

Women and Alcohol: New Data, New Trends

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In April 2018, one of the largest meta-studies of the effects of alcohol on the cardiovascular system was published in *The Lancet* (Wood et al., 2018). It drew a research line in the sand not previously discussed: Alcohol is unsafe and lower limits of consumption need to be considered in future public health guidelines.

Two months prior to the release of the *Lancet* research, investigative reporters from *The New York Times* released a stunning revelation: Scientists and researchers at the National Institutes of Health had obtained funding from the alcohol industry for research that would support the recommendation of a “daily alcoholic drink as part of a healthy lifestyle” (Rabin, 2018).

The guidance we have heard for years about the safety of alcohol consumption is in fact, far from the truth.

This has particularly impacted women. For decades, research into the effects of alcohol was generalized to the female population overlooking issues unique to women.

One of the top researchers of women and alcohol is Sharon C. Wilsnack, PhD. Wilsnack is a professor in the department of clinical neuroscience at the University of North Dakota School of Medicine and Health Sciences in Grand Forks, ND.

In 1961, when she wrote her dissertation on women and alcohol, “there were seven research studies” from which she could refer. “Today, there are thousands.” As Wilsnack says, “There is an increase in the research on alcohol and women, and an increase on the focus of gender-specific treatment. But for women ‘having it all’ today means having increased stress, and increased predictors for alcohol abuse.”

As social stigmas are fading, more women are participating in settings where alcohol is the focus. Marketing efforts are directing women to consume drinks specifically designed for them such as Sex on the Beach, Blue Hawaiian, and Lemon Martinis, to name a few. In a conversation about marketing strategies aimed at women, an executive with Seagram’s who wished not to be identified noted, “It’s an untapped market, and we’re going after our share.”

Biological Differences

Women are different from men. Women's bodies metabolize alcohol dissimilarly for the primary reason that the overall water content in women's bodies is less than that of men. When alcohol is consumed, it mixes with water in the body; with less water content alcohol goes directly into a woman's bloodstream leading to higher concentrations of alcohol in her brain and other organs (National Institute of Alcohol Abuse and Alcoholism, 2003).

When alcohol reaches the stomach, before it gets absorbed from the small intestine and sent to the liver where the majority of its metabolism occurs, it interacts with the enzyme gastric alcohol dehydrogenase (ADH), which serves as the first wave of breakdown of ethanol. Women have lower levels of gastric ADH, resulting in more alcohol reaching the bloodstream in women than in men. Women experience impairment at far lower levels of alcohol intake than men, resulting in an increase of cognitive and motor dysfunctions.

Many studies have found women who consume moderate amounts of alcohol, defined as more than two drinks a day, are more vulnerable to liver disease and cirrhosis. Wilsnack's work has shown that women are at increased risk of atrial fibrillation, hypertension, sudden cardiac death, and hemorrhagic stroke (2014). They are more susceptible to breast cancer due to alcohol ingestion increasing estrogen and androgen levels; alcohol also increases the chance of metastization.

In a 2017 study published by Harvard-affiliated Massachusetts General Hospital and by Boston University, the effects of alcohol on brain reward function was found to be more damaging to women than men (Harvard Women's Health, 2017). Specifically, MRI imaging revealed that the amygdala and hippocampus were significantly larger in women who had alcohol dependence than in men.

The findings also reflect the growing understanding that women who consume high levels of alcohol often have comorbid psychological diagnoses such as anxiety and depression, as well as indicators of low self-esteem (Nolen-Hoeksema, 2004).

Michael M. Miller, MD, director of the American Board of Addiction Medicine and The Addiction Medicine Foundation, as well as a past president of the American Society of Addiction Medicine, is faculty member for the addiction psychiatry fellowship and the addiction medicine fellowship at the University of Wisconsin School of Medicine and Public Health. He notes that a particular phenomenon known as "telescoping" is unique to women and how they experience an "accelerated progression from social drinking to heavy and addictive drinking" and also "the amount of time needed for heavy alcohol exposure to lead to physical damage to organs including the liver and the brain is less in women, compared to men."

