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Are you “the medicine”? Intention category and explicitness as predictors of perceived outcomes associated with psychedelic experiences

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Abstract

Background. It is widely accepted that beyond the pharmacological predictors, individuals' pre-drug mental disposition, including *intentions*, influences the psychedelic experience. However, is it not fully clear how intentions and outcomes relate. This study explores the intention category and explicitness in association with outcomes.

Methods. Content validated intention categories developed during sequential expert interviews provided the basis for the quantitative online data collection. Retrospective self-report data ($N = 296$) based on participants' most recent experience involving a high dosage of long-acting classical serotonergic psychedelics included a variety of measures, of which *intention category* and *explicitness* constituted the basis for the present analyses. Assessed outcomes included realisation, significance, occurrence of mystical-type and challenging experiences, emotional breakthroughs, and connectedness. Linear and multiple regression analyses were utilised to explore the associations between these.

Results. An intention categorization model which can be utilized in future research was developed. Explicitness was confirmed to be indicative of higher outcome measure scores, but not lower challenging experience scores. When combined with explicitness, specific intention categories statistically significantly predicted most outcome measures.

Conclusions. Specific explicit intentions are predictive of intention realisation and significance, occurrence of mystical-type experiences, emotional breakthroughs and connectedness. The findings highlight the salience of the explicit nature and type of intentions for psychedelic experience outcomes and invite further research exploring their relation to set, setting and substance.

Keywords: *intention, intention psychedelic experience, psychedelics, psychedelic preparation, psychedelic predictors*

Background

The increasing research interest in predictors of psychedelic experiences [1-6] can be explained by the fact that despite the exponentially growing number of publications in psychedelic research, effective ways of inducing desired outcomes associated with such experiences are not fully understood [3, 6, 7]. In this study, psychedelics represent powerful consciousness-altering serotonergic psychoactive substances, also known as “psychoplastogens” by promoting cortical neuroplasticity [8]. These substances affect a variety of cognitive processes and can reliably induce profound alterations in mood and perception [9]. These effects and alterations can last between several minutes and 24 hours depending on the dose, substance, and method of ingestion, however, the neuroplasticity window, which appears to open within a few hours, may last up to a few days [10]. Phenomenological analyses of psychedelic experiences point to a certain degree of communality [11, 12], however, broadly speaking, what will occur during an individual’s psychedelic experience remains largely unpredictable [3, 6, 7].

It is widely accepted that in addition to the pharmacological predictors, individuals’ pre-drug mental disposition profoundly influences the acute psychedelic effects [5, 13, 14]. Set, as the part of the renowned formula “set, setting, substance” [15], is known to incorporate elements such as personality traits, mindset, preparedness, expectations and *intentions* [1, 4, 6, 16, 17, 18]. A variety of studies have explored possible interconnections between intentions and outcomes focusing in-depth either on *intention category* or *intention explicitness*, but not both.

Intention category

While clustering psychedelic intentions some researchers took the top-down approach of pre-defining these based on their own expertise [e.g., 1, 3, 19]. Others extracted intentions from participants’ data directly [e.g., 5, 6, 20]. No universal content-validated categorization of psychedelic intentions appears to be available this far (Table 1).

Author(s), year*	Intention / motive categorisation (psychedelic use)
Adamczyk et al., 2025 [16]	self-exploration; spiritual purposes; self-healing; cognitive exploration; recreational activities; curiosity; boredom; other unspecified reasons.
Romeo et al., 2025 [21]	curiosity; self-exploration; recreational; spiritual; therapeutic.
Argyri et al., 2024 [20]	exploration or curiosity; have fun; active search for healing; help gain clarity on life decisions; motivated by positive prior experiences; self-development; inspired by media hype; seeking spiritual experience; no intention (non-intentional ingestion).
Mosina & Michael, 2024 [19]	have fun; enjoy the visuals; connect to / explore the outer world; experiment with psychedelic substances in a non-judgemental environment; join my tripping friends; connect to / explore the inner world; feel the intensity; learn and grow; get high; heal.

Borkel et al., 2024 [1]	fun; self-knowledge; therapeutic; spiritual/religious; creativity; escapism; group acceptance; don't know.
Lake & Lucas, 2024 [22]	personal growth; recreation; religious / spiritual purposes; general wellbeing; reduce the use of other substances; medical / therapeutic purposes.
Basedow & Kuitunen-Paul, 2022 [23]	coping; conformity; enhancement; expansion; social.
McCartney et al., 2022 [5]	escapism; self-exploration.
Russ et al., 2019 [6]	(motivations) spiritual; norm; pleasure; betterment
Haijen et al., 2018 [3]	fun/recreational/party; therapeutic/personal growth; medicinal; spiritual experience; religious experience; curiosity; social; connection with nature; to escape from difficult emotions; to confront difficult emotions.

Table 1. Intentions and motives for psychedelic use: previous categorization examples

A review of research findings on predictive value of intention categories (Table 2), highlights the complexity of the relationship between intentions and outcomes. For example, spiritual and religious motivations were found to predict mystical-type experiences [6] but also to be associated with experiences of ontological shock and existential distress [20]. Escapism and recreational intentions were found to be associated with distress and extended difficulties [1, 5, 6, 20], but also with a lower likelihood of challenging experiences [3]. Furthermore, intention categories have not been previously linked to individual's *perceived fulfilment*, from now on referred to as *realisation*, or perceived significance of intentions.

Overall, previous research delivers valuable insights about the impact of intentions on the outcomes of psychedelic experiences generally. However, the distinct categorization approaches combined with a rich variety of assessed outcome measures impede comparability of findings.

