



“There may be a genetic tendency ...”: How adoptive parents understand and communicate about substance use and risk behaviors with their adolescent children

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ABSTRACT

For adoptive parents, evaluating their children’s potential for risk-taking behaviors, such as substance use, may be complicated by both known and unknown elements of their children’s background, which may impact their children’s risk profile. Grounded in a framework that integrates concepts of uncertainty management and communicative openness, this study explores how 68 adoptive parents (25 lesbian mothers, 20 gay fathers, and 23 heterosexual parents) understand, and communicate with their early adolescent children about, such risks. Our qualitative analysis revealed that parents’ concerns related to their children’s substance abuse potential were often grounded in awareness of genetic risk factors and prenatal substance exposure, as well as their children’s mental health challenges and adoption-related loss. Parents articulated a variety of ways that they addressed risk-taking with their children, which ranged from instructive and information-focused to supportive approaches. Findings highlight how adoptive parents balance honesty about risks with fostering their children’s self-esteem and positive identity development. This study illuminates the complexities of adoptive parenting in terms of managing uncertainty and promoting adolescent well-being, and underscores the role of open and ongoing communication and emotional attunement in navigating these challenges.

1. Introduction

Adolescence is a period of intense identity development and transition, marked by gradual movement towards autonomy, independent decision-making, and life planning. And yet, adolescents often encounter situations for which they are not prepared, including those that involve some assessment of decision-making around risk (Alderman et al., 2019). Indeed, many teens engage in risk-taking behaviors, including the use of nicotine, alcohol, drugs, and unprotected sexual activity (Alderman et al., 2019; Romer et al., 2017). Although some level of risk-taking behavior is considered normative, other types of risky behaviors can have serious negative long-term social and health consequences. For example, almost three-quarters of deaths among teens are due to injuries from motor vehicle accidents, injuries influenced by alcohol and drug use, injuries caused by firearms, and homicide and suicide (Alderman et al., 2019).

Early adolescence (e.g., age 10–13) is a crucial stage of child development, and may be a key point of entry for the prevention of risky

behaviors (Matsuda et al., 2023). During this stage, children experience physical and emotional changes, and the salience and influence of peers increase (Babore et al., 2016). Parent-child relationships and communication during this stage can play a role in enhancing children’s emotional adjustment, ultimately mitigating their vulnerability for the risk-taking behaviors that become more prevalent in middle and later adolescence (Matsuda et al., 2023). For example, parental messages about substance abuse (e.g., messages of warning; encouragement to talk to parents about questions or issues) may reduce risk for substance use in adolescence and young adulthood (Matsuda et al., 2023) as well as other problems that are associated with adolescent substance dependency, such as risky sexual behavior and delinquency (Steinfeld & Torregrossa, 2023).

1.1. Risk, adolescence, and adoption

Some groups of adolescents are at higher risk for risk-taking behaviors. Adolescents with mental health challenges, including

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depression and behavioral problems, are at greater risk for substance use challenges (Bozzini et al., 2021). A recent meta-analysis found that childhood diagnoses of ADHD, Oppositional Defiant Disorder (ODD), and depression increased the risk of developing substance use disorders, underscoring the need for early prevention and intervention efforts (Groenman et al., 2017). Impulsivity, sensation-seeking, and lack of self-control represent tendencies that may fuel substance abuse; and, youth who struggle with low self-esteem, emotion regulation challenges, and poor self-image may turn to substances to cope with such challenges (Hartley & Somerville, 2015; Miller, 2024).

Adopted youth constitutes a group that have a higher risk of adjustment difficulties, including mental health challenges and substance use challenges (Brodzinsky & Palacios, 2023; Keyes et al., 2008; Yoon et al., 2012). Such elevated difficulties are largely attributed to “the legacy of genetically based problems, negative prenatal experiences (exposure to drugs and alcohol), and pre-placement adversities such as malnutrition, neglect, abuse, [and] parental psychopathology” (Brodzinsky, 2011, p. 200). Genetic factors account for at least some of the elevated risk in substance abuse problems among adopted adolescents (Huibregtse et al., 2016). Additionally, adopted children are at an elevated risk of prenatal alcohol and drug exposure as well as pre-placement deprivation and trauma, which can contribute to elevated mental health and substance risks in adolescence and beyond (Davies & Bledsoe, 2005; Keyes et al., 2008). Intense feelings of adoption-related loss and grief, which characterize the experience of some adoptees, may also predispose some individuals to mental health challenges, which may in turn lead to substance abuse or other risk-taking behaviors as a means of coping (Brodzinsky et al., 2022).

The complex pathways by which adopted adolescents may be at higher risk for substance abuse are exemplified in part in a study by Askeland et al. (2018) which found no differences between international adoptees and their non-adopted peers in whether they had tried alcohol or drugs, but determined that adoptees were more likely to engage in problematic alcohol or drug use. The difference was attenuated and no longer significant when adjusting for depression and ADHD: that is, the association between adoption status and problematic substance use was mediated (and thus largely explained) by their elevated levels of mental health problems. Other work has found that higher numbers of adverse events pre-placement (e.g., neglect, prenatal drug exposure) are related to poorer mental health, which in turn is a risk factor for substance abuse (Paine et al., 2021). Thus, a variety of circumstances related to adoption may predispose youth to mental health difficulties, which elevate their risk for substance use challenges.

The complex relationship between adoption and substance use is signaled by the fact that there are specialized substance abuse treatment programs geared towards adopted teenagers (Burning Tree, 2024; Furst, 2022). Such programs tend to emphasize the unique issues posed by adoption, in that people with a birth parent who abused drugs are twice as likely to abuse drugs as those whose birth parents do not have a drug abuse history, and there are often “unknowns” in adoptees’ backgrounds related to their origins that often create a sense of confusion and anxiety, compromising their sense of self and emotional well-being (Burning Tree, 2024; Furst, 2022).

Finally, adopted youth are not only at elevated risk for mental health challenges and substance use, but also for related risk-taking behaviors. For example, some work has found that adopted girls are at risk for earlier sexual initiation, which researchers suggest may reflect genetically influenced personality traits, such as impulsivity, sensation-seeking tendencies, or depression, or, an earlier onset of puberty (Bricker et al., 2006). Girls and young women who were adopted from foster care may be at especially elevated risk for early sexual initiation and early pregnancy (Combs et al., 2018). One study of young women with a history of foster care found that 50 % had become pregnant at least once by age 19 (Dworsky & Courtney, 2010).

1.2. Birth family information as a source of information about risk

Adoptive parents often have incomplete information about their children’s genetic background and/or their risk factors for mental health or substance related challenges (Pinderhughes & Brodzinsky, 2019; Wrobel & Grotevant, 2019). Even parents who possess this information (e.g., based on ongoing contact with birth family or background records) may struggle with how to use or communicate about it when talking with their children. Adoptive parents face the challenge of trying to balance the task of communicating honestly (e.g., about risks and “things to watch out for”) with the desire to foster self-esteem and a positive self-image, which in part involves helping the adoptee to internalize a positive view of their birth family (Goldberg et al., 2020; Jones & Hackett, 2007).

Some research has examined how adoptive parents draw on birth family and/or background information to anticipate and navigate their children’s development and/or the surfacing of potential challenges. One study of adoptive families found that adoptive parents who had ongoing contact with birth families sometimes relied on them as sources of information for children’s weight, height, and developmental milestones—generally neutral areas (Goldberg & Virginia, 2022). Another study, which examined the use of birth family information in a sample of adoptive parents of teens who were experiencing severe mental health issues, found that some parents reflected on their children’s birth family’s history of mental health challenges in attempting to understand their teens’ current presentation and future trajectory (Goldberg et al., 2023). A few parents described how their children had developed complex or angry feelings towards their birth parents, as they grappled with their identities as adoptees and struggled to identify the origins of their emotional, neurological, or developmental challenges (Goldberg et al., 2023). Ultimately, it is to the adopted child’s benefit for adoptive parents to maintain communication with birth family members throughout children’s lives, as birth family can be an important ongoing source of valuable information about mental health and various risk factors, enabling adoptive parents to anticipate and respond to potential issues (Child Welfare Information Gateway, 2019; Duncan et al., 2021). Such information is particularly crucial when navigating mental health concerns or risky behaviors in adolescence, as it allows adoptive parents to make more informed decisions and to communicate more effectively to children about their histories and potential challenges (Pinderhughes & Brodzinsky, 2019).

1.3. Communication about risk

Research on how parents communicate about substance abuse and related risk to their children indicates that parents’ approaches vary widely, with some parents taking a more direct approach and others taking a more indirect approach; additionally, some parents convey a “no tolerance” rule, while others convey more permissive and/or laissez-faire attitudes (Miller-Day, 2002, 2008; Pettigrew et al., 2018). Parental messaging around drugs is more often part of the ongoing conversation within families rather than being structured in a single “drug talk” (Miller-Day, 2002; Miller-Day & Dodd, 2004); and, total avoidance of the topic of drugs and alcohol is rare (Kelly et al., 2002). Notably, parental communication may enhance adolescents’ perceived sanctions against substance use, reducing the likelihood that they will experiment with drugs and alcohol (Kelly et al., 2002). Further, a review of the literature on parent–child communication and substance abuse indicated that (a) open communication about substance is most effective when it occurs within the context of high levels of parent–child connectedness, and (b) conversations about health risks are associated with lower levels of substance use while more frequent conversations and permissive messages are associated with higher levels (Carver et al., 2017). Experts suggest that parents engage in open, credible, and two-sided conversations with their children about substance use (Carver et al., 2017). Such communication is more effective when it not only

occurs in the presence of strong parent-adolescent relationships (Pettigrew et al., 2017) but also parental awareness of children's activities and behaviors: indeed, parents who are well-informed about their children's activities can better guide them away from risky behaviors (Kapetanovic et al., 2019). However, intrusive monitoring and solicitation of information from teens does not appear to cultivate trust, better communication, and/or lead to reduced risk of risky behaviors: in turn, parents must balance parental awareness with respect for teenagers' developmentally appropriate need for privacy (Kapetanovic et al., 2019).

