STUDYING THE RELATIONSHIP BETWEEN SUBSTANCE USE AND BELIEF MATURITY

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Important information

Belief maturity is a construct consisting of **two traits, belief strength and dogmatism (our attitudes to outside beliefs and information).**

A high level of belief maturity requires effort to strengthen and understand our beliefs (high strength), yet be open to new information and beliefs whether they support or contradict our current understanding (low dogmatism).

From 2011 to 2021 substance use was estimated to have globally increased by 23%, therefore understanding its effects on our beliefs is important.

Substances categories investigated were: Alcohol, Depressants, Stimulants, Psychedelics, Dissociative, Cannabinoids Empathogens and Opioids.

Context

Prior research has shown that **substance use has mixed relationships with beliefs. Spiritual beliefs** were found to be **strong protective factors for substance use**, yet **Miller et al., (2000)** highlighted that the **content of the belief is not as important** as the **conviction and commitment.**

Contradictory prior **findings show psychedelics, empathogens and cannabis are positively associated with spiritual beliefs,** highlighting the **complex relationship between substance use and belief** and the need to **study substance categories individually.**

Freeman & Bentall (2017) found that **both alcohol and substance use had a higher odds ratio for conspiratorial beliefs.**

Although there is limited research studying the relationship between **substance use and dogmatism**, **Carhart-Harris et al., (2016)** show **psychedelics and empathogens** can **increase trait openness,** (tendency to seek out new experiences and to be willing to explore ideas) which would **oppose the traits of dogmatic individuals.**

Aim

To investigate the **relationship between belief maturity and individual substance categories amongst users (1),** and **compare** the **different relationships found (2).**

To investigate the **relationship between belief maturity and substance use broadly (3).**

Hypotheses (1): Amongst users, the level and recency of psychedelic substance use will have a positive relationship with scales measuring bi-directional belief strength (ARES and GCB) and a negative relationship with the dogmatism scale.

Hypothesis (2): Amongst users, regarding level and recency of use, there will be a difference between substance categories' relationships with scales measuring bidirectional belief strength (ARES and GCB) and the dogmatism scale.

Hypothesis (3): Amongst users, the level of general substance use will have a positive relationship with scales measuring bi-directional belief strength (ARES and GCB) and a positive relationship with a measure of dogmatism.

Method

Participants: 137 participants aged 18+ were recruited, **65** of whom were included in the analysis. **4** were removed as had **never used substances**, **68** were removed for **incomplete or inaccurate responses.**

The study was conducted **online** and **took approximately 12 minutes.** Participants were assessed on **5 self-report scales, scored using a 7-point Likert scale.**

The first section consisted of **two scales** to understand participants' relationship with substances, these assessed the **participant's level of use** and **recency of use** for **all substances outlined.**

The second section consisted of **3 scales** to **understand participants' level of belief maturity.** Firstly, participants responded to **2 measures of beliefs**, **spiritual and religious beliefs (ARES)** and **worldview/conspiratorial beliefs (GCB)**, scoring was **recomputed** to assess **purely the strength of belief.** To provide extra context to results and discussion, original scoring to highlight the direction of belief was also used. Participants were then assessed on their **level of dogmatism** using a **short-form version** of the **dogmatism scale by Troldahl and Powell (1965)**

Results

Table 1

Spearman's Rho Correlations Between Categorised Level of Substance Use and Measures of Belief Maturity, and Original ARES and GCB Amongst Users

Measures of Belief Maturity	Alcohol Use	Depressants Use	Stimulants Use	Psychedelics Use	Dissociatives Use	Cannabinoids Use	Empathogens Use	Opioids Use
ARES Bi-Strength	0.143	-0.282	-0.146	0.155	0.038	-0.024	0.035	0.088
p-value	0.256	0.402	0.467	0.504	0.864	0.878	0.871	0.713
GCB Bi-Strength	0.136	-0.039	-0.023	0.352	0.031	-0.061	-0.131	0.035
p-value	0.281	0.910	0.911	0.118	0.887	0.695	0.541	0.885
Dogmatism	-0.080	0.587	0.275	0.229	0.212	0.195	0.196	0.133
p-value	0.526	0.057	0.165	0.318	0.331	0.209	0.359	0.577
ARES Original	-0.209	-0.076	-0.116	0.004	0.173	0.317*	-0.212	0.221
p-value	0.095	0.823	0.564	0.985	0.429	0.039	0.320	0.349
GCB Original	-0.312*	0.334	-0.132	0.194	0.204	0.394**	0.052	0.234
p-value	0.011	0.315	0.510	0.400	0.351	0.009	0.809	0.320

Note. * p < .05, ** p < .01, *** p < .001

Table 1 shows that there were **no correlations** that reached statistical significance **between all measures of belief maturity and level of substance use.**

Table 2

Spearman's Rho Correlations Between Categorised Substance Use Recency and Measures of Belief Maturity, and Original ARES and GCB Amongst Users

Measures of Belief Maturity	Alcohol Recency	Depressants Recency	Stimulants Recency	Psychedelics Recency	Dissociatives Recency	Cannabinoids Recency	Empathogens Recency	Opioids Recency
ARES Bi-Strength	0.104	-0.174	0.172	-0.015	0.368	0.050	0.131	0.279
p-value	0.410	0.609	0.391	0.948	0.084	0.750	0.540	0.233
GCB Bi-Strength	0.051	-0.059	0.117	0.416	-0.013	0.124	0.146	-0.349
p-value	0.686	0.863	0.560	0.061	0.952	0.427	0.497	0.132
Dogmatism	0.021	0.159	0.602***	0.482*	0.639**	0.272	0.432*	0.310
p-value	0.867	0.640	<.001	0.027	0.001	0.078	0.035	0.184
ARES Original	-0.153	-0.084	-0.086	0.362	0.297	0.240	-0.079	0.140
p-value	0.225	0.806	0.669	0.107	0.169	0.121	0.714	0.557
GCB Original	-0.056	-0.175	-0.010	0.477*	0.184	0.398**	0.005	-0.251
p-value	0.657	0.608	0.961	0.029	0.400	0.008	0.980	0.286

Note. * p < .05, ** p < .01, *** p < .001

Table 2 shows that there were **many substances** where **more recent use had a strongly positive significant correlation with dogmatism, psychedelics** also had a **strong positive correlation with bi-directional strength in beliefs for GCB**, which approached but did not reach significance.

Table 3

Spearman's Rho Correlations Between General Substance Use and Measure of Belief Maturity, and Original ARES and GCB Amongst Users

Measures of Belief Maturity	General Substance Use
ARES Bi-Strength	-0.037
p-value	0.770
GCB Bi-Strength	-0.078
p-value	0.538
Dogmatism	0.100
p-value	0.429
ARES Original	0.046
p-value	0.716
GCB Original	0.290*
p-value	0.019

Note. * p < .05, ** p < .01, *** p < .001

Table 3 shows that all measures of belief maturity had negligible and insignificant relationships with level of general substance use.

Discussion

The results of this study did not support H1, as more recent psychedelic use was found to be positively correlated with dogmatism, contradictory to what was expected. This may be due to the individual's intention during psychedelic use, as mindset and setting can influence a person's experience, as psychedelics have been found to both strengthen and relax beliefs.

H2 was partially supported as differences were found between substance categories' correlations with measures of belief maturity, however, these were only statistically significant for dogmatism. This shows that substances have a complex relationship with belief maturity, possibly due to their varying effects on our perceptions and experiences.

Lastly, the results of this study showed a negligible and insignificant correlation between general substance use and all measures of belief maturity. Therefore, for H3, the null hypothesis failed to be rejected. This may be due to the