Intention	Author(s), year	Findings
therapeutic	Healy et al., 2025 [24]	significant psychological benefits: improvements with large effect sizes in PTSD and CPTSD symptoms, trait shame, social and general connectedness.
therapeutic	Borkel et al., 2024 [1]	associated with greater psychopathology and lower wellbeing, which is attempted to be explained by the psychological profiles of those seeking treatment.
search for healing	Argyri et al., 2024 [20]	post-acute extended difficulties.
self-healing	Adamczyk et al., 2025 [16]	significantly higher EDI scores (ego-dissolution representing one of the theoretical approaches proposed to shape post-acute effects of a psychedelic experience, encompasses alterations in agency, self-identity, self-awareness and suggests a profound shift in self-perception).
escape	McCartney et al., 2022 [5]	more distress and negative outcomes.
escapism	Borkel et al., 2024 [1]	highest positive correlation with psychopathology variables and highest negative correlation with personality and well-being variables; labelled escapism a risk factor in psychedelic therapy.
creativity enhancement	Borkel et al., 2024 [1]	predicted worse psychopathology, attempted to be explained by associations between creativity and mental illness and a model of shared vulnerabilities.
self-exploration	Adamczyk et al., 2025 [16]	significantly higher EDI scores.
self-exploration	McCartney et al., 2022 [5]	linked to curiosity, readiness to embrace the experience, engage with unexpected or challenging material, and desire for deeper understanding of the self.
self-development	Argyri et al., 2024 [20]	post-acute extended difficulties.
self-knowledge	Borkel et al., 2024 [1]	associated with higher meaningfulness of the experience.
help gain clarity on life decisions	Argyri et al., 2024 [20]	post-acute extended difficulties.
spiritual purposes	Adamczyk et al., 2025 [16]	significantly higher EDI scores.
spiritual connection	Haijen et al., 2018 [3]	includes connection to nature, having a spiritual experience and/or therapeutic purposes: positively associated with well-being (WEMWBS) scores at baseline as well as predictive of well-being scores at the 2- and 4-week follow-up; trending towards statistical significance of being a mystical-type experience predictor; positive correlation with “clear intentions”.
spiritual and religious	Borkel et al., 2024 [1]	predicted greater wellbeing, higher meaningfulness, mindful acceptance, and less psychopathology.
spiritual	Russ et al., 2019 [6]	strong predictor for occurrence of mystical-type experiences.
seeking spiritual experiences	Argyri et al., 2024 [20]	post-acute extended difficulties.
spiritual / religious	Romeo et al., 2025 [21]	significant predictor of MEQ (mystical experience questionnaire) scores
recreation	Haijen et al., 2018 [3]	component resulting from the principal component analysis which includes categories: fun/recreational/party, social, curiosity associated with a lower likelihood of having challenging experiences and negatively associated with “clear intentions”.
have fun	Argyri et al., 2024 [20]	post-acute extended difficulties.
recreation	Romeo et al., 2025 [21]	lowest association with MEQ scores.
media hype	Argyri et al., 2024 [20]	post-acute extended difficulties.
curiosity	Adamczyk et al., 2025 [16]	significantly higher EDI scores. Linked to self-exploration.
exploration/curiosity	Argyri et al., 2024 [20]	post-acute extended difficulties.
pleasure	Russ et al., 2019 [6]	among predictors for adverse DED – Dread of Ego Dissolution (resembles challenging experiences and was created to measure experiences of cognitive impairment, feelings of disintegration, loss of self-control, anxiety and panic (Studerus et al., 2012).
not knowing	Borkel et al., 2024 [1]	non-awareness predicted lower wellbeing and meaningfulness of psychedelic experiences.
no intention (unintended ingestion)	Argyri et al., 2024 [20]	post-acute extended difficulties.

Table 2. Previous findings on associations between psychedelic intentions and outcomes

Intention explicitness

In parallel, though defined in different ways, the explicitness of individual’s intentions, decoupled from the content of the intention, was found to be predictive of a variety of outcomes [2, 3, 17]. Explicitness points towards a preceding active engagement with the

purpose of seeking out a psychedelic experience. This engagement, which is known in psychedelic practice as “intention-setting”, affects the degree of intention-clarity [25, 26]. Framed as “conscious” and directed at healing, the explicit intention is considered to be typical in traditional shamanic use and associated with healing outcomes [27]. Framed as clarity (“I have a clear intention for the upcoming experience”) and expectation strength (“I have strong expectations for the upcoming experience”), intention explicitness was found to be positively associated with peak experiences, akin to mystical-type experiences, which subsequently predicted higher well-being, and, conversely, less challenging experiences, which, in turn, predicted higher well-being [17]. Within the Psychedelic Preparedness Scale (PPS) McAlpine et al. [4] identified “intention-preparation” as one of the main four themes of the psychedelic preparatory process centred *therapeutic intentions*. However, psychedelic-related intentions are not limited to these, especially within the wider non-clinical applications of psychedelics, which account for an estimated 95% of use [28]. Overall, while the importance of intention explicitness is recognized, the variety of approaches impedes comparability of findings related to its impact on the outcomes.

The present study

The subsequently presented analyses and results constituted a part of a larger study exploring intention-related nuance in association with outcomes. These specifically addressed the identified gaps related to a lack of content-validated categorisation approach and exploration of the effects of both intention categories and explicitness combined on participants’ perceived outcomes. The broad exploratory hypothesis (*E1*) predicted a distinction between intention *categories* in association with outcomes. *Explicitness*-related hypotheses included: *H1*: Explicit intention definition will be associated with higher perceived significance of the psychedelic experience and a higher likelihood of it affecting the experience; *H2*: More explicit intentions will be associated with higher connectedness, emotional breakthrough, mystical experience, wellbeing, and lower challenging experience scores.

Methods

Procedure

This study used web-based retrospective self-report data collection incorporating a survey created and hosted on Qualtrics, which took approximately 20 minutes to complete. The survey structure included briefing and debriefing pages alongside blocks on content and demographics. Within the content block, the first section related to intention categories for general psychedelic use, and all the remaining questionnaires related to participants' most recent psychedelic experience, including their intention, and intention-related qualities; set, setting and substance, and psychometric outcome measures. Data collection took place over the period of 100 days (ending 3rd July 2025). This study was preregistered [29].