Parental communication is also important in reducing other types of risk behaviors. Early and frequent parent-youth communication about sex and sexual health, for example, has been linked to safer sex behavior, including contraceptive and condom use, and delayed sexual initiation (Coakley et al., 2017; Widman et al., 2016), resulting in lower rates of sexually transmitted infections (STIs) (Coakley et al., 2017). Similarly, open parental communication about online risk behaviors can reduce exposure to cyberbullying and inappropriate content (Symons et al., 2017). However, not unlike offline behaviors, parents often have limited knowledge of their children's online activities, with privacy concerns and ineffective monitoring hindering their ability to intervene effectively (Symons et al., 2017). In turn, research suggests that efforts to improve parent-child communication processes can in turn facilitate effective discussion about the many factors that could lead to risk behaviors, while also enhancing parents' transmission and children's understandings of values surrounding health risk behaviors (e.g., injury, tobacco use, early sexual involvement) (Riesch et al., 2006).

1.3.1. Adoption specific considerations

Given adopted adolescents' elevated risk of challenges in some areas, particularly substance use, of interest is how parents conceptualize that risk and communicate about it to their children. Research has established the importance of adoption-related communication to parent-child relationships and child well-being (Horstman et al., 2016). How parents share adoption related information with children, and help them to understand the meaning and implications of being adopted, is key to children's self-concept. When parents are open, direct, affirming, and empathic in their communications about adoption, and acknowledge the loss inherent to adoption, children are better able to integrate their adoption into their sense of self (Brodzinsky, 2011; Wrobel et al., 2003). And, to the extent that parents are able to support their adopted children in accessing their birth family or background information, this can facilitate positive adoptive identity development (Brodzinsky, 2011).

Ultimately, it is essential that adoptive parents (a) engage in an ongoing dialogue (as opposed to just "telling" or "talking at" their children about their adoption); (b) take stock of their own feelings and values related to birth family (e.g., mental illness, substance abuse) and work through these on their own to ensure that they are emotionally prepared to supportively discuss their children's origins; and, relatedly, (c) avoid negative descriptions or comments about birth family in order to best facilitate children's self-esteem and relationships with birth family, if relevant (Goldberg & Virginia, 2022; Horstman et al., 2016). In essence, adoptive parents must work towards an attuned, thoughtful stance vis a vis discussion of their children's histories, birth family, and potential genetic "loadings" so as to be embracing of children's full selves as well as connections with their origins (Goldberg et al., 2020). Especially when discussing difficult background information (e.g., a parent's substance use), it is important to take a developmentally graded approach, gradually building towards greater detail and specificity (Goldberg et al., 2020; Keefer & Schooler, 2015). It is also important to use neutral language and attribution—for example, a birth parent's inability to care for the child can be framed in terms of their "illness", be it mental or substance use-related, and/or in terms of difficulties in judgment, impulse control, and other challenges that are difficult to correct (Brodzinsky, 2011).

1.4. Theoretical perspective

The current study is grounded in uncertainty management theory. Uncertainty exists when details are ambiguous, complex, unpredictable, when information is unavailable or inconsistent, or when people feel insecure about their own knowledge; in turn, people respond to uncertainty in a variety of ways, possibly seeking out or avoiding certain types of information or resources (Brashers, 2001). Adoptive parents often face the challenge of managing (and helping children to manage) uncertainty because they have limited, vague, or inconsistent information about children's backgrounds and birth family (Colaner & Kranstuber, 2010). Adoptive parents may, in open adoptions, seek to mitigate uncertainty by consulting with birth family or facilitating conversations between birth family and children to address key questions (Goldberg et al., 2020). Of interest is if and how adoptive parents utilize information gleaned from birth family regarding their children's current or future risk for substance abuse, mental health, or other challenges to better understand, and anticipate, potential risk (e.g., for drug abuse).

Also relevant to this study is the concept of communicative openness (Brodzinsky, 2005, 2006; Brodzinsky & Palacios, 2023). Important regardless of the amount of contact between adoptive families and birth families (i.e., structural openness), it refers to the creation of "an open, honest, nondefensive, and emotionally attuned family dialogue" regarding adoption (Brodzinsky, 2005, p. 151). The level of communicative openness theoretically develops as a function of reciprocal influences between parents and children—yet parents' values and behaviors create the initial context that supports children's comfort with asking questions about adoption, birth family, and identity (Wrobel et al., 2003). Likewise, in the presence of an ambiguous family climate (e.g., one that lacks flexible and open communication about adoption), children may feel reluctant to ask questions (Brodzinsky, 2005; Wrobel et al., 2003). As children move into adolescence and become more curious about their origins and background, communicative openness becomes increasingly important. Of interest is if and how parents' conversational practices related to risk behaviors are characterized by communicative openness generally and related to adoption specifically.

1.5. The current study

Parents of early adolescents may or may not yet be thinking about their children's vulnerability or predisposition to various challenges that may be genetically mediated, such as substance abuse (including drugs, alcohol, and vaping), and other "risky" behaviors such as early or unprotected sexual activity. Of interest in the case of adoptive parents is how they understand and approach the potential of substance and mental health challenges in particular, given that (a) they may be aware that adopted youth, in general, have elevated risks in these areas; (b) these areas are known to be genetically mediated; and (c) in that they do not share genetic information with their children, they may draw from other sources (e.g., birth parents) to anticipate or ascertain risk. In turn, of interest is how they draw on their children's developmental and mental health history in gauging current and future risk and communicate about such risk to children.

1.6. Research questions

1. What concerns do adoptive parents voice related to their children's risk for risk-taking behaviors—in particular, substance abuse?
2. (How) do they perceive adoption-related factors (e.g., genetic predisposition) and other factors as influencing their children's risk for substance abuse?
3. How do they communicate about such concerns to their children? (How) do they use knowledge of birth family and/or genetic risk in such conversations?

2. Method

Aggregated demographic data appear in Table 1; Table 2 contains data by family. The sample consists of data from 68 families: 25 lesbian mothers (LM; 24 White, 1 Black), 20 gay fathers (GF; 19 White, 1 Black), and 23 heterosexual parents (HP), including 19 heterosexual mothers (HM; 18 White, 1 Latinx) and 4 heterosexual fathers (HF; 4 White). All parents adopted their children approximately 12 years earlier: 39 via private domestic adoption, 18 via public domestic adoption, and 11 via international adoption. Our analysis focused on parents' oldest (first adopted) children; 34 families (50%) adopted subsequent children.

A majority of the parents were White ($n = 64$, 94.1%), whereas a majority of children were of color (i.e., Black, Asian, Latinx, biracial; $n = 46$, 67.7%). Parents were generally well-educated ($n = 61$, 89.7% had a bachelor's degree or higher). Children were 12.54 years old, on average when parents were interviewed ($SD = 1.4$). Children ranged in age from 11 to 17, but most (87%) were 11–13; just 13% were 14–17 (see Table 2). Families lived in a variety of U.S. states, across a range of geographic regions; several participants lived in Canada. There were

Table 1
Demographic details of participants ($N = 68$).

	Lesbian ($n = 25$)	Gay ($n = 20$)	Hetero ($n = 23$)	Full Sample ($n = 68$)
Family Variables				
Family Income (\$, M, SD)	\$105,339 (\$53,955)	\$183,528 (\$67,241)	\$127,636 (\$61,722)	\$142,432 (\$63,963)
Parent Demographics				
Parent Race ($N, \%$)				
White	24 (96%)	19 (95%)	21 (91.4%)	64 (94.1%)
Of Color	1 (4%)	1 (5%)	2 (8.6%)	3 (5.9%)
Parent Age (M, SD)	56.48 (5.1)	57 (4.6)	53.39 (4.8)	55.59 (5.0)
Level of Education				
HS Diploma	0 (0%)	2 (10%)	1 (4.35%)	3 (4.41%)
Some college/associate	1 (4%)	1 (5%)	1 (4.35%)	3 (4.41%)
Bachelor's	15 (60%)	9 (45%)	4 (17.39%)	28 (41.18%)
Master's	7 (28%)	7 (35%)	13 (56.52%)	27 (39.71%)
PhD/MD/JD	2 (8%)	0 (0%)	4 (17.39%)	6 (8.82%)
Unknown	0 (0%)	1 (5%)	0 (0%)	1 (1.47%)
Child Demographics				
Child Race ($N, \%$)				
White	7 (28%)	8 (40%)	7 (30.4%)	22 (32.4%)
Black/African American	3 (12%)	4 (20%)	3 (13.1%)	10 (14.7%)
Asian/Asian American	3 (12%)	0 (0%)	5 (21.7%)	8 (11.8%)
Latinx	5 (20%)	4 (20%)	1 (4.4%)	10 (14.7%)
Biracial/Multiracial	7 (28%)	4 (20%)	7 (30.4%)	18 (26.5%)
Child Age (M, SD)	12.56 (1.3)	12.65 (1.6)	12.43 (1.2)	12.54 (1.4)
Child Gender ($N, \%$)				
Cis Girl	13 (52%)	9 (45%)	14 (60.8%)	36 (52.9%)
Cis Boy	8 (32%)	8 (40%)	8 (34.8%)	24 (35.3%)
Trans/Nonbinary	4 (16%)	3 (15%)	1 (4.4%)	8 (11.8%)
Siblings ($N, \%$)	12 (48%)	8 (40%)	14 (60.9%)	34 (50%)
Coast ($N, \%$)				
Northeast	8 (32%)	7 (35%)	9 (39.1%)	24 (35.3%)
West	7 (28%)	7 (35%)	8 (34.8%)	22 (32.4%)
South	6 (24%)	2 (10%)	2 (8.7%)	10 (14.7%)
Midwest	3 (12%)	4 (20%)	2 (8.7%)	9 (13.2%)
Canada	1 (4%)	0 (0%)	2 (8.7%)	3 (4.4%)
Adoption Type ($N, \%$)				
International	4 (16%)	1 (5%)	6 (26.1%)	11 (16.2%)
Domestic private	14 (56%)	14 (70%)	11 (47.8%)	39 (57.3%)
Domestic public	7 (28%)	5 (25%)	6 (26.1%)	18 (26.5%)

