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Psychedelics: Friend or Foe? Perceived Parental Attitudes, Use, and Current Personal Attitudes Toward Classic Hallucinogens

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Abstract

This project investigates relationships between parental attitudes toward classic hallucinogens (i.e., LSD, psilocybin, and mescaline) during adolescence, frequency of personal hallucinogen use, and current attitudes toward hallucinogens from the perspective of recreational psychedelic users. Previous literature highlights self-reported benefits, spiritual experiences, and less harm in comparison to other substances when reporting on recreational classic hallucinogen use. However, the associations of parental communication and level of familial religious affiliation with current relationships involving hallucinogens have seldom been investigated. 120 participants took a web-based survey on Qualtrics marketed on Prolific regarding the parental communication involving classic hallucinogens during adolescence, first age of use, current frequency of use, and personal attitudes toward legality, medical value, and safety of hallucinogenic substances. In comparison with infrequent hallucinogen users, frequent users held significantly higher scores of positive attitudes toward classic hallucinogens than infrequent users on all attitude scales. Additionally, participants who indicated a very religious familial identity demonstrated significantly higher scores of negative parental attitudes in the Parental Attitudes portion of the survey. Furthermore, perceived negative parental attitudes were associated with a younger age of their child's first use. The research aim is to explore potential differences between parental communication, lifetime use, and the current attitudes recreational users have toward psychedelics. This is integral to understanding how the usage of classic hallucinogens (regarding age during first use and frequency of use) is informed by familial upbringing.

Introduction

Psychedelic substances have been regarded as controversial for both medical and recreational uses throughout history (Carhart-Harris & Goodwin, 2017; Chi & Gold, 2020). Yet over the past decade, classic hallucinogen use in the United States has become ever-present, prompting a need for reevaluations on attitudes toward hallucinogens. Recreational use of LSD among adults in the US increased by over 50% between 2015 - 2018, and nationwide psilocybin use increased from 8.5% of the adult population in 2016 to 9.68% in 2018 (Yockey et al., 2020; Yockey & King, 2021). Despite this surge in recreational use, little research has investigated social factors surrounding classic hallucinogens during adolescence and how this may interact with use later in life. In particular, studies investigating the relationship between parental communication around classic hallucinogens and use and attitudes have seldom been explored in comparison to alcohol, marijuana, cocaine, and other drugs of abuse. This may be due to the rates of hallucinogen use disorder being extremely low, affecting only 0.2% of individuals 12 and older in 2020 (2021 NSDUH Annual National Report). As researchers strive to gain a better understanding of social influences on substance use, it is imperative to expand explorations to hallucinogens. These investigations will enable us to compare and contrast parental communication regarding various substances during adolescence.

The current study does not aim to explore hallucinogen abuse factors or influences. Rather, it intends to highlight the relationship between central social factors such as parental religiosity and communication surrounding hallucinogens during adolescence, and current adult use and attitudes held toward hallucinogens from recreational users.

Shared Parental Attitudes Regarding Drug Use and Adolescent Attitudes and Use

Primary Socialization Theory, established in 1998, posits that parents maintain a central role in their child's formation of beliefs regarding substance use (Oetting et al., 1998). Parents may influence their child in a variety of ways, including unhealthy modeling via drug use, dysfunctional family

dynamics, and parent-child communication. Parental communication surrounding drug use has been presented as a potential mediator that prevents adolescent substance use and influences anti drug-use beliefs. There are a multitude of approaches toward parent-child communication, including direct and indirect framing. Researchers have established specific anti-drug rhetoric and rules as "harder" communication, and discussions of potential risks and consequences as "softer" communication (Ennett et al., 2001). According to a meta-analysis by Carver et al., when parents solely put rules in place and tell adolescents not to use drugs, adolescents are more likely to indicate higher levels of alcohol, tobacco, and drug use (Carver et al., 2017). Conversely, when parents openly discuss prospective risks and consequences resulting from drug use, adolescents are less likely to initiate substance use.