Participants

Participants were recruited via online social media channels relevant to psychedelics and provided a link to the online survey. The eligibility criteria included a minimum age (18 years old), English language proficiency and a minimum of one experience on a high dosage of a classical long-acting psychedelic. "High dosage" was defined as "sufficient to substantially alter one's state of consciousness and awareness for several hours". The "classical long-acting" psychedelics were specified as: psilocybin-containing fungi, LSD (lysergic acid diethylamide), 2-CB (4-bromo-2,5-dimethoxyphenethylamine), DMT (*N,N*-dimethyltryptamine) containing ayahuasca, mescaline-containing cacti, and iboga. Of 471 participants who started the survey, 241 completed all sections. Participants who also completed the items on intentions for general psychedelic use were also included in some analyses, resulting in the final sample of $N = 296$ (age $M = 44.0$, $SD = 13.1$, demographics are summarized in Table 3).

Variable	Category	<i>n</i>	%
Gender	Male	121	40.9
	Female	111	37.5
	Non-binary	7	2.4
	Not specified	57	19.2
Ethnicity*	White	193	65.2
	Mixed	16	5.5
	Asian	14	4.7
	Black	2	0.6
	Not specified	71	24.0
English proficiency	Native speaker	181	61.1
	Advanced	53	17.9
	Other/Not specified	62	21.0
Education level	Undergraduate degree	74	25.0

Belief system	Postgraduate degree	116	39.2
	Other/Not specified	106	35.8
	Spiritual but not religious	127	42.9
	Agnostic	32	10.8
	Atheist	24	8.1
	Buddhist	16	5.4
	Pantheist	8	2.7
	Animist	7	2.4
	Christian	7	2.4
	Catholic	3	1.0
	Sikh	2	0.7
	Hindu	1	0.3
	Other/Not specified	69	23.3

* Results summarized based on data collected according to UK Government's survey categories [30]

Table 3. Demographics of the participant sample

Ethics

This study was reviewed via a formal ethics procedure and was approved by the University Research Ethics Board of the University of Greenwich (24.4.6.i.f).

Measures

Intention category: general use

First, intentions were categorized incorporating a modified content validation approach [31, 32], which involved subject matter experts. Eight sequential in-depth interviews aimed at categorising intentions in the least complex and simultaneously most encompassing way. To ensure representation of both theoretical and practical expertise, apart from senior academics, the recruited experts included psychedelic facilitators and harm reduction experts. The categorization model was formed sequentially, with the initial expert defining categories and the subsequent experts refining and adding additional categories to reach content saturation. The resulting 21 categories (Table 5) were subsequently presented to participants of the web-based survey. To access the general psychedelic use, participants were asked to rate on a 5-point scale (1 = “never”, 5 = “always”) how often each intention category was at the core of their psychedelic experiences. Total frequency scores of intention categories were calculated based on the average of all items.

Intention category and explicitness: most recent experience

To explore the outcomes associated with specific intentions participants were requested to recall their one most recent psychedelic experience. This approach was chosen to minimize self-selection, social desirability and recall biases, but also for simplicity and parity of comparisons. Focusing only on their most recent psychedelic experience, participants were asked to answer various experience- and intention-related questions. Experience-related

variables included time, set, setting, and substance, among others. Intention-related variables relevant for the present analyses were *intention category*, as described above, and *explicitness*. The latter was assessed incorporating a self-constructed, and therefore not psychometrically validated item “How well thought-through, defined, and explicit was your intention for this experience?” rated on a visual analogue scale (VAS) from 0 = “completely implicit (sub-conscious)” to 100 = “completely explicit (conscious)”.

Outcome measures

Outcome measures relating to their most recent psychedelic experience included perceived realisation and significance of their intention, Mystical Experience Questionnaire (MEQ), Challenging Experience Questionnaire (CEQ), Emotional Breakthrough Inventory (EBI), Watts Connectedness Scale (WCS), and well-being measures summarized in Table 4.

Statistical analysis

The software SPSS (version 29.0.2.0) was used for statistical analysis. Apart from descriptive statistics, linear and multiple regressions were carried out to investigate the associations between the variables. Data were screened for outliers and normality (check of residuals and histograms - visual inspection of distribution and deviations), missing data (which was not replaced), linearity and homoscedasticity (visual inspection of scatterplots), as well as multicollinearity (tolerance / VIF check). Mean scores were calculated for multi-item scales. Two-tailed tests were used by default ($p < .05$).

Measure	Item	Scale	Validation	References	Analysed	Comments
Perceived realisation	My intention "got answered" directly during this experience	5-point (1 = “strongly disagree”, 5 = “strongly agree”).	Not psychometrically validated, not a validated scale	n.a.	Individually.	Self-constructed items for study purposes.
	My intention "got answered" indirectly during this experience					
	I got the experience I needed					
	I got the experience I wanted					
Perceived significance	I think my intention significantly affected this experience	5-point (1 = “strongly disagree”, 5 = “strongly agree”).	Not psychometrically validated, not a validated scale.	n.a.	Individually.	Self-constructed items for study purposes.
	I would say this experience was highly significant for the trajectory of my life					
MEQ	Sense of oneness, insight into ultimate reality, or sacredness	6-point (0 = “not at all”, 5 = “extreme”)	Both MEQ-4 and CEQ-7 showed robust correspondence with their full-length counterparts and demonstrated expected associations with substance-related variables supporting measure validity.	Short: Strickland et al., 2024 [33]. Full: Barrett et al., 2015 [34], MacLean et al., 2012 [35].	Total MEQ score calculated based on the average of all items.	For the purposes of this study, the briefer versions introduced to substantially reduce participant burden associated with lengthy questionnaires, MEQ-4 (four items) and CEQ-7 (seven items) were utilized.
	Positive mood					
	Transcendence of time and space					
	Ineffability (i.e., incapable of being expressed or described in words)					
CEQ	Fear	6-point (0 = “not at all”, 5 = “extreme”)	With only one item per sub-scale, the internal reliability of the scale is not applicable.	Short: Strickland et al., 2024 [33]. Full: Barrett et al., 2016 [36].	Total CEQ score calculated based on the average of all items.	
	Grief					
	Physical distress					
	Insanity					
	Isolation					
	Thoughts or feelings of death					
Paranoia						
EBI	I faced emotionally difficult feelings that I usually push aside	visual analogue (VAS) from 0 = “not at all” to 100 = “entirely”	Was assessed in terms of internal, convergent, divergent, and predictive validity, as well as internal consistency (Cronbach’s alpha = 0.932).	Roseman et al., 2019 [37].	Total EBI score calculated based on the average of all items.	
	I experienced a resolution of a personal conflict/trauma					
	I felt able to explore challenging emotions and memories					
	I had an emotional breakthrough					
	I was able to get a sense of closure on an emotional problem					
	I achieved an emotional release followed by a sense of relief					
WCS	I have felt connected to a range of emotions	visual analogue (VAS) from 0 = “not at all” to 100 = “entirely”	Psychometrically validated in terms of reliability (internal consistency of the latent variables with Cronbach’s alpha > 0.9), construct and criterion validity, and composite reliability	Watts et al., 2022 [38].	Total WCS score calculated based on the average of all items.	Reduction of items from 19 to 8 to reduce participant attrition and test fatigue (2 items with the highest factor loadings per dimension + two further items that appeared substantially linked to the previously identified intention categories).
	I have been able to fully experience emotion, whether positive or negative					
	I have felt connected to friends and/or family					
	I have felt connected to a community					
	I have felt connected to a spiritual essence (in the secular or religious sense)					
	I have felt connected to a source of universal love					
	I have felt connected to nature					
	I have felt connected to a purpose in life					
WHO-5	Summarized in supplementary material			World Health Organization, 2024 [39], Sischka et al., 2020 [40].		
EWB	Summarized in supplementary material			Waterman et al., 2010 [41].		

