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Prevalence, types, and demographic characteristics associated with major life changes following psychedelic use

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Psychedelic use has been linked to major life changes that may impact health outcomes, yet few studies have systematically examined the prevalence, types, and demographic characteristics that may be associated with such changes. This paper draws subsamples of respondents who endorsed lifetime psychedelic use from two samples of US adults – one nationally representative by age, race/ethnicity, and sex (Study 1; *n* = 613) and one larger, more sociodemographically diverse but non-representative (Study 2; *n* = 3,168). Study 1 was used to estimate the prevalence of reported major life changes following psychedelic use and to characterize the types of changes reported; Study 2 was used to extend the findings from Study 1 by exploring demographic characteristics that might be associated with the likelihood of experiencing major life changes following psychedelic use. In Study 1, 18.4% of respondents (*n* = 113) reported at least one major life change that they attributed to psychedelic use, with common changes involving relationships (6.9%, *n* = 42); diet and exercise (6.2%, *n* = 38); quitting alcohol, tobacco, or other substance use (5.5%, *n* = 34), and religious beliefs (5.5%, *n* = 34). In Study 2, higher religiosity, younger age, and greater lifetime psychedelic use emerged as factors strongly associated with reporting a major life change following psychedelic use (aORs > 3.0, *p* < 0.001 for all). These findings suggest that major life changes following psychedelic use occur in approximately 1 in 5 users and may vary by demographic factors. Further research using longitudinal designs is warranted to clarify the persistence, valence, and health impact of such changes and to guide evidence-based approaches to preparation, integration, and support.

Keywords Major life changes, Psychedelics, Psychedelic-assisted therapy

Psychedelics, defined as psychoactive substances that primarily activate 5-HT_{2A} receptors (e.g., psilocybin, lysergic acid diethylamide [LSD], N,N-dimethyltryptamine [DMT]), have gained renewed attention for their potential therapeutic benefits. Across more than a decade of modern clinical research, psychedelics have demonstrated promise for a range of psychiatric and behavioral conditions, with randomized clinical trial evidence supporting their efficacy in treatment-resistant depression and major depressive disorder[1], generalized anxiety disorder and existential distress associated with serious illness[2–4], and substance use disorders, including both alcohol and tobacco use disorders[5,6]. Emerging data and ongoing trials further suggest potential benefit for conditions such as post-traumatic stress disorder (PTSD), eating disorders, and certain headache and pain syndromes[7]. While these findings have generated considerable optimism, further research is needed to understand the underlying mechanisms by which psychedelics may confer these health benefits.

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One plausible mechanism by which psychedelics may impact health outcomes is through "quantum change," or major life changes that result from transcendent psychedelic experiences[8]. Psychedelics often induce profound alterations in subjective experience during acute drug action[9], encompassing complex changes in affective, cognitive, and perceptual domains[10–12]. The intensity and qualitative nature of these experiences are strongly dose-dependent, ranging from mild perceptual distortions and emotional shifts at lower doses to deeply immersive or "mystical-type" experiences characterized by reduced self-focus, hyperassociative processing, unitive consciousness, and transcendence of time and space at higher doses[13–16]. Individuals frequently report gaining profound insights during these acute experiences – insights into the self, the origins and maintenance of psychological or behavioral disorders, and the nature of their relationships with others, including friends, family members, and romantic partners[17–19]. These insights are often described as pivotal or revelatory and may prompt major life changes, such as adopting new health behaviors, altering interpersonal relationships, or re-evaluating personal goals and values. Indeed, prior research indicates that insights during psychedelic experiences are among the strongest predictors of subsequent life changes[20].

Whether such major life changes result in improved health outcomes, however, likely depends on their valence (i.e., perceived positivity or negativity), context, and maintenance. Some reported changes, such as improved diet, increased physical activity, or reduced substance use, are inherently conducive to better health outcomes. Others, such as reported shifts in metaphysical or spiritual beliefs, careers, or relationships, may prove adaptive or maladaptive depending on context and interpretation. Still others, including changes related to sexual orientation or gender identity, remain largely unexplored. Importantly, while many individuals describe these major life changes as positive[20], some may be unanticipated or unwanted, particularly when emerging from "false insights" or misattributed meanings formed during psychedelic experiences[21,22]. Understanding which types of major life changes are beneficial, neutral, or harmful – and the conditions under which they occur – is therefore essential to guiding both clinical practice and public health messaging around psychedelic use.

Understanding the likelihood and nature of major life changes following psychedelic use, as well as their potential role in downstream health outcomes, has been challenging because few studies have systematically collected and reported these data. In a large international survey of ayahuasca users ($n = 8{,}907$), Perkins et al. (2023) found that 89.2% of respondents reported experiencing at least one major life change they attributed to their ayahuasca use[20]. Similarly, in a retrospective survey of naturalistic psychedelic users ($n = 581$), Aday et al. (2024) found that 83.0% of respondents reported experiencing a major life change in at least one of ten assessed domains[23]. While both studies provide insights, their findings may have been influenced by notable limitations. Most importantly, because both studies relied on self-selected samples, the generalizability of their findings is limited. Individuals with particularly meaningful or positive psychedelic experiences may be more likely to participate in such surveys, potentially inflating estimates of major life changes and overlooking those with neutral or negative outcomes. Additionally, one study did not collect data on race/ethnicity and neither collected data on sexual orientation, limiting the ability to assess how cultural background, minority stress, or intersectional identities may shape the experience, interpretation, and impact of psychedelic use on major life changes.