Kam & Middleton investigated parental influence on adolescent attitudes toward alcohol, cigarette, and marijuana use beliefs. It was found that direct anti-substance parent-child communication was correlated with higher levels of anti-drug use beliefs for Latino/European American adolescents (Kam & Middleton, 2013). In contrast, parental reference to own substance use, even if negatively phrased, was associated with lower levels of anti-drug use beliefs for adolescents. Similarly, Carver et al. suggested that general parent-child connectedness and high quality substance use communication were protective factors against adolescent alcohol, tobacco, and drug use (Carver et al., 2017). Yet parents' own disclosure of previous use as a method of addressing health risks may be predictive of increased adolescent substance use. For example, an increase of reported alcohol use made it more likely for mothers to reflect on their own negative experiences with alcohol, which predicted increased alcohol consumption in adolescents (Handley & Chassin, 2013). The present study will investigate shared parental attitudes toward classic hallucinogens, including references to own use, and the potential interaction with participants' relationships with classic hallucinogens.

Parental Religiosity as a Protective Factor Against Use

Parental religiosity has been predictive of authoritative parenting styles and increased child monitoring, which are collectively associated with adolescent social responsibility (Gunnore et al., 1999). Parent and youth religious involvement has been additionally linked to positive interactions between family members (Wills et al., 2003). Further studies have connected increased personal levels of adolescent religiosity to decreased marijuana and overall substance use (Chu 2007; Kogan et al., 2005; Wallace et al., 2003). One study that surveyed Central American students to investigate lifetime use of alcohol, tobacco, marijuana, and an additional five drugs found that a personal belief in God and increased parental religiosity were protective factors against lifetime drug use (Kliewer & Murrelle, 2007). Risk factors included having parents or additional family members who have problems with drugs and alcohol, due to the possible drug use modeling and enhanced drug and alcohol availability.

Yet the mechanism through which decreased drug use and increased anti-drug use beliefs occur has been linked to family values, over personal religiosity (Sanchez et al., 2011). Sanchez and colleagues observed and interviewed religious institutions, leaders, focus groups, and drug-naïve youth. It was found that religious adolescents both used religious ideas and the family guidelines established during childhood to defend their decision not to use drugs. Parental religiosity as a potentially protective factor against hallucinogen use has not been explored, particularly in the context of the age at first hallucinogen use.

Current Use and Attitudes Toward Hallucinogens

When addressing attitudes toward hallucinogens, it is important to recognize those of the users. Even through polarizing social beliefs toward psychedelics in the United States, one trend remains clear – recreational users of classic hallucinogens tend to hold more positive attitudes toward hallucinogens than non-users. Roberts et al. (2020) demonstrated that both users of psilocybin and mushroom-naïve participants perceive mushrooms to be safer than other substances such as alcohol, heroin, cocaine, tobacco, and prescription painkillers. Yet non-users of psilocybin have made more claims that

hallucinogenic mushrooms are addictive and have the potential for abuse (Hallock et al., 2013).

Simultaneously, users do not believe that psilocybin has negatively impacted their academics, mental health, or physical health. Thus far, any potential differences in attitudes toward hallucinogens between recreational users have not been investigated.

Current Study

This project aims to place the frequency of use, age of first use, and current attitudes toward classic hallucinogens from recreational users into a wider context. That is, its purpose is to better understand the association between parental attitudes, level of familial religiosity during adolescence, and the use/current attitudes of recreational hallucinogen users. Our first objective was to investigate how negative parental attitudes interact with the age of participants during their first instance of ingesting hallucinogens. In addition, we investigated how negative parental attitudes toward hallucinogens interact with parental religiosity. We posited that participants who come from an increased familial religious identity will indicate significantly higher scores of negative perceived parental attitudes in the *Parenting Practices* survey portion.

Furthermore, this project hopes to establish possible differences within the group of recreational hallucinogen users, rather than differentiating between users and non-users. We explored how the first age of use or current frequency of use relates to current attitudes held toward hallucinogens by recreational users. From this inquiry, the following hypothesis was postulated: in comparison to infrequent hallucinogen users, frequent hallucinogen users will indicate significantly higher scores of agreement for positive attitudes in the Attitudes on Psychedelics Questionnaire.

Method

This project is based on self-reported data from 120 participants across the United States. Originally, 145 participants completed the web-based survey. After subsetting out submissions that did not provide consent, did not pass the robot test, contained no entries, or were partially complete, the

total number of participants was 120. All participants were required to be at least 18 years of age and have had recreationally taken LSD, psilocybin, and/or mescaline at least once.