Table 4. Summary of outcome measures

Results

Intention category

The 21 categories of intentions, which were identified during the modified content validation are summarized in Table 5. To reduce the risk of misinterpretation and to account for discrepancies in language use rooted in the differences of individuals' beliefs and worldviews, clarifying comments were partially added in parentheses for selected categories. For example, throughout the phase of content validation experts agreed that "no intention" should be specified as non-intentional ingestion, proposing that the very act of ingesting a substance willingly suggests some degree of intention albeit perhaps low in its explicitness (in line with [42]).

	Category	Clarifying examples
1	Valuable insight	incl. learning, unlearning and relearning, new perspectives, problem-solving
2	Creativity	incl. Innovation, artistic expression
3	"See what happens"	
4	Healing or improving: physical health	
5	Healing or improving: mental health	
6	Processing of emotions	incl. exploration, confrontation and engagement
7	Escape	incl. distraction, not thinking about problems, numbing
8	Fun	incl. hedonism, silliness and recreation
9	Experience enhancement	incl. sensory experience intensification, eroticism
10	Celebration	incl. rites of passage - e.g., marriage, birthday
11	Curiosity	incl. "answering a call(ing)", surrendering, experimentation, reaction to the "hype", wish to explore the Unknown, inspiration or encouragement from others, professional development relevancy, death preparation, etc.
12	Belonging to the community	incl. psychedelic, religious, spiritual
13	Connection to self	incl. own intuition, self-inquiry and guidance for decision-making
14	Connection to others	incl. friends, community, relationship improvement, family - dead or alive
15	Connection to nature	
16	Connection to the sacred	incl. spiritual or religious experience; connecting to the "source", the "divine", "knowing God(dess)", deities, spirits, ancestors, universe, cosmic consciousness, quantum field, the Absolute
17	Contemplative practices / transcendence	incl. spiritual and religious practices, prayer, meditation, self-transcendence, ego-dissolution, experience stillness
18	Out-of-Body experiences	
19	Supernatural powers and magic	incl. benevolent & malevolent
20	Dedicating the practice to someONE or someTHING else	
21	No intention	non-intentional ingestion

Table 5. Psychedelic intentions: categorisation based on expert interviews (content-validation)

The rating of the frequency (from 0 = "never" to 4 = "always") with which the above-described 21 categories of intentions became a part of participants' psychedelic experiences *generally* resulted in the total score for each category, the means of which are summarized in Figure 1.

