

Article

Exploring Drug Use Among Youth Raised by Custodial Grandparents and Other Caregiver Types

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Abstract

Juvenile substance use continues to be well researched. Prior research suggests that youth substance use can have far-reaching impacts. While several causes of substance use have been explored, including parental supervision and family structure, it is unclear if caregiver type can impact a juvenile's substance-using behavior. The current study uses school-level data to examine self-reported substance use among youth who reside with both biological parents, a single parent, custodial grandparent(s), or other caregiver types. The results identify significant differences in self-reported substance use across primary caregiver types. These findings have implications for specific substance use prevention programs to target youth who reside in custodial grandparent-headed households.

Keywords: juvenile substance use; family structure; custodial grandparents



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1. Introduction

Juvenile substance use continues to concern scholars, policy makers, and practitioners on a global level (Degenhardt et al., 2016). While adolescence is often a period of growth and transition for youth, it is also usually when substance use first occurs. In addition to the availability and use of alcohol and tobacco among the world's youth, there are additional concerns surrounding how illicit drug use can interrupt or damage adolescents' ability to grow and transition into adulthood (Degenhardt et al., 2016). Prior research suggests that early use of drugs and alcohol can negatively impact both the physical and mental well-being of youth (Schulte & Hser, 2013; Stone et al., 2012). Early substance use can also put youth at an increased risk of engaging in dangerous driving habits, risky sexual behavior, and delinquent or criminal behavior (Crews et al., 2007; DeLisi et al., 2015; Gordon et al., 2004; Hall et al., 2016; Phillips, 2012), and it can increase the risk of them developing a substance use disorder later in life (Kessler et al., 2001). For these reasons, scholars and policy makers continue to investigate why youth engage in substance use and who is more likely to need preventative and treatment services (Degenhardt et al., 2016).

Extant literature has highlighted several risk factors associated with youth substance use, including parental substance use, traumatic experiences, or peer associations (Aarons et al., 2008; Gmel et al., 2025; Rusby et al., 2018; Seker et al., 2021; Valdez et al., 2024). Family characteristics and household structure have also been a focus of the prior literature, with scholars arguing that youth who are raised in two-parent households are significantly less likely to engage in substance use than youth raised in other household

types (Demuth & Brown, 2004; Kroese et al., 2021; Stritzel & Crosnoe, 2023; Stritzel et al., 2022; Valdez et al., 2024; Zhang et al., 2020). However, the number of two-parent households has been decreasing over time, with more youth living in households with one biological parent and a stepparent (Jacobsen & Zaatut, 2022), extended family members, or custodial grandparents (Hemez & Washington, 2021). While a growing body of research has emerged investigating various outcomes associated with youth who reside in custodial grandparent-headed households (L. Campbell et al., 2012; Dubowitz et al., 1994; Goulette et al., 2016; Lee & Villagrana, 2015; Ryan et al., 2010; Sands et al., 2009; Scott & Goulette, 2023; Scott et al., 2022; Shovali et al., 2020; Smith & Palmieri, 2007; Smith et al., 2008, 2019), it is unclear if primary caregiver type influences youth substance use. The current study aims to contribute to this gap in the literature by examining the self-reported substance use of youth who reside with both biological parents, a single parent, custodial grandparent(s), or other caregiver types.

2. Theoretical Perspectives Surrounding the Family Unit's Influence on Youth Behavior

Several theoretical perspectives have been put forth to explain the impact family environment can have on youth's behavior (Alboukordi et al., 2012; Goulette et al., 2016; Kroese et al., 2021; Scott et al., 2022; Valdez et al., 2024). Gottfredson and Hirschi (1990), in their General Theory of Crime, explained that youth in two parent households were less likely to engage in delinquent or problematic behavior if their caregivers closely supervised, monitored, and disciplined their behavior. In doing so, caregivers were instilling a high level of self-control in youth (Gottfredson & Hirschi, 1990). Comparatively, single-parent households may not provide a consistent level of supervision or discipline to reduce the risk of youth engaging in delinquent or substance-using behavior (Breivik et al., 2009; Gottfredson & Hirschi, 1990; Hoffmann, 2017; Valdez et al., 2024). Single parents, especially single mothers, may need to work outside of the home for longer periods of time to provide for their children (Hoffmann, 2017).

