



Published in final edited form as:

*J Soc Social Work Res.* 2020 ; 11(1): 21–38. doi:10.1086/707642.

## Parents' Perceptions of Adolescent Exposure to Marijuana Following Legalization in Washington State

**Tiffany M. Jones,**

Colorado State University

**Nicole Eisenberg,**

University of Washington

**Rick Kosterman,**

University of Washington

**Jungeun Olivia Lee,**

University of Southern California

**Jennifer A. Bailey,**

University of Washington

**Kevin P. Haggerty**

University of Washington

### Abstract

**Objective:** Parents in Washington State face new challenges related to the non-medical marijuana legislation that was passed in 2012. We asked parent focus group participants about changes they have observed in their environment, how their children are exposed to marijuana, and how this exposure might affect youth marijuana use.

**Method:** We conducted 6 focus groups with parents of youth ages 8 to 15 ( $N = 54$ ). Parents were recruited from the Seattle Social Development Project, a multi-ethnic, longitudinal panel study that originated in Seattle in 1985. Thematic content analysis was used to analyze qualitative data.

**Results:** Parents agreed that they did not want their children using marijuana, and were concerned that their children were exposed to marijuana more often and in many different contexts. Parents said they now need to monitor their children's environment more carefully, especially the other adults that spend time around their children. Edible marijuana products were

---

Correspondence regarding this article should be directed to Tiffany M. Jones 450 W Pitkin St, Fort Collins, CO 80521  
jones@colostate.edu.

#### Author Notes

Tiffany M. Jones, PhD, is an Assistant Professor at the School of Social Work, Colorado State University

Nicole Eisenberg, PhD, is a Research Scientist at the Social Development Research Group, School of Social Work, University of Washington

Rick Kosterman, PhD, is a Research Scientist at the Social Development Research Group, School of Social Work, University of Washington

Jungeun Olivia Lee, PhD, is an Assistant Professor at the School of Social Work, University of Southern California

Jennifer A. Bailey, PhD, is a Senior Research Scientist at the Social Development Research Group, School of Social Work, University of Washington

Kevin P. Haggerty, PhD, is a Professor at the Social Development Research Group, School of Social Work, University of Washington

particularly concerning for parents, as they offer a new set of challenges for parents in monitoring their children's exposure to and use of marijuana. Parents were concerned that marijuana exposure would increase risk of marijuana use in adolescents.

**Conclusions:** Parents' experiences in Washington State provide valuable lessons for social work practitioners, policymakers and those developing preventive interventions. Prevention efforts and public health messaging should begin *before* legalization takes effect to support parents in preparing for changes in their social and physical environments, and should seek to incorporate parenting strategies to monitor and intervene when children are exposed to marijuana.

### Keywords

Marijuana legalization; adolescent marijuana use; parenting; marijuana policy

---

In 2012, the non-medical use and possession of marijuana became legal for adults in Washington State. Today, adolescents in nine states and the District of Columbia are growing up in an environment where non-medical marijuana use is legal for adults over age 21. Little is known about what new challenges parents and adolescents will experience as a result of this unprecedented policy change (Anderson & Rees, 2014). Adolescents may face additional exposures to marijuana, as marijuana is now being legally sold in retail outlets and is available in multiple forms (e.g., flower or bud, edibles, topical lotions) for consumption. Parents, social workers and policymakers have grounds for concern, because marijuana has been shown to have deleterious effects on adolescents such as impaired brain development and school performance (Ammerman, Ryan, Adelman, & Committee on Substance Abuse, 2015; Volkow, Baler, Compton, & Weiss, 2014), which are greater the earlier adolescents begin using (Brook, Adams, Balka, & Johnson, 2002).

Many population-based studies have documented rates of adult and youth marijuana use and how trends in use have changed over time. The nationally representative National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) found a significant increase in marijuana use in the U.S. population, where the prevalence of marijuana use doubled from 2001–2002 to 2012–2013 (Hasin et al., 2015). Data from the 2010–2015 Monitoring The Future (MTF) study has shown that youth in grades 8 and 10 (but not grade 12) in Washington State increased past-month marijuana use, increased regular marijuana use, and they perceived marijuana to be less harmful over the time period of the study (Cerdá, et al., 2017). In Colorado, where non-medical marijuana was legalized at the same time, youth did not report increases in use, though they also perceived marijuana to be less harmful (Cerdá, et al., 2017; Ghosh et al., 2017). Despite these important studies on the prevalence of use over time, few studies have investigated how legalizing non-medical marijuana has affected parents raising children where marijuana is now legal.

Parenting attitudes about marijuana and parent practices such as monitoring youth marijuana exposure are strongly linked to adolescent use (Huansuriya, Siegel, & Crano, 2014; Lac & Crano, 2009; Lamb & Crano, 2014), and children of parents who use marijuana are much more likely to use marijuana themselves (Bailey, Hill, Oesterle, & Hawkins, 2006; Kerr, Tiberio, & Capaldi, 2015; Patrick, Maggs, Greene, Morgan, & Schulenberg, 2014; Vermeulen-Smit, Verdurmen, Engels, & Vollebergh, 2015). Thus, it is critical to examine

how parents' attitudes and behavior regarding marijuana use are affected by legalization of non-medical use by adults. A study of parents' reactions to the new law in Washington State revealed that parents thought the law would have little impact on their marijuana-related attitudes (Mason, Hanson, Fleming, Ringle, & Haggerty, 2015). A related qualitative study found that the new law contributed to a mixed message about the acceptability of marijuana use, and that parents were concerned about their adolescents being exposed to possible misinformation about marijuana (Skinner et al., 2017). Both of these studies were conducted before marijuana retail stores had opened.