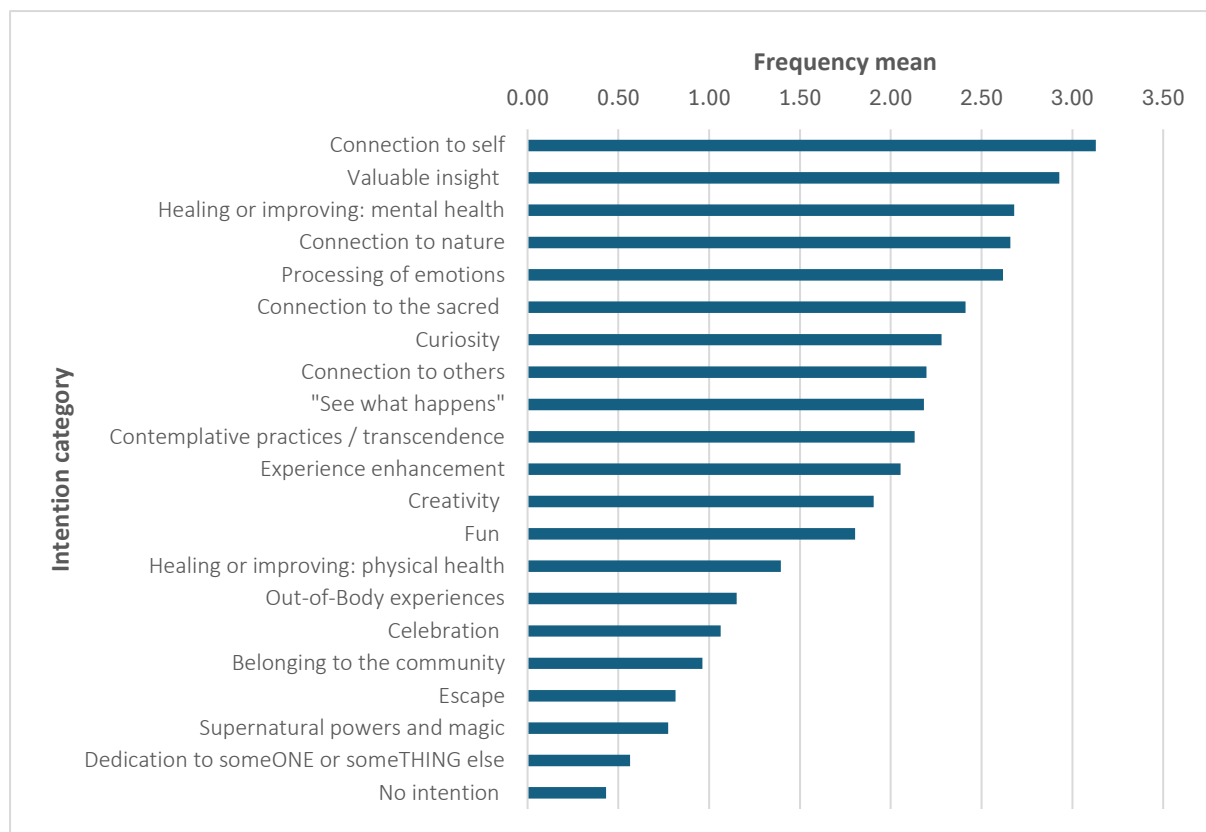


Figure 1. Psychedelic intentions - general use (N = 296)

Furthermore, prompted to think of their most recent experience on a high dosage of a classical long-acting psychedelic, participants were asked a series of questions related to this experience. Descriptive statistics for time, set, setting and substance related to participants' most recent psychedelic experiences can be found in Table 6.

Variable	Category	n	%
Time	Within last month	68	23.0
	Within last 6 months	90	30.4
	Within last year	50	16.9
	Within last 5 years	51	17.2
	Within the last decade	9	3.0
	More than a decade ago	12	4.1
	Not specified	16	5.4
Set*	Without previous experience	17	5.7
	Influenced by previous experiences	140	47.3
	Prepared	187	63.2
	Unprepared	16	5.4
	Excited/Confident	182	61.5
	Relaxed/Calm	139	47.0
	Euphoric	38	12.8
	Intimidated/Unsure	35	11.8
	Anxious / nervous / stressed	63	21.3
	Panicking	1	0.3
Setting*	By myself	88	29.7
	Intimate (1 other person or small group - e.g., retreat participants, friends)	132	44.6
	Big group (e.g., event)	36	12.2
	Clinical	6	2.0
	Therapeutic underground	29	9.8
	Ceremonial / ritualistic	54	18.2

	Church	6	2.0
	Celebrational / party / rave / festival	27	9.1
	Recreational / experimental	45	15.2
	Home	87	29.4
	Nature	66	22.3
	Retreat	40	13.5
	Wellness / mindfulness	33	29.4
	Within my culture	43	14.5
	Within foreign culture	18	6.1
Substance	Psilocybin	152	51.4
	LSD	63	21.3
	Ayahuasca (DMT)	46	15.5
	2-CB	7	2.4
	Mescaline	5	1.7
	Ibogaine	2	0.7
	Not specified	21	7.1

* Allowed multiple choice

Table 6. Time, set, setting, and primary substance specifics of participants' most recent psychedelic experience ($N = 296$)

Not each of the assessed intention categories ($n = 21$) was represented in the reports of participants' most recent experiences. Due to low representation ($n < 5$) the following nine intention categories were omitted from further analyses: out-of-body experiences ($n = 0$), dedication to someone or something else ($n = 0$), no intention (non-intentional ingestion) ($n = 0$), creativity ($n = 1$), physical healing ($n = 3$), escape ($n = 4$), celebration ($n = 2$), belonging to community ($n = 2$), and supernatural powers and magic ($n = 1$). The final list of intention categories for further analyses is summarized in Table 7.

	<i>n</i>
1 Valuable insight	59
2 "See what happens"	17
3 Healing (mental)	28
4 Processing emotions	22
5 Fun	34
6 Experience enhancement	8
7 Curiosity	8
8 Connection to self	24
9 Connection to others	12
10 Connection to nature	9
11 Connection to sacred	21
12 Contemplative practices	5
N	247

Table 7. Remaining intention categories represented within the sample of participants' most recent psychedelic experiences

Linear regression analyses were performed to assess the relationships between intention explicitness and both perceived realisation and significance (Table 8). As hypothesized ($H1$), intention explicitness score was found to be associated with higher perceived significance of the psychedelic experience, $F(1, 255) = 43.67, p < .001$, and a higher likelihood of it affecting the experience, $F(1, 255) = 24.27, p < .001$. Furthermore, there was a statistically significant relationship between the explicitness score and intention "being answered" directly, $F(1, 255) = 37.79, p < .001$, as well as indirectly, $F(1, 254) = 11.92, p < .001$ during the experience, and getting the experience one "needed", $F(1, 254) = 26.99, p < .001$, as well as "wanted", F

(1, 255) = 13.96, $p < .001$. Further linear regression analyses were carried out to assess the relationships between intention explicitness and acute psychedelic outcome measures. Results confirmed $H2$ only partially. As hypothesized ($H2$), there was a significant positive association between intention explicitness and MEQ, $F(1, 244) = 19.73$, $p < .001$, EBI, $F(1, 227) = 24.25$, $p < .001$, and WCS scores, $F(1, 238) = 21.47$, $p < .001$. However, the negative association between intention explicitness and CEQ scores was not statistically significant, $F(1, 244) = 1.59$, $p = .209$. A summary of well-being-related findings can be found in supplementary material.