In regards to the tenets of Gottfredson and Hirschi's (1990) theory, the extant literature has been pretty clear. Youth who reside in two-parent households are less likely to engage in delinquent or antisocial behavior than youth who are raised in households with a single parent or a biological parent and stepparent (Hoffmann, 2017; Jacobsen & Zaatut, 2022; Valdez et al., 2024). Prior research also suggests that youth who reside in a two-parent household are less likely to use drugs and alcohol than youth raised by a single parent, a step-parent, or other caregiver type (Demuth & Brown, 2004; Fagan & Wright, 2012; Hoffmann, 1995, 2017, 2022; Kroese et al., 2021; Stritzel & Crosnoe, 2023; Stritzel et al., 2022; Valdez et al., 2024; Zhang et al., 2020).

A second theoretical explanation posits that a youth's risk to engage in delinquent behavior is not just attributed to the number of caregivers within a household, but the quality of the relationship between youth and caregiver (Hirschi, 1969; Jacobsen & Zaatut, 2022). Hirschi (1969) argued that youth who held strong attachments to caregivers, or other role models, were more likely to conform to societal norms, the expectations of their caregivers, and were less likely to engage in delinquent or substance-using behavior. Conversely, youth who had a neutral or negative attachment to their caregivers may be more likely to engage in delinquent or substance-using behavior because they were less inclined to conform to others' expectations (Hirschi, 1969; Jacobsen & Zaatut, 2022; Thaxton & Agnew, 2004). Under this perspective, youth who are raised in a single-parent household may be less likely to engage in delinquent behavior if there is a strong attachment between caregiver and child (Jacobsen & Zaatut, 2022).

Prior research suggests that the risk of youth becoming delinquent or antisocial exponentially decreases depending on whether they are strongly attached to one or both parents (Demuth & Brown, 2004; Mack et al., 2007; Scott et al., 2022). Other research argues that in comparison to paternal attachments, maternal attachments can be far more effective at reducing the risk of delinquent behavior for male youth (Griffin et al., 2000; Hirtenlehner & Sims Blackwell, 2015; Mack et al., 2007). According to scholars, the relationship between caregiver and youth, in any household type, might be negatively affected by conflict or additional circumstances (Demuth & Brown, 2004; Mack et al., 2007; Jacobsen & Zaatut, 2022). For example, youth who reside with a single-parent, stepparent, or other caregiver type may have experienced stress with changes in housing or the introduction of different caregivers over time (Kierkus et al., 2010). Some of these youth may have endured additional traumatic events during childhood, including domestic violence, abuse, neglect, or unstable housing, potentially impacting the quality of bonds between youth and their caregivers (Seker et al., 2021; Valdez et al., 2024). Youth may use drugs or alcohol to cope with or escape from these traumatic or stressful experiences (Aarons et al., 2008; Seker et al., 2021; Valdez et al., 2024). Despite this, however, caregivers can build warm, nurturing, involved relationships with youth, regardless of past experiences (Chavda & Nisarga, 2023). Scholars argue that involved caregivers who provide supervision and have a positive relationship with the juveniles in their care can reduce the risk of youth engaging in delinquent or substance-using behavior (Demuth & Brown, 2004; Flewelling & Bauman, 1990; Goulette et al., 2016; Jacobsen & Zaatut, 2022; Scott & Goulette, 2023).

Custodial Grandparent-Headed Households

Although many of the extant studies suggest that two-parent households are in the best position to supervise, care for, and protect youth from using drugs and alcohol, it is important to consider other family structure types as well. According to Hemez and Washington (2021), the number of youth residing with both of their biological parents has been decreasing over time. Juveniles may reside with stepparents (Jacobsen & Zaatut, 2022), extended family members, also known as kinship care (Kelley et al., 2011; Ryan et al., 2010; Scott et al., 2022; Wu et al., 2020), or custodial grandparents (Hemez & Washington, 2021). For example, in 2020, it was reported that roughly three million juveniles resided with relatives and not with a biological parent. Nearly 55 percent of these youth lived with a grandparent (Hemez & Washington, 2021). Kinship care and custodial grandparent-headed households can develop because of a formal court ruling or through an informal arrangement agreed upon by the youth's parents and grandparents (Hayslip et al., 2019; Wu et al., 2020). Several reasons have been noted for the formation of custodial grandparent-headed households, including parental death, incarceration, abandonment, mental illness, drug abuse, and teenage pregnancy (Choi et al., 2016; Kelley et al., 2011; Smith et al., 2019; Taylor et al., 2016).