Miller also emphasizes a startling correlation to drinking: "The number one killer is by far tobacco. Whether women are consuming alcohol, cocaine, or opioids, women who are addicted usually are also smoking. There is a six-fold higher rate of smoking among women with addiction compared to women without addiction involving alcohol and other drugs, and nicotine kills about three times as many people as do alcohol and other drugs combined. So if we really want to save lives, we have to address treatment for addiction involving nicotine."

Women and Social Norms

Over the decades, studies surmised that women drink less than men, and have less negative consequences due to drinking than men. What has come to light over the past 15 to 20 years is that in fact, women do drink as much as men, but in ways we had not previously considered.

Miller's observations regarding women and drinking are particularly astute. Females are relationship oriented and form attachments. "A relationship is far more important for a woman than a man. When a woman is in a relationship with a man who drinks, she is far more likely to go to the bar or join his social networks, and as a result, she can increase her alcohol consumption to unhealthy and dangerous levels. Then, her own genetics (if she has a positive family history of alcohol misuse) can set her up to lose control."

The data show sharp increases in female arrests for driving while intoxicated. FBI crime data between 1998 and 2007 show an increase of 28.8% in women's arrests for drunk driving. Wilsnack used the documentary *There's Something Wrong With Aunt Diane* as an illustration. In one of the most spectacular Long Island traffic crashes in Westchester County history, Diane Schuler, 36, was so heavily intoxicated that she drove in the wrong direction on the Taconic Parkway for almost two miles before killing eight people. Toxicology reports estimate that she had consumed more than 10 shots prior to getting behind the wheel.

A younger generation influenced by social media and greater gender equality is reflected in data showing that binge drinking is on the rise in college and young professional cohorts.

Miller observes, "Young women are binge drinking in high school and college so they can be 'like the guys.' This is a sociological phenomenon where we are seeing social expectations changing from healthy to unhealthy behaviors." He also notes that "Young women are getting caught up in the opioid epidemic and we are seeing a shift in addiction from a single substance to the use of multiple substances."

With the increase in accepted social drinking norms comes the risk of violence and sexual assault. Studies show significant correlations between alcohol and risky sexual behavior, as well as assault. Interestingly, women with alcohol problems are more likely to have significant relationships or marriage to male problem drinkers. This may be attributed to "assortative mating" where partners seek out similar behavioral patterns (Nolen-Hoeksema).

Both Miller and Wilsnack point out that unlike the research of the past, one size no longer fits all when it comes to discussing women and alcohol consumption. Miller emphasizes, "Women become addicted in multifactorial scenarios." Whether young and bingeing at parties, living with a history of trauma, or having a family of origin that creates psychological damage, women are susceptible to greater and graver problems than their male counterparts.

An Aging Population

Whether they are living at home or as a resident of an "adult community," older women are especially at risk of alcohol abuse or dependence. Older adults will compose 22% of the population by the year 2030. Women will constitute a larger proportion of the cohort, as they tend to outlive their spouses.

As women age their body decreases in "lean body mass vs. total volume of fat"; this results in an increase in the body distribution of alcohol consumed. Older women also have heightened reactions to prescription medications, are often prescribed benzodiazepines and barbiturates for sleep issues, and may not even be aware of the effects when they combine these drugs with alcohol (Nolen-Hoeksema).

Adult communities are modernizing their social activities from bingo to cultural seminars and more stimulating activities including wine tastings. Alcohol is more prevalent than ever before. Wilsnack observes, "With aging boomers, alcohol is being used as part of a more 'social' approach to living in an adult residence."

Trends and the Future

Implications for the social work profession are complex and multilayered. Trauma is now being understood as an underlying cause of drinking problems; alcohol becomes a socially accepted avenue in which to "numb" from the psychological effects, as well as offset the ancillary anxiety or depression that accompanies trauma.

Gender-specific treatment becomes important for both men and women: Neither gender is comfortable discussing intimate and personal traumatic details about physical or sexual abuse in front of each other.

Social workers are uniquely positioned to identify alcohol issues and intervene. Whether in the front lines of medical services or community mental health, practitioners need to be acutely aware of alcohol as an underlying etiology.

Social workers engaged in public health policy and legislation can issue a call for change. Decades of misinformation must be recalibrated. Marketing ploys that target women, especially young women, must be addressed. The current accepted norms mean that women are endangered in ways we have never seen before.

The tide of increased drinking among women has risen. Social workers in all facets of the profession can change this surging wave to prevent further damage in the future.

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