More recently, in a 2014 survey of parents in the Washington State-based Seattle Social Development Project (SSDP), Kosterman et al. (2016) found that parents' attitudes had changed since non-medical marijuana was legalized in Washington State. Approval of adult use had substantially increased (half the respondents approved of adult marijuana use), and perceived harm had substantially decreased. However, the vast majority of these parents thought that teen marijuana use was not acceptable (93%), and 89% said that it was not okay to parent while high. Given these changes in attitude and the influence of parent marijuana-related attitudes on youth marijuana use (Lamb & Crano, 2014), it is important to understand parents' reactions in greater depth, in their own words, and to investigate qualitatively how this law is impacting parents' experiences, as well as how parents see the law affecting their children.

Our interest in the potential changes in adolescent exposure to marijuana following non-medical marijuana legalization is driven by the social development model (SDM; Catalano, Kosterman, Hawkins, Newcomb & Abbott, 1996), which theorizes causal pathways that lead to increased youth substance use. Applying the SDM to the case of non-medical marijuana legalization leads us to examine the possible increase in the opportunities for involvement with marijuana as norms in society shift to be more pro-marijuana, and how youth might have additional marijuana exposures since adults with whom youth are bonded can now use marijuana legally.

Mechanisms by which the legalization of marijuana for adult use may impact teen use include a shift toward pro-use norms in the larger society and in teens' own social environments, and increased availability of marijuana. Adolescents who live in areas with norms more favorable towards marijuana use are more likely to use (Hopfer, 2014; Levy, 2013) and to onset use earlier (Guttmanova et al., 2016). Although some studies of the legalization of *medical* marijuana showed that adolescent marijuana use continued at similar rates (Anderson, Hansen, & Rees, 2015; Choo et al., 2014; Harper, Strumpf, & Kaufman, 2012; Lynne-Landsman, Livingston, & Wagenaar, 2013), these studies did not assess the impact that a system of legal retail stores—with associated marketing—might have on either adult or youth marijuana use (Levy, 2013). Marijuana purchased in the new legal “pot shops” will likely increase access for teens indirectly (Anderson et al., 2015), and increased availability is related to increased adolescent use (Hopfer, 2014). Moreover, new forms of marijuana and methods of use are becoming available with the advent of legalization (marijuana-infused edibles and drinkables, vaporizer oils, etc.). It is unclear how the convergence of all these changes—opening of retail stores, changing community norms, availability of new marijuana products—will impact adolescent marijuana exposure.

The present study is based on a series of focus groups conducted after retail marijuana stores opened in 2014, with a subsample of parents participating in SSDP with children between the ages of 8 and 15. We asked parents about their opinions of adolescent marijuana use, changes they have noticed in their social environment following implementation of marijuana legalization, and how these changes affect their preadolescent and adolescent children. Our goal was to obtain in-depth information about parents' experiences and to explore qualitatively how the law has affected the lives of parents and their children (Rich & Ginsburg, 1999). Specifically, we addressed the following research questions:

- What do parents think about adolescent marijuana use now that marijuana use is legal for adults?
- Are parents noticing changes in their neighborhoods and homes since marijuana legalization, and if so, what are those changes?
- How are children exposed to marijuana, and in what forms?
- Do parents think youth exposure to marijuana will impact their children's use?

## Methods

### Participants

Parents were recruited from SSDP, a multi-ethnic, longitudinal panel study that began in Seattle in 1985. Parents were, on average, 39 years old when the focus groups were conducted in 2014. SSDP participants who had at least monthly contact with their child (ages 8–15), and lived within 50 miles of Seattle were invited to participate. Participants were recruited first by mail, then follow up phone calls were conducted to recruit interested parents. Participants were scheduled for focus groups on a first-come, first-served basis, and not all interested parents were able to be scheduled for a focus group. We maintained a wait-list in order to accommodate as many interested parents as possible. A total of 54 parents participated. Participant demographics and past marijuana use were known from the surveys previously administered. Demographics and descriptive information about focus group participants are reported in Table 1. We sampled participants from our existing longitudinal study to allow the qualitative methods to provide the richness and depth of parental experience to supplement our survey data reported on in the Kosterman et al. (2016) study. In addition, this allowed for the qualitative data to be matched to participants' history of marijuana use, reported on prospectively since age 10.

For two of the six groups, we recruited participants who, in a confidential survey (Kosterman et al., 2016), had reported using marijuana during the past year; the remaining four groups were composed of parents who reported no use in the past year. Parents who reported past-year marijuana use were recruited if their child was between the ages of 8 and 15. Of the non-using parents, two focus groups consisted of parents who had a child between the ages of 8 and 11, and two were with parents of a child between 12 and 15 years. This sampling strategy allowed us to investigate whether the age of children or parents' marijuana use had any influence on their opinions and experiences related to the research questions. We believe our sample size was sufficient, as the main themes were largely repeated in multiple focus groups.