The extant literature remains relatively mixed on whether kinship and custodial grandparent-headed households are beneficial for youth and their caregivers (L. Campbell et al., 2012; Kelley et al., 2011; Neely-Barnes et al., 2010; Sands et al., 2009; Smith et al., 2008, 2019; Washington et al., 2013, 2014; Wu et al., 2020). According to Wu et al. (2015, 2020), kinship care is often viewed to be the preferred placement option, and in the youth's best interest so that family relationships are fostered, and youth are given more stability and consistency (Coleman & Wu, 2016; Frame et al., 2000; M. A. Winokur et al., 2008; M. Winokur et al., 2014). Prior research suggests that kinship care can lead to positive outcomes, including feelings of safety and security reported by youth (Sands et al., 2009), and a reduced likelihood of youth developing physical and mental health problems in the future (M. A. Winokur et al., 2008; Wu et al., 2020). Scholars argue that kinship caregivers

who foster a warm and consistent relationship can further protect youth from delinquent or substance-using behavior (Goulette et al., 2016; Jacobsen & Zaatut, 2022; Johnson-Garner & Meyers, 2003). Youth who reported feeling loved, safe, and protected while in the care of their grandparents were found to excel in school and develop friendships with their peers (Sands et al., 2009; Shovali et al., 2020). Scholars have found that youth who are placed in kinship care can develop resiliency, furthering their ability to thrive (Goulette et al., 2016; Sands et al., 2009; Washington et al., 2013, 2014).

Other research suggests that kinship care and custodial grandparent-headed households can negatively impact youth. Scholars argue that being removed from the care of their biological parents and placed in the care of their grandparents may traumatize youth and lead them to develop problematic behavior or future psychological issues (Dubowitz et al., 1994; Lee & Villagrana, 2015; Sands et al., 2009; Smith & Palmieri, 2007). While in kinship care, youth who experience inconsistent discipline or parenting practices may have difficulty adjusting at home or at school (Goulette et al., 2016; Kelley et al., 2011; Smith & Richardson, 2008; Smith et al., 2008; Scott & Goulette, 2023). These youth may struggle with peer interactions and were found to have an increased risk of developing internalizing and externalizing problems over time (L. Campbell et al., 2012; Smith et al., 2008, 2019). Prior research suggests that emotional or behavioral problems experienced by youth may become more intense or more frequent as they age (Goulette et al., 2016; Neely-Barnes et al., 2010).

For these reasons, scholars continue to investigate more specific outcomes for juveniles who are raised in custodial grandparent-headed households. In addition to examining the emotional, behavioral, and academic achievements of youth raised by custodial grandparents (L. Campbell et al., 2012; Dubowitz et al., 1994; Lee & Villagrana, 2015; Sands et al., 2009; Shovali et al., 2020; Smith & Palmieri, 2007; Smith et al., 2008, 2019), a limited number of studies have investigated whether these youth are likely to come into contact with the police (Goulette et al., 2016), get arrested for criminal behavior (Ryan et al., 2010), join a gang (Scott & Goulette, 2023), or reoffend after contact with the juvenile justice or criminal justice systems (L. R. Campbell et al., 2006).

Limited research has explored whether youth raised by custodial grandparents are at an increased risk of engaging in substance use (Robbins et al., 2006; Xu et al., 2022). In their analysis of African American custodial grandparent-headed and parent-headed households, Robbins et al. (2006) found no significant differences in the self-reported frequency use of alcohol, marijuana, or other drugs between the two groups of youth. In their review of the extant literature surrounding custodial grandparent-headed households, Xu et al. (2022) also noted no significant differences in substance use between youth raised by their grandparents and other caregiver types. In contrast, L. R. Campbell et al. (2006) found that while youth raised in custodial grandparent-headed households were more likely to have previous assaults, delinquency referrals, and other school problems, they were less likely to have substance use issues than youth raised in parent-headed households. Finally, Valdez et al. (2024) noted that, in comparison to youth raised in two-parent households, youth who resided with custodial grandparents reported higher odds of vaping, marijuana, and other substance use.

3. Current Study

With the far-reaching consequences of juvenile substance use noted in the prior literature as it relates to youth physical and mental health, growth and social development, and its association to delinquent, criminal, and risky behavior (Crews et al., 2007; Gordon et al., 2004; Hall et al., 2016; Nawi et al., 2021; Schulte & Hser, 2013; Stone et al., 2012; Xu et al., 2022), attempts to identify youth who may be at an increased risk of engaging in

such behavior is of the utmost importance. While much of the prior research investigating how family structure can influence youth's likelihood to engage in substance use has focused on youth who reside with both biological parents, single parents, or a stepparent, it is important to recognize the growth of custodial grandparent-headed households.