roughly an equal percentage of cisgender (cis) girls (36) and cis boys (24) in the sample, with two cis boys exploring/questioning their gender, and eight children identifying as trans/nonbinary.

Parents provided information about children's mental health. Thirty-two parents (47.1%) reported specific diagnoses, such as depression, anxiety, and ADHD. Twenty-eight parents (41.2%, including some parents who reported diagnoses) described mental health challenges, such as impulsivity, withdrawal behaviors, low self-esteem, and emotion regulation difficulties.

2.1. Procedure

Participants completed an interview with the principal investigator or a trained doctoral student in psychology. Interviews lasted 1–1.5 h and were transcribed verbatim. The study was approved by Clark University's internal human subjects review board. Interviews focused on parents' experiences navigating the physical, emotional, and social changes associated with the transition to adolescence, and included questions such as: 1. How is [child]? Have there been any big changes in their life? What have been the most challenging or surprising parts of adolescence so far? How have you navigated providing structure and guidance for [child] versus allowing them to explore and make mistakes? 2. As [child] continues to mature into adulthood, what kinds of things do you worry about or hope for? Are any of your worries/hopes for the future specifically related to adoption? 3. Do you or your partner worry about your child's susceptibility to substance abuse or mental health issues—if this was something that the birth parents struggled with? How do you talk about these issues? 4. Do you talk to your child about, and/or how to avoid, general risks that intensify in adolescence? Have you and your partner had differences of opinion about if and how to talk about these issues? 5. How has your child's comfort with being adopted changed over time? Are there any ways that adoption has been more salient/come up in new ways as [child] transitions into adolescence? 6. Has there been anything about [child's] adoption or conception story that has affected the ease of talking about any specific issues?

2.1.1. Sample selection

The sample of 68 families was selected from a larger sample of 125 families who were interviewed 12 years after they became parents via adoption. Each family was asked to select one parent to be interviewed. We analyzed data from a subsample (i.e., about half) of the larger sample because of the extensive resources involved in in-depth qualitative analysis, and our wish to ensure relative representativeness of the larger sample in parent and child demographics, but not sacrifice depth or nuance in our analysis, which is a risk in qualitative analyses of large datasets (Roy et al., 2015). A subsample was chosen with an effort to select interviews based on the richness (i.e., length, detail, complexity) of data in response to the topic of interest, while being mindful that our subsample mirrored the full sample in key demographic characteristics (Roy et al., 2015). The subsample mirrored the larger sample in parent sexual orientation, race, education, and income, and child race, age, and gender; that is, the two samples did not differ significantly on any of the major demographic variables.

2.2. Data analysis

Interviews were examined using reflective thematic analysis, a flexible, yet rigorous approach to analyzing qualitative data whereby patterns (i.e., themes) in the open-ended data are attended to and organized (Braun & Clarke, 2006, 2019), and sometimes quantified, to provide a sense of how frequent or infrequent a particular theme is (Roy et al., 2015). Data analysis focused on adoptive parents' feelings, concerns, and communication related to substance use and other risk behaviors. The first author and primary coder is a White cisgender woman who has researched the experiences of youth from diverse family structures for over two decades, including adopted youth. She began the

Table 2
Demographic details of participants, by case ID (N = 68).

#	Family Type	Child	Parent	Age	Child Race	Parent Race	Child Gender	Region	Adoption Type
1	Two moms	Ben	Kat	13	Biracial (B/W)	Both W	Cis boy	Midwest city	Private Domestic
2	Two moms	Josie	Gwen	13	Biracial (L/W)	Both W	Cis girl	West Coast city	Public Domestic
3	Two moms	Jean	Joan	13	White	Both W	Cis girl	Southern suburb	Private Domestic
4	Two moms	Elle	Angel	12	Biracial (B/W)	Both W	Nonbinary	West Coast city	Private Domestic
5	Two moms	Matt	Marcy	12	Latinx	Both W	Cis boy	West Coast city	Private Domestic
6	Two moms	Morgan	Patty	13	Latinx	Both W	Cis girl	Midwest city	International
7	Two moms	Mira	Beth	12	Asian	Both W	Cis girl	Northeast city	Private Domestic
8	Two moms	Eliza	Trish	11	Biracial (L/W)	Both W	Cis girl	Northeast city	Private Domestic
9	Two moms	Jessie	Isabela	11	White	Both W	Cis girl	West Coast city	Private Domestic
10	Two moms	George	Zora	13	Asian	Both W	Cis boy	Southern suburb	International
11	Two moms	Riley	Cathy	12	White	Both W	Nonbinary	Southern city	Private Domestic
12	Two moms	Jaime	Sheila	13	Biracial (B/L)	Both W	Nonbinary	Northeast city	Private Domestic
13	Two moms	Zander	Barbara	13	White	Both W	Cis boy	West Coast city	Private Domestic
14	Two moms	Lana	Aria	13	Asian	Both W	Cis girl	West Coast city	International
15	Two moms	Sophia	Claire	11	White	One W One Ind	Cis girl	Northeast suburb	Private Domestic
16	Two moms	Lucy	Lauren	12	Latinx	Both W	Trans girl	West Coast suburb	Public Domestic
17	Two moms	Trevor	Joyce	11	White	Both W	Cis boy	Northeast city	Private Domestic
18	Two moms	Jason	Sandy	12	White	Both W	Cis boy	Northeast suburb	Private Domestic
19	Two moms	Rose	Ivy	16	Black	One B One W	Cis girl	Canadian city	Public Domestic
20	Two moms	Abby	Amanda	12	Black	Both W	Cis girl	Southern city	Private Domestic
21	Two moms	Luke	Yvette	14	Latinx	Both W	Cis boy	Southern suburb	International
22	Two moms	Nora	Petra	16	Latinx	Both W	Cis girl	Northeast suburb	Public Domestic
23	Two moms	Dahlia	Anne	12	Black	Both W	Cis girl	Southern city	Public Domestic
24	Two moms	Chris	Claudia	12	Biracial (B/W)	Both W	Cis boy	Midwest city	Public Domestic
25	Two moms	Kiley	Tammy	12	Biracial (B/W)	Both W	Cis girl	Northeast suburb	Public Domestic
26	Mom and dad	Mollie	Meg	13	Asian	Both W	Cis girl	Canadian city	International
27	Mom and dad	Megan	Lisa	12	Biracial (L/W)	Both W	Cis girl	West Coast suburb	Private Domestic
28	Mom and dad	Callie	Bonnie	13	White	Both W	Cis girl	Southern city	Private Domestic
29	Mom and dad	Tyler	Madeline	12	White	Both W	Cis boy	Midwest suburb	Private Domestic
30	Mom and dad	Sam	Caroline	13	Biracial (L/W)	Both W	Cis boy	Canadian city	Private Domestic
31	Mom and dad	Dawn	Veronica	14	Asian	One W One A	Cis girl	West Coast city	International
32	Mom and dad	Bryan	Jen	15	White	Both W	Cis boy	Northeast suburb	Public Domestic
33	Mom and dad	Emily	Kate	12	White	Both W	Cis girl	Northeast suburb	Public Domestic
34	Mom and dad	Rosie	Sarah	11	White	Both W	Cis girl	West Coast city	Private Domestic
35	Mom and dad	Chloe	Maryanne	13	Biracial (PI/W)	One L One W	Cis girl	West Coast city	Public Domestic
36	Mom and dad	David	Bill	12	Asian	Both W	Cis boy	Northeast suburb	International
37	Mom and dad	Julian	Becky	12	White	Both W	Cis boy	Northeast suburb	Private Domestic
38	Mom and dad	Angelica	Alessia	12	Biracial (B/W)	One B One W	Cis girl	Northeast suburb	Private Domestic
39	Mom and dad	Nina	Lyle	12	Asian	Both W	Cis girl	West Coast city	International
40	Mom and dad	Andy	Esther	12	Black	Both W	Cis boy	Midwest suburb	Private Domestic
41	Mom and dad	Leah	Danielle	12	Biracial (B/W)	Both W	Cis girl	West Coast city	Private Domestic
42	Mom and dad	Fiona	Keira	13	Latinx	Both W	Cis girl	Northeast city	International
43	Mom and dad	Charlie	Darien	11	White	Both W	Cis boy	Southern city	Public Domestic

