article should be viewed with caution, and replication is needed before the findings can be generalized to the general adult population. In addition, two single-item tobacco measures were used, presenting reliability questions. Furthermore, no variable measuring race was included on the questionnaires, so this variable was not included in the regression equations.

Another limitation is that because the research did not include any measures of use, no conclusions can be drawn about the direct causative effects of the differences in attitudes on use. In general, it may be assumed that with the documented differences in use patterns, the role of attitudes may be an important determinant, but a causative role cannot be articulated.

**Findings**

A series of regression analyses were run to examine the associations among gender, the control variables, and the ATOD measures. In each equation, gender was regressed on the dependent variable controlling for the respondent’s education, income, age, employment status, and marital status.

**Gender Effects**

Of the three causative measures, the women had significantly higher biological ($\beta = .153, p < .000$) and environmental ($\beta = .067, p < .032$) index scores than the men (Table 2). The women tended to attribute genetic disposition, family history, and environmental stress as major causes of substance abuse more often than did the men. On the other hand, there was no significant difference between male and female scores on the individual index. Men and women equally attributed lack of moral character and willpower as causes of substance abuse.

The women had significantly higher power index scores for alcohol ($\beta = .131, p < .000$), other drugs ($\beta = .091, p < .009$), and tobacco ($\beta = .069, p < .037$). Women also tended to perceive a higher prevalence of the use of alcohol ($\beta = .126, p < .000$), other drugs ($\beta = .202, p < .000$), and tobacco ($\beta = .107, p < .000$). The women had higher treatment effectiveness scores ($\beta = .179, p < .000$) than the men, although...
no statistical difference was found in beliefs about prevention effectiveness.

**Overall Effects**

For the causality measures, education and income had small but significant effects on the biological measure (Table 3). Employment status had a small but significant effect on the environmental measure. None of the control variables, however, had effects on either of the program effectiveness measures.

Among the measures of beliefs about the power of various substances, marital status had a small effect on beliefs about the power of drugs, and age had an effect on beliefs about the power of tobacco. For the use measures, education and age had an effect on all three dependent variables. Income had an effect on the measure of drug and tobacco use. For all of the dependent measures, the overall variance explained is low, with the most (17 percent) variance explained for perceived tobacco use.

**Discussion**

The results identify a number of gender-related differences in ATOD attitudes. Differences occurred on almost all of the attitudinal measures. The regression equations showed the differential impact gender has on ATOD attitudes. Except for attributing individual causality to ATOD abuse and beliefs about the effectiveness of prevention, women have significantly different beliefs about the causes, power, and prevalence of ATOD abuse and the effectiveness of treatment programs. Nine of the 11 relationships studied revealed significant gender differences.

**Perceived Susceptibility**

To be effective, ATOD prevention must be relevant to and address the target population’s beliefs about vulnerability to substance abuse. The women's beliefs about susceptibility to substance abuse differed from the beliefs held by the men with regard to biological and environmental factors. The women more often tended to believe that substance abuse is caused by biological and environmental influences. The women viewed genetic disposition and family history as more strongly contributing to substance abuse. Similarly, the women more commonly identified relationship problems and stress as situational or environmental causes of substance abuse. This finding is especially interesting in conjunction with the literature suggesting that substance abuse among women tends to be initiated in the context of interpersonal relationships (Gerstein et al., 1979) and that harmful or painful relationships with men

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Note: Only significant values are reported.
figure significantly in the histories of alcoholic women (Wilke, 1994).

One of the few areas in which female and male attitudes converge is regarding the individual characteristics that contribute to substance abuse. There was no significant difference between male and female scores on the individual index, with men and women equally attributing lack of moral character and willpower as causes of substance abuse.

**Perceived Severity**

Cognitions about the dangers and prevalence of ATOD are critical to the design of relevant prevention and treatment strategies. The findings indicate significant differences between men and women regarding these beliefs. The women tended to view substances as having more powerful effects than men did. This finding supports that of Spigner et al. (1993), who suggested that women view ATOD more negatively than men. The present study also indicates that women perceive the problem of ATOD abuse as significantly more prevalent.

**Perceived Benefits of Intervention**

Engaging individuals in prevention and treatment interventions depends, in part, on their beliefs about the efficacy of those interventions. The women tended to be more optimistic about the efficacy of intervention with regard to treatment, but their view of prevention was similar to that of the men. This finding appears to agree with the literature that reports that women are generally socialized to be more receptive to and to make greater use of health treatment interventions (Nichols, 1985).

**Implications for Prevention, Assessment, and Treatment**

**Prevention**

ATOD prevention approaches for women should consider their health beliefs about substance abuse. Because women more readily acknowledge the power of and risks associated with ATOD, they are more likely to benefit from psycho-educational approaches that reinforce beliefs about the dangers of substance use and abuse.