To address this gap, the present paper aims to (1) estimate the prevalence of reported major life changes following psychedelic use in a sample that was nationally representative of US adults in terms of age, race/ethnicity, and sex; (2) characterize the types of changes reported; and (3) identify demographic characteristics that may be associated with the likelihood of experiencing one or more such changes in a larger sample of US adults that was more sociodemographically diverse in terms of race/ethnicity, gender identity, and sexual orientation.

Methods

The present paper draws on samples from two studies. The first study (Study 1) was used to estimate the prevalence of reported major life changes following psychedelic use and to characterize the types of changes reported. The second study (Study 2) was used to extend the findings from Study 1 by exploring demographic characteristics that might predict the likelihood of experiencing major life changes following psychedelic use. Both studies were determined to be exempt from review by the Institutional Review Board at the University of Wisconsin – Madison. All respondents provided informed consent to participate, and all methods were performed in accordance with the relevant ethical guidelines and regulations, including the Declaration of Helsinki.

Study respondents

Respondents for Study 1 were US residents aged 18 years or older. The sample ($n = 2{,}822$) was recruited through Prolific Academic in 2021 and was stratified by age, race/ethnicity, and sex to reflect the demographic composition of the US adult population. Respondents for Study 2 were US residents between 18 and 50 years of age. This sample ($n = 13{,}012$) was also recruited through Prolific Academic, in 2023, but was not stratified by demographic characteristics. To minimize self-selection bias, neither study referenced psychedelics in its recruitment materials.

Variables

Respondents from both studies were asked to report demographic characteristics, including age in years, race/ethnicity, gender identity, sexual orientation, marital status, educational attainment, and political affiliation. In Study 2, additional measures of religiosity and employment status were included to provide a more comprehensive demographic profile. Additionally, respondents from both studies were asked to report lifetime frequency of use for the following psychedelics: ayahuasca; N, N-dimethyltryptamine (DMT); psilocybin; lysergic acid diethylamide (LSD); mescaline; peyote; and San Pedro. For this study, "lifetime use" was defined as any self-reported use of one or more of these substances at least once over the course of the respondent's

lifetime, irrespective of recency, dose, or context of use. We combined lifetime frequency of psychedelic use greater than 20 times into a single category to ensure sufficient sample size within each group and to minimize variability across categories while also maintaining the distinction between high-frequency users and others for meaningful interpretation.

All respondents who endorsed lifetime psychedelic use were asked to report which, if any, of the following major life changes occurred as a result of their experiences with psychedelics: quitting job or career; quitting alcohol, tobacco, or other substance use; divorcing or breaking up with a romantic partner; recommitting to a romantic partner; coming out with a new gender identity; coming out with a new sexual orientation; changing religious beliefs; changing diet completely; changing exercise routine completely; deciding to have a child; and deciding to not have a child. Respondents were also given the option to select "none of the above"; however, no respondents selected this option, and it was therefore excluded from analyses. For analysis, we combined conceptually related changes into single categories (e.g., divorcing or breaking up with a romantic partner and recommitting to a romantic partner were grouped together), resulting in seven types of major life changes. Additionally, we created a new "any major life change" variable to capture whether a respondent reported one of more of these changes. The full text of the survey items used to assess major life changes is provided in Supplementary Appendix 1.

Statistical analyses

A total of 15,834 respondents participated across the two studies, with 2,822 respondents in Study 1 and 13,012 respondents in Study 2. However, only the subsample of respondents who endorsed lifetime psychedelic use ($n = 613$ for Study 1; $n = 3{,}168$ for Study 2) were included in the current analyses. There were no missing data for any variables included in the analyses. All statistical analyses were performed using Stata version 18.0 at $\alpha = 0.05$ significance level using two-sided tests. Given the exploratory nature of this study, no correction for multiple testing was applied, and results should therefore be interpreted as hypothesis-generating rather than confirmatory. Exact p-values are reported to three decimal places so that readers may apply a conservative Bonferroni-type adjustment of their choosing.

First, we generated descriptive statistics to summarize the distribution of demographic characteristics for the subsample of respondents who endorsed lifetime psychedelic use in Study 1 and Study 2. Additionally, we characterized the specific types of major life changes reported by respondents in both studies by calculating the proportion of respondents who reported each type of change.

Next, to assess whether demographic characteristics might be associated with the likelihood of reporting any major life change among respondents who endorsed lifetime psychedelic use, we estimated a multivariable logistic regression model (Any Major Life Change Model). Due to concerns about small sample size and potential violation of the events per variable (EPV) rule[24] in Study 1, this analysis was conducted using only data from Study 2. We included the following independent variables: age in years (18–29, 30–39, 40–50), race/ethnicity (White, Black/African American, Hispanic/Latino, other), gender identity (man; woman; transgender, non-binary or other), sexual orientation (heterosexual; lesbian, gay, bisexual or other), marital status (single/never married, living with a partner, married, divorced or other), educational attainment (less than a bachelor's degree/bachelor's degree or more), religiosity (not at all religious, a little or moderately religious, quite or very religious), political affiliation (Democrat, Republican), employment status (yes, no), and lifetime frequency of psychedelic use (once, 2-5x, 6-10x, 11-20x, > 20x).

