

A Framework for Understanding the Alcohol and Substance Use among Girl Adolescents: Risks and Interventions

Kız Ergenlerde Alkol ve Madde Kullanımının Anlaşılmasına Yönelik Bir Çerçeve: Riskler ve Müdahaleler

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ABSTRACT

Understanding the specific vulnerabilities and requirements of adolescent girls is essential for creating effective strategies to address alcohol and substance use within this group. This article describes the unique challenges girls face during adolescence concerning alcohol and substance use. This article delves into the various factors contributing to alcohol and substance use among teenage girls, including societal pressures, peer influence, and family dynamics and emphasizes the importance of understanding these complexities to develop effective intervention strategies tailored to the specific needs of adolescent girls. It discusses evidence-based approaches for prevention and intervention, highlighting the significance of education and support systems in mitigating alcohol and substance use risks. Additionally, the article addresses the role of parents, schools, healthcare providers, and community in supporting girls through this critical developmental stage. Considering the complexity of their experiences, it is clear that a comprehensive and multifaceted approach is needed to address alcohol and substance use among adolescent girls. There is a need for studies that aim to define and explain alcohol and substance use problems for adolescent girls. By acknowledging the unique experiences and challenges that girls encounter both worldwide and specifically in Turkey, healthcare providers can develop inclusive and gender-responsive strategies for addiction prevention and treatment.

Keywords: Alcohol use, girl adolescents, substance use

Öz

Ergen kızların spesifik hassasiyetlerini ve gereksinimlerini anlamak, bu grup içinde alkol ve madde kullanımına yönelik etkili stratejiler oluşturmak için önemlidir. Bu makale, kızların ergenlik döneminde alkol ve madde kullanımıyla ilgili olarak karşılaştıkları benzersiz zorlukları anlatmaktadır. Makale, toplumsal baskılar, akran etkisi ve aile dinamikleri de dahil olmak üzere genç kızlar arasında alkol ve madde kullanımına katkıda bulunan çeşitli faktörleri ele almakta, ergen kızların özel ihtiyaçlarına uygun etkili müdahale stratejileri geliştirmek için bu karmaşıklıkları anlamının önemini vurgulamaktadır. Alkol ve madde kullanımı risklerini azaltmada eğitim ve destek sistemlerinin önemini vurgulayarak önleme ve müdahaleye yönelik kanıta dayalı yaklaşımları tartışmaktadır. Ayrıca makale, kızların bu kritik gelişim aşamasında desteklenmesinde ebeveynlerin, okulların, sağlık hizmeti sağlayıcılarının ve toplumun rolünü ele almaktadır. Deneyimlerinin karmaşıklığı göz önüne alındığında, ergen kızlarda alkol ve madde kullanımını ele almak için kapsamlı ve çok yönlü bir yaklaşıma ihtiyaç olduğu açıktır. Ergen kızların alkol ve madde kullanım sorunlarını tanımlamayı ve açıklamayı amaçlayan çalışmalara ihtiyaç vardır. Sağlık hizmeti sağlayıcıları, kızların hem dünya çapında hem de Türkiye'de karşılaştıkları benzersiz deneyimleri ve zorlukları kabul ederek, bağımlılığın önlenmesi ve tedavisi için kapsayıcı ve cinsiyete duyarlı stratejiler geliştirebilirler.

Anahtar kelimeler: Alkol kullanımı, kız ergenler, madde kullanımı



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Introduction

Navigating the path forward for adolescent girls concerning alcohol and substance use requires a comprehensive approach that considers various factors influencing their behaviors and provides effective interventions and support systems. Recognizing the unique vulnerabilities and needs of adolescent girls is crucial in developing strategies to address alcohol and substance use among this population. This article provides an overview of the prevalence, patterns, and associated factors of substance use among girls during adolescence, with a focus on global trends and insights from Turkey.

Adolescence is a critical period of transition characterized by physical, emotional, and psychological changes. For young people, this journey can be particularly challenging as they navigate societal expectations, peer pressure, and personal identity development (Özdemir et al., 2016). Among the myriad challenges faced during this phase, alcohol and substance use disorders emerge as a significant concern, with its roots often intertwined with the complexities of adolescence (Hawkins, 2009).