## Procedures

We conducted six focus groups with parents of youth ages 8 to 15. Focus groups were chosen as the best modality to obtain qualitative data on parents' experiences and perspectives, since they enable agreements and disagreements to be discussed with greater depth (Rich & Ginsburg, 1999). An experienced facilitator led the focus groups, and efforts were made to elicit thoughts and opinions from all participants. Strategies to do so included the following: 1) discussing ground rules for participation such as explaining the facilitator's role in keeping the pace to get through all questions and asking for multiple opinions; 2) summarizing responses to questions then asking for dissenting views or different experiences; and 3) creating opportunities for quieter participants to contribute by asking if they had experiences or opinions to offer. A structured interview protocol was used in all focus group sessions. A note taker was also present to document content and nonverbal participation, allowing for immediate review of content. The protocol was updated after each session to elicit deeper engagement from all participants while ensuring consistent question areas were maintained across groups and that all topics were covered. Each focus group lasted 2 hours, and participants were paid \$100 for their time. Focus groups were audio recorded and transcribed, and transcripts were reviewed by the note taker present for consistency with noted content. All focus groups took place in August 2014, 19 months after use of non-medical marijuana was made legal, and 1 month after the first legal marijuana retail stores opened in Seattle. The Institutional Review Board at the University of Washington approved all study procedures.

## Analysis

Thematic content analysis was used to identify basic patterns and topics in the focus group discussions which were then categorized to describe main themes (Braun & Clarke, 2006; Hsieh & Shannon, 2005). The first author completed primary coding, and the second and third authors reviewed and verified code definitions and supporting transcript excerpts. The first author then completed memos on each research question, summarizing relevant themes and identifying representative quotes. In an iterative process, memos were discussed in meetings with the first, second, and third author, and improvements to code definitions and themes were made. Memos were also used to explore negative cases, where dissenting opinions to themes were offered by participants, in an effort to capture the nuance in themes and participant voices. In addition, themes were compared to quantitative data from the larger sample of participants in cases where the focus group data aligned with survey questions, in order to contextualize findings from the larger study, and to establish a level of generalizability to the larger sample. Lastly, transcripts were reviewed with the revised coding scheme, and updated memos of themes and main points were again reviewed by the first three authors for accuracy in capturing the meaning of participants' statements. All coding was completed using NVivo software (QSR International Pty Ltd., 2014).

## Results

Findings from the focus groups indicated that parents in the metro area of Seattle, Washington faced a new set of challenges resulting from the legalization of non-medical marijuana. A summary of themes is reported in Table 2.

## Parents' Attitudes on Adolescent Marijuana Use

Generally, parents agreed that using marijuana is not good for youth and they did not want their children to use.

It seems like every parent in this room agrees upon they don't want their child to consume marijuana. I mean we don't. If they choose to, that's the choice of an individual. But as a parent, you don't want them to, no. Even if you – even if I do. I use. But I don't want mine to. That's just what it is.

Across all focus groups, parents consistently pointed out the reasons that youth should not use marijuana, regardless of their views about adult use of marijuana or whether they themselves used. Parents named financial consequences, inability to play sports, health problems, loss of motivation or focus, damage to their future or job prospects, and that marijuana could be a gateway drug if their children used it.

Despite this mostly negative view towards adolescent marijuana use, there was nuance in these discussions for users and nonusers. Some parents from using and non-using groups thought that adolescent experimentation with marijuana use was inevitable, and some parents shared reasons why marijuana might not be bad, or could even benefit some adolescents. One participant captured this sentiment in stating that the issue is not “*black and white*.” One parent pointed out that, “*I think there's a lot of confusion because we don't know what the long-term side effects are. I think there are a lot of us who just don't really know what to think.*” Parents from all groups shared anecdotes of marijuana being used to treat severe medical conditions in children, and in this respect implied approval of medical marijuana use. Others expressed how they preferred that their children use marijuana rather than other drugs, and many thought that marijuana use was preferable to alcohol use. A few marijuana-using parents felt that abstinence was not realistic, and said they discussed safe use practices with their adolescents such as using in safe locations or being careful from whom they obtain marijuana. These types of individual comments were prevalent, but the larger theme was that parents generally agreed that they did not want their child to use marijuana, saying, “*I don't think they're emotionally or psychologically developed enough to even handle even smoking weed, to me. I think they just need time. That's an adult thing.*”

### “It's Everywhere”: Community Changes Since Marijuana Legalization

For the most part, parents felt that their communities had changed since legalization, increasing adolescent marijuana exposure. Parents from all focus groups were emphatic in discussing how overt and subtle allusions to marijuana were “*everywhere*.” One parent explained, “*It just seems to be everywhere. Public places. Places where families might be gathering,*” another said “*They come of the closet now. [...] Everybody can do it now.*” One parent, in discussing public use, explained,

I think it just changed peoples' outlook on it, [...] they think they're not gonna get in trouble or something like this. They don't know the law, and they probably think, ‘Oh, I'll just get a ticket.’ So I think they [use marijuana] more freely now.

The above represents a dominant theme. However, a few parents disagreed, noting that it was perceptions that had changed and not actual prevalence of marijuana or its associated

references. These participants noted that the public may have heightened awareness of what to look for following the new law and subsequent media coverage: *“I think a lot more people are just becoming aware of it than there was before. I don’t know that there are more people smoking now because it’s legal.”* Another parent explained,

I just think that people are more aware, like people that don’t smoke now recognize the smell a little bit more, and I think there’s just a more heightened awareness of it. And so it seems like it’s more in your face. ... it’s out there. It’s been out there, and it’s not like it’s been out of sight, out of mind. Some of us knew, or were more aware of it, and now that there’s been so much media attention brought to it, I think a lot more people are just becoming aware of it than there was before. I don’t know that there are more people smoking now because it’s legal.