Of the participants, 55% were female and 45% were male, with the mean age at the time of the survey being 35.9 years ($SD = 10.9$). 68 participants identified as white, 44 as black, 3 as asian, and 3 as mixed. 2 participants had expired data.

Procedure

Following approval from the Institutional Review Board, a web-based survey was distributed in order to garner anonymity, greater feelings of comfort, and a more widespread reach across the United States. This may have reduced some of the social desirability effects and reluctance to disclose personal information. The survey was built on Qualtrics and ran on Prolific, a website that recruits individuals for survey-taking in exchange for payment. The average amount of time it took to complete the survey was 6.37 minutes. The payment given for taking the survey was \$2.

Measures

To measure the attitudes that parents held toward classic hallucinogens during adolescence, the *Parenting Practices* portion of a questionnaire was utilized and reframed under the context of psychedelics (Macaulay et al., 2005). In particular, the *Setting an Anti-Drug Message* item of whether parents "talk to me about the risks of using tobacco, alcohol and other drugs," was reworded to, "During adolescence (<18 years), a parent or guardian spoke with me about the dangers of psychedelic use (magic mushroom, acid, and/or peyote)..." . Another item asking whether parents "told me that they do not want me to use tobacco, alcohol, or other drugs" was reworded to "During adolescence (<18 years), a parent or guardian expressed that they did not want me to use psychedelic substances..." . These phrases were modified to measure the shift from parenting practices during adolescence to adulthood. In the original questionnaire by Macaulay and researchers, adolescents rated responses from 1 (never) to 5 (always), which was modified to 1 (strongly disagree) to 5 (strongly agree). An additional question

was added to investigate the possibility of parents communicating about their own use of psychedelics, and was framed as follows: "During adolescence (<18 years), a parent or guardian spoke about their own personal experiences with taking psychedelic substances...".

To measure the current attitudes held by recreational users, the validated Attitudes on Psychedelics Questionnaire (APQ) was administered (Žuljević et al., 2022). The APQ portion was subdivided into four subsections, as it was within the original survey: *Legal Use of Psychedelics*, *Effects of Psychedelics*, *Risk Assessment of Psychedelics*, and *Openness to Psychedelics*. All subsections regarding attitudes included the following statement: "For the following questions, please respond with your own personal belief regarding psychedelic substances". All questions had answer responses that ranged from 1 (strongly disagree) to 5 (strongly agree).

Results

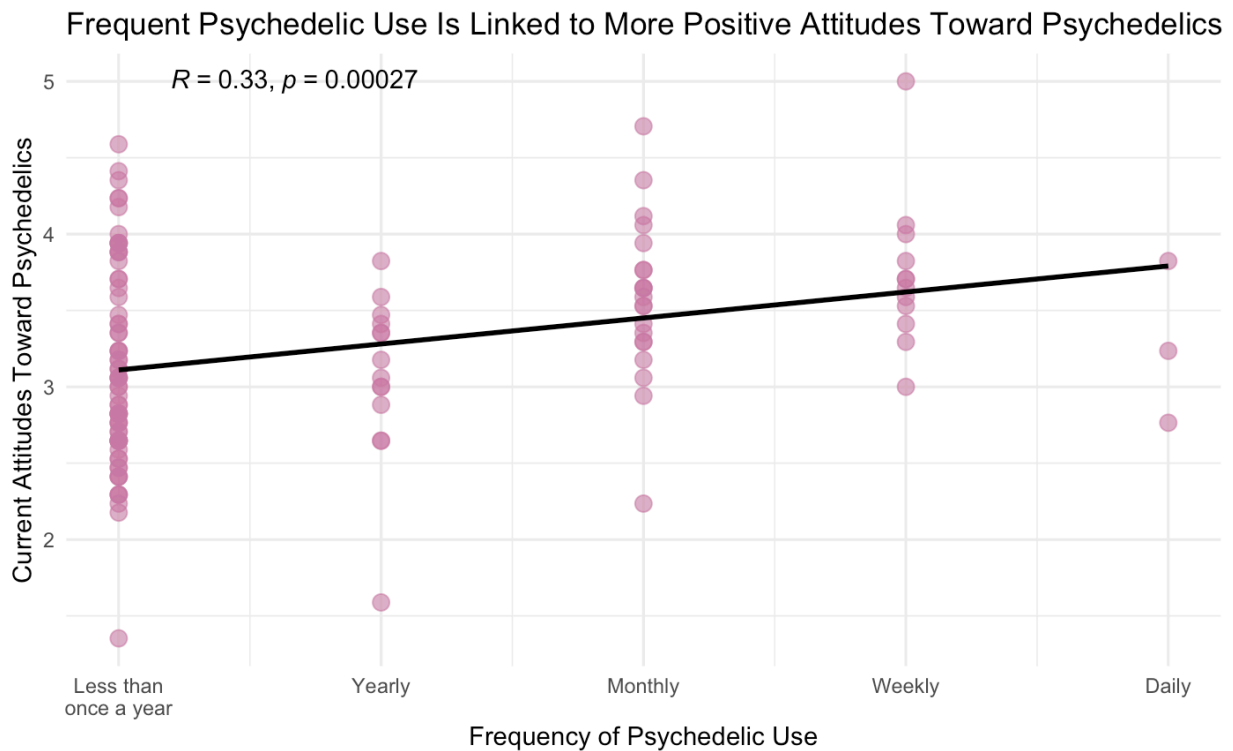
This project utilized RStudio to conduct correlational tests using the Spearman method. The Spearman method was employed due to a non-normal distribution. The mean score on the total APQ portion (1 = negative attitude, 5 = positive attitude) was $m = 3.258$. The mean score for the attitude in the *Legal Use of Psychedelics* subsection was $m = 3.45$. The mean score for the attitude in the *Effects of Psychedelics* subsection was $m = 2.91$. The mean score for the attitude on the *Risk Assessment of Psychedelics* was $m = 2.93$. The mean score for attitudes within the *Openness to Psychedelics* subsection was $m = 3.76$.