(continued on next page)

Table 2 (continued)

#	Family Type	Child	Parent	Age	Child Race	Parent Race	Child Gender	Region	Adoption Type
44	Mom and dad	Grace	Aviva	14	Asian	Both W	Cis girl	Northeast suburb	International
45	Mom and dad	Jonas	Cora	15	Biracial (B/W)	Both W	Cis boy	Northeast suburb	Public Domestic
46	Mom and dad	Christina	Arabella	11	Biracial (B/W)	Both W	Cis girl	West Coast city	Private Domestic
47	Mom and dad	Dana	Vanessa	11	Black	Both W	Cis girl	Northeast city	Private Domestic
48	Mom and dad	Wren	Brett	11	Black	Both W	Nonbinary	Northeast suburb	Public Domestic
49	Two dads	Joshua	Donald	12	Biracial (B/W)	Both W	Cis boy	Southern city	Private Domestic
50	Two dads	Zoe	Frank	13	Latinx	Both W	Trans girl	West Coast city	Private Domestic
51	Two dads	Hannah	Tom	13	White	Both W	Cis girl	Northeast suburb	Private Domestic
52	Two dads	Eleanor	Shane	13	Biracial (AN/W)	Both W	Cis girl	West Coast city	Private Domestic
53	Two dads	Lila	Jimmy	15	Black	One B One W	Cis girl	Midwest city	Public Domestic
54	Two dads	River	Salem	13	White	Both W	Trans boy	West Coast city	Private Domestic
55	Two dads	Donny	Mark	13	Latinx	One W One L	Cis boy questioning	West Coast city	Private Domestic
56	Two dads	Soren	Todd	12	Black	One B One W	Cis boy questioning	West Coast city	Private Domestic
57	Two dads	Holden	Chandler	12	White	Both W	Cis boy	West Coast city	Private Domestic
58	Two dads	Colin	Eddie	17	Biracial (L/W)	Both W	Cis boy	Southern suburb	Public Domestic
59	Two dads	Brian	Mike	11	Biracial (B/W)	Both W	Cis boy	Northeast suburb	Private Domestic
60	Two dads	Kendra	Patrick	12	Black	Both W	Cis girl	Northeast suburb	Private Domestic
61	Two dads	Timmy	Barney	12	Black	Both W	Cis boy	Midwest city	Public Domestic
62	Two dads	Olivia	Jake	12	White	Both W	Cis girl	Northeast city	Private Domestic
63	Two dads	Braylin	Joe	11	White	Both W	Cis girl	Northeast suburb	Private Domestic
64	Two dads	Shirley	Moses	12	Latinx	One L/W One W	Cis girl	Midwest city	International
65	Two dads	Ryan	Steven	12	White	Both W	Nonbinary	Northeast suburb	Public Domestic
66	Two dads	Anne	Chad	11	Latinx	Both W	Cis girl	West Coast city	Private Domestic
67	Two dads	Erin	Stan	11	White	Both W	Cis girl	Midwest suburb	Private Domestic
68	Two dads	Evan	Andre	16	White	Both W	Cis boy	Northeast suburb	Public Domestic

Note: B/W = Black/White; B/L = Black/Latinx; L/W = Latinx/White; PI/W = Pacific Islander/White; AN/W = Alaskan Native/White; W = White; B = Black; A = Asian; L = Latinx; Ind = Indigenous.

coding process with open coding, reading the transcripts multiple times to gain understanding of participants' perspectives and noting preliminary ideas about core constructs of interest. Knowledge of the relevant literatures, theoretical frameworks, and familiarity with the dataset as a whole (i.e., years of interviewing participants) informed the initial analysis (Goldberg & Allen, 2024). Following the initial open coding, the first author made the decision to focus specifically on adoptive parents' perceptions of how birth family contexts (such as genetic predispositions, mental health histories, and adoption-related trauma) might influence their child's engagement in risk-taking behaviors, and their communication about such behaviors. She wrote detailed memos for each parent to describe their perspectives vis-à-vis the interplay between their child's behavior, the perceived influence of birth family history, the emotional challenges related to parenting a child with particular risk factors, and how they discussed mental health, substance use, and related risk behaviors with their child.

She then used selective coding to sort the data into initial categories that stayed close to the data and were specific (e.g., "prenatal drug exposure"; "mental health challenges"). She then identified larger groupings that unified and provided meaning to these codes, and connected them to larger constructs of interest given the research questions (e.g., "the perceived role/s of genetic and mental health factors in shaping risk behaviors"; "communication strategies adopted by parents to manage risk behaviors"). She refined the emerging scheme throughout the process. She also examined whether and how family demographics, such as gender and adoption type, intersected with key themes. The coding scheme was applied to all interviews.

A secondary coder, a doctoral student in clinical psychology, and a White cisgender woman, independently reviewed the transcripts and documented her own interpretations of the data. To ensure consistency and reliability, the secondary coder applied the emerging coding scheme to a subset of interviews and then compared her findings with the first author's initial coding. Discrepancies were discussed, and consensus was reached through iterative dialogue, with both coders refining their coding categories to better capture nuances in participant responses. The secondary coder also kept detailed memos to track her reasoning and decision-making, which helped in addressing potential biases and ensuring the accuracy of the coding.

Then, the authors invited eight undergraduate research assistants—two adopted, six non-adopted—to review participant transcripts and identify emerging themes. Each student reviewed four transcripts, thus capturing almost half of the total transcripts. They provided input, which the first two authors used to inform the final scheme. The third author served as an auditor and reviewed the final scheme and a selection of the data, which led to minor changes in the storyline and organization of the findings. The fourth author reviewed the write-up of findings and offered input on research and literature that supported the purpose and relevance of the study, interpretation of the results, and implications for adoption practice.

The authorship team then attended to the "storyline" of the findings, such that we first present our typology of parents based on perceived risk and communication approach: parents with few concerns and a generally open communication strategy; and, then, three groups of parents with concerns related to their children's risk for substance use

specifically. We then discuss parents' concerns about other risk-related areas, such as those related to sexual risk-taking and victimization, driving, and online behavior. We indicate parent type (LM, GF, HP) and child gender, race, age, mental health status, and adoption type where most relevant.

3. Findings

The focus of this study was on adoptive parents' concerns related to risk-taking behaviors, with a particular focus on substance abuse as it is known to be heavily genetically mediated, and, whether and how they drew on children's birth family background as well as their children's current mental health and developmental status in ascertaining their risk-taking potential. We also focused on how adoptive parents communicate about risk-related concerns to their children.

3.1. Few concerns; generally open and collaborative communication

Some parents ($n = 32$; 8 GF, 12 LM, 12 HP; 47 %) described few concerns about their children's risk for substance abuse. Most (over two-thirds) were parents of cis girls with no history of mental health problems—although a few did describe their children as having anxiety. These parents frequently emphasized personality characteristics of their children that they viewed as guarding against substance use challenges in particular (e.g., “rule driven”, “straitlaced”), which, in combination with “protective factors” (e.g., good self-esteem, “excellent student”) and a lack of no known genetic predisposition, gave them relief. Shane, a gay father of a 13 year-old biracial cis girl, said, “Eleanor has healthy self-esteem and boundaries and expectations,” which he attributed to “good family communication” and parent-child relationships. In turn, Shane viewed Eleanor as possessing qualities that would hopefully insulate her from risk—qualities he partly grounded in a family climate that fostered openness and trust, wherein parent and child feel comfortable discussing difficult topics (Brodzinsky, 2005).

These parents tended to describe high levels of communication with their children in general. Some had not talked “too much” about substances, noting that their conversations to date had been fairly general and abstract, which reflected their general lack of worry—as well as, in some cases, their perception of their children as “young, developmentally” and “emotionally immature”. Those who had communicated more directly about risk behaviors described an ongoing, back-and-forth style of dialogue, with discussions often centered on what their children were observing at school and/or in the world (e.g., in their cities, or in the media). As Patty, a lesbian mother of a 13 year-old cis girl named Morgan, shared, “We talk about vaping a lot because apparently kids at her school are vaping; we've talked about just how bad that is for you,” noting too, “We've had lots of conversations about impulse control and thinking about things before you try them.” Meg, a heterosexual mother of a 13 year-old Asian cis girl, shared, “So I'll bring up [drinking or drugs], or Mollie will bring it up and tell me something is going on at school with somebody she knows, and so we'll talk about that.”

Some of these parents normalized risk-taking behaviors (e.g., “you will eventually try substances”), with a few even preferring that their children try alcohol in their own homes. Their relaxed approach seemed to reflect their lack of worry about potential risk. Tom, a gay father, described his 13 year-old White cis daughter as a “control freak”, which kept him from worrying too much about her substance abuse risk: “But I've had that conversation with Hannah... ‘if you and your friends ever decide that you want to have a party, you're going to talk to me and you can either have it on my back porch or I can be in the apartment monitoring what's going on.’” Tom went on: “The only way that they can learn how much they can do, alcohol or pot wise, is to experiment. And in order to do that, you have to give them a safe space to do that.”