The purpose of the current study was to investigate the self-reported substance use of youth who were raised by custodial grandparents in comparison to youth who resided with other caregiver types. The current study contributes to the field and aims to improve prior research in several ways. First, the current study analyzed a large sample of youth from the state of Arizona. Prior research involving youth of custodial grandparent-headed households has used relatively small sample sizes (L. R. Campbell et al., 2006). Second, caregiver types are compared to one another without combining kinship care and custodial grandparent-headed households (Ryan et al., 2010). Finally, the current study examines juvenile substance use as it relates to multiple substances, including cigarettes, e-cigarettes, alcohol, and marijuana in three forms (bud/flower, edibles, or smoked). This extends prior works that have focused on a limited number of these substances (Robbins et al., 2006).

4. Hypotheses

Hypothesis 1. *Youth with both biological parents as their primary caregiver type will be less likely to self-report ever using alcohol, cigarettes, e-cigarettes, or marijuana in multiple forms (bud/flower, edibles, or smoked) compared to youth with custodial grandparent(s).*

Hypothesis 2. *Youth with a single parent as their primary caregiver will be more likely to self-report ever using alcohol, cigarettes, e-cigarettes, or marijuana in multiple forms (bud/flower, edibles, or smoked) compared to youth with custodial grandparent(s).*

Hypothesis 3. *Youth with custodial grandparent(s) as their primary caregiver will be more likely to self-report ever using alcohol, cigarettes, e-cigarettes, or marijuana in multiple forms (bud/flower, edibles, or smoked) compared to youth with other caregiver types.*

5. Method

The current study analyzed data from the Arizona Youth Survey (AYS). This survey is conducted together by the Arizona Criminal Justice Commission and the Arizona State University's School of Criminology and Criminal Justice. The AYS is given to a sample of 8th, 10th, and 12th graders throughout the state every two years, and asks several questions related to gang involvement, substance use, as well as other behaviors (Scott & Goulette, 2023). Only data from the 2020 survey data was used in the current study as it included the most variables and cases for the analyses.

5.1. Dependent Variables

Six outcome measures capturing youth' self-reported substance use were analyzed. These were dichotomous measures examining if the youth had ever used cigarettes, e-cigarettes, alcohol, and marijuana in three forms (bud/flower, edibles, or smoked). These binary measures were created from original survey items which asked youth, "how old were you when you first smoked a cigarette, vaped e-juice/e-liquid with nicotine, had more than a sip or two of alcohol, used marijuana buds/flowers, used food/drinks with marijuana (edibles), and smoked marijuana?" The response options for these items included: never, 1–10, 11, 12, 13, 14, 15, 16, 17–21. The response categories were collapsed and compared youth who reported never trying the substance (no = 0) with youth who reported trying the substance at a particular age (yes = 1).

5.2. Independent Variables

Youth's primary caregiver type was the independent variable of interest in the current analyses. In the original survey, youth were asked to report their primary caregiver type. Their choices included mother/father, stepparent, grandparent, foster parent, other adult, or none. Several dichotomous measures were created to capture whether a youth's primary caregiver(s) was both biological parents, a single parent, grandparent(s), or other caregiver type. Youth who reported their primary caregiver type to be their grandparents served as the reference group in the multivariate logistic regression analyses.

Several control variables were also included in the current analyses. A youth's age and number of siblings were measured as count variables. A youth's race/ethnicity (White, Black, Latino, or other (reference category) and sex (female = 1, male = 0) were also included. A dichotomous variable was used to capture income level and compared youth who received free lunch at school (yes = 1) from youth who did not receive free lunch at school (no = 0). Finally, a caregiver's education level was included as a dichotomous measure and compared caregivers who completed high school (yes = 1) from those who did not complete high school (no = 0).

5.3. Analysis

The primary goal of the current study was to explore if youth who were raised by custodial grandparents were more likely to report using these substances when compared to youth raised by other caregiver types. Analyses included bivariate chi square analyses due to the categorical dependent and independent variables and multivariate logistic regression models examining the impact of youth's caregiver type on likelihood of self-reported substance use. Missing data were minimal and handled through listwise deletion. This resulted in a final sample of 23,790 youth in the multivariate analysis.

6. Results

6.1. Descriptive and Bivariate

Characteristics of the survey sample are displayed in Table 1. Over 70% of the youth surveyed reported having both biological parents as primary caregivers. Less than 1% of youth reported having grandparent(s) as their primary caregivers. Out of the youth surveyed, about 45% of the sample identified as White while another 36% of youth reported being Latino/a/x. Nearly half of the sample identified as female. Roughly 46% of the youth surveyed reported to receive free lunch at school.

Table 1. Independent and control variable descriptive statistics.