	B	SE	β	t	p	R	R ²
This experience was highly significant for the trajectory of my life	0.017	0.003	.382	6.61	<.001	0.382	.146
My intention significantly affected this experience	0.013	0.003	.295	4.93	<.001	0.295	.087
My intention “got answered” directly during this experience	0.015	0.003	.359	6.15	<.001	0.359	.129
My intention “got answered” indirectly during this experience	0.009	0.003	.212	3.45	<.001	0.212	.045
I got the experience I needed	0.011	0.002	.310	5.16	<.001	0.310	.096
I got the experience I wanted	0.017	0.003	.382	6.61	<.001	0.228	.052
MEQ	0.011	0.002	.274	4.44	<.001	0.274	.075
EBI	0.34	0.069	.311	4.92	<.001	0.311	.097
WCS	0.249	0.054	.288	4.63	<.001	0.288	.083
CEQ	-0.003	0.002	-.08	-1.26	0.209	0.08	.006

Table 8. Explicitness of intention as an outcome predictor

Combining *intention category* and *explicitness*, referred to as *explicit intentions*, multiple linear regression analyses were performed with a variety of outcome measures as dependent variables. Results (Table 9) included statistically significant associations between explicit intentions and intention being “answered” directly, $F(12, 247) = 3.25$, $p < .001$, and indirectly, $F(12, 246) = 3.03$, $p < .001$, getting the experience one wanted, $F(12, 247) = 2.79$, $p = .001$, and needed, $F(12, 246) = 3.06$, $p < .001$, the experience being significant for the trajectory of one’s life, $F(12, 247) = 5.29$, $p < .001$, intention significantly affecting this experience, $F(12, 247) = 2.54$, $p = .004$, higher MEQ, $F(12, 236) = 2.87$, $p = .001$, EBI, $F(12, 217) = 4.32$, $p < .001$, WCS, $F(12, 228) = 2.83$, $p = .001$, and lower CEQ scores, $F(12, 235) = 2.63$, $p = .003$. In line with the exploratory hypothesis ($E1$) a distinction between intention categories in association with outcomes was observed, taking their explicitness into account.

		Valuable insight	"See what happens"	Healing (mental)	Processing emotions	Fun	Enhancement	Curiosity	Connection self	Connection others	Connection nature	Connection sacred	Contemplation
"My intention "got answered" directly during this experience"	B	0.01	0.01	0.011	0.008	0.015	0.02	0.015	0.012	0.014	0.011	0.018	0.015
	Std Error	0.003	0.006	0.003	0.004	0.004	0.006	0.006	0.003	0.005	0.005	0.004	0.007
	BETA	.289	.112	.253	.164	.287	.196	.159	.272	.209	.141	.343	.138
	t	3.616	1.702	3.5	2.367	4.024	3.094	2.517	3.877	3.192	2.208	4.966	2.246
	p	<.001*	.090	<.001*	.019	<.001*	.002*	.012	<.001*	.002*	.028	<.001*	.026
	R	0.369											
	R ²	.136											
My intention "got answered" indirectly during this experience	B	0.009	0.005	0.006	0.004	0.005	-0.008	0.011	0.008	0.014	0	0.015	0.011
	Std Error	0.003	0.006	0.003	0.004	0.004	0.007	0.006	0.003	0.005	0.005	0.004	0.007
	BETA	.269	.052	.138	.073	.089	-.082	.112	.166	.200	.003	.292	.104
	t	3.356	0.798	1.898	1.04	1.241	-1.281	1.754	2.352	3.04	0.041	4.195	1.68
	p	<.001*	.426	.059	.299	.216	.201	.081	.019	.003*	.968	<.001*	.094
	R	0.359											
	R ²	.129											
I got the experience I wanted	B	0.007	-0.007	0.008	0.006	0.01	0.015	0.016	0.009	0.011	0.011	0.012	-0.007
	Std Error	0.003	0.006	0.003	0.004	0.004	0.007	0.006	0.003	0.005	0.005	0.004	0.007
	BETA	.205	-.073	.169	.113	.193	.145	.171	.198	.147	.127	.223	-.068
	t	2.54	-1.101	2.317	1.611	2.688	2.267	2.669	2.798	2.23	1.979	3.192	-1.096
	p	.012	.272	.021	.108	.008	.024	.008	.006	.027	.049	.002*	.274
	R	0.346											
	R ²	.120											
I got the experience I needed	B	0.008	-0.004	0.007	0.007	0.002	0.004	0.009	0.008	0.009	0.006	0.011	-0.003
	Std Error	0.002	0.005	0.003	0.003	0.003	0.005	0.005	0.003	0.004	0.004	0.003	0.006
	BETA	.300	-.053	.186	.159	.036	.049	.113	.221	.155	.086	.259	-.030
	t	3.737	-0.797	2.553	2.274	0.498	0.768	1.767	3.121	2.358	1.334	3.715	-0.478
	p	<.001*	.426	.011	.024	.619	.443	.079	.002*	.019	.183	<.001*	.633
	R	0.360											
	R ²	.130											
I think my intention significantly affected this experience	B	0.009	-0.001	0.011	0.012	0.009	0.005	0.006	0.009	0.006	0.004	0.013	0.017
	Std Error	0.003	0.006	0.003	0.004	0.004	0.007	0.006	0.003	0.005	0.005	0.004	0.007
	BETA	0.26	-0.011	0.257	0.22	0.18	0.046	0.06	0.203	0.09	0.049	0.25	0.158
	t	3.214	-0.164	3.51	3.129	2.493	0.719	0.927	2.847	1.352	0.755	3.555	2.539
	p	0.001*	.870	<.001*	0.002*	.013	.473	.355	.005*	.178	.451	<.001*	.012
	R	0.331											
	R ²	.11											
I would say this experience was highly significant for the trajectory of my life	B	0.014	0.008	0.012	0.012	0.003	-0.005	0.011	0.013	0.011	0.005	0.02	0.013
	Std Error	0.003	0.006	0.003	0.004	0.004	0.006	0.006	0.003	0.005	0.005	0.004	0.007
	BETA	0.404	0.083	0.271	0.221	0.048	-0.043	0.117	0.281	0.15	0.054	0.362	0.118
	t	5.271	1.317	3.907	3.323	0.707	-0.709	1.919	4.176	2.384	0.886	5.451	2.004
	p	<.001*	.189	<.001*	.001*	.480	.479	.056	<.001*	.018	.376	<.001*	.046
	R	0.452											
	R ²	.204											
MEQ	B	0.009	0.004	0.008	-0.001	0	0	0.005	0.008	0.006	0.007	0.012	0.013
	Std Error	0.003	0.006	0.003	0.003	0.003	0.006	0.006	0.003	0.004	0.005	0.004	0.006
	BETA	.294	.052	.210	-.022	.011	-.004	.057	.182	.090	.097	.248	.130
	t	3.515	0.762	2.797	-0.303	0.143	-0.057	0.876	2.507	1.317	1.464	3.487	2.044
	p	<.001*	.447	.006	.762	.886	.955	.382	.013	.189	.144	<.001*	.042
	R	0.357											
	R ²	.127											
EBI	B	0.252	0.057	0.32	0.363	-0.056	-0.11	0.241	0.192	0.099	-0.15	0.215	0.082
	Std Error	0.071	0.152	0.079	0.095	0.091	0.165	0.164	0.085	0.117	0.136	0.096	0.16
	BETA	.303	.026	.310	.278	-.046	-.044	.096	.165	.058	-.073	.162	.033
	t	3.562	0.377	4.03	3.83	-0.608	-0.667	1.468	2.258	0.844	-1.103	2.241	0.515
	p	<.001*	.706	<.001*	<.001*	.544	.506	.144	.025	.400	.271	.026	.607
	R	0.439											
	R ²	.193											
WCS	B	0.257	-0.026	0.192	0.062	0.176	0.249	0.231	0.181	0.122	0.146	0.268	0.187
	Std Error	0.056	0.12	0.064	0.077	0.074	0.133	0.128	0.067	0.092	0.11	0.078	0.131
	BETA	.397	-.015	.233	.059	.181	.124	.120	.199	.092	.089	.250	0.092
	t	4.606	-0.218	3.001	0.812	2.38	1.877	1.803	2.69	1.328	1.323	3.454	1.43
	p	<.001*	.827	.003*	.417	.018	.062	.073	.008	.185	.187	<.001*	.154
	R	0.360											
	R ²	.129											
CEQ	B	-0.006	0.006	-0.001	0.003	-0.007	-0.016	-0.011	-0.003	-0.01	-0.009	-0.005	0.003
	Std Error	0.002	0.005	0.003	0.003	0.003	0.006	0.006	0.003	0.004	0.005	0.003	0.006
	BETA	-.200	.073	-.028	.061	-.165	-.182	-.12	-.083	-.169	-.128	-.098	.031
	t	-2.361	1.068	-0.369	0.841	-2.188	-2.752	-1.828	-1.134	-2.454	-1.915	-1.355	0.48
	p	.019	.286	.712	.401	.030	.006	.069	.258	.015	.057	.177	.632
	R	0.344											
	R ²	.118											