To examine whether the type of psychedelic used was associated with reporting any major life change, we conducted an additional analysis that included a categorical variable representing compound type. Respondents were categorized as reporting (1) psilocybin and/or LSD use only, (2) psilocybin or LSD use in combination with other psychedelics, or (3) use of other psychedelics only (e.g., DMT, mescaline, peyote, San Pedro). This variable was included only in the Any Major Life Change Model due to limited events and the exploratory nature of this analysis.

To assess whether demographic characteristics might be associated with the probability of reporting specific types of major life changes among respondents who endorsed lifetime psychedelic use, we also estimated separate multivariable logistic regression models (Change-Specific Models) for each of the seven types of changes. The Change-Specific Models only used data from Study 2 and controlled for the same independent variables as the "Any Major Life Change Model."

To assess potential multicollinearity between independent variables, we computed variance inflation factors (VIFs) for each variable. Because no VIF was larger than 1.16, we did not exclude any variables from the models due to multicollinearity[25]. VIFs, along with relevant correlations (Pearson's r), are provided in Supplementary Table 1.

Lastly, since some of the demographic characteristics included in our analyses functioned as both independent variables (e.g., religiosity) and as direct components of specific major life changes (e.g., changes to religious beliefs), there was a risk of reverse causation, potentially leading to an overestimation of their predictive value. A sensitivity analysis was conducted for each of the following mutable (at least as self-reported) demographic characteristics: marital status, religiosity, employment status, sexual orientation, and gender identity. Specifically, we re-estimated the logistic regression model excluding respondents who reported the related major life change to determine whether the demographic characteristic remained significantly associated with other major life changes. Results from the sensitivity analysis are provided in Supplementary Table 2.

Results

As reported in Table 1, the subsample of respondents who endorsed lifetime psychedelic use in Study 1 was mostly White (85.3%, $n = 523$), married or living with a partner (53.6%, $n = 328$), men (54.2%, $n = 332$), and aged 50 years or older (46.3%, $n = 284$). Most respondents who endorsed lifetime psychedelic use in Study 1

Demographic characteristics	Study 1 % (n)	Study 2 % (n)	χ^2 (df)	*p*-value
Age			1600 (3)	<0.001
>50 years	46.3 (284)	0.0 (0)		
40 - 50 years	18.6 (114)	21.4 (678)		
30 - 39 years	15.0 (92)	36.8 (1166)		
18 - 29 years	20.1 (123)	41.8 (1324)		
Race/ethnicity			35.46 (3)	<0.001
White	85.3 (523)	74.8 (2368)		
Black/African American	4.4 (27)	5.2 (164)		
Hispanic/Latino	4.9 (30)	8.2 (259)		
Other	5.4 (33)	11.9 (377)		
Gender identity			48.38 (2)	<0.001
Woman	44.2 (271)	51.7 (1638)		
Man	54.2 (332)	41.4 (1312)		
Transgender, non-binary or other	1.6 (10)	6.9 (218)		
Sexual orientation			88.52 (1)	<0.001
Heterosexual	80.9 (496)	61.0 (1933)		
Lesbian, gay, bisexual or other	19.1 (117)	39.0 (1235)		
Marital status			157.29 (3)	<0.001
Single or never married	28.1 (172)	38.9 (1233)		
Living with a partner	15.7 (96)	29.4 (932)		
Married	37.9 (232)	24.4 (772)		
Divorced or other	18.4 (113)	7.3 (231)		
Educational attainment			0.14 (1)	0.704
<Bachelor's degree	50.9 (312)	51.7 (1639)		
≥Bachelor's degree	49.1 (301)	48.3 (1529)		
Religiosity			-	-
Not religious		61.1 (1935)		
Little or moderately religious		32.0 (1015)		
Quite or very religious		6.9 (218)		
Political affiliation			1300 (2)	<0.001
Republican	12.6 (77)	18.5 (586)		
Democrat	50.2 (308)	81.5 (2582)		
Other	37.2 (228)	0.0 (0)		
Employment status			-	-
Unemployed		25.3 (800)		
Employed		74.8 (2368)		
Psychedelic usage frequency			12.59 (4)	0.013
Once	13.2 (81)	13.9 (441)		
2 - 5 times	38.3 (235)	37.3 (1182)		
6 - 10 times	17.0 (104)	19.2 (608)		
11 - 20 times	10.6 (65)	13.6 (431)		
>20 times	20.9 (128)	16.0 (506)		

Table 1.. Demographic Comparison of Respondents Who Endorsed Lifetime Psychedelic Use in Study 1 (n=613) and Study 2 (n=3168).

were heterosexual (80.9%, $n=496$), but a substantial number identified as gay, lesbian, bisexual, or other (19.1%, $n=117$). Most (86.8%, $n=532$) reported using psychedelics more than once, with 20.9% ($n=128$) reporting lifetime use of more than 20 times.

Compared to Study 1, the subsample of respondents who endorsed lifetime psychedelic use in Study 2 was more diverse in terms of race/ethnicity, gender identity, and sexual orientation. Specifically, Study 2 had greater representation of Black/African American (5.2% vs. 4.4% in Study 1), Hispanic/Latino (8.2% vs. 4.9% in Study 1), and other racial/ethnic groups (11.9% vs. 5.4% in Study 1). Study 2 included a higher proportion of women (51.7% vs. 44.2% in Study 1) as well as more transgender, non-binary, and other gender minority respondents (6.9% vs. 1.6% in Study 1). Study 2 also included a higher proportion of lesbian, gay, bisexual, or other non-heterosexual respondents (39.0% vs. 19.1% in Study 1). The eligibility criteria for Study 2 (ages 18 to 50) also contributed to a younger subsample, with 41.8% of respondents aged 18 to 29 compared to 20.1% in Study 1.