Measures	Percentage
Primary Caregiver %	
Both Biological Parents	70.16%
Single Parent	11.86%
Grandparent(s)	0.76%
Other Caregiver Types	17.22%
Race %	
White	44.98%
Latino	35.79%
Black	7.06%

Table 1. *Cont.*

Measures	Percentage
Other	12.17%
Mean Age in Years	15.36
Free Lunch %	46.10%
Have Sibling(s) %	78.21%
Caregiver Completed High School %	90.17%
Female %	49.53%

The results of the chi square analyses are presented in Table 2 and reveal several significant associations between primary caregiver type and juvenile substance use. Specifically, there was a significant difference in the use of cigarettes, e-cigarettes, alcohol, and all three forms of marijuana when comparing youth of grandparent-headed households and youth with other caregiver types. Due to these significant findings, multivariate logistic regression analyses were conducted to control for other variables and reduce the amount of spuriousness (Alexopoulos, 2010).

Table 2. Bivariate analyses of primary caregiver type and substance use.

Primary Caregiver Type	Cigarette Use	E-Cigarette Use	Alcohol Use	Smoked Marijuana	Marijuana Edible	Marijuana Bud/Flower
Both Biological Parents	12.98% ***	30.50% ***	40.18% ***	29.02% ***	20.17% ***	21.00% ***
Single Parent	20.04% ***	39.60% ***	49.26% ***	42.40% ***	32.33% ***	33.95% ***
Grandparent(s)	25.89% ***	43.75% ***	51.80% ***	50.45% ***	39.73% ***	43.75% ***
Other Primary Caregiver Type	20.87% ***	39.63% ***	48.80% ***	41.70% ***	31.91% ***	32.30% ***

Notes: *** $p < 0.001$.

6.2. Logistic Regression

Table 3 presents the results of the multivariate logistic regression, with Model 1 examining self-reported alcohol use, Model 2 examining cigarette use, and Model 3 examining e-cigarette use among youth raised by the differing primary caregiver types. In comparison to youth raised by custodial grandparents, youth raised by both parents were significantly less likely to self-report alcohol use (O.R. = 0.66, $p < 0.01$). Youth who reported to be raised by both biological parents were also significantly less likely to report cigarette use than youth raised by a custodial grandparent (O.R. = 0.51, $p < 0.001$). This trend also followed when examining self-reported e-cigarette use among youth. No significant differences were found when comparing self-reported alcohol, cigarette, or e-cigarette use among youth who were raised by a single parent, other caregiver type, and those with a custodial grandparent as their primary caregiver.

Several control variables were also found to significantly influence self-reported alcohol, cigarette, and e-cigarette use among youth raised by different primary caregiver types. As expected, older youth were more likely to report ever using alcohol, cigarettes, and e-cigarettes than younger youth. In comparison to youth of other races/ethnicities, White and Black youth were more likely to report using alcohol and e-cigarettes while Hispanic youth were significantly more likely to report using alcohol than other youth. In comparison to youth who did not report receiving free lunch at school, youth who received free lunch at school were significantly more likely to report ever using alcohol

and e-cigarettes. Youth who reported having siblings were significantly more likely to self-report using all three substances while youth raised by a caregiver who graduated high school were significantly more likely to report ever using alcohol and cigarettes. No significant differences in the use of e-cigarettes were found. Finally, female youth were significantly more likely to report using alcohol, cigarettes, and e-cigarettes than male youth who were surveyed.

Table 3. Alcohol and cigarette use.

	Model 1 (Alcohol)	Model 2 (Cigarette)	Model 3 (E-Cigarette)
	<i>n</i> = 23,790	<i>n</i> = 23,790	<i>n</i> = 23,790
	Odds Ratio (se)	Odds Ratio (se)	Odds Ratio (se)
Single parent household	0.91 (0.15)	0.83 (0.16)	0.85 (0.14)
Two-parent household	0.66 ** (0.10)	0.51 *** (0.10)	0.58 ** (0.09)
Other caregiver type household	0.99 (0.17)	1.18 (0.24)	0.96 (0.16)
Youth age	1.29 *** (0.01)	1.18 *** (0.01)	1.25 *** (0.01)
White	1.08 ** (0.02)	0.93 (0.03)	1.11 *** (0.02)
Hispanic	1.16 *** (0.03)	0.94 (0.03)	1.05 (0.02)
Black	0.81 *** (0.03)	1.08 (0.05)	0.89 ** (0.03)
Free lunch	0.86 *** (0.02)	1.004 (0.04)	0.88 *** (0.02)
Siblings	0.75 *** (0.02)	0.77 ** (0.03)	0.78 *** (0.02)
Caregiver HS completed	0.95 *** (0.04)	0.82 ** (0.05)	0.93 (0.04)
Female	1.36 *** (0.03)	0.75 *** (0.02)	1.23 *** (0.03)