### Forms of Youth Exposure to Marijuana

**Exposure outside the home.**—Many parents discussed how they had frequently encountered indicators of marijuana trends and use in public, ranging from increases in the visibility of marijuana retailers, open (but illegal) use of marijuana in public spaces such as parks and bus stops, positive depiction of marijuana use in popular culture, and frequent smells of marijuana across the region. The experience is one that may be unique to Seattle compared to other less densely populated parts of the state. One parent said, *“I thought it was okay in public too because it’s everywhere,”* and another said, *“You can drive down the street and then all you smell is smoke.”* Parents in all focus groups brought up instances where they had been in public and have seen or smelled people using marijuana. One parent said *“I mean, you can go to Walmart, and come out with a contact [high],”* and another said *“For you to just walk out of your house and go to the store and that’s all you smell, by the person passing you – or even a car going by – they’re just more free with it, now.”* The open marijuana use in public was a concern for all parents, and many parents were confused about whether open marijuana use was legal since it seemed so common, despite being illegal.

Parents shared many anecdotes about ways that their children were exposed to marijuana by their neighbors or at their friends’ houses. One parent described her frustration with her neighbor’s frequent marijuana use in their yard, in plain sight of her children. Others reported similar anecdotes, with one parent describing a situation their child unknowingly brought home marijuana leaf from a plant she had found in the neighbor’s yard. Some parents were surprised by how they needed to be more careful to evaluate the adults who were supervising their children. *“Now you have to check out the parents. You know, like, is she high? Do you keep your brownies way up in the cupboard, you know what I mean?”*

Parents in all focus groups discussed the prevalence of marijuana in the schools. *“Now that my son has been in high school. And he goes to this school, [...] it’s just everywhere. It’s just everyone is doing it. It’s like you’re the cool guy [...] It’s just unbelievable.”* Some parents thought that it was inevitable that their children would be exposed to marijuana at school. One parent explained, *“I feel like there just needs to be something more set up for schools to be ready to address it because that’s usually where it starts.”* Another parent explained how pervasive marijuana in schools is, and how it is found in schools across socioeconomic statuses, saying *“It’s at every middle school – I – we live in a high class area,*

*and it's all over the place. I mean, I don't care – it doesn't have economical barriers. I mean, it's everywhere.”*

**Marijuana use in the home.**—Parents shared a variety of opinions on family member marijuana use. Some parents expressed frustration that there was little they could do to prevent their children from being exposed to family members' marijuana use. Parents sometimes shared family histories of substance abuse with their children and explained how in their view marijuana was a gateway to serious addiction problems. One parent explained:

I've got pretty good history of addiction in my family and a brother who continues struggling with marijuana and alcohol addiction and mental health problems that are wrapped up in it also [...] I really want the kids to understand that they already have probably a genetic predisposition to addiction and any use can start them down the path and end up like their uncle.

Yet other parents, mainly marijuana users, were not concerned about exposing their children to family member use, as long as it was openly discussed, and they educated their children about their expectations of how children should avoid marijuana. In one family where the father uses marijuana, a parent said, *“If [their dad] bakes brownies, my 13-year-old asks, ‘Did you make these or did Daddy make those?’ Daddy made those.”* Another parent explained, *“I've had a conversation with them about it. It's just like alcohol. It's not for you. It's for me.”*

Using and non-using parents disagreed on whether or not parents should discuss their own use with their children. Some marijuana-using parents explained to their children that marijuana is their medicine. *I've had my kids walk in while I was smoking, and [...] I just said, ‘Hey, look. Daddy's got some anxiety issues. It helps daddy go to bed at night.’ And they're like, ‘Okay. Cool.’ It's not for you.* Another parent explained:

My kids' dad has smoked pot their whole entire life. The kids have seen him smoke it. They know that anything up on the shelf that is dad's, don't touch. I was kind of like, ‘Maybe not at such a young age they shouldn't know.’ He's like, ‘I'm not going to hide it from them. It is what it is. This is what I do.’

Non-using parents generally felt that parent marijuana use should not be discussed with children, and some felt parents should not use at all. One parent explained *“[Using marijuana] shouldn't be anywhere on a parent's mind,”* and another said *“[Using marijuana] is just not complementary to my mission statement [of being a parent].”*

**Forms of marijuana.**—Parents reported on the myriad forms of marijuana now available, from smoking the bud itself, to topical creams, candies, and beverages. One parent explained, *“You could get weed in anything now. Whatever you like, you could get weed in it.”* Many non-using parents had not considered how edible marijuana in particular posed a new challenge for protecting their children. Many were quite surprised to learn about the variety of edible forms; for example, one parent said, *“So there's marijuana gummy bears? Like, I had no idea,”* and another, *“Oh, I'm behind.”* Parents discussed their need to educate



their children about edibles that they might find at school, at their friends' houses, or at the neighbors' homes.

I would worry about the accessibility for children because the candy, the cookies, the brownies, those are all appealing and what if [...] their kid brought it to school and they're sharing it unknowingly with your kid so now you need to warn your kid, [...] I don't care what your friend says. You don't eat their candy. You don't eat their cookies. You don't eat their brownies. Can't trust you know, I wouldn't trust that for my own child.

Two groups (one user, one nonuser) discussed how adolescent exposure could be reduced if adults used edibles covertly, but two parents raised the issue of how youth might also use edibles to hide their use from teachers and parents.

It is important to note that, while the medical marijuana market was largely unregulated regarding edibles at the time of the focus groups, the legal market had much tighter regulations on edibles (e.g., no candies appealing to youth). However, parents did not distinguish between what was medical or non-medical when describing increases in adolescent exposure.