Adolescent substance use is a significant public health concern worldwide, with girls increasingly engaging in various forms of substance experimentation and misuse. Alcohol use among adolescent girls is a global phenomenon, with varying prevalence rates across regions and countries, highlighting the influence of social environment, drug accessibility, and personal attributes (Stockings et al., 2016). Eastern Europe bears the greatest health burden from alcohol, while the burden from illicit drugs is higher in the USA, Canada, Australia, New Zealand, and western Europe. There are substantial gaps in global epidemiological data concerning the extent of drug use, and much of our understanding of the progression of substance use comes from cohort studies conducted in high-income countries several decades ago, impeding the development of effective global policy responses (Degenhardt et al., 2016).

Alcohol, cannabis, and tobacco products are the primary substances used by adolescents, with other illicit drugs following suit. In North America, the average age for initiating substance use has been on the rise and currently falls between 15 and 17 years old. (Boak et al., 2020).

Adolescents who begin substance use during early adolescence (11-14 years) are especially susceptible to experiencing problems related to substance use later on (Jordan & Andersen, 2017).

According to the World Health Organization (WHO), alcohol is the most commonly used psychoactive substance among adolescents worldwide. Approximately, 155 million adolescents aged 10-19 years have used alcohol, and 11 million have used drugs globally. While boys traditionally exhibit higher rates of substance use, the gender gap is narrowing, with girls catching up in recent years. (World Health Organization, 2019). In Turkey, adolescent substance use is a growing concern, with prevalence rates mirroring global trends. In recent times, research has noted a swift rise in substance misuse among adolescents in Turkey (EMCDDA, 2019).

According to the Turkish Monitoring Centre for Drugs and Drug Addiction (TUBIM), alcohol and tobacco are the most commonly used substances among adolescents, followed by cannabis and synthetic drugs (TUBIM, 2021). The consequences of alcohol and substance use among girls during adolescence are significant and encompass physical major health risks, serious mental health disorders, academic difficulties, interpersonal conflicts, and increased vulnerability to other risky behaviors (Poznyak & Rekve, 2018; SAMHSA, 2021).

Research findings indicate that nearly one out of every three adolescents in certain regions of European countries are reported to be affected. In Turkey, adolescents tend to report lower rates of substance use (EMCDDA, 2016). A study conducted among college students in three major state universities in Turkey revealed that the prevalence of having tried illicit drugs at least once was 13.2%. (Ayvasik, & Sumer, 2010).

Despite the recognized significance of addressing gender differences in substance use research, only a quarter of all studies on adolescent substance use have actually included standard reporting on this aspect (Karlsson Lind et al., 2017). Recognizing the distinct impacts of alcohol and cannabis use on males and females separately among adolescent populations could provide valuable insights into understanding why adolescents of different genders vary in their susceptibility to substance use (Lees et al., 2020).

While substance use rates among female adolescents in our country are lower compared to males, there are shifts in intervention policies concerning substance use, reflecting the seriousness of the impact observed in girls (Yılmaz, 2022; Ünübol & Sayar, 2022). Specialized treatment programs tailored for women have been implemented to address challenges related to accessing and engaging in treatment, as well as to tackle the social and physical issues faced by women struggling with addiction (Elms et al., 2018). As part of these efforts, an inpatient purification center specifically for women was inaugurated in Turkey (TUBIM, 2021).

The Impact of Alcohol and Substance Use on Adolescent Girls

Alcohol and substance use among adolescent girls can have profound and lasting effects on their physical health, mental well-being, social relationships, and overall development. Understanding the specific impacts of substance use on girls is crucial for developing targeted prevention and intervention efforts to mitigate these consequences. Substance use can lead to various medical complications among adolescent girls, including liver damage, cardiovascular problems, respiratory issues, impaired immune function and addiction (Kay et al., 2014). Adolescent girls are particularly vulnerable to developing substance use disorders due to ongoing brain development and heightened susceptibility to addictive substances. Early initiation of alcohol and drug use increases the risk of developing addiction later in life (Volkow et al., 2019).