As reported in Table 2, among the subsample of respondents who endorsed lifetime psychedelic use in the dataset that was nationally representative of US adults in terms of age, race/ethnicity, and sex (Study 1), 18.4% ($n = 113$) reported at least one major life change that they attributed to their experiences with psychedelics (95% CI [15.4, 21.7]). Among respondents who reported at least one major life change ($n = 113$), both the median and mode number of changes reported was 1, indicated that the most common response was a single reported change. The most common major life change reported was changes to relationship status (6.9%, $n = 42$), followed by changes to diet or exercise routine (6.2%, $n = 38$), quitting alcohol, tobacco, or other substance use (5.5%, $n = 34$), changes to religious beliefs (5.5%, $n = 34$), quitting a job or career (2.8%, $n = 17$), changes to family intentions (2.0%, $n = 12$), and changes related to sexual orientation or gender identity (1.3%, $n = 8$). Findings from Study 2 were largely consistent with Study 1, though Study 2 had a higher proportion of respondents who reported experiencing at least one major life change (26.3%, 95% CI [24.8, 27.9]).

In assessing whether demographic characteristics might be associated with the likelihood of respondents reporting any major life change following psychedelic use, a test of the full Any Major Life Change Model compared with a constant-only or null model was statistically significant ($\chi^2_{(20)} = 448.29$, $p < 0.001$). The model had moderate fit for logistic regression (McFadden's pseudo $R^2 = 0.123$), explaining 12.3% of the variability in the dependent variable. All Change-Specific Models also were statistically significant and demonstrated acceptable fits, with likelihood ratio chi-square values ranging from 66.78 to 252.66 ($p < 0.001$ for all models) and McFadden's pseudo R^2 values ranging from 0.084 to 0.169.

As reported in Table 3, age, religiosity, and lifetime frequency of psychedelic use were strongly associated (aORs > 3.00) with reporting any major life change among respondents who endorsed lifetime psychedelic use, and these effects were largely consistent across every type of change (see Table 4). Respondents aged 18 to 29 years had more than three times the odds of reporting any major life change as adults aged 40 to 50 years (aOR = 3.15, 95% CI [2.39, 4.15], $p < 0.001$). Likewise, respondents who described themselves as "quite religious" or "very religious" had more than three times the odds of reporting any major life change as those who were "not at all religious" (aOR = 3.21, 95% CI [2.30, 4.49], $p < 0.001$). Religiosity remained strongly associated with reporting any major life change in a re-estimated multivariable logistic regression model that excluded respondents who reported changing religious beliefs (aOR = 2.96, 95% CI [2.04, 4.29], $p < 0.001$).

Additionally, the odds of reporting any major life change increased substantially with higher lifetime frequency of psychedelic use. Compared to those who used psychedelics only once, respondents who used psychedelics 6–10 times and 11–20 times had 4.39 and 4.94 the odds, respectively, of reporting any major life change following psychedelic use (aOR 4.39, 95% CI [3.07, 6.28], $p < 0.001$; aOR 4.94, 95% CI [3.40, 6.28], $p < 0.001$). Respondents who used psychedelics more than 20 times had the highest odds of reporting any major life change, with an adjusted odds ratio of 10.03 relative to those who used psychedelics only once (95% CI [6.92, 14.54], $p < 0.001$).

Most other demographic characteristics included in our models were moderately (aORs from 1.50 to 3.00) to weakly (aORs < 1.50) associated with the likelihood of reporting any major life change following psychedelic use, including race/ethnicity, gender identity, sexual orientation, and political affiliation. Two demographic characteristics (employment status and educational attainment) were not significantly associated with reporting any major life change (see Table 3).

In a supplemental model that included compound type, respondents who reported using psychedelics other than psilocybin or LSD exclusively had substantially higher odds of reporting any major life change compared to those who used psilocybin and/or LSD only (aOR = 4.16, 95% CI [2.58, 6.72], $p < 0.001$). Respondents who reported using psilocybin or LSD in combination with other psychedelics also had higher odds of reporting a major life change (aOR = 1.76, 95% CI [1.42, 2.19], $p < 0.001$). These findings suggest that experiences involving non-psilocybin/LSD psychedelics – compounds often used in higher doses or ceremonial settings – may be more likely to result in self-reported life changes than experiences limited to psilocybin or LSD.

As reported in Table 4, while most other demographic characteristics were only moderately or weakly associated with the likelihood of reporting any major life change, several were strongly associated with specific types of change. For instance, gender minority respondents (i.e., respondents who identified as transgender, non-binary or other) had 3.61 times the odds of reporting coming out with a new sexual orientation or gender identity as cisgender respondents (aOR = 3.61, 95% CI [1.96, 6.64], $p < 0.001$). Note that this comparison should be interpreted cautiously, as 'coming out' may not be a relevant concept for most cisgender respondents.