Current Frequency of Use and Attitudes Held Toward Classic Hallucinogens

A Spearman correlation indicated that more frequent users are more likely to hold the attitude that psychedelics should be legal ($r_s(118) = 0.280$, $p = .002$), have positive effects ($r_s(118) = 0.263$, $p = .004$), have low amounts of risks ($r_s(118) = .304$, $p < .001$), and are more open to psychedelic research and learning about others' experiences with psychedelics ($r_s(118) = 0.204$, $p = .025$). When considering

all subsets, frequent users held significantly more positive attitudes toward classic hallucinogens than infrequent users ($r_s(118) = .33, p < .001$).

Figure 1.1



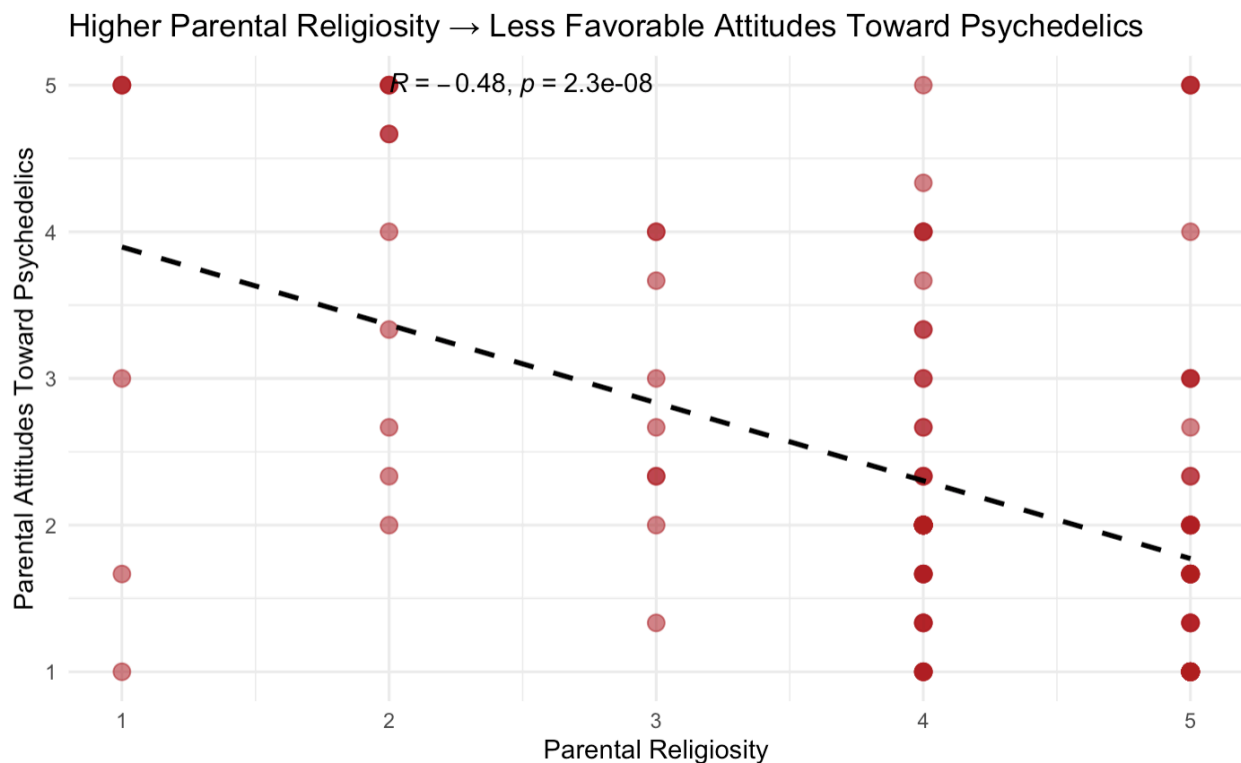
Note. Individuals indicated how frequently they ingest classic hallucinogens. Five options were displayed with only one possible selection, including 'Less than once a year', 'Yearly', 'Monthly', 'Weekly', and 'Daily'. Participants who use classic hallucinogens on a more frequent basis tended to hold more overall positive attitudes toward these substances in the APQ.