Note: statistically significant results ($p < 0.05$) are marked in bold; results which retained significance after applying the Bonferroni-correction ($p < 0.005$) are marked with *.

Table 9. Explicit intentions as outcome predictors

The colour-coded synthesis of these findings (Figure 2) offers an alternative presentation of these results. In this representation explicit intentions were arranged on the continuum from “less positive” (left side) to “more positive” (right side) associated outcomes. CEQ scores were reverse-coloured - a negative association implying a lower challenging experience score signifies a better outcome. Statistically significant positive associations were marked blue. While general predictor significance ($p < 0.5$) was represented in lighter colours, the highly significant associations ($p < 0.005$ after Bonferroni correction) were marked in brighter colours. No colouring was attributed in case of an absence of statistically significant associations.

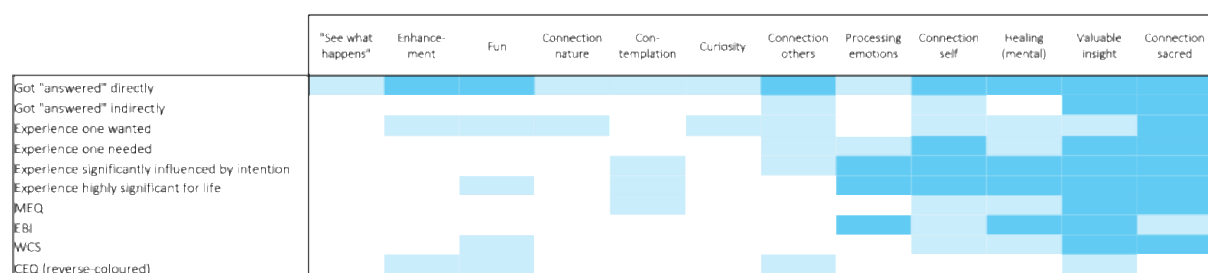


Figure 2. Intentional landscape: a synthesis of statistically significant associations

Discussion

This retrospective survey-based quantitative study sought to investigate possible associations between the intentions with which individuals entered psychedelic experiences and their perceived outcomes. While data on various intention-related qualities were collected for future analyses, the results presented here were concerned with the effects of *intention explicitness* and *category* on perceived outcomes as the two main factors previously considered in psychedelic research, albeit separately until now. Key take-aways from the findings have implications for future psychedelic research and education and can be applied in psychedelic preparation and integration.

First, participants' intention *categories* in terms of general psychedelic use were assessed based on 21 intention categories (Table 5) defined within a modified content validation process. The comparison of scores for each category was based on participants' assessment of the frequency with which specific intentions were generally a part of their psychedelic practice. The results (Figure 1) did not show noteworthy gaps, indicating that all 21 categories found application. Furthermore, possible links between intentions and outcomes were assessed based on participants' answers related to their most recent

psychedelic experience, in which 12 of 21 categories were represented with $n > 5$ (Table 7). These remaining 12 categories appeared nearly identical with the 12 of 21 categories with the highest frequency scores in terms of general psychedelic use (Figure 1). The only non-overlapping category was *fun*, which was 13th while *creativity* was the 12th highest frequency score. Therefore, the remaining 12 categories are likely to be representative of the most common intentions. While displaying a varied degree of overlap, the resulting 12 most common intention categories appear to differ from the existing categorization models in previous literature [1, 3, 6, 16, 21] and may appear useful in future intention-related research.