Some parents expressed a relative lack of concern but nevertheless targeted their communication toward what to do in a situation if their children were presented with drugs or alcohol. These parents sought to

equip their children with tools for resistance but also underscored their willingness to assist if their child ever needed to leave a situation where drugs and alcohol were present. Kate, a lesbian mother, said, about her 13 year-old multiracial cis son, Ben, “We do talk about smoking and drugs and safe sex and drugs and drinking [and] peer pressure..and we've got this plan now...: ‘You can text and leave a situation you're not comfortable in. But if...you have too much to drink, you can call us either way...We will come get you.’” Maryanne, whose daughter Chloe (13 year-old, cis, multiracial) had anxiety and dyslexia, was not concerned about substance abuse—in part because Chloe was “highly safety conscious” and, thus, her anxiety was seen as a barrier to risk taking—also described detailed discussions about strategies to resist peer pressure to use substances:

The minute somebody offers you a vape, the minute someone offers you a joint, all you say is, “Triggers my asthma, sorry”...If you're at a party and someone offers you booze, and you don't wanna—your excuse is, “Oh my God, my mom has a breathalyzer I have to breathe into when I get home.”...I was like, “As you're getting older, we will work through every excuse; you will always have something in your back pocket.”

Thus, in the absence of worries about their children's current or future risk, these parents generally either did not communicate about substance abuse, or, emphasized open and relatively low-stress communication about substances, whereby they prepared their children for future encounters with drugs and alcohol, and focused on either (a) equipping them with tools for resistance, and/or (b) normalized experimentation in a controlled/safe environment.

3.2. Concerns about risk

Parents who described worries about their children's vulnerability to substance abuse ($n = 36$; 53 %) articulated several distinct sets of pathways by which their children might be at elevated risk: (a) genetics; (b) mental health difficulties; and c) loss surrounding adoption. In some cases these overlapped: for example, some parents who emphasized genetic risk also emphasized mental health issues.

3.2.1. Concerns about substance abuse due to genetic predisposition; instructive communication

One group of adoptive parents perceived their children to be at elevated risk for substance abuse because of genetic risk: They knew that their child's birth parents/family had a history of substance abuse problems, and in turn were aware that their child had this potential ($n = 19$: 4 GF, 9 LM, 6 HP; 27.9 %). Many ($n = 11$) of these children were adopted via foster care. Jake, a gay father of a 12 year-old White cis girl named Olivia, said, “Both of her parents [had addiction issues]. Now her birth mother is completely clean. So that's [what] I am fearful of.” Jake was careful not to convey to Olivia that addiction was her “natural destiny; I just kind of give it a factual presentation.” Notably, Olivia had an ongoing relationship with her birth mother, which Jake and his husband facilitated; it was in the context of this positive relationship that Jake acknowledged the reality of Olivia's “biological predisposition.” Thus, Jake's possession of valuable but potentially upsetting background information about Olivia's risk for substance use helped to reduce his uncertainty—yet he seized on the relative uncertainty that remained (i.e., biology is not destiny) in determining how to communicate such information. By framing the genetic risk as an informational issue rather than a deterministic one, Jake worked to manage uncertainty without creating undue anxiety in Olivia.

Most of these parents described talking to their children about their genetic predisposition to substance abuse, typically framing their vulnerability to addiction as “something you should be aware of”. Trish, a lesbian mother of an 11 year-old biracial cis girl named Eliza, shared, “She has two parents with substance abuse problems. We've already started sharing that. We [are] honest with her, and let her know that she

is just genetically a bit more susceptible than the average person.” This type of genetic predisposition was often discussed as a vulnerability that could be circumvented or resisted in the context of preparation and “good choices.” As Sandy, a lesbian mother of a 12 year-old cis boy, said, “Jason’s mom was crack-addicted, cocaine-addicted when he was born...so we’ve talked to him about [how] because of that, he’s more prone to addictive personality. [We talk about] choices: it makes you make bad choices when you drink too much alcohol or when you do drugs. You need to do things that help you make good choices.” Joyce, a lesbian mother whose 11 year-old White cis son Trevor had diagnoses of depression and ODD, had already observed Trevor’s “addictive tendencies.” She tried to teach him about “moderation in sugar intake and moderation in screen intake” and was “frank with him, like, ‘Look, everyone in your family has this kind of addictive personality and you’ve got to be mindful of that as you make choices.’”

Parents of children who had been exposed to substances prenatally often emphasized not only genetic predisposition, but also the possibility that their children’s brains were fundamentally altered, in trying to guide their children towards a heightened awareness of their addiction risk. Cora, a heterosexual mother of a 15 year-old biracial cis boy named Jonas who had diagnoses of ADHD, generalized anxiety, and PTSD, was clear that not only did her son’s birth mother have a history of substance abuse and depression, but he was “born addicted.” In Cora’s eyes, “he just was always going to have a propensity for an addictive personality, which we have already seen, [like with videogames].” Cora emphasized to Jonas that he was “born addicted, and so his neurological system, his brain, has developed differently, so he’s just more susceptible to becoming addicted to things in general, especially drugs.” Indeed, parents who knew their children were born addicted to drugs often warned them that their brains were “uniquely wired” (“there are some things that are different because of how your brain works”).

Parents sometimes guided their children in developing concrete strategies for what to do when they were presented with substances—strategies that were grounded in the assumption that trying such substances could have devastating consequences. Jimmy, a gay father of a 15 year old biracial cis girl named Lila, narrated how he talked to his daughter about her risk: “What I can tell you for a fact is that what runs in your family is substance abuse issues. Your mother was addicted, and her mother was addicted. [And when her mother died], your mother turned to drugs.” In turn, Jimmy guided Lila to deploy a drilled-down version of this narrative in situations where drugs were available or offered: “All you have to tell them is that your mother, you, your family lineage, their addiction—addiction is an issue.” Gwen, a lesbian mother of a 13 year-old biracial cis girl named Josie who had diagnoses of ADHD, anxiety, depression, and fetal alcohol syndrome, was direct with Josie about her risk and how to manage it: “[You] have a more sensitive brain situation...There’s a long history of drug and alcohol abuse in [your biological family], and a lot of that abuse comes from trauma...[so you] are going to be more susceptible to the negative parts of drug use.” Heightening Gwen’s concerns was the reality that Josie had several friends who “smoke pot, who vape,” as well as the fact that “[one time], I sniffed her when she came in, and she smelled like vape.” In turn, “I told her...‘Be prepared. I’m gonna look in your eyes. I’m gonna sniff your clothes.’” Gwen also offered Josie specific tools and talking points for resisting drugs: “We’re trying to help her to understand that she can say no, and she can blame it on us. I’ve heard her tell her friends, ‘If I smoke pot, I will lose my phone.’”

Notably, in only one case did a parent discuss their child’s inherited genetic risk for substance abuse in a way that reflected and upheld a negative portrayal of birth parents more broadly. Darien, a heterosexual father of an 11 year-old White cis boy who had behavioral and academic issues, said, “There’s drug use in Charlie’s birth family...and when we see him gravitating toward addictive behavior, we’re like, ‘Ahhh!’” Darien noted that he did not know much about the birth family, who lost Charlie to the child welfare system, but what he knew “wasn’t good.” In talking to Charlie, Darien referred to his birth family’s drug use as a

consequence of “bad decisions” and a cause of Charlie entering the foster care system and being adopted: “We are in a heavy meth area, so we can hold up people and talk about that, and we talk about bad decisions and bad drugs...Bad drugs are difficult, and you make bad decisions, and we’re sure glad you’re here, but that’s one of the reasons.” Thus, Darien laid out a somewhat confusing set of facts for Charlie to consider, including the possibility that addictive behavior was genetically mediated, but also the notion that his birth parents made “bad choices” (suggesting that Charlie had some control over his future), and that there was some “silver lining” to their choices, in that Charlie had been adopted by Darien and his wife.

In one case, a gay father named Chandler noted how he had explicitly aimed not to “blame” the birth mother for his son’s risk for drug use. In discussing his 12 year-old cis White son Holden, Chandler worried that “because of the ADHD and impulse control and living in the city, there’s a lot of temptations; we worry a little more about drugs and alcohol,” a fear that was amplified in the context of Holden’s birth mother’s drug history. Chandler had “always been open” about the circumstances that led to Holden’s adoption—but “without saying anything negative about her.” In turn, he had not explicitly told Holden “about the drug use and making bad choices, any of that. [Now that he’s older], we might be more likely to say ‘That’s really her story to tell’, or at least get her permission [to share].” This family had ongoing communication and contact with their son’s birth mother enabled them to draw on her as a source of input and information in the context of difficult discussions about substance use risk, thereby mitigating uncertainty and enhancing open communication (Brashers, 2001; Brodzinsky, 2005).

Thus, these parents generally made efforts to communicate genetic risk to their children in such a way that framed such risk as something to be cautious of, and that could be mitigated, rather than as destiny. Further, they were largely careful to communicate this information without disparaging the birth family or suggesting that their “pathology” was to blame.