Parental Religiosity and Attitudes Toward Classic Hallucinogens

A Spearman correlation was conducted to explore the relationship between the level of parental religiosity and shared negative attitudes toward hallucinogens. A strong, significant relationship showed that as the level of parental religiosity increased, parents tended to share negative attitudes surrounding hallucinogens significantly more ($r_s(118) = -.483, p < .001$). Furthermore, as the level of parental

religiosity increased, parents tended to speak significantly more about their own previous experiences with taking hallucinogens ($r_s(118) = .308, p < .001$).

Figure 1.2



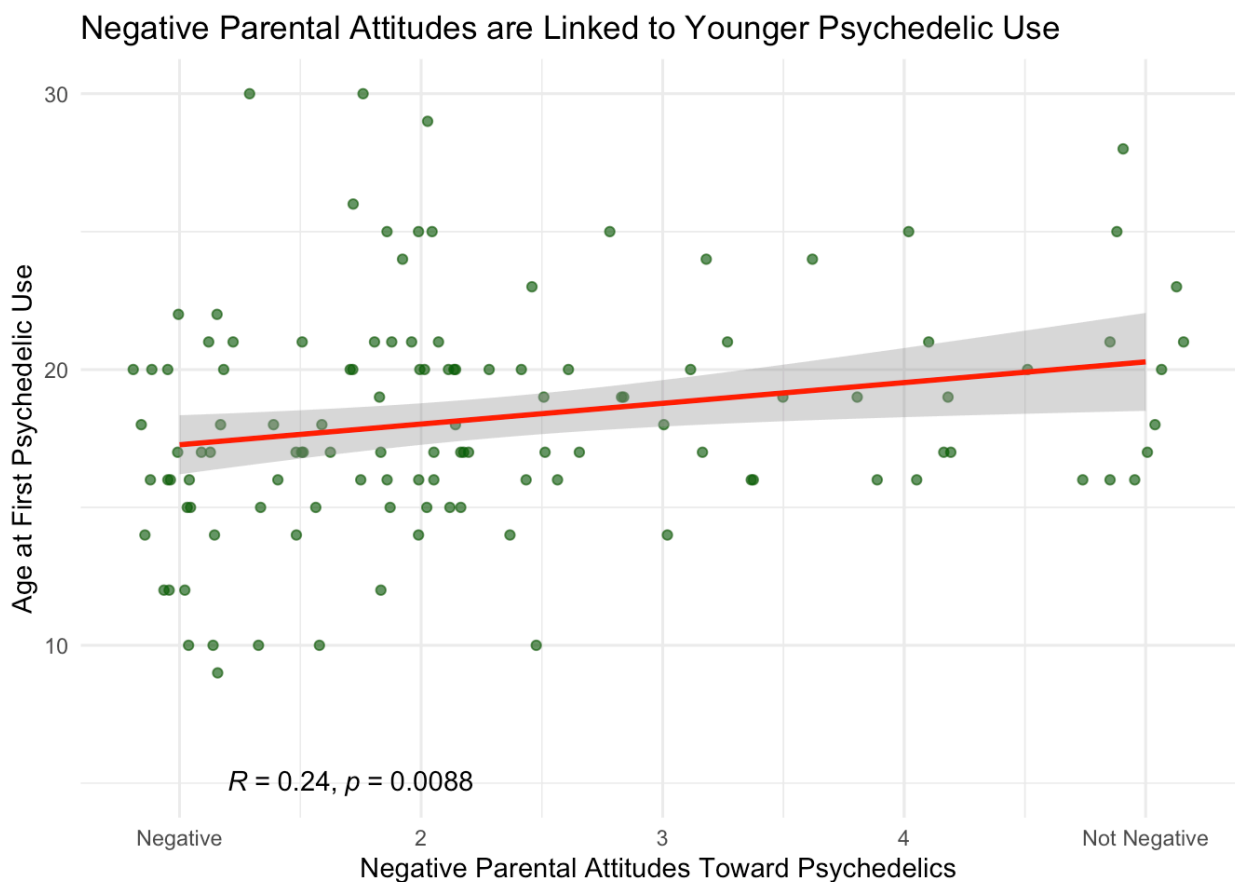
Note. Participants indicated the level of parental religiosity during adolescence with (5) demonstrating high parental religiosity and (1) demonstrating low parental religiosity, as well as the perceived parental attitudes toward classic hallucinogens during adolescence. High parental religiosity significantly correlated with negative perceived parental attitudes during adolescence.