	Study 1 ($n = 613$)		Study 2 ($n = 3168$)	
Type of major life change	**% (*n*)**	**95% CI**	**% (*n*)**	**95% CI**
Relationship status	6.9 (42)	4.9, 8.9	9.7 (306)	8.6, 10.7
Diet or exercise routine	6.2 (38)	4.3, 8.1	8.9 (281)	7.9, 9.9
Quitting alcohol, tobacco, or other substance use	5.5 (34)	3.7, 7.4	10.1 (319)	9.0, 11.1
Religious beliefs	5.5 (34)	3.7, 7.4	9.0 (285)	8.0, 10.0
Quitting job or career	2.8 (17)	1.5, 4.1	2.8 (90)	2.3, 3.4
Family intentions	2.0 (12)	0.1, 3.1	1.8 (57)	1.3, 2.3
Sexual orientation or gender identity	1.3 (8)	0.0, 2.2	2.7 (84)	2.1, 3.2
Total reporting any major life change	18.4 (113)	15.4, 21.5	26.3 (834)	24.8, 27.9

Table 2. Type of major life changes reported by respondents endorsing lifetime psychedelic Use.

Demographic characteristic	aOR	95% CI	*p*-value
Age			
40–50 years	1.00		
30–39 years	1.97	1.52, 2.55	< 0.001
18–29 years	3.15	2.39, 4.15	< 0.001
Race/ethnicity			
White	1.00		
Black/African American	1.54	1.07, 2.22	0.021
Hispanic/Latino	1.31	0.96, 1.77	0.085
Other	1.20	0.92, 1.56	0.171
Gender identity			
Woman	1.00		
Man	1.59	1.31, 1.93	< 0.001
Transgender, non-binary or other	1.43	1.01, 2.01	0.042
Sexual orientation			
Heterosexual	1.00		
Lesbian, gay, bisexual or other	1.32	1.08, 1.61	0.006
Marital status			
Single or never married	1.00		
Living with a partner	1.29	1.05, 1.60	0.017
Married	1.54	1.21, 1.95	< 0.001
Divorced or other	1.22	0.84, 1.77	0.297
Educational attainment			
> Bachelor's degree	1.00		
≤Bachelor's degree	0.93	0.78, 1.11	0.431
Religiosity			
Not religious	1.00		
Little or moderately religious	1.48	1.22, 1.79	< 0.001
Quite or very religious	3.21	2.30, 4.49	< 0.001
Political affiliation			
Republican	1.00		
Democrat	1.40	1.09, 1.79	0.008
Employment status			
Unemployed	1.00		
Employed	1.14	0.93, 1.40	0.194
Psychedelic usage frequency			
Once	1.00		
2–5 times	1.79	1.27, 2.54	0.001
6–10 times	4.39	3.07, 6.28	< 0.001
11–20 times	4.94	3.40, 7.19	< 0.001
>20 times	10.03	6.92, 14.54	< 0.001

Table 3. Adjusted odds ratios (aORs) of experiencing any major life change following psychedelic use ($n = 3168$).

Similarly, sexual minority respondents (i.e., respondents who identified as lesbian, gay, bisexual or other) had nearly 3 times the odds of reporting this type of change as heterosexual respondents (aOR = 2.86, 95% CI [1.63, 5.01], $p < 0.001$). Additionally, men had 2.80 times the odds of women of reporting quitting their job or career following psychedelic use (aOR = 2.80, 95% CI [1.66, 4.72], $p < 0.001$).

Discussion

The present paper extends the emerging literature on psychedelic use and major life changes by quantifying the prevalence, types, and demographic characteristics associated with major life changes following psychedelic use across two large US samples. Overall, we found that approximately one in five respondents (18.4%, $n = 113$) in the nationally representative sample of US adults in terms of age, race/ethnicity, and sex (Study 1) reported at least one major life change that they attributed to their experiences with psychedelics. Approximately one in four respondents (26.3%, $n = 834$) in the larger, non-representative sample (Study 2) reported at least one major life change.