Substance use is strongly associated with the development of mental health disorders and cognitive impairment among adolescent girls. Conditions such as depression, anxiety, and eating disorders are more prevalent among girls who engage in alcohol and drug use (Hawke et al., 2020). The study that examines self-reported mental health issues among young individuals undergoing outpatient treatment for substance use disorders in Sweden and its findings indicate notable gender gaps, as girls report significantly elevated levels of mental health problems compared to boys (Richert et al., 2020). The studies show that girls exhibited notably higher rates of mental health problems and a greater occurrence of comorbidity between substance use disorder and mental

health disorders (Fernandez Artamendi et al., 2021; Brewer et al., 2017).

Alcohol and substance use can impair cognitive function, memory, and decision-making abilities in adolescent girls, affecting their current and future academic performance (Lisdahl et al., 2018). A study of 3,286 high school students shows that the effect of annual fluctuations in marijuana use on working memory is more pronounced in girls than in boys. The findings of the study suggest distinct neurocognitive impairment patterns in working memory between females and males following cannabis use throughout adolescence (Noorbakhsh et al., 2020). Early onset of cannabis use may lead to greater deficits in spatial working memory among female adolescents, potentially hampering their academic performance and resulting in significant impairment in adulthood, thereby diminishing their overall quality of life (Crane et al., 2013).

Alcohol and substance use can disrupt educational attainment among adolescent girls, leading to lower grades, absenteeism, and dropout rates. These consequences can hinder their future opportunities and employment. Substance-related legal issues and reputational damage can limit their employment options and financial stability (Terry-McElrath et al., 2017).

Alcohol and substance use can strain relationships with family members, friends, and partners, leading to conflict, isolation, and estrangement. Girls who engage in alcohol and substance use are at increased risk of experiencing victimization, including sexual assault and violence. Substance use may impair their ability to recognize and respond to dangerous situations, leaving them vulnerable to harm (Devries et al., 2014).

Risk Factors Associated with Alcohol and Substance Use among Adolescent Girls

Adolescent girls undergo a multitude of transformations, both internally and externally. Hormonal fluctuations, neurobiological changes, and emerging cognitive abilities contribute to a heightened susceptibility to external influences. Additionally, societal norms and gender expectations often place unique pressures on girls, impacting their self-esteem, body image, and sense of belonging. These vulnerabilities can manifest in various forms, including alcohol use and substance abuse (Austrian

et al., 2020). Factors contributing to substance use among adolescent girls in Turkey are also complex and multifactorial. Sociocultural norms, familial dynamics, peer relationships, academic stress, and urbanization are among the factors influencing substance use behaviors among Turkish girls during adolescence (Yildiz et al., 2020).

In Turkey, gender-specific risk factors may intersect with cultural norms and societal expectations, shaping girls' experiences of addiction differently from boys. For example, cultural stigma surrounding mental health issues and addiction may disproportionately affect girls, leading to underreporting and reluctance to seek help (Ünübol et al., 2019). For girls, risk factors such as trauma, low self-esteem, peer pressure, early puberty, and exposure to familial substance use may contribute to vulnerability to addiction (Persike et al., 2020). Family dynamics, traditional gender roles, and socioeconomic disparities may also influence girls' susceptibility to substance use in the Turkish context (Levent et al., 2023).

During adolescence, girls are particularly susceptible to the influences of their family and peers, which can significantly impact their decisions regarding risky behaviors, alcohol and substance use. Both familial and peer relationships play crucial roles in shaping attitudes, behaviors, and risk perceptions related to substance use among adolescent girls. In families, high levels of parental monitoring and open and supportive communication has been shown to be protective against alcohol and substance use during adolescence (Ennett et al., 2001; Ryan et al., 2010).

The research focusing on gender disparities among 1,334 early adolescents in the United States (aged 11-14 years), revealed that indirect effects indicated declines in academic achievement mediated the connection between peer victimization and substance use for both genders. However, elevated depressive symptoms only mediated this association for just girls. Additionally, stronger support from family and friends lessened the correlation between relational victimization and depressive symptoms for girls (Vannucci et al., 2021).

Peer groups provide opportunities for socialization, including the opportunity to engage in alcohol and substance use together. Adolescents may view alcohol and substance use as a means of bonding with peers or as a way

to cope with social stressors or feel pressured to conform to using these substances. Empowering girls to resist negative peer influences could protect them from alcohol and substance use (Marschall-Lévesque et al., 2014; Van Ryzin et al., 2012).