### Effects of Exposure on Youth Marijuana Use

**Changes in norms.**—Most parents were worried that increased exposure to marijuana created an environment where marijuana use was perceived as more acceptable. One parent explained her concerns about how her children might be thinking: *"It's okay to do it because they see it, and it's legal, so they're thinking that way."* Another parent said, *"I think people are more open with it so they're thinking it's okay to do it. They're at school, people's doing it, in the homes people are doing it; it's just more free."* Some parents expressed how they felt pro-marijuana messages were unavoidable: *"So between what they see on television, hearing music, and then from their peers [...] I think it's in their face."*

Many parents felt that the new law contributed to a mixed message about marijuana; one parent called the law an *"oxymoron."* Another explained, *"For all these years they said it was illegal, and they gave you reasons why. And now all of a sudden overnight, everybody can have it."* A few parents reported frustration that the law is no longer helping them to set limits with their children. *"One minute you can't do this. Oh, no, you can do that. No, the cops are going to bust you. Now they're not going to [...] worry about it."* Many parents now feel extra pressure to help their children resist these confusing messages, especially how *"it's tough to tell a kid that something is absolutely wrong if there's this store where the government is legally selling it to adults."* The intersection of the old medical marijuana market and the new non-medical market may also add to confusion about appropriate norms. One parent wondered how to balance warnings about risk when *"marijuana is being portrayed as this thing that is potentially good for you."*

**Changes in availability.**—With respect to possible changes in the availability of marijuana, most parents agreed, *"It's always been one of the more readily available things, anyway."* But parents disagreed about whether the new law resulted in more availability for teens. Some argued that *"Of course it will change how available it will be because there's*

*more of it and more people to supply it,”* while others said that because marijuana is already easily available, the new law will not make it easier for adolescents to obtain.

## Discussion

Our findings expand on previous work aimed at understanding the influence of non-medical marijuana legalization by documenting the qualitative changes parents are experiencing in their social and physical environments and in their parenting. Parents' experiences provide additional insight into how legalizing non-medical marijuana can impact the daily lives of parents and their children, since the signs of marijuana are now “*everywhere*.” Our findings have implications for social service providers working with adolescents and families, policy makers attempting to draft marijuana legalization laws that address the concerns of parents, for prevention program developers, and for other parents who are raising children in an environment where non-medical marijuana use is legal for adults.

We know from our quantitative work that the norms of the larger sample from which our focus group participants were recruited have shifted to be more positive towards marijuana post legalization (Kosterman et al., 2014), and that in general, youth living in communities with pro-use norms use more marijuana (Hopfer, 2014; Levy, 2013). Findings from our qualitative focus groups put these findings in context, and show the many ways that parents struggle to control the pro-marijuana influences their children face following legalization. Our findings highlight some of the surprises that parents faced following legalization, especially with regard to the additional scrutiny with which most parents felt they needed to evaluate the adults in their children's lives. A majority of non-using parents expressed concern about how marijuana-using adults might not consider their own use as a problem for the adolescents around them, following the policy change. Many of these non-using parents were also surprised to find the limits of their power to control many of the avenues through which their children were exposed, particularly for neighbors' marijuana use and open public use. The struggles of these parents are consistent with the normalization thesis (Duff et al., 2011; Parker, Williams & Aldridge, 2002) which may explain how the increasingly tolerant attitudes towards marijuana in society at large are influencing parents and their children. As the use of marijuana becomes less stigmatized and social norms adjust to reflect a growing perception that marijuana use is “normal” (Duff et al., 2011; Parker et al., 2002), parents experience new challenges in how their children are exposed to marijuana that reflects this normalization of marijuana use in society.

Relatedly, the increase in edible marijuana product availability poses a new source of exposure. Commercially available marijuana products are packaged similar to other store-bought treats. In addition to the draw of these products for children, they also make using marijuana easier to hide from parents. Adults who use edible products need to be aware of this packaging risk so that they are not inadvertently consumed by children; this is another area where many parents felt surprised at how much more thoroughly they needed to educate their children and discuss marijuana use practices with other adults in their children's life.

The differences in marijuana-related attitudes and experiences between marijuana using parents and non-using parents varied across themes. For the most part, using and non-using

parents agreed that they did not want their children to use marijuana. Most marijuana using parents also agreed with non-using parents that marijuana has a stronger presence in their communities and social environments. Differences emerged with regard to the degree of concern about adult marijuana use in the home and elsewhere, and the comfort level parents had with youth marijuana exposure in general and youth marijuana use. Parents who used marijuana were more likely to take a harm reduction stance towards marijuana, expressed through their willingness to tolerate their children's use and to teach safe use practices. A harm reduction approach often stands in opposition to a moral approach which prohibits all drug use, and instead advocates for safe use which aims to reduce other harms that are sometimes associated with substance use (Jenkins, Slemon, & Haines-Saah, 2017; Marlatt, 1996). Many marijuana-using parents sought to reduce harm that youth marijuana can cause by teaching their children how to use safely, to avoid driving with others who are high, to be careful of unsafe sources, and to sometimes provide a safe place to use marijuana. Often implied in marijuana-using parents discussion was the assumption that a harm reduction approach was warranted because it was inevitable that their children would use marijuana. The divide between using parents and non-using parents on the topics of adult marijuana use and child harm reduction reflects the need for future research to attend to the different contexts in which children are being raised – one where marijuana may be present in the home, and one where it is not – and the implications of this for preventive interventions to support different parents (Jenkins et al., 2017).