Parental Attitudes and Participant Use

A Spearman correlation was run to explore the association between perceived parental attitudes and their child's age during the first use of hallucinogens. Overall, the average participant age during first interaction with classic hallucinogens was $m = 18.25$. A significant relationship indicated that when parents shared negative attitudes about hallucinogens during adolescence, the participant was more

likely to use hallucinogens at a younger age ($r_{s(118)} = .238, p = .009$). Furthermore, increased negative parental attitudes toward hallucinogens during adolescence served as a predictive factor of increased current frequency of participant use ($r_{s(118)} = -.37, p < .001$). Similarly, when parents shared their own experiences with previous psychedelic use, participants were more likely to use psychedelics at a younger age ($r_{s(118)} = -.206, p = .024$).

Figure 1.3



Note. Participants indicated the age at which they first ingested classic hallucinogens in a text entry survey question. Negative perceived parental attitudes during adolescence was linked to younger participant use.

Parents who disclosed their own previous experiences with psychedelics served as a predictor of increased current frequency of participant use ($r_{s(118)} = .43, p < .001$). Additionally, parents who shared

their own experiences with previous psychedelic use tended to express negative attitudes towards psychedelic use significantly more ($rs(118) = -.456, p < .001$).

Parental Attitudes and Participant Attitudes

A Spearman correlation was conducted to explore the relationship between perceived parental attitudes and the current participant attitudes. No relationship was found between the two variables ($rs(118) = -.007, p = .943$).

Discussion

This project investigated relationships between shared parental attitudes toward classic hallucinogens (that is, LSD, psilocybin, and mescaline) during adolescence, frequency of personal hallucinogen use, and current attitudes toward hallucinogens from the perspective of recreational psychedelic users. In doing so, it aimed to place recreational hallucinogen use in a wider context, particularly in relation to perceived parental attitudes.

Shared Parental Attitudes and Disclosure of Classic Hallucinogen Use

Previous research suggests that increased parental anti-drug communication during adolescence served as a protective factor against alcohol, tobacco, and marijuana use (Kam & Middleton, 2013). Conversely, the present study demonstrates that negative perceived parental attitudes based on anti-hallucinogen communication during adolescence were associated with earlier participant hallucinogen use. Parents who disclosed their own previous experiences with hallucinogens were significantly more likely to share negative attitudes toward hallucinogens, indicating that parental disclosures of their own use were likely framed negatively. Kam & Middleton (2013) found that parental disclosure of past use, even if framed negatively, was associated with earlier adolescent use. Similarly, the present study found that parental disclosure of previous hallucinogen use was associated with earlier participant hallucinogen use and an increased frequency of current use. This may indicate that both negative perceived parental attitudes and own parental disclosure of use do not serve as protective

factors against classic hallucinogen use. Though it is important to note that participants were not asked if these shared parental attitudes came before or after a disciplinary action involving hallucinogens. Therefore, it is possible that participants who had used hallucinogens at a younger age were more likely to receive anti-hallucinogen communication from parents.