3.2.2. Concerns about abuse due to mental health problems; information-focused communication aimed at supporting children’s coping

Some parents voiced concerns about their children’s risk for substance abuse amid their mental health challenges, such that they saw their mental health profile (impulsive, sensation-seeking, depressed) as potentially predisposing them to substance abuse ($n = 20$; 9 GF, 6 LM, 5 HP; 29%). That is, they saw their children’s vulnerability through a dual risk lens, whereby their mental health challenges made them more vulnerable to substance abuse specifically—a vulnerability that was sometimes enhanced by suspected genetic vulnerability: indeed, seven of these 20 parents also mentioned their child’s genetic risk for substance abuse.

Parents of children with ADHD and impulsivity worried about their children’s risk for risk-taking and “experimentation” in general, which extended to substance abuse. Bill, a heterosexual father of a 12 year-old Asian cis boy who had ADHD, was aware of the linkages among ADHD, gender, and substance abuse: “[I know about] ADHD, and I know plenty of adults, typically they’re males, and they tend to convert to drugs or substance abuse. So that is always...in my mind; this is how they self-medicate.” Bill went on to say, “So we’ve had that conversation at the dinner table, about vaping, and tobacco, and alcohol, and drug use. He had all these statistics that he spewed at us. I’m like, ‘Okay, so you get it.’”

Parents of children with depression and anxiety worried about their children being drawn to substances as a way of coping with their mood or “taking the edge off.” Angel, a lesbian mother of a biracial nonbinary 12 year-old who had anxiety and depression, said:

Elle is incredibly at risk, both for mental health concerns and for substance abuse. Broadly stated, being Elle in the world is really hard. And things like drugs and alcohol sure seem to make it appear that things are easier. I think that once Elle discovers and has access

to substances like marijuana and alcohol...it's going to feel really good to them.

Sometimes, too, parents worried about the social challenges and peer issues that resulted from their children's mental health challenges as an added risk factor for substance use: namely, they worried that isolation and a lack of a sense of belonging would lead them to use drugs or alcohol to fit in. Caroline, a heterosexual mother of a 13 year-old biracial cis boy, Sam, who had depression, anxiety, and suicidal ideation, was "a little worried that he's so sensitive to the world that it's going to be hard for him. He doesn't have a lot of grit...Because he's already on the depressive side, I think if he did try drugs, I can see him being into it. I don't think drugs would be good for him." Like other parents, Caroline suspected that Sam might find it hard to resist and might really enjoy substances, making the possibility of addiction particularly sobering.

Joe, a gay father of an 11 year-old White cis girl named Braylin, was concerned that her ADHD and anxiety, combined with a lack of a well-adjusted peer group, might make Braylin vulnerable to substance abuse. Joe said, "I do worry about [substances], primarily because of the whole ADHD thing, and kind of impulse control in general. We've been having conversations about that since she's been able to speak, so she certainly knows at least intellectually-speaking the potential hazards of some of that stuff." Joe worried that Braylin could, in the future, be feeling really "alone... and then she has to become a druggie because that's the people that she wants to unwind with." Joe struggled with how exactly to communicate about risk: "Scaring kids away from drugs, I don't think is a good strategy [but] I also worry about how NOT using that strategy plays out in someone who has poor impulse control." Similarly, Mark, a gay father of a 13 year-old Latinx cis boy named Donnie who had ADHD and anxiety, was unsure how to navigate around his worries that Donnie would engage in "bad decision making", especially where drugs were concerned. Mark reflected, "You don't want to bring it up. You don't want to put the idea in his head, but you also don't want him not to be prepared for the chance he could be offered something at school in the future, or could be convinced to try something...I don't know."

Indeed, although parents could recognize how their children's challenges with emotional regulation and social difficulties might predispose them to substance use as a means of coping, they were often at a loss for how to effectively talk to and guard their children against this tendency. One common approach, however, was to discuss alternative strategies for coping, such as talking about emotions, using art to process feelings, and going to therapy. Tammy, whose cis daughter Kiley (age 12, biracial) was adopted from foster care (and "remembered her birth mother's drinking"), was aware of the powerful pull of drugs and alcohol, and thus not only sought to educate Kiley about her genetic vulnerability but also to help her to "learn how to process her feelings and work through them and communicate them." When reflecting on her concerns around potential risk behavior, Esther, a heterosexual mother of a 12 year-old Black cis boy named Andy, voiced relief that Andy's mental health was "better than it [had] ever been." Esther attributed this to the tools and strategies that Andy had developed with the help of school staff, which enabled him to recognize his triggers and respond with greater control.

Among some parents, particularly those with boys and/or older children, there was a more immediate sense of urgency surrounding imparting messages of caution and warning regarding substance use risk. Eddie, a gay father of a 17 year-old biracial cis boy named Colin, believed that his son's anger and impulsivity might make him more likely to abuse substances. Eddie said, "Now that he's driving, we, from the very beginning, have said, 'Under no circumstances should you ever drink, use any kind of drug, [be in] any altered state, and get behind the wheel of a car...If you're someplace and you've been drinking, just call us. We will come get you. You won't be in trouble.'" Andre, a gay father of a 16 year-old White cis boy named Evan who had anxiety and a history of self-harm, shared that Evan had already experimented with vaping. In turn, Andre had enlisted Evan's birth mother to help with

communicating with him about the risks of substances and sexual activity:

She actually requested that she have time with him to impart her wisdom and lived experiences with him...We told her, "We're very open with him. You can talk to him about anything. He is very receptive to that." She reportedly said to Evan, "I was very young. I made a lot of mistakes and I don't want you to make those same mistakes"...It was a really, really positive experience to have her included in that.

Of note is one-third of the parents who worried about susceptibility to substance use via the mediating role of mental health problems had trans children. Concerns about mental health challenges predisposing their children to substance abuse were amplified by their awareness of their gender identity journey as an "added layer". These parents often emphasized their efforts to do everything they could to support their children in the hopes of mitigating risk, such as facilitating the development of coping skills via therapy and the cultivation of positive peer relationships. Said Lauren, a White lesbian mother of a 12 year-old trans girl named Lucy:

We worry that she already has that predisposition. She knows that her parents had drug problems. And I just feel like she's such a high risk kid...not just drug exposed but...the gender identity stuff and being adopted and.. we feel like we've just done everything humanly possible to support her: letting her go to transgender camp, and adoption groups and..opening up conversations about how it's easy to get addicted to things.

These parents, then, generally communicated factual information about substances alongside efforts to bolster their children's coping and well-being so that they would be less likely to turn to substances. However, they also articulated some uncertainty about what to do and/or the effectiveness of their approach.

3.2.3. Concerns about substance abuse due to adoption-related loss and trauma; supportive communication focused on processing and guiding children's coping

A final group of parents articulated a third pathway to potential substance abuse, whereby their children's adoption-related loss and trauma (e.g., feelings of abandonment and grief) might exacerbate mental health difficulties, which might lead to substance abuse and other risk-taking behaviors ($n = 8$; 2 GF, 4 HP, 2 LM; 12 %). Five of these parents, notably, were among those in the prior group who worried about their children's mental health as a risk factor for substance abuse. Stan, a gay father whose 11 year-old White cis daughter Erin had diagnoses of ADHD and dyslexia, worried "a ton about her self-esteem not being where it could be based on...her self-esteem with regards to her birth family situation," noting that it was a "situation...ripe for teenage pregnancy or drug abuse." Stan did not have a clear idea of how to talk to Erin about his concerns, other than to uplift her and hope that eventually she would see her parents as sources of support and knowledge. Danielle, a heterosexual mother of a 12 year-old cis girl named Leah, was aware that Leah was "having almost a textbook response around adoption grief...her questions are demonstrating that she is focused...on having been relinquished, being adopted" and "she gets a little angry towards her birth mother for having so many babies and placing them in so many different families." Danielle worried that Leah's adoption grief could set her up for negative coping behaviors later on, such as substance abuse, to manage the painful feelings around her adoption that could become more intense and unsettled as adolescence unfolded. Danielle hoped that by serving as a sturdy source of support, she could guide her daughter toward healthier avenues for coping.

In a final example, Bonnie, a heterosexual mother of a 13 year-old White cis girl named Callie who had anxiety, dyslexia, and autism, described her daughter as "very anxious; like, she is not able to be left home alone because she's too scared." Acknowledging that Callie might

have adoption related trauma, Bonnie worried that she would “turn angry and resentful” based on her adoption history. Bonnie tried to be mindful of Callie’s fragile mental health while also educating her about risk behaviors (e.g., in the context of avoiding substances and preventing sexual assault), noting the possibility of “setting [her] off” or making her more fearful.

Thus, parents in this group expressed concerns that adoption-related trauma and grief could contribute to mental health struggles, which in turn might increase their children’s risk for substance abuse and other risky behaviors. While many parents aimed to provide supportive environments to help their children cope, they also worried that unresolved emotional pain could lead to maladaptive coping strategies as their children entered adolescence.