*** $p < 0.001$; ** $p < 0.01$.

Table 4 presents the results of the multivariate logistic regression examining the self-reported marijuana use among youth raised by different primary caregiver types. Custodial grandparent(s) was the reference category in Models 4–6. In examining the self-reported use of marijuana in bud or flower form, youth raised by both biological parents were significantly less likely to ever use than youth raised by custodial grandparents (O.R. = 0.37, $p < 0.001$). In comparison to youth raised by custodial grandparents, youth raised by both parents were also significantly less likely to report ever using marijuana edibles (O.R. = 0.44, $p < 0.001$). No significant differences in use of marijuana bud/flower

or edibles were found when comparing youth of custodial grandparent-headed households and youth who resided with a single parent or other caregiver type. Youth raised by both biological parents were significantly less likely to self-report ever smoking marijuana in comparison to youth raised by custodial grandparents (O.R. = 0.43, $p < 0.001$). Youth who reported having a single parent as their primary caregiver were also significantly less likely to report ever smoking marijuana than youth raised by a custodial grandparent (O.R. = 0.71, $p < 0.05$). No significant differences in self-reported marijuana smoking were found when comparing youth with custodial grandparents and youth with other primary caregiver types.

Table 4. Marijuana use.

	Model 4 (Marijuana Bud/Flower)	Model 5 (Marijuana Edibles)	Model 6 (Smoked Marijuana)
	<i>n</i> = 23,790	<i>n</i> = 23,790	<i>n</i> = 23,790
	Odds Ratio (se)	Odds Ratio (se)	Odds Ratio (se)
Single parent household	0.68 * (0.11)	0.78 (0.13)	0.71 * (0.05)
Two-parent household	0.37 *** (0.06)	0.44 *** (0.07)	0.43 *** (0.07)
Other caregiver type household	0.73 (0.01)	0.93 (0.16)	0.80 (0.14)
Youth age	1.36 *** (0.01)	1.24 *** (0.01)	1.31 *** (0.01)
White	0.92 ** (0.02)	0.87 *** (0.02)	0.92 ** (0.02)
Hispanic	1.02 (0.03)	1.05 (0.03)	1.09 ** (0.03)
Black	1.10 * (0.04)	1.14 ** (0.04)	1.05 (0.04)
Free lunch	1.00 (0.03)	1.04 (0.03)	0.97 (0.03)
Siblings	0.77 *** (0.03)	0.78 *** (0.03)	0.79 *** (0.02)
Caregiver HS completed	0.88 * (0.05)	0.87 * (0.05)	0.89 * (0.04)
Female	0.92 ** (0.03)	1.05 (0.03)	1.13 *** (0.03)

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Several control variables were also found to significantly influence self-reported marijuana use among surveyed youth. While White youth were significantly more likely to self-report using marijuana in all three forms (bud/flower, edibles, or smoke), Hispanic youth were more likely to report smoking marijuana than other youth. In comparison to other youth, Black youth were more likely to report ever using marijuana in bud/flower

or in edible form, but no significant differences were noted in self-reported marijuana smoking. Being raised with siblings and having a caregiver who graduated high school increased the odds of self-reported marijuana use across the three forms. In comparison to males, females were significantly more likely to self-report using marijuana buds/flowers or smoking marijuana. No significant differences were found in examining the use of edibles among surveyed male and female youth.

7. Discussion

Scholars and practitioners continue to examine factors associated with juvenile substance use. Prior research suggests that substance use during adolescence can negatively impact the physical and mental health, growth, and social development of youth (Crews et al., 2007; Gordon et al., 2004; Hall et al., 2016; Nawi et al., 2021). Juvenile substance use has been shown to be associated with youth engaging in delinquent, criminal, and risky behavior, and is likely to increase the risk of youth developing a substance use disorder later in life (Crews et al., 2007; DeLisi et al., 2015; Gordon et al., 2004; Hall et al., 2016; Kessler et al., 2001; Nawi et al., 2021; Phillips, 2012; Seker et al., 2021; Schulte & Hser, 2013; Stone et al., 2012). Extant research examining how family structure influences youth's substance use contends that two-parent households may be in the best position to protect youth from using drugs and alcohol through consistent supervision and discipline (Demuth & Brown, 2004; Fagan & Wright, 2012; Hoffmann, 1995, 2017, 2022; Kroese et al., 2021; Stritzel & Crosnoe, 2023; Stritzel et al., 2022; Valdez et al., 2024; Zhang et al., 2020). However, much of this research has focused on examining the risk of substance use of youth who reside in two-parent, single parent, or stepparent households. As the number of custodial grandparent-headed households has increased over time (Hemez & Washington, 2021), there is a growing population of youth who are not included in this area of research (Robbins et al., 2006; Valdez et al., 2024; Xu et al., 2022). Therefore, the current study contributes to the limited literature surrounding youth who are raised in custodial grandparent-headed households and their self-reported drug use.