While there is strong evidence that positive parental attitudes towards marijuana is associated with increases in youth marijuana use (Huansuriya, et al., 2014; Lac & Crano, 2009; Lamb & Crano, 2014), it was not clear from these focus groups whether legalization of non-medical marijuana influenced parental attitudes toward marijuana to become more positive. Parents who use marijuana seemed equally surprised about the increase of marijuana in their community, but it was not clear that they felt their parenting had to change to the same degree, since marijuana in the home and among adults with whom their children interact was already common. It may be that the perceived change in marijuana exposure and access was not as large for these families.

Of note to policy makers and social service providers, when describing their experiences, parents did not distinguish between medical and non-medical marijuana. Medical marijuana has been legal in Washington State since 1998, yet many parents talked about seeing green crosses (typically used to advertise a medical marijuana facility) as if they were a new phenomenon (post non-medical marijuana legalization). The heightened salience of green crosses and other signs of marijuana suggest three considerations from these focus groups. First, legalization of marijuana for non-medical use may have changed parents' awareness of indicators and issues related to marijuana. Second, parents did not appear to attribute their perception of a recent change toward more pro-marijuana attitudes to the previous 16-year existence of legal *medical* marijuana. Focus group parents' discussions of a more recent change in acceptance, long after medical marijuana was legalized, is supported by trends seen in quantitative survey findings (Kosterman et al., 2016). Third, parents did not reference or acknowledge different the marijuana sources as they are present in the public sphere. It is possible that it does not matter to parents where the marijuana came from—be it the black market, medical, or non-medical facilities. What is relevant to parents is how there

has been a relatively recent cultural shift making marijuana more acceptable and normal in public spaces and in popular culture (such as the media their children are exposed to), and this shift corresponds to the timing of the new law regarding *non-medical* marijuana. Parents are concerned about the impact this cultural change is having on their adolescent children, and many reported ways that these changes are manifesting in the common sentiment that “*it’s everywhere.*”

The experiences reported by these parents in their own words can help inform the development of interventions and parenting programs aimed at preventing youth marijuana use, and inform policymakers considering marijuana law changes. Parents would benefit from tools and skills to empower them to navigate the rapidly changing marijuana environment, including strategies to monitor and respond to adolescent marijuana exposure, especially concerning the new forms of marijuana that their children may encounter. In line with previous research (Skinner et al., 2017), we found that many parents are unsure how to best counter the increasing implicit and explicit pro-marijuana messages their children encounter and marijuana becomes normalized, and interventions should be attentive to this need. A number of interventions have demonstrated efficacy to prevent adolescent marijuana use in the context of relatively strong legal norms against non-medical use (Lemon, Pennucci, Hanley, & Aos, 2014), but available interventions have not been tailored to the new legal environment and the unique parenting challenges this entails. Parental marijuana use may be particularly important to address in new interventions, both for parents who are currently using and for parents who used in the past but are unsure how—or whether—to discuss this use with their children. Prevention science has not provided clear guidance, in our view, on what parents should communicate to their children about their own experiences with marijuana.

Limitations of this study should be noted. Our findings may not be generalizable to other geographic locations, especially since our sampling selected participants only within limited geographic boundaries. The Seattle region also has its own culture around marijuana use that may be specific to this region. The nature of focus groups can make it difficult to avoid dominant voices overshadowing quieter participants. Our experienced facilitator consistently sought to balance the conversation and to explicitly ask for alternative opinions; however, it is possible that some participants felt less comfortable sharing their experiences or opinions. Additionally, the design of our focus groups limited us from connecting demographic information to participant responses. Future research should explore differences in the experiences of youth and their parents from different identities, especially those from different racial groups and socioeconomic statuses, as these groups may experience the implementation of legalized non-medical marijuana differently.

Research from early adopting states like Washington and Colorado should inform both the content and timing of public health campaigns. Other states considering marijuana legalization or where marijuana has recently been legalized should carefully consider the experiences of these Seattle parents. In particular, many parents’ surprise about the breadth of edible marijuana products, and their concern about adult marijuana use as an important form of adolescent exposure, urge the initiation of public health campaigns and prevention messaging *before* legalization takes effect. Public health messaging that provides clear and

consistent facts and guidance with respect to risks for youth and steps parents can take can also help prepare parents who are raising children in locations where non-medical marijuana use is becoming legal, as well as social service providers who are working with youth and families. Our findings offer important insights into the experiences of parents raising adolescents following the legalization of non-medical marijuana and highlight important considerations for social service providers, interventionists and policymakers.

## Acknowledgments

This research was supported by National Institute on Drug Abuse (Grant No. R01DA033956). Content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agency. We thank our funder, the study participants, and the staff of the Social Development Research Group, especially Rebecca Cortes and Mary Casey-Goldstein for study facilitation and coordination. An earlier version of this paper was presented at the annual meeting of the Society for Prevention Research in Washington, DC, in May 2015.