Demographic characteristic	Quitting alcohol, tobacco or other substances	Relationship status	Religious beliefs	Diet or exercise	Quitting job or career	Sexual orientation or gender identity	Family intentions
Age							
40–50 years	1.00	1.00	1.00	1.00	1.00	1.00	1.00
30–39 years	2.01 (1.36, 2.96)***	1.59 (1.11, 2.27)*	1.88 (1.26, 2.80)**	2.53 (1.63, 3.93)***	1.56 (0.78, 3.10)	2.25 (0.98, 5.19)	5.07 (1.72, 15.0)**
18–29 years	2.55 (1.70, 3.82)***	1.76 (1.20, 2.59)**	2.96 (1.95, 4.49)***	3.96 (2.51, 6.24)***	3.19 (1.60, 6.40)**	4.90 (2.14, 11.2)***	5.87 (1.91, 18.1)**
Race/ethnicity							
White	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Black/African American	0.68 (0.37, 1.25)	1.57 (0.96, 2.57)	0.79 (0.43, 1.46)	1.63 (0.98, 2.71)	1.30 (0.57, 2.98)	1.95 (0.88, 4.34)	2.39 (0.89, 6.40)
Hispanic/Latino	1.44 (0.96, 2.18)	1.48 (0.97, 2.25)	1.05 (0.66, 1.67)	1.49 (0.97, 2.27)	1.03 (0.48, 2.25)	0.29 (0.07, 1.21)	2.60 (1.20, 5.63)*
Other	1.24 (0.87, 1.77)	1.07 (0.73, 1.56)	1.09 (0.75, 1.59)	1.34 (0.93, 1.93)	0.72 (0.35, 1.50)	0.79 (0.39, 1.61)	1.04 (0.45, 2.40)
Gender identity							
Woman	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Man	1.89 (1.43, 2.51)***	1.07 (0.81, 1.42)	1.71 (1.27, 2.30)***	1.68 (1.25, 2.26)**	2.80 (1.66, 4.72)***	1.22 (0.69, 2.16)	0.62 (0.33, 1.17)
Trans, non-binary, or other	1.31 (0.81, 2.13)	1.08 (0.68, 1.71)	1.48 (0.92, 2.40)	1.42 (0.86, 2.33)	1.45 (0.56, 3.77)	3.61 (1.96, 6.64)***	1.02 (0.39, 2.65)
Sexual orientation							
Heterosexual	1.00	1.00	1.00	1.00	1.00	1.00	1.00
LGB or other	1.30 (0.97, 1.72)	1.48 (1.12, 1.96)**	1.47 (1.09, 1.98)*	1.13 (0.83, 1.52)	1.08 (0.65, 1.81)	2.86 (1.63, 5.01)***	1.30 (0.70, 2.43)
Marital status							
Single or never married	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Living with a partner	0.97 (0.72, 1.31)	1.85 (1.36, 2.52)***	1.20 (0.87, 1.65)	1.07 (0.78, 1.46)	0.94 (0.53, 1.67)	1.28 (0.71, 2.29)	1.45 (0.75, 2.80)
Married	0.84 (0.59, 1.19)	2.07 (1.46, 2.92)***	1.44 (1.01, 2.07)*	1.23 (0.86, 1.77)	2.08 (1.20, 3.63)*	2.62 (1.41, 4.87)**	1.91 (0.89, 4.09)
Divorced or other	0.83 (0.49, 1.42)	1.60 (0.95, 2.69)	1.59 (0.95, 2.66)	1.22 (0.69, 2.13)	0.63 (0.18, 2.15)	1.25 (0.43, 3.66)	1.34 (0.43, 4.23)
Educational attainment							
< Bachelor's degree	1.00	1.00	1.00	1.00	1.00	1.00	1.00
≥Bachelor's degree	0.73 (0.57, 0.95)*	0.89 (0.69, 1.15)	0.92 (0.70, 1.20)	1.10 (0.85, 1.44)	0.92 (0.58, 1.45)	1.23 (0.76, 1.97)	0.57 (0.32, 1.03)
Religiosity							
Not religious	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Little or moderately religious	1.56 (1.19, 2.04)**	1.63 (1.24, 2.13)***	2.17 (1.64, 2.87)***	1.44 (1.08, 1.90)*	1.66 (1.02, 2.69)*	1.92 (1.15, 3.21)*	1.81 (1.01, 3.22)*
Quite or very religious	2.77 (1.79, 4.29)***	2.61 (1.67, 4.09)***	2.63 (1.66, 4.18)***	1.64 (1.01, 2.66)*	3.23 (1.62, 6.40)**	5.03 (2.51, 10.1)***	1.48 (0.53, 4.17)
Political affiliation							
Republican	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Democrat	1.47 (1.04, 2.09)*	2.18 (1.46, 3.24)***	1.29 (0.90, 1.84)	1.19 (0.83, 1.71)	1.84 (0.99, 3.42)	1.60 (0.75, 3.40)	0.68 (0.34, 1.34)
Employment status							
Unemployed	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Employed	1.30 (0.97, 1.74)	1.18 (0.88, 1.59)	1.16 (0.85, 1.57)	1.03 (0.76, 1.39)	1.15 (0.67, 1.95)	1.52 (0.85, 2.72)	1.12 (0.60, 2.08)
Usage frequency							
Once	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2–5 times	2.45 (1.24, 4.85)*	1.37 (0.81, 2.32)	2.00 (1.03, 3.88)*	2.35 (1.19, 4.65)*	0.88 (0.33, 2.33)	1.66 (0.66, 4.18)	1.10 (0.29, 4.10)
6–10 times	5.91 (2.99, 11.7)***	3.23 (1.90, 5.48)***	4.31 (2.22, 8.39)***	5.26 (2.65, 10.4)***	3.62 (1.46, 8.96)**	2.23 (0.84, 5.93)	3.05 (0.85, 11.0)
11–20 times	7.00 (3.51, 14.0)***	3.70 (2.14, 6.39)***	6.65 (3.41, 13.0)***	7.43 (3.73, 14.8)***	2.17 (0.80, 5.87)	2.08 (0.73, 5.92)	3.75 (1.01, 13.9)*
>20 times	13.5 (6.87, 26.5)***	5.79 (3.40, 9.87)***	11.8 (6.12, 22.6)***	11.0 (5.55, 21.7)***	4.67 (1.86, 11.7)**	6.83 (2.68, 17.4)***	10.2 (2.95, 35.2)***

Table 4. Adjusted odds ratios (aORs) for reporting specific types of major life changes (Dependent Variables) following psychedelic Use, by demographic characteristic (Independent Variables) [aOR (95% CI); ($n = 3168$). *p < 0.05 **p < 0.01 ***p < 0.001. LGB is lesbian, gay, or bisexual.