The current study suggests that youth who are raised by custodial grandparents may be more likely to self-report ever using alcohol, cigarettes, e-cigarettes, and marijuana than youth raised by their biological parents, a single parent, or other caregiver types. As highlighted by the prior literature, youth who reside with their grandparents may do so because their biological parents were unable or unwilling to care for them (Choi et al., 2016; Kelley et al., 2011; Smith et al., 2015; Taylor et al., 2016). This disruption or change in living arrangements and caregivers may have caused these youth stress and/or trauma (Dubowitz et al., 1994; Lee & Villagrana, 2015; Sands et al., 2009; Smith & Palmieri, 2007). Scholars contend that youth in custodial grandparent-headed households may have unresolved trauma from experiencing domestic violence, unstable housing, abuse, or neglect prior to residing with their grandparent(s) (Sands et al., 2009; Seker et al., 2021; Valdez et al., 2024). While it is unclear *why* these youth reported using these substances, scholars argue that youth who experience traumatic events may use drugs and alcohol to cope with or escape from these past experiences (Aarons et al., 2008; Valdez et al., 2024; Seker et al., 2021).

Another potential explanation for the current findings may be related to the type of parenting practices and discipline techniques youth raised by custodial grandparents experience at home. Prior research suggests that custodial grandparents may experience elevated stress in parenting their growing grandchildren. Youth in custodial grandparent-headed households are at an increased risk of developing internalizing and externalizing problems (L. Campbell et al., 2012; Smith et al., 2008, 2019). These emotional and behavioral problems can increase in frequency and intensity as youth grow older (Neely-Barnes et al., 2010). Scholars contend that custodial grandparents report elevated stress, espe-

cially “when grandchildren have physical and/or psychological problems associated with parental crisis and/or maltreatment” (Hayslip et al., 2019, p. 156; see also Gleeson et al., 2009). This elevated stress can negatively impact grandparents’ parenting and disciplining strategies, which in turn, can exacerbate their grandchildren’s problematic behavior (Kelley et al., 2011). Other research contends that custodial grandparents can be less attentive to their grandchildren’s needs, potentially creating further stress for both (Kaminski et al., 2008). This may increase the risk of youth raised by custodial grandparents to use drugs and alcohol in comparison to youth with other caregiver types.

Finally, the increased use of cigarettes, e-cigarettes, alcohol, and marijuana among youth raised by a custodial grandparent might be the result of these substances being more readily available. According to recent Monitoring the Future (MTF) data, another school-based survey focused on investigating youth substance use, surveyed 8th, 10th, and 12th graders reported easy availability of substances, including alcohol, cigarettes, and marijuana (Johnston et al., 2020). These substances are among the ones most frequently used by surveyed youth. The current findings may have little to do with primary caregiver type and more to do with youthful experimentation and ease of availability (Johnston et al., 2020).

While not a direct focus of the present study, the current analyses found that surveyed female youth were significantly more likely than males to self-report ever using cigarettes, e-cigarettes, alcohol, and marijuana buds/flowers or smoking marijuana. This is a bit unusual because males generally report higher rates of substance use than females (Johnston et al., 2020). However, as discussed by Johnston et al. (2020), female juvenile substance use has been increasing over the years, and has even surpassed male substance use, especially in the use of marijuana. Gaps in substance use between male and female youth tend to narrow as the groups age as well (Johnston et al., 2020). It is unclear whether the current analyses captured similar findings as highlighted by Johnston et al. (2020), but it is something to consider.

7.1. Limitations and Directions for Future Research

While the current study significantly contributes to the body of literature on custodial grandparent-headed households and their influence on youth self-reported substance use, there are several limitations that should be considered. First, the current analyses used only one year of cross-sectional data from the Arizona Youth Survey (AYS). Our findings should be interpreted with caution as we were unable to determine that primary caregiver type caused youth to use cigarettes, e-cigarettes, alcohol, or marijuana. Additionally, it is unclear how long youth had been in the care of their identified primary caregiver or if their caregiver type had changed before they were surveyed. Future research examining whether primary caregiver types influence juvenile substance use should employ longitudinal data so that length of care and the emergence of substance use of youth can be established and followed over time. Second, while prior literature surrounding family structure and its impact on juvenile behavior has focused on caregivers’ ability to supervise and discipline youth’s problematic behavior, this was not the focus of the current study. Other relevant characteristics could have been unintentionally omitted from the current analyses. Future research should explore additional characteristics associated with juvenile substance use and attempt to identify the unique needs of youth who reside in grandparent-headed households.