## References

- Ammerman S, Ryan S, Adelman WP, & Committee on Substance Abuse, the Committee on Adolescence. (2015). The impact of marijuana policies on youth: Clinical, research, and legal update. *Pediatrics*, 135, e769–e785. 10.1542/peds.2014-4147 [PubMed: 25624385]
- Anderson DM, & Rees DI (2014). The legalization of recreational marijuana: How likely is the worst-case scenario? *Journal of Policy Analysis and Management*, 33, 221–232. 10.1002/pam.21727 [PubMed: 24358533]
- Anderson MD, Hansen B, & Rees DI (2015). Medical marijuana laws and teen marijuana use. *American Law and Economics Review*, 17, 495–528. 10.1093/aler/ahv002
- Bailey JA, Hill KG, Oesterle S, & Hawkins JD (2006). Linking substance use and problem behavior across three generations. *Journal of Abnormal Child Psychology*, 34, 273–292. 10.1007/s10802-006-9033-z
- Braun V, & Clarke V (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101. 10.1191/1478088706qp0630a
- Brook JS, Adams RE, Balka EB, & Johnson E (2002). Early adolescent marijuana use: Risks for the transition to young adulthood. *Psychological Medicine*, 32, 79–91. 10.1017/S0033291701004809 [PubMed: 11883732]
- Catalano RF, & Hawkins JD (1996). The social development model: A theory of antisocial behavior. In Hawkins JD (Ed.), *Delinquency and crime: Current theories* (pp. 149–197). New York: Cambridge University Press.
- Cerdá M, Wall M, Feng T, Keyes KM, Sarvet A, Schulenberg J, O'malley PM, Pacula RL, Galea S, & Hasin DS (2017). Association of state recreational marijuana laws with adolescent marijuana use. *JAMA Pediatrics*, 171, 142–149. [PubMed: 28027345]
- Choo EK, Benz M, Zaller N, Warren O, Rising KL, & McConnell KJ (2014). The impact of state medical marijuana legislation on adolescent marijuana use. *Journal of Adolescent Health*, 55, 160–166. 10.1016/j.jadohealth.2014.02.018
- Duff C, Asbridge M, Brochu S, Cousineau MM, Hathaway AD, Marsh D, & Erickson PG (2012). A Canadian perspective on cannabis normalization among adults. *Addiction Research & Theory*, 20(4), 271–283.
- Ghosh TS, Vigil DI, Maffey A, Tolliver R, Van Dyke M, Kattari L, ... & Wolk L (2017). Lessons learned after three years of legalized, recreational marijuana: the Colorado experience. *Preventive Medicine*, 104, 4–6. [PubMed: 28232101]
- Guttmanova K, Lee CM, Kilmer JR, Fleming CB, Rhew IC, Kosterman R, & Larimer ME (2016). Impacts of changing marijuana policies on alcohol use in the United States. *Alcoholism: Clinical and Experimental Research*, 40, 33–46. 10.1111/acer.12942

- Harper S, Strumpf EC, & Kaufman JS (2012). Do medical marijuana laws increase marijuana use? Replication study and extension. *Annals of Epidemiology*, 22, 207–212. 10.1016/j.annepidem.2011.12.002 [PubMed: 22285867]
- Hasin DS, Saha TD, Kerridge BT, Goldstein RB, Chou SP, Zhang H, ... & Huang B (2015). Prevalence of marijuana use disorders in the United States between 2001–2002 and 2012–2013. *JAMA Psychiatry*, 72(12), 1235–1242. [PubMed: 26502112]
- Hopfer C (2014). Implications of marijuana legalization for adolescent substance use. *Substance Abuse*, 35, 331–335. 10.1080/08897077.2014.943386 [PubMed: 25127003]
- Hsieh HF, & Shannon SE (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277–1288. 10.1177/1049732305276687 [PubMed: 16204405]
- Huansuriya T, Siegel JT, & Crano WD (2014). Parent-child drug communication: Pathway from parents' ad exposure to youth's marijuana use intention. *Journal of Health Communication*, 19, 244–259. 10.1080/10810730.2013.811326 [PubMed: 24308793]
- Jenkins EK, Slemmon A, & Haines-Saah RJ (2017). Developing harm reduction in the context of youth substance use: insights from a multi-site qualitative analysis of young people's harm minimization strategies. *Harm reduction journal*, 14(1), 53. [PubMed: 28760146]
- Kerr DCR, Tiberio SS, & Capaldi DM (2015). Contextual risks linking parents' adolescent marijuana use to offspring onset. *Drug and Alcohol Dependence*, 154, 222–228. 10.1016/j.drugalcdep.2015.06.041 [PubMed: 26166667]
- Kosterman R, Bailey JA, Guttmanova K, Jones TM, Eisenberg N, Hill KG, & Hawkins JD (2016). Marijuana legalization and parents' attitudes, use, and parenting in Washington State. *Journal of Adolescent Health*, 59, 450–456. 10.1016/j.jadohealth.2016.07.004
- Kosterman R, Hill KG, Lee JO, Meacham MC, Abbott RD, Catalano RF, & Hawkins JD (2014). Young adult social development as a mediator of alcohol use disorder symptoms from age 21 to 30. *Psychology of Addictive Behaviors*, 28, 348–358. 10.1037/a0034970 [PubMed: 24955663]
- Lac A, & Crano WD (2009). Monitoring matters: Meta-analytic review reveals the reliable linkage of parental monitoring with adolescent marijuana use. *Perspectives on Psychological Science*, 4, 578–586. 10.1111/j.1745-6924.2009.01166.x [PubMed: 26082797]
- Lamb CS, & Crano WD (2014). Parents' beliefs and children's marijuana use: Evidence for a self-fulfilling prophecy effect. *Addictive Behaviors*, 39, 127–132. 10.1016/j.addbeh.2013.09.009 [PubMed: 24144589]
- Lemon M, Pennucci A, Hanley S, & Aos S (2014). Preventing and treating youth marijuana use: An updated review of the evidence (Doc. No. 14 –10–3201) Olympia, WA: Washington State Institute for Public Policy. Retrieved from [https://www.colorado.gov/pacific/sites/default/files/RMJ1\\_Preventing-youth-substance-abuse-Research-Update-FINAL.pdf](https://www.colorado.gov/pacific/sites/default/files/RMJ1_Preventing-youth-substance-abuse-Research-Update-FINAL.pdf).
- Levy S (2013). Effects of marijuana policy on children and adolescents. *JAMA Pediatrics*, 167, 600–602. 10.1001/jamapediatrics.2013.2270 [PubMed: 23712691]
- Lynne-Landsman SD, Livingston MD, & Wagenaar AC (2013). Effects of state medical marijuana laws on adolescent marijuana use. *American Journal of Public Health*, 103, 1500–1506. 10.2105/AJPH.2012.301117 [PubMed: 23763418]
- Marlatt GA (1996). Harm reduction: Come as you are. *Addictive behaviors*, 21(6), 779–788. [PubMed: 8904943]
- Mason WA, Hanson K, Fleming CB, Ringle JL, & Haggerty KP (2015). Washington State recreational marijuana legalization: Parent and adolescent perceptions, knowledge, and discussions in a sample of low-income families. *Substance Use and Misuse*, 50, 541–545. 10.3109/10826084.2014.952447 [PubMed: 25671633]
- Parker H, Williams L, & Aldridge J (2002). The normalization of 'sensible' recreational drug use: Further evidence from the North West England longitudinal study. *Sociology*, 36(4), 941–964.
- Patrick ME, Maggs JL, Greene KM, Morgan NR, & Schulenberg JE (2014). The link between mother and adolescent substance use: Intergenerational findings from the British Cohort Study. *Longitudinal and Life Course Studies*, 5, 56–63. 10.14301/lcs.v5i1.241 [PubMed: 24489608]
- QSR International Pty Ltd. (2014). Nvivo qualitative data analysis software version 10.