Parental Religiosity During Adolescence and Use

Previous studies have found that religious involvement during youth is negatively associated with drug use and pro-drug beliefs (Chu 2007; Kogan et al., 2005; Wallace et al., 2003). Although family legacy and parents' guidelines may be what ultimately lead youth not to use drugs, rather than personal religious faith (Sanchez et al., 2011). Scheepers & colleagues found that parental and individual religiosity significantly influence personal moral attitudes, particularly in countries that are more religious (Scheepers et al., 2002). In this respect, religious parents may monitor their children and construct anti-drug guidelines partially due to support and guidance from the church (Gorsuch, 1995). The literature suggests that parental religiosity may serve as a protective factor against adolescent drug use by implementing increased anti-drug guidelines during childhood.

The present study found that familial religiosity was associated with significantly more shared negative parental attitudes toward psychedelics during adolescence, as predicted. Interestingly, religious parents were also more likely to discuss their own past experiences with taking hallucinogens with their children. Although increased familial religiosity was not associated with an earlier or later first age of use, familial religiosity did serve as a predictor of an increased frequency of current use. This suggests that familial religiosity does not serve as a protective factor against classic hallucinogen use. Further research is necessary to explore personal religiosity during adolescence and adulthood, and its relationship to hallucinogen use.

Parental and Personal Attitudes Toward Classic Hallucinogens

Parental attitudes toward hallucinogens during adolescence maintained no relationship to current attitudes toward hallucinogens among recreational users. Considering that all participants were above the age of 18 and had used at least one classic hallucinogen, subjects seemed to have formed attitudes toward hallucinogens based on their own experiences with them, rather than parental communication shared during adolescence.

Differences in Attitudes Between Recreational Users

As predicted, frequent users held significantly more positive attitudes toward classic hallucinogens than infrequent users on all scales. This may demonstrate that frequent users have more positive experiences with hallucinogens, leading them to hold more positive attitudes toward the substances themselves. It may also indicate that frequent users hold the belief that the legalization and/or implementation of medical hallucinogen treatment would benefit them in particular. Additionally, frequent users could feel more educated on current medical hallucinogen research and legality, leading them to feel more confident in answering positively regarding the *Legal Use, Effects, Risk Assessment, and Openness* subsections.

Overall Attitudes Toward Classic Hallucinogens

LSD, psilocybin, and mescaline are considered Schedule I substances under the Controlled Substances Act, which declares that they have a high potential for abuse and no accepted medical use ("Controlled Substances - Alphabetical Order", 2025). When exploring differences in attitudes toward hallucinogens, researchers found that users tend to perceive psilocybin mushrooms as less addictive and less harmful than non-users (Hallock et al., 2013). Moreover, most psilocybin users recounted their experiences as "positive" or "mostly positive", and none of the participants reported a negative experience. The present study explored user attitudes toward health effects, risks, legality, and openness to classic hallucinogens.

Sample attitudes toward health effects and risks of psychedelic usage were generally negative, while openness to psychedelic therapeutic research and psychedelic legality were generally positive. This implies that hallucinogen users are well aware of the potentially negative effects and risks of use from their own or learned experiences surrounding these substances. Despite these possible risks, users generally believe that hallucinogen research and legality should be supported.

Limitations

The majority of participants came from religious backgrounds and used classic hallucinogens infrequently, making it difficult to extend findings to non-religious backgrounds and frequent hallucinogen users.

In addition, surveying the parents would be of use due to possible convergence/divergence of the recollection of communication during adolescence. The present project does not account for other influences, such as those from peers, friends, or educational sources. Future research should explore different facets of parental communication regarding hallucinogens and their influence on use/attitudes during adolescence. This would allow for a greater understanding of how shared parental attitudes directly influence adolescent attitudes and use. In particular, researchers should investigate both adolescent users and non-users of hallucinogens and the possible differences between parental communication involving these substances.

Lastly, this exploration has a lack of generalizability. Although the survey was distributed nationally, the sample was not representative of the United States population in race, age, or gender.

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