The prevalence of reported major life changes in our nationally representative sample (Study 1; 18.4%, $n = 113$) was substantially lower than the proportions reported by Perkins et al. (2023; 89.2%, $n = 7,945$) and Aday et al. (2024; 83.0%, $n = 482$)[20,23]. This contrast in findings is likely due to several factors, including differences in recruitment strategies, study samples, and the substances and contexts of use. Both Perkins et al. (2023) and Aday et al. (2024) recruited respondents from psychedelic-specific venues and platforms, which may have increased self-selection bias by attracting individuals with particularly meaningful or positive experiences. Additionally, more than two-thirds of respondents in Perkins et al. (2023) used ayahuasca in ceremonial or spiritual settings – contexts often associated with higher doses, guided facilitation, and strong expectations of

transformation – all of which may amplify perceived effect. By contrast, our study included individuals who may have used a variety of psychedelics across a wide range of contexts, including casual or recreational use, and did not assess dose or differentiate between microdosing and microdosing. Consistent with this interpretation, our supplemental analysis found that respondents who reported using psychedelics other than psilocybin or LSD (i.e., compounds more often associated with ceremonial or high-dose use) had substantially higher odds of reporting a major life change than those who used psilocybin or LSD only, further suggesting that differences in compound type and dosing may contribute to variation in reported life changes. Psilocybin and LSD are also the psychedelics most frequently used in microdosing regimens, which tend to produce subtler perceptual and emotional effects (if any, beyond placebo effects) than full-dose ("macrodose") experiences[26,27]. The lower proportion of respondents reporting major life changes in our study may therefore reflect these variations in both drug intensity and context of use. Differences in how "major life changes" were operationalized across studies likely also contributed: Perkins et al. (2023) and Aday et al. (2024) examined a broader array of changes (e.g., changes to goals and values) than those enumerated in the current study, potentially capturing experiences not explicitly measured in the present research.

Although our findings confirm that major life changes following psychedelic use are not uncommon, they also demonstrate that such changes are far from universal. These results suggest that while meaningful transformations can occur, they should not be assumed or expected as reliable outcomes. Individuals who pursue psychedelic use – whether in naturalistic or therapeutic contexts – should do so with realistic expectations. Public health messaging that overstates the likelihood of life-altering insights or major life changes risks promoting inflated expectations and potential disappointment. Moreover, the likelihood and magnitude of such changes are likely shaped by a constellation of factors, including individual differences in psychological readiness, intention, and openness; contextual factors such as set, setting, and "matrix"; and experiential factors such as emotional intensity, dose, and integration support[28–33]. Future research should investigate how these factors interact to influence the occurrence, valence, and durability of major life changes following psychedelic use.

Another novel finding of our study is that higher religiosity emerged as a strong predictor of reporting any major life change following psychedelic use. Spiritual, existential, religious, and theological (SERT) experiences are common in response to psychedelic use and may serve as possible mediators of therapeutic change, as evidenced by research finding associations between SERT experiences and outcomes in cancer-related distress, treatment-resistant depression, and substance use disorders[34]. Indeed, Perkins et al. (2023) and Aday et al. (2024) both examined changes to religious or spiritual status as an outcome of psychedelic use; however, neither explored personal religiosity as a predictor of major life changes. Notably, Perkins et al. (2023) also found that ayahuasca use in religious contexts (e.g., ayahuasca churches) was associated with distinct patterns of life changes, underscoring the contextual influence of belief frameworks on the nature and meaning of psychedelic experiences. By incorporating individual religiosity as a predictor, our study extends this prior work to elucidate how both contextual and personal dimensions of faith and spirituality may shape psychedelic experiences.

Given the cross-sectional nature of the data, we cannot definitively determine the direction of the association between religiosity and major life changes, leaving it unclear whether religiosity influences the likelihood of such changes or is itself shaped by them. It stands to reason that religiosity would be associated with changes in religious beliefs, as shown in our study; however, religiosity was also associated with all other types of major life changes. Importantly, this strong association remained even after respondents who reported changes to religious beliefs were excluded from our models, suggesting that an individual's level of religiosity prior to psychedelic use may be predictive of other types of major life changes. Perhaps religiosity shapes the interpretation of the psychedelic experience (e.g., spiritual insights resonate more strongly with religious individuals), or highly religious individuals more readily integrate psychedelic experiences into their pre-existing belief systems, thereby amplifying life changes[34,35]. Regardless, this finding lends support to recent calls by researchers for the integration of SERT dynamics into psychedelic-assisted therapies[34].

Our findings regarding the other demographic characteristics that emerged as strongly associated with major life changes are largely consistent with the other two studies to systematically measure life changes related to psychedelic use. Similar to Perkins et al. (2023), we found that younger age was a strong predictor of reporting any major life change following psychedelic use, adding support to the growing literature on developmental and psychosocial influences in shaping psychedelic experiences[36]. We also found that greater lifetime frequency of psychedelic use was strongly associated with reporting any major life change following psychedelic use. This finding is consistent with both Perkins et al. (2023) and Aday et al. (2024), reinforcing evidence for a robust frequency-dependent association between psychedelic use and major life changes.

Our findings also suggest the certain demographic subgroups might be more likely to experience specific major life changes. Most notably, identifying as sexual or gender minority, two demographic characteristics that were otherwise weakly associated with major life changes generally, was strongly associated with reporting changes specific to sexual orientation and gender identity. If these changes involved reductions in shame or gender dysphoria, as increasingly hypothesized by researchers[37–39], psychedelics may confer unique therapeutic benefits for sexual and gender minority individuals.