3.3. Other risk-related concerns and related communication

Parents also voiced several other areas of risk related concerns that were implicitly or explicitly related to their children’s adoptive background. Six (1 GF, 3 LM, 1HP; 9%) specifically described anxieties about **sexual risk taking resulting in early pregnancy** among their cis daughters. They drew on their knowledge that their children had been products of early pregnancies, and, in some cases, noted possible birth parent characteristics (e.g., impulsivity) that may have contributed to the circumstances that led to early pregnancy. As Beth, a lesbian mother of a 13 year-old Asian cis girl named Mira, shared: “I definitely worry about early pregnancy. Kids who are adopted are at risk of [that]. There’s a lot of early pregnancy in her birth family.” Beth did not feel entirely confident about how to approach this topic: “[We aim] for a more light touch about later pregnancy: ‘Yeah, [have] a few kids when you’re 25 or 30. When you’re older, you have a lot more choices’...If you hit [the topic] too hard, then it’s like, ‘You’re being judgmental. I hate you.’...It’s hard to have these discussions explicitly.” For Chad, a gay father of an 11 year-old Hispanic cis daughter named Anne, the potential for early pregnancy was also on his mind: “Her mother got pregnant with her when she was 15.” Notably, Anne’s awareness and curiosity related to her birth mother’s young age when she got pregnant had indeed increased over time: “As she gets closer to that age [15], she’s aware of what the consequences are and how young her birth mother was at the time,” adding, “If the topic comes up, we don’t see any reason not to talk about it.”

In a few cases, parents were highly directive in their communication (“we’ve been pretty frank about issues of sexuality and behaviors in having sex too young, and becoming pregnant and unwanted pregnancies”). Several parents noted that they had already pursued birth control for their children “as a precaution” (“I’m not letting her screw up her life by getting pregnant at the age of 15 or 16”). Gwen, a lesbian mother of a 13-year-old biracial cis daughter named Josie, described major concerns about Josie’s ability to effectively regulate her emotions and resist sensation-seeking. For this reason, as much as Gwen emphasized “no sex, no drugs”, she also facilitated Josie’s access to birth control: “We knew we needed to do something [but] something that wouldn’t prevent her from getting pregnant later, as she is deeply committed to being a mom.”

Four parents (2 LM, 2 HP), all with cis daughters of color (6%), described concerns about the **risk of sexual victimization**, placing this in the context of their children’s early puberty whereby they looked older and more mature than they were. This concern translated into guidance emphasizing self-protection, safety, and bodily awareness (“I say, ‘You can’t be alone when you go out with your friends and you go to the bathroom’”). Trish, a lesbian mother of an 11 year-old biracial cis girl named Eliza, said, “The conversations around sexual assault and sexual abuse [have started]...It’s hard to have those conversations with your child, who your whole instinct is to protect, and be like, ‘Oh no, that would never happen!’” Lyle, a heterosexual father of an 12 year-old Asian cis daughter named Nina, noted, “I am concerned that when men start to treat her as a potential sexual object or conquest, that she will

stand up to it.” Lyle also highlighted stereotypes related to his daughter’s ethnic background in articulating his concerns, stating, “There are going to be men who will just assume that Nina is their sexual object and that she will submit to their needs because she is Chinese.”

Six parents (5 LM, 1 HP, four with cis boys and two with cis girls; all youth of color; 9%) were concerned about **risky or distracted driving**, which they grounded in their children’s ADHD, impulse control, and executive functioning more broadly. Kate, a lesbian mother of a 13 year-old Hispanic cis girl who had “impulsive tendencies”, voiced her fears about general risk-taking behaviors: “Texting and driving. Drinking and driving...Emily is willing to try everything and that can be a great thing, but it also scares the crap out of me...[so] we’ve had lots of conversations about impulse control and thinking about things before trying them.” Zora, a lesbian mother of a 13 year-old Asian cis boy with ADHD, said, “Lately, we’ve been trying to lay the groundwork for when George starts driving. Because of his ADD, I’m a little concerned about his driving. He can get distracted by other things.” For several parents, the risks posed by their children’s inattention and impulsivity in the context of driving were amplified by the possibility of racial discrimination or profiling. Cora, a heterosexual mother of a 15 year-old biracial cis boy named Jonas, managed her worry in part by warning Jonas, “If you are ever out and you get stopped by a police officer and you act the way you just acted toward us...you could be in danger, because they can think that you are erratic and belligerent and resisting.” Cora, in turn, implored Jonas to “be careful.”

Finally, some parents ($n = 23$; 8 LM, 10 HP, 5 GF) voiced concerns about the **risks posed by technology and online settings**, such as social media, text messaging (including sharing and receiving inappropriate and/or sexually explicit content), and gaming platforms, which they often linked back to their children’s mental health profiles, impulsive or attention-seeking behaviors, or their broader developmental vulnerabilities. Sarah, a heterosexual mother of an 11 year-old White cis girl named Rosie, described her fears around social media, highlighting Rosie’s susceptibility to peer-rejection and cyberbullying: “That is not a good space for her to be. So no, she does not have a smart phone...we’re gonna get her a walky-talky so she can talk to her friend who lives a couple blocks away, but social media, that would be a disaster, in so many ways. I just really fear that she would get bullied.” Marcy, a lesbian mother of a 12 year-old Latinx cis boy named Matt, voiced concern about his ability to navigate inappropriate or harmful online content, noting a lack of “skills [to handle potential] bullying on social media,” and feeling that Matt might lack the “impulse control to not do stupid stuff [or] send pictures that shouldn’t be circulated around.” These parents often described open communication with their children about monitoring their social media accounts and smartphone use, as well firm boundary setting, to prevent dangers online (“with social media, we have clear rules, which seem to be working—‘we want your password; here’s your access; we’ll check [your social media]’”).

4. Discussion

The current study fills a gap in the literature by exploring adoptive parents’ concerns about risk-taking behaviors, such as substance abuse, and how they navigate the complexities of discussing these issues in relation to their children’s birth family histories. We found that, in line with prior work (Ruiz et al., 2021), parents’ concerns about risk were somewhat gendered, in that they had different concerns for their daughters and sons, and, parents of trans children often voiced concern about mental health issues as a risk factor for substance abuse challenges. Parent concerns also varied by adoption type, such that parents who worried about genetic predispositions often had children adopted via foster care; and race, such that parents of children of color were more likely to emphasize driving related concerns. These findings highlight many areas for future research in order to better understand how children’s and parents’ intersecting identities shape adoptive families’ conceptualizations of risk behaviors.

While much of the existing research has focused on adoptive parents' communication approaches more generally and related to adoption specifically (Brodzinsky, 2005; Horstman et al., 2016), less attention has been paid to how they incorporate sensitive information, such as genetic predispositions to mental health challenges or substance abuse, into such discussions. Our findings highlight how adoptive parents balance the disclosure of potentially stigmatizing information with efforts to empower their children, and seek to establish open lines of communication that will serve children as they enter adolescence and face more opportunities for risk-taking behavior. We found that adoptive parents generally enacted a proactive, informed approach to communication when discussing substance abuse and other risks. They focused on raising awareness about genetic predisposition and associated risks while also encouraging resilience and personal agency. Parents tended to manage uncertainty by framing risk factors as something to be mindful of, rather than an inevitability. Many parents were attuned to their children's developmental needs and emotional readiness, highlighting the importance of emotional sensitivity in communication about sensitive issues. Further, parents tended to recount discussions about risk as relatively casual and occurring in diverse contexts and conversations, which notable given evidence that teens may be less anxious in and more open to conversations about sensitive topics when parents' approach is more informal and receptive (Affi et al., 2008).

Parent Concerns.

In this study, we observed that parents who had few concerns about their children's potential risk-taking behaviors often had cis daughters, typically without major mental health concerns—aside from mild anxiety symptoms, which parents viewed as protective. This finding aligns with research highlighting gendered differences in risk-taking behaviors among adopted children, whereby girls are generally at lower risk for substance abuse and externalizing behaviors, which are often seen as indicators of heightened risk-taking (Crea et al., 2018). These less concerned parents generally had little information about their children's birth family history, which, coupled with children's unremarkable mental health presentation, enabled parents to assume an open, relaxed communication approach, free from the need to convey significant warnings about risks. As a result, family conversations were collaborative, allowing for open exchanges and fostering a sense of trust (Carver et al., 2017). Of interest is whether parents in such families adapt their approach when their perception of risk changes (e.g., new background information comes to light; children show interest in experimenting with substances). Although our study was unable to examine this possibility, future work should explore this since it has key implications for adoption communication dynamics and the well-being of all family members.

In contrast, parents who perceived a potential risk for their children—particularly in relation to substance use—tended to consider several overlapping pathways of risk. For example, some parents believed that genetic factors played a significant role, while others pointed to their children's mental health challenges, including depression or anxiety, as potential contributors. Parents of trans children were especially likely to emphasize the role of mental health challenges as a contributing factor to substance use, reflecting their awareness of how stigma, victimization, and related stressors may contribute to mental health struggles among LGBTQ+ adolescents, which in turn increase their vulnerability to engaging in various risk behaviors (Huebner et al., 2015). Also, many parents acknowledged the unique trauma and loss associated with adoption as a possible risk factor for their child's vulnerability to substance use and other challenges. This risk is magnified as adoptees enter the adolescent years because of their deepening understanding of adoption-related loss, which is internalized into their emerging identity and self-esteem, often complicating their psychological adjustment (Brodzinsky, 2011; Brodzinsky et al., 2022; Brodzinsky & Palacios, 2023).