Second, intention *explicitness* assessed with a self-constructed item was found to be associated with higher perceived significance (confirming *H1*) and realisation, and higher MEQ, EBI, and WCS scores. No significant negative association with CEQ scores was found, only partially confirming *H2* (Table 8). In other words, while being predictive of what can be considered positive outcomes, intention explicitness itself does not appear to predict challenging experiences.

Third, statistically significant associations between combined *category* and *explicitness*, which represents a novel approach, were summarized to give an overview of the associations between the intentional landscape and the outcome measures (Figure 2). Without labelling certain intentions as “good” or “bad”, “right” or “wrong”, it needs to be acknowledged that some categories (e.g., *connection to sacred*, *valuable insight*, *healing (mental)*) appear to be more strongly associated with outcome measures, while others (e.g., “*see what happens*”, *experience enhancement*, *fun*) appear not to be significantly associated with such.

These findings (Figure 2 and Table 9) might be utilized to enhance outcomes related to realisation and significance, mystical experiences, emotional breakthroughs and connectedness during the preparation preceding a psychedelic experience. The fact that the associations of various explicit intentions retained statistical significance after applying Bonferroni-correction for all outcome measures except challenging experiences speaks to the likely importance of considering further factors, such as appropriate preparation, beyond intention-setting. The emotional processing of autobiographical material under the influence of psychedelics can result in recalling or even reexperiencing trauma in any context [42]. While partially inductive of healing, this emotional process can lead to either positive integration, mixed effects, or re-traumatization [42]. To reduce harm associated with

challenging experiences and extended difficulties, a wider spectrum of preparation and integration practices beyond intention-setting is likely to be essential. A substantial part of these is aimed at practicing “being grounded” – through a variety of embodied practices involving different forms of physical exercise, sensory experiences, strengthening of the support network, etc. [20].

Strengths

The presented findings resulted from the first study of its kind to focus on psychedelic intentions and their effects on perceived outcomes. It incorporated a modified content validation approach in the process of defining intention categories. Furthermore, it is the first quantitative exploration which combines intention category with explicitness to investigate effects on perceived outcomes of psychedelic experiences. Due to study design, the data gathered reflects the real-world conditions and can, therefore, be considered representative within the cultural framework of the sample. Using a variety of validated measures, the results of this study generated useful insights which can be utilised within the psychedelic preparation, integration and psychedelic facilitation practices.

Limitations and directions for future research

The results of this study were based on self-reported experiences associated with a high dose of classical serotonergic long-acting psychedelics and may, therefore, not be generalizable to experiences induced by non-serotonergic or short-acting classical psychedelic substances. Due to the retrospective study design, the data may be partially subject to recall bias despite the researchers’ attempt to control for it. Additionally, the WCS was shortened to reduce participant attrition and test fatigue. The assessed measures of explicitness, perceived realisation and significance have not been previously psychometrically validated. Due to the study design no direct effects could be observed. These points need to be considered when making interpretations.

Primarily, there are tendencies for certain types of intentions (e.g., connecting to the sacred) to be related to specific set (e.g., ritual preparation) and, especially, setting and substance (e.g., ayahuasca in group ceremonial contexts), and these have not been explored in depth in the present study, so inferences about the role of intentions on outcomes are

limited. Future research should explore these interactions more directly to explore their relative overlap and prediction of outcomes.

Another limitation of this study resulted from the fact that despite the initial aim to present analyses results for 21 identified intention categories, not each intention category was represented in the participants' most recent experience which met the study criteria. The statistical power driven by the number of participants may have somewhat affected the results of those categories with lower sample representation. Therefore, future research should analyse of the full category list based on a bigger sample.

Conclusions

The current study explored the links between intentions with which individuals enter a psychedelic experience and associated perceived outcomes. A thorough literature review served as the basis for a modified content validation incorporating expert interviews and resulting in a nuanced categorisation of psychedelic intentions. This categorisation can be utilized in psychedelic preparation and aid future nuanced outcome-related exploration in psychedelic research. The 21 defined categories served as the basis for an online survey with the help of which the quantitative data of this study was obtained. This data was analysed incorporating descriptive statistics, linear and multiple regression analyses to explore the possible links between the 12 remaining intention categories represented within the sample and the outcomes. It was found that when combined with explicitness, specific intention categories statistically significantly predicted all outcome measures, however, the predictive value varied substantially between categories. A synthesis of these findings (Figure 2) might be useful in both psychedelic integration and preparation to support the individuals' intention-setting process in any context, including beyond the therapeutic one. Further research exploring the overlap and relative influence of other situational factors, such as preparedness more generally combined with set, setting, and substance needs conducting. Nevertheless, the salience of intention among these has been shown to be relevant, although potentially inseparable from other factors naturalistically.

List of abbreviations

2-CB – 4-bromo-2,5-dimethoxyphenethylamine

CEQ – Challenging Experience Questionnaire

DMT – *N,N*-dimethyltryptamine

EBI – Emotional Breakthrough Inventory

MEQ – Mystical Experience Questionnaire

LSD – lysergic acid diethylamide

VAS – visual analogue scale

VIF – Variance Inflation Factor

WCS – Watts Connectedness Scale

Declarations

Ethics

This study was reviewed via a formal ethics procedure and was approved by the University Research Ethics Board of the University of Greenwich (24.4.6.i.f). Participants were extensively informed about the study via a study advert as well as an information sheet enabling informed consent, which had to be given prior to participation.

Consent for publication

Not applicable.

Availability of data and materials

The datasets generated and/or analysed during the current study are available in the OSF repository,
https://osf.io/tw6cm/overview?view_only=d475ba3bd13f47a291ee88f77dc6e939

Competing interests

The authors declare no conflicts of interest.

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Authors' contributions

IM and DL conceptualized the study and developed the methodology. IM oversaw project administration during data collection and conducted data curation. DL provided supervision throughout. IM prepared the original manuscript draft, and DL provided critical reviewed and editorial revisions. All authors have read and approved the final manuscript.

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