- Rich M, & Ginsburg KR (1999). The reason and rhyme of qualitative research: Why, when, and how to use qualitative methods in the study of adolescent health. *Journal of Adolescent Health, 25*, 371–378. 10.1016/S1054-139X(99)00068-3
- Skinner ML, Haggerty KP, Casey-Goldstein M, Thompson RW, Buddenberg L, & Mason WA (2017). Focus groups of parents and teens help develop messages to prevent early marijuana use in the context of legal retail sales. *Substance Use and Misuse, 52*, 351–358. 10.1080/10826084.2016.1227847 [PubMed: 27768528]
- Vermeulen-Smit E, Verdurmen JEE, Engels R, & Vollebergh WAM (2015). The role of general parenting and cannabis-specific parenting practices in adolescent cannabis and other illicit drug use. *Drug & Alcohol Dependence, 147*, 222–228. 10.1016/j.drugalcdep.2014.11.014 [PubMed: 25500130]
- Volkow ND, Baler RD, Compton WM, & Weiss SRB (2014). Adverse health effects of marijuana use. *New England Journal of Medicine, 370*, 2219–2227. 10.1056/NEJMra1402309

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

**Table 1.**

Characteristics of focus group participants.

	<u>Parents of children ages 8–11</u>		<u>Parents of children ages 12–15</u>		<u>Marijuana-using parents</u>	
	<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>	<b>Group 5</b>	<b>Group 6</b>
Targeted child age	8–11	8–11	12–15	12–15	8–15	8–15
Number of participants	9	9	10	9	8	9
% With child 8–11 years	100	100	0	22	38	44
% With child 12–15 years	22	22	100	100	63	100
% Ever used marijuana	22	56	50	44	100	100
% Used marijuana past year	0	0	0	0	100	100
% Used 12+ times a year	0	0	0	0	57	56
Demographics						
% Male	33	33	10	22	13	56
% Caucasian	44	44	30	44	63	11
% African American	11	33	40	44	38	56
% Asian American	33	22	30	11	0	0
% Native American	11	0	0	0	0	33
% College graduate	55	44	30	33	38	11
% Married	100	44	40	56	63	44



**Table 2.**

Summary of main themes from parents' discussions.

Theme	Summary
Parents' thoughts on adolescent marijuana use	<ul style="list-style-type: none"> <li>• Widespread agreement that they do not want their children to use marijuana</li> <li>• Many noted that teen marijuana use isn't a "black and white" issue: marijuana may have medical benefits, it may be better than other drugs, it might not be bad for everyone</li> </ul>
Community changes since marijuana legalization	<ul style="list-style-type: none"> <li>• Generally, parents agreed that marijuana is much more visible, people use more openly in public</li> </ul>
Forms of youth exposure to marijuana	<ul style="list-style-type: none"> <li>• Most parents were concerned about the heightened level of exposure to marijuana outside the home, e.g., at friends' houses, in schools, by neighbors</li> <li>• Many expressed that parents need to consider how their own and other adults' marijuana use may affect their children</li> <li>• Many note that edible marijuana products pose a new challenge to monitoring exposure and use</li> </ul>
Effects of exposure on youth marijuana use	<ul style="list-style-type: none"> <li>• Generally, parents thought that youth exposure to marijuana will increase their risk for use</li> <li>• Many had concerns about change in norms—marijuana use represented as normal or positive by media; new law contributes to mixed message</li> <li>• Some had concerns about increased availability</li> </ul>