Our findings may have important implications for clinical practice and ethical standards of care surrounding psychedelic-assisted therapy. They demonstrate that while only some individuals who use psychedelics report major life changes, such changes can span diverse domains – including relationships, health behaviors, and religious beliefs – and may be more likely among those who are younger, more religious, or have greater lifetime frequency of psychedelic use. For clinicians and mental health professionals, this information can inform preparatory discussions and consent processes by helping patients set realistic expectations regarding the likelihood and nature of major life changes that may arise from psychedelic experiences. Incorporating this evidence into informed consent procedures can help patients make more informed decisions about whether

to proceed with treatment given the possibility of such changes, including those that may be unanticipated or unwanted.

Moreover, by recognizing which individuals may be more predisposed to such changes, clinicians and mental health professionals can proactively prepare integration strategies that support adaptation, meaning-making, emotional processing, and problem solving. This anticipatory approach could enhance therapeutic safety and optimize outcomes by mitigating potential risks such as confusion or emotional distress. Finally, these findings underscore the importance of framing psychedelic-assisted therapy with a balanced, evidence-based discourse that acknowledges the potential for profound transformation while tempering expectations of universal life change.

Building on these clinical implications, our findings also highlight the need for additional research to extend understanding of who experiences major life changes and under what conditions. Although our analyses identified certain demographic characteristics associated with reported major life changes, we cannot determine whether these characteristics confer greater susceptibility to change, predict specific types of change, or influence the persistence or health impact of these changes over time. If characteristics such as age, religiosity, or sexual orientation and gender identity indeed moderate the likelihood or nature of changes following psychedelic use, this knowledge could further inform personalized preparation and integration strategies in clinical practice. Future longitudinal studies are needed to assess both the emergence and persistence of major life changes and to evaluate whether these changes mediate long-term improvements in mental and physical health. Such work would benefit from systematically incorporating standardized instruments, thus enabling researchers to capture the frequency, valence, and types of changes in a structured and replicable manner.

Limitations

These results should be interpreted in the context of several important limitations. First, while one dataset used in our analyses was stratified to be representative of the US adult population in terms of age, race/ethnicity, and sex, it did not necessarily represent other demographic characteristics. Additionally, the second dataset was not stratified to be representative. Consequently, the generalizability of these findings to the broader US population may be limited.

Second, the cross-sectional study design prevents conclusive causal inferences, particularly with respect to mutable self-reported demographic characteristics such as religiosity. Because all data were collected at a single time point, the temporal sequence between these characteristics and reported major life changes could not be firmly established, introducing the potential for endogeneity or reverse causation. To partially mitigate this concern, we conducted a sensitivity analysis in which we excluded respondents who reported the related major life change and re-examined whether these demographic characteristics remained significant predictors. While this approach strengthens the credibility of our findings, future research using longitudinal data would provide a more definitive test of causality in the relationship between demographic characteristics that can shift like religiosity and major life changes following psychedelic use.

Third, the dataset did not include information about other factors that may influence the psychedelic experience, including set (e.g., expectations, emotional state, and intentions associated with use), setting (i.e., physical and social environment where use takes place), and "matrix" (i.e., broader living conditions and sociocultural circumstances). Nor did we assess individual differences in psychological readiness, motivation, or intention prior to psychedelic use, or experiential factors such as emotional intensity, dose, or the presence and quality of integration support following the experience. Collecting such data would allow for a more comprehensive understanding of how these contextual and experiential variables shape the likelihood, nature, and interpretation of major life changes. Additionally, we did not collect information about the valence of the life changes reported, limiting our ability to determine whether such changes were experienced as beneficial, neutral, or distressing. Including these factors in future studies would be important considering the relatively large unexplained variances in our outcome variables and the need to clarify which conditions foster adaptive versus maladaptive change.

Finally, the multivariable logistic regression models used to predict infrequent changes (e.g., changes to family intentions) were based on cell sizes less than 50. This limited sample size may have resulted in unstable estimates and inflated standard errors, thereby reducing statistical power and potentially compromising the reliability and validity of our findings. Accordingly, these findings should be viewed as exploratory in nature and used to generate hypotheses for future research rather than definitively explain the role of demographic characteristics.

Conclusion

In summary, this study provides new insights into the prevalence, types, and demographic characteristics associated with major life changes following psychedelic use. By using nationally representative and sociodemographically diverse samples, this study offers a more balanced picture of psychedelic-related transformation than has previously been available. Our findings challenge assumptions that major life changes are universal outcomes of psychedelic experiences and underscore the likely importance of context, individual differences, and frequency of use in shaping such transformations. These insights may have important implications for clinical practice and public health messaging, highlighting the need to balance growing enthusiasm for psychedelics with realistic expectations about the likelihood and nature of potential life changes. Future longitudinal research is needed to clarify the persistence, valence, and health impact of such changes and to guide evidence-based approaches to preparation, integration, and support.

Data availability

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

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Author contributions
N.A.C: formal analysis, writing – original draft; O.S.: conceptualization, data curation, writing – review and editing; S.M.: writing – review and editing; M.N.E.: writing – review and editing; G.H.M: writing – review and editing; S.B.G.: writing – review and editing; R.A.S.: writing – review and editing; P.S.H.: writing – review and editing, supervision.

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Declarations

Competing interests
P.S.H. was previously in paid advisory relationships with Eleusis Benefit Corporation, Journey Colab Corporation, Reset Pharmaceuticals Inc., and Silo Pharma, and is currently in paid advisory relationships with Bright Minds Biosciences Ltd. and holds stock options in Beckley Psytech. P.S.H. is also co-founder of Equulus Therapeutics and Mycelial Health. O.S. was a co-founder of Eudelics AB. No financial conflicts of interest were reported by any other authors of this paper.

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