The concerns raised by these parents are in line with prior work documenting the role of early adversity, including prenatal exposure to

substances and early trauma, in increasing risk for substance abuse in adopted youth (Crea et al., 2018; Paine et al., 2021). As such, parents' concerns varied by adoption type, with parents of children adopted from foster care especially likely to emphasize the role of genetic predispositions and early trauma as potential risk factors for substance use (Crea et al., 2018; Petruccioli et al., 2019). Notably, research has identified two potential genetic pathways that may inform these concerns. The first links a biological parent's history of substance dependency directly to the adoptee's risk for developing similar issues (Cadoret et al., 1995). The second pathway is more indirect, such that a shared genetic predisposition to mental health problems (e.g., externalizing behaviors such as aggression) leads to substance dependence (Cadoret et al., 1995; Stallings et al., 2022). Our study not only highlights adoptive parents' intimate awareness of these potential pathways, but underscores the challenges they face in determining how to communicate effectively with children about such risks, while encouraging them to develop skills and strategies that will help to minimize risk. Some felt uncertain about their approach—for example, they struggled to balance their instincts to protect their children (e.g., via providing strict oversight or guidance) with an appreciation for their children's need for autonomy (Kapetanovic et al., 2019).

The results of our study can also be understood in the context of the diathesis-stress model of genetic transmission, in which the potential influence of genetic vulnerabilities (diathesis) for adjustment difficulties is more likely to be manifested if the individual is exposed to stressful life experiences. Prior work found that adopted adolescents whose biological parents suffered from either antisocial personality disorder (Cadoret et al., 1995) or schizophrenia (Tienari et al., 2004) were much more likely to exhibit these problems compared to adopted adolescents whose birth parents did not have these diagnoses only when their adoptive family dynamics were highly conflictual. In the absence of adoptive family problems, there was little difference between these groups in the manifestation of these types of psychopathologies. Such findings suggest that risk for substance abuse and other risks explored in this study are less likely to be manifested by adopted adolescents when their parents create an open family environment in which they can address their concerns about their children's biological history and current behavior in an honest, emotionally attuned, and respectful manner, and when youth feel comfortable in discussing these issues with their parents. Given the sensitivity in addressing many birth family issues without disparaging their child's origins, adoptive parents are often in need of professional guidance in this area of family life.

Our findings also highlight a range of concerns among adoptive parents related to their children's sexual risk, particularly in the context of early pregnancy and sexual victimization. Parents often linked these concerns to their children's adoptive backgrounds, including a history of early pregnancies in birth families, and the potential for genetic and environmental factors to influence their children's behavior. This was especially prominent among parents of cis girls, who expressed heightened concerns about sexual risk-taking behaviors, including early pregnancy and vulnerability to sexual victimization—concerns they tried to manage by encouraging discussions about birth control and self-protection. Concerns were also shaped by the intersection of gender, race, and early puberty, with parents of daughters of color particularly worried about the risks associated with sexual objectification and exploitation—concerns that align with prior work documenting earlier puberty among Black girls specifically, who in turn may face sexualization and exploitation (Crooks et al., 2023). Additionally, parents of children of color frequently emphasized driving-related concerns, often reflecting their heightened awareness of both their children's impulsive tendencies and racialized risks, including potential biases or differential treatment from law enforcement (Dow, 2016). These concerns underscore how parents of children of color must navigate the intersection of behavioral tendencies, such as impulsivity, with systemic issues like racial profiling and differential treatment, which can exacerbate familial stress and impact adolescent mental health and behavioral outcomes

(Goff et al., 2014; Martin-Storey & Benner, 2019).

Many parents also expressed concerns about online risks, including exposure to cyberbullying, inappropriate content, and peer pressure through social media and gaming platforms. Although not the main focus of this study, their emergence as a salient theme is worth noting amidst evidence that this is a growing concern for most parents with teenagers. Prior work has documented the increasing vulnerability of adolescents to risk in online settings, particularly for those with behavioral challenges or developmental vulnerabilities (Symons et al., 2017).

Parent Communication

One aim of the current study was to investigate how adoptive parents communicated with their children about potential risks. Prior work suggests that, regardless of how much information parents had about their child's birth family—or whether that information was viewed positively or negatively—parents who foster open and empathetic communication about adoption-related issues are more successful in creating a family environment that is supportive and understanding (Brodzinsky, 2006; 2011). Such openness not only helps adoptees process the loss associated with adoption but also supports their identity development and facilitates a better relationship with their adoptive family (Brodzinsky, 2011). Moreover, general communication in adoptive families is linked to better family functioning, more positive attitudes toward adoptive parents, and lower risk of adjustment problems (Rueter & Koerner, 2008). Open communication can also bolster self-esteem and help teens develop the interpersonal skills needed to avoid risky behaviors (Koesten & Anderson, 2004).

In our study, we were particularly interested in how adoptive parents incorporated sensitive information about birth parents' backgrounds—such as substance use or mental health issues—into their discussions about their children's vulnerability to risk-taking behaviors. Previous research suggests that adoptive parents often struggle with how and when to disclose such sensitive information, especially if it could cast the birth parents in a negative light. Parents may worry that disclosing such details could negatively affect their child's self-image or birth family relationships (Goldberg et al., 2020). In this study, many parents approached these sensitive topics matter-of-factly, framing the conversation with attention to the choices that birth parents made, while emphasizing to children that their biological background was not "destiny." By doing so, these parents sought to avoid creating negative feelings or undue resentment toward the birth parents, often emphasizing that while components of birth family history could present challenges, they did not define the child's potential or worth; nor did they provide a complete picture of the birth parents, who may well have positive attributes as well. These discussions seemed aimed at empowering children to understand that they had the agency to shape their futures, despite the risks they might inherit from their birth family histories. This approach is consistent with findings that suggest that adoptive families who emphasize resilience and autonomy can help children navigate complex feelings of identity and loss (Brodzinsky, 2011; Powell & Afffi, 2005). These findings may be helpful in informing adoption-related counseling and interventions, particularly in guiding adoptive parents on how to address sensitive topics like genetic risk, mental health issues, and adoption trauma, as well as supporting parents in fostering resilience and coping strategies in their children.

4.1. Limitations and future directions for research

The current study is limited by the fact that we only interviewed parents. Certainly, the youth in these families might have a different perspective and/or insights to share related to how their parents—and they—communicated about risk. Indeed, prior work suggests that adoptive parents' and children's perceptions of communications are not always aligned (Rosnati et al., 2007). We also do not know how parents' efforts to be mindful of how they were speaking about birth parents translated into children's impressions; it is possible that some youth

internalized more negative ideas about their birth parents and/or their own "inheritances" than the parents in the sample were aware of. Additionally, we captured families at only one point in time. Parents' strategies and approaches may shift as their children grow older—a possibility that we glimpsed among parents of older adolescents, for whom the potential for risk behaviors was more immediate. Future work should aim to include both adoptive parents and their children in examining perspectives of family communication about risk, ideally at multiple time points. Further, we do not know whether, to what degree, and in what situations parents' approaches to mitigating risk were ultimately successful: future research might examine, for example, whether open communication about genetic susceptibility to certain risk behaviors is associated with lower risk in the context of certain child demographics, diagnoses, and/or family situations.

This sample of parents is distinguished by the fact that they are part of a longitudinal study and have built significant rapport with the research team, facilitating their ability to talk openly about the struggles that they are experiencing in relation to parenting and their children's well-being. Adoptive parents in other studies might underreport struggles if they perhaps experience less trust in the researchers and/or fear being judged or misunderstood. But by contrast, although some of these parents were indeed struggling, they were generally not parenting children with highly severe needs and/or challenges. Adoptive parents in such circumstances (see Goldberg et al., 2023) might struggle even more with whether and how to convey difficult birth family and/or genetic information to their children, and may need more support and guidance (e.g., from therapists and allied professionals) in doing so.

4.2. Implications for practice

Prior research suggests that adoptive parents often worry about how, and when, to share difficult elements of their children's background, such as conception through rape or a birth parent's mental illness, with their children (Goldberg et al., 2020; Jones & Hackett, 2007). Adoption scholars (Brodzinsky, 2011; Pinderhughes & Brodzinsky, 2019) and practitioners (Keefer & Schooler, 2015) assert that openness in general, and discussion of difficult aspects of the children's story (e.g., birth parent drug use; incarceration) specifically, should be developmentally staged. That is, the content and process of communicative openness should vary with the child's age, given that the ability to engage meaningfully with their adoption story changes as a function of social, emotional, and cognitive development (Brodzinsky, 2011). With these developmental stages in mind, a parent might talk about difficult birth family topics differently according to a child's age: for example, to a preschooler, explaining that their birth mother was not healthy enough to care for them; to a teen, sharing that their birth mother struggled with alcoholism (Brodzinsky, 2011). Practitioners who work with adoptive parents should support them in enacting developmentally graded approaches to communicating about difficult topics, while also providing them with support in managing their own concerns about risk potential, as well as managing the ongoing challenges associated with having incomplete information about their children's background. Practitioners may benefit from the dissemination of evidence-based, parent-oriented materials—which could be adapted from the findings of relevant research, including the current study. Such resources (e.g., pamphlets, infographics) could enhance accessibility and support adoptive parents' self-determination by informing them about risk behaviors in adopted adolescents, strategies other adoptive parents have used in efforts to mitigate these risks, and associated outcomes. Additionally, such materials could be made available more broadly (e.g., in adoption clinics, day care centers, and schools).

Finally, adoptive parents should be encouraged to view the background information that they do possess as suggestive rather than directive. That is, such information can be used to guide them towards parenting in ways that may help mitigate certain challenges, but, it should be balanced with their own observations and knowledge of the

children they are raising (Child Welfare Information Gateway, 2019; Duncan et al., 2021).

Ethical Approval and Informed Consent. All participants completed an online consent form prior to being interviewed. The current study was approved by Clark University's IRB.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

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