Additional limitations associated with the AYS data include generalizability and how it is administered (Scott & Goulette, 2023). Because the current study used only one year of data from one state, Arizona, the findings presented here may not be generalizable to other groups of youth and their caregivers. However, the current analyses seemed to highlight similar trends observed within a nationally representative data set, Monitoring the Future

(Johnston et al., 2020). Additional research in other jurisdictions should be conducted to more clearly explore primary caregiver type and its influence on juvenile substance use. Moreover, the AYS is a school-based survey. Youth who were absent from school, or who did not attend school, the day surveys were administered were not included in data collection or the current analyses (Scott & Goulette, 2023). This is an important omission to recognize as these youth might be at a greater risk of engaging in substance use, regardless of caregiver type (Henry & Thornberry, 2010). Finally, self-reported measures should be interpreted cautiously, as surveyed youth may not have been completely honest when reporting their use of cigarettes, e-cigarettes, alcohol, or marijuana. While some students may have over-exaggerated their use of these substances, especially if they completed the survey in the presence of their peers, others may have under-reported their prior substance use. Scholars may want to consider using other data sources in the future, if possible.

7.2. Policy Implications

Despite these limitations, the findings of the current study highlight several policy implications. It is suggested that more support services are offered to custodial grandparents and their grandchildren, highlighting the unique needs of both groups (L. R. Campbell et al., 2006; Mendoza et al., 2020; Sadruddin et al., 2019). Prior research suggests that custodial grandparents may struggle to manage the academic, social, and financial challenges associated with raising one's grandchildren later in life (Goulette et al., 2016). Custodial grandparents may benefit from attending parenting classes to help manage youth's behavior and address any caregiving struggles they experience. Parenting classes may assist custodial grandparents in understanding the importance of monitoring youth's behavior and building a close relationship with their grandchildren to protect them from beginning or engaging in substance use (Valdez et al., 2024). Support services that help custodial grandparents develop coping skills to manage their stress, communicate more effectively, and prioritize their mental and physical health can further reduce their stress levels so that they remain active caregivers (Mendoza et al., 2020). Services offered to custodial grandparents and their grandchildren should be delivered to specifically recognize their unique circumstances (Taylor et al., 2016).

Related to identifying and addressing substance-using behavior in youth specifically, it is recommended that custodial grandparents are provided additional information surrounding drug use and avenues for counseling services for them and their grandchildren (Taylor et al., 2016), so that they may look for early warning signs associated with substance-using behavior in youth and how to handle such issues as they arise. Educational information surrounding cigarettes, e-cigarettes, alcohol, and marijuana can inform caregivers of new trends or types of illicit substances that are becoming popular, so that they can be more proactive and have important conversations with the youth in their care (Johnston et al., 2020).

Youth who reside in custodial grandparent-headed households may need support services as well. As youth are transitioning out of the care of their biological parents into the care of their grandparents, social services should be used to assess for prior trauma, especially if they experienced domestic violence, abuse, or neglect, so that counseling services may be offered (The National Child Traumatic Stress Network, n.d.; Taylor et al., 2016). Additionally, it is important that youth raised by custodial grandparents are evaluated on their emotional, behavioral, cognitive, and social functioning, so that risk factors associated with delinquent or substance-using behavior can be identified and addressed (L. R. Campbell et al., 2006). Their unique needs may be distinctively different from youth who reside with other caregiver types (L. R. Campbell et al., 2006).

Finally, the findings of the current study suggest that drug and alcohol prevention programs should continue to investigate risk and protective factors associated with youth substance use as it relates to the family environment (Degenhardt et al., 2016), and recognize that there are many different household types outside of two-parent, single parent, and stepparent families (Valdez et al., 2024). Revisions should be incorporated into established programs to become more inclusive for youth and their caregivers (Taylor et al., 2016).

8. Conclusions

The current study contributes to the extant research examining youth substance use, the influence of family structure, and custodial grandparent-headed households. While scholars have long established that two-parent households may be in the best position to protect youth from engaging in substance use, very little is known about the self-reported substance use of youth who are cared for by their grandparents. The current study suggests that youth who identified their primary caregiver to be their grandparent(s) were significantly more likely to report using cigarettes, e-cigarettes, alcohol, and marijuana than youth of two-parent households. These findings highlight a need for substance use prevention programs that directly service youth who are raised by multiple caregiver types.

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