Stigmatization of Alcohol and Substance Use Among Adolescent Girls

Stigmatization of alcohol and substance use among adolescent girls is a pervasive social phenomenon with profound implications for their well-being and access to care. Girls who engage in substance use may be subjected to negative labels, stereotypes, and social exclusion, perpetuating feelings of shame, guilt, and low self-worth (McNeil, 2021). The stigma associated with alcohol and substance use among adolescent girls has far-reaching consequences across multiple domains. Social isolation, peer rejection, and bullying are common experiences for girls facing stigma, exacerbating feelings of loneliness and depression (Cheetham et al., 2019). Stigmatization may also deter girls from seeking help or disclosing their substance use to parents, teachers, or healthcare providers, hindering access to timely intervention and support services. Moreover, internalized stigma can perpetuate cycles of self-blame, denial, and avoidance, impeding recovery and exacerbating mental health challenges (Livingston & Boyd, 2010).

Stigmatization poses significant barriers to effective treatment and recovery for adolescent girls struggling with alcohol and substance use. Fear of judgment, discrimination, and loss of social status may deter girls from seeking professional help or participating in substance abuse treatment programs (Motyka et al., 2022). Healthcare providers' attitudes and behaviors can also influence girls' willingness to engage in treatment, with stigma contributing to disparities in access to quality care and treatment outcomes. Addressing stigmatization of alcohol and substance use among adolescent girls requires multifaceted interventions at individual, interpersonal, and societal levels. Education campaigns aimed at challenging stereotypes, promoting empathy, and fostering inclusive attitudes can help reduce stigma and raise awareness about the complexities of substance use in girls. Creating safe spaces for open dialogue and peer support can empower

girls to share their experiences, seek help, and access community resources without fear of judgment or discrimination (Hughes et al., 2023). Through collective efforts to challenge stereotypes and promote empathy, we can dismantle stigma and create a more compassionate and equitable society for all adolescent girls facing challenges.

Empowering Adolescent Girls: Prevention Techniques for Substance and Alcohol Use

Recognizing the unique vulnerabilities and needs of adolescent girls is crucial in developing strategies to address alcohol and substance use among this population. Empowering adolescent girls with knowledge and skills to make informed decisions about alcohol and substance use is key to prevention efforts. Education programs should focus on building resilience, assertiveness, and coping strategies to help girls navigate peer pressure and societal influences (Tremblay et al., 2020).

Despite the need for gender-specific substance use prevention programs, few such programs exist (Chen et al., 2004). The study conducted 2017 with girl adolescents, Online Drug Abuse Prevention Program showed that, compared to girls in the control group, those who received the intervention smoked fewer cigarettes and reported higher levels of self-esteem, goal setting, media literacy, and self-efficacy. At the 1-year follow-up, girls who received the intervention reported reduced instances of binge drinking and cigarette smoking compared to those in the control group (Schwinn et al., 2018).

Positive parenting techniques, such as setting clear rules and boundaries, providing consistent discipline, and encouragement for positive behavior, help reinforce healthy decision-making skills in adolescent girls. Parental involvement and warmth have been shown to reduce the likelihood of substance use initiation among adolescents (Meisel & Colder, 2022). Modeling responsible alcohol consumption, coping strategies for stress and healthy conflict resolution techniques instill positive values and norms in adolescent girls. Strong family connections also serve as protective factors against substance use initiation and promote a sense of belonging and support for adolescent girls (Crano & Donaldson, 2018).

Creating supportive environments within families, schools, and communities can buffer adolescent girls

against the risks associated with alcohol and substance use. Encouraging open communication, fostering positive peer relationships, and providing access to supportive adults can enhance protective factors and reduce the likelihood of engagement in risky behaviors. Collaborative efforts involving schools, healthcare providers, law enforcement, and community organizations are vital for implementing comprehensive prevention and intervention strategies (Hawkins et al., 2016).

Tailoring interventions to the specific needs of adolescent girls is essential for addressing alcohol and substance use effectively. Gender-specific programs can focus on issues such as body image, self-esteem, and social pressures that are particularly relevant to girls' experiences during adolescence (Meyer et al., 2019). Gender-specific prevention programs foster a sense of safety, belonging, and empowerment, enhancing engagement and retention in treatment.

Addiction Treatment Techniques for Adolescent Girls: Advancements and Perspectives

In recent years, advancements in addiction treatment have led to the development of novel techniques specifically designed to support the recovery journey of adolescent girls. Recognizing the distinct biological, psychological, and social factors influencing addiction in adolescent girls, gender-specific treatment programs have gained traction. To enhance the knowledge levels of personnel involved in the operational structuring of women's detoxification, adolescent girls' detoxification, mother and baby units, and rehabilitation centers, a "Training of Gender-Sensitive Treatment Model Development" was organized (Romo-Avilés, 2023; Jacobs, 2019).

Many adolescent girls with substance use disorders have a history of trauma, including physical, emotional, or sexual abuse. Trauma-informed care approaches prioritize safety, trust, and collaboration, recognizing the impact of trauma on substance use behaviors (Bartholow & Huffman, 2023). Therapeutic techniques such as trauma-focused cognitive-behavioral therapy (TF-CBT) help girls process traumatic experiences, build coping skills, and develop resilience. Mindfulness-based interventions have shown promise in reducing cravings, managing stress, and promoting emotional regulation among adolescents with substance

use disorders (Brewer-Smyth, 2022). Mindfulness techniques cultivate present-moment awareness, acceptance, and non-judgmental attitude, empowering girls to enhance self-awareness.

Peer support and group therapy play a vital role in adolescent addiction treatment, providing girls with a sense of belonging, validation, and social support. Peer-led support groups offer opportunities for girls to connect with peers, share experiences, and learn from each other's successes and challenges. Group therapy modalities promote interpersonal skills, emotional regulation, and accountability (Shalaby & Agyapong, 2020). Involving families in the treatment process is essential for addressing underlying family dynamics, communication patterns, and relational conflicts that may contribute to substance use among adolescent girls. Family therapy approaches focus on improving family functioning, enhancing communication, and strengthening bonds to support sustained recovery (Volkow, 2020). By integrating gender-specific approaches, trauma-informed care, mindfulness-based interventions, peer support, and family-based interventions, clinicians and treatment providers can address the multifaceted needs of adolescent girls holistically.

Advancements in technology offer new opportunities for delivering addiction treatment to adolescents. Mobile health (mHealth) interventions, smartphone applications, and online platforms provide accessible and confidential support for girls struggling with substance use (Carreiro et al., 2020). These technology-based interventions offer resources such as psychoeducation, coping skills training, and peer support, empowering girls to manage cravings, regulate emotions, and build resilience (Kazemi et al., 2021).

Conclusion and Recommendations

Understanding substance use and alcohol use among adolescent girls is vital for addressing the complex interplay of individual, social, and environmental factors that contribute to substance use behaviors and for developing comprehensive strategies to support girls' health, well-being, and future success. We need to conduct more researches to reach detailed information about adolescent girls. Conduct research that examines the impact of alcohol and substance use policies, regulations, and enforcement

efforts on the behaviors and outcomes of adolescent girls. By evaluating the effectiveness of policy interventions and advocating for evidence-based policy changes, researchers can contribute to the development of a supportive policy environment that promotes the health and well-being of adolescent girls. In addition to these regulations, conduct longitudinal studies that follow adolescent girls over time to better understand the trajectories of alcohol and substance use, as well as the factors that contribute to initiation, escalation, or cessation of use. Longitudinal research can provide valuable insights into the developmental pathways of substance use among girls and help identify critical periods for intervention.

Substance use among adolescents represents a significant global health challenge, necessitating concerted efforts to address its underlying determinants and mitigate associated risks. Although there are some common characteristics between genders in substance use disorders; some basic differences between genders play a determining role in adolescents' substance use. By acknowledging the unique vulnerabilities of girl adolescence and implementing targeted prevention and intervention strategies, we can empower girls to navigate these complexities with resilience and strength. Together, we can foster a supportive environment that promotes health, well-being, and positive outcomes for adolescent girls facing addiction. Understanding the intersection of girl adolescence and addiction is crucial for effective prevention, intervention and treatment strategies. As these strategies continue to evolve and expand, they hold promise for reducing the burden of substance abuse and promoting the well-being of adolescent girls. By recognizing the distinct experiences and challenges faced by girls, both globally and within the context of Turkey, policymakers, healthcare providers, and community stakeholders can work towards creating inclusive and gender-responsive approaches to addiction prevention and treatment.

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