Because women are more receptive to ideas about the influence of environmental and genetic factors in substance abuse, prevention programs should provide the opportunity to explore these issues in detail, especially those that influence women to initiate substance abuse. Examining how interpersonal influences increase women’s vulnerability should be an integral part of prevention strategies.

The literature (Abbott, 1994; Finkelstein, 1994; Van Den Bergh, 1991; Wilke, 1994) and our findings indicate that women who abuse ATOD suffer greater social stigma than their male counterparts and also attach greater stigma to substance abuse. Psychoeducational prevention strategies targeted to women could encourage them to destigmatize addictive disorders so that they may be more supportive of other women in need of treatment. Similarly, given the reported incidence of addiction to psychotropic medications among women, an important aspect of prevention programs would be raising women’s consciousness about addiction to these medications.

In contrast, machismo is often associated with ATOD abuse among and by men (Canetto, 1991; Kagle, 1987). As primary caregivers, women are likely to be in a position to influence the men in their lives—sons or partners—who are at risk of substance abuse. It would be useful for women to understand how men perceive the risks associated with ATOD differently so that they may more effectively help them.

**Assessment**

Research suggests that addictive disorders progress much more rapidly (Lisansky, 1957; Smith & Cloninger, 1981) and that physiological
responses to substances generally occur at much lower doses for women (Blume, 1988). Consequently, early identification of addictive disorders among women is critical. However, most addictions assessment instruments currently in use reflect a male bias. Because women tend to evaluate the risks associated with ATOD and the power of substances as being greater than men do, such attitudinal differences may contribute to false positives or false negatives as women respond to largely male-standardized assessment instruments. Instruments that are more gender-specific for addiction behavior patterns, health consequences, and health beliefs are critical to the accurate and timely identification of addiction among women.

Our findings, like the existing literature, suggest that interpersonal and situational issues not only are believed by women to be more salient risk factors in ATOD abuse, but also, in fact, represent important risk factors in the etiology of addiction disorders among women. Assessment tools that examine interpersonal and situational stressors would support more timely and accurate assessment of the psychosocial risk factors that contribute to substance abuse by women.

**Treatment**

Women tend to be underrepresented in clinical treatment programs for addictive disorders (Nelson-Zlupko et al., 1995). For example, Reed (1985) reported that the ratio of men to women in alcohol treatment programs ranged from 2:1 to 10:1. The findings of our study suggest that the underrepresentation of women in treatment can probably be attributed to barriers to their participation rather than their beliefs about the efficacy of treatment. In addition, the failure of traditional in- and outpatient substance abuse clinical treatment services to address the health beliefs of women or the realities of their lives is a deterrent to women seeking treatment. The limited service options available for women with children and the lack of adequate child care services are among the most significant barriers to the participation of the growing number of addicted young mothers in substance abuse treatment (Beschner & Thompson, 1981).

Relapse after treatment also appears to be connected with life situations (Weiner, Wallen, & Zankowski, 1990). Long-term outcomes for women in recovery might be enhanced by developing follow-up services that aid women in establishing supportive relationships among friends and family as a mechanism to reduce the sense of powerlessness and to ameliorate the sense of loss that often precipitates the problem of substance abuse (Lisansky, 1989). Our findings indicate that women tend to acknowledge the role of interpersonal factors in substance abuse, so such efforts may have a positive impact on reducing relapse.

**Implications for Program Development**

Social workers in all areas of practice encounter a significant incidence of substance abuse among their client populations. Finding interventions that address the special needs of female clients is a particular challenge. Social workers participate at all levels of substance abuse program development, prevention, assessment, and treatment and can play an important role in generating interventions relevant to the needs of women. A handful of programs have emerged that address the services needs of addicted mothers with children (Carten, 1996; Mumme, 1991; Walker, Eric, Pivnick, & Drucker, 1991). Clearly, more funding is needed to expand and support these efforts to reduce the barriers to treatment these women face as well as to provide them with interventions that are relevant to the realities of their lives. In addition, traditional programs that serve the general addicted population need to examine the male bias inherent in their interventions and develop more gender-specific approaches to recovery.

**Implications for Research**

The role of attitudes and beliefs in substance abuse issues is not clearly understood. The health belief model provides a useful theoretical framework for examining attitudes and health choices, but additional research is needed. This study suggests at least three directions for further research. First, the attitudinal indexes could be modified, expanded, and normalized on the basis of additional research. Second, the
etiological significance of attitudes as precipitating and sustaining factors in substance abuse among both men and women requires closer examination. Longitudinal research and the development of empirically based models would help explicate causal sequences. Such research, however, must be sensitive to gender-related differences. Finally, program evaluations should be conducted to compare outcomes of programs that target women with those that serve both genders to examine relative effectiveness.

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