



Rapid Review of Literature on Underage Drinking, Pregnancy, and FASD

Version 1.0

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Summary: This rapid literature review was conducted to assess the impacts of underage drinking on the prevalence of teen pregnancy and occurrence of Fetal Alcohol Spectrum Disorders (FASD) in the United States and specifically in the state of Hawai'i. Overall, the findings point to underage drinking, among other risky behaviors, leading to teen pregnancy. Teen pregnancy rates in the United States, as well as the state of Hawai'i have been decreasing in recent years. Hawai'i typically has similar rates to the entire nation, with some neighbor island counties frequently being higher. Native Hawaiians have higher teen pregnancy rates than other subgroups. Fetal Alcohol Spectrum Disorders (FASD) can cause lifelong health issues for children. Pregnant teenagers are more likely to drink alcohol than older pregnant women.

Background

Underage drinking and teen pregnancy are often discussed as important indicators. However, the impact of drinking in adolescence on the prevalence of teen pregnancy is more rarely discussed. The purpose of this rapid review of literature is to assess the impacts of underage drinking on the prevalence of teen pregnancy and occurrence of Fetal Alcohol Spectrum Disorders (FASD), in the United States and specifically in the state of Hawai'i.

Methodology and Search Terms

This rapid review was conducted between 12/14/20 to 12/17/20 at the request of the Hawai'i Department of Health Alcohol and Drug Abuse Division. Google, Google Scholar and PubMed databases were searched with the following terms: "underage drinking" + "pregnancy" + "teen pregnancy" + "alcohol" + "drinking" + "hawaii" + "SAMHSA FASD Center for Excellence" + "FASD".

Results

Overall, the findings point to underage drinking, among other risky behaviors, leading to teen

pregnancy. Teen pregnancy rates in the United States, as well as the state of Hawai'i, have been decreasing in recent years. Hawai'i typically has similar rates to the entire nation, with some neighbor island counties frequently being higher. Native Hawaiians have higher teen pregnancy rates than other subgroups. Fetal Alcohol Spectrum Disorders (FASD) can cause lifelong health issues for children. Pregnant teenagers are more likely to drink alcohol than older pregnant women.

Underage Drinking and Prevalence of Teen Pregnancy

The Hawai'i Health Matters community dashboard reports that in 2018 the state of Hawai'i had a teen birth rate of 17.2 births per 1,000 women aged 15-19, slightly lower than the national rate of 17.4. Honolulu and Kauai counties had lower rates of 15.4 and 14.8, respectively, while Maui and Hawai'i counties had higher than average rates of 24 and 20.2.

While teen pregnancy rates are dropping in Hawai'i and in the nation as a whole, the impacted teens still face many risks to the health and future opportunities for them and their children. According to the CDC, only about 50% of teen mothers receive a high school diploma by the age of 22, compared

to 90% of women who did not give birth during adolescence.

Many teens have repeat births, with 1 in 5 being a repeat birth in 2010, reported by the CDC. In the same year, an estimated 13% of teen births were a 3rd child. Repeat teen births can lead to infants being born too small or too soon, leading to more health problems for the baby.

The Youth Risk Behavior Survey (YRBS) found that 28.2% of Hawai'i's public high school students reported having ever had sexual intercourse in 2017, which is lower than the 35.9% in 2013. About 3.4% reported having had sexual intercourse before the age of 13 and 64.4% of sexually active students used some form of birth control during the 3 months prior to the survey, with only 47.4% choosing to use condoms.

Aparicio et. al. (2016) evaluated the social ecological context of teen births among Native Hawaiian youth. The report found that women in this population who gave birth prior to age 20 had lower household incomes, higher usage of WIC during pregnancy, higher rates of intimate partner violence, and greater emotional and traumatic stress than women who gave birth after age 20. About 15% of Native Hawaiian teen mothers reported having had a previous birth.

A 2017 report from the Sexuality Information and Education Council of the United States (SIECUS) described the state of sexual education in the state of Hawai'i. In 2015, sexual health education was mandated for the state to provide medically accurate material including information about abstinence, contraception, and methods of sexually transmitted infection (STI) prevention. The law allows for the discussion of birth control devices, but prohibits distribution of condoms and other prophylactic devices to students.

Connery et. al. (2014) detailed strategies for risk reduction of adolescent unplanned pregnancies and substance use. They found that preconception substance use is a significant risk factor.

Additionally, while women make up 30-40% of substance use treatment programs, these programs do not routinely address reproductive health.

In Hawai'i, 22.3% of sexually active public high school students reported using alcohol or drugs before the last time they had sexual intercourse in 2017, according to the YRBS. A 2018 Substance Abuse and Mental Health Services Administration (SAMHSA) report found that 31,000 (21.3% of) youth between ages of 12 and 20 had consumed alcohol in the month prior to being surveyed. About 250 minors were found to be in possession of alcohol by state law enforcement authorities that year.

Bellis et. al. (2009) reported that pupils in Hawaii in 1997-98 who began drinking alcohol by the age of 10 were twice as likely to use alcohol at the time of sexual activity, compared to children who began drinking at age 15 or older. In addition to evidence that early regular alcohol use is correlated with early onset of sexual activity, they found evidence that any amount of current drinking is associated with being sexually active, particularly binge drinking. Alcohol use may also decrease the likelihood of using condoms. Alcohol consumption, particularly binge drinking, is correlated with increased risk of pregnancy in teenagers.

Rees et. al. (2001) emphasized the need to control for confounding factors and unobservables when estimating the link between substance use and sexual behavior. They found that when accounting for these factors, the impact is much weaker.

Underage Drinking and FASD

Fetal Alcohol Spectrum Disorders (FASD) is used to describe a variety of impacts onto a child's health when a mother drinks alcohol during pregnancy. The State of Hawai'i, Department of Health (Hawai'i DOH) reports that FASD is 100% preventable, and no amount or form of alcohol is safe to drink during pregnancy. FASD can result in

lifelong effects, and is the most common preventable cause of mental retardation. Each year, 40,000 babies are born with FASD.

A 2009 SAMHSA report detailed the Hawai'i state legislature's adoption of a proposal to address FASD more comprehensively and charged the DOH with developing a coordinated statewide effort to address the issue. In 2004, the state provided immunity from criminal prosecution for drug offenses for pregnant women seeking prenatal treatment.

The Pregnancy Risk Assessment Monitoring System (PRAMS) survey found that in 2009-2011, 51.5% of Hawai'i women that gave birth drank alcohol in the 3 months before pregnancy, with 24.1% reporting binge drinking in that period. About 6.9% reported drinking in their third trimester of pregnancy, with 1.2% reporting binge drinking.

The Hawai'i DOH reports that the average lifetime cost of caring for a child with FASD is \$2 million. Guettabi et. al. (2019) found that the total spending for individuals with FASD-related conditions in Hawai'i from 2011-2015 was \$460,515,584. More than \$32 million of that total was directly related or FASD-related visits or codes. An average FASD-related visit costs \$121, which is higher than an average Medicaid visit. About 20% of patients are responsible for 85.85% of the total spending as initial conditions are positively associated with the number of visits and accumulated medical costs.

Connery et. al. reported that in 2011-2012 pregnant teenagers reported higher lifetime alcohol use (18.3%) than non-pregnant teenagers (13.8%) in the U.S. Pregnant teens had a rate double that of pregnant women 18-25, and six times that of pregnant women 26-44. Pregnant teens reported half the drinking rate in the month before the survey than their non pregnant counterparts (13.4% vs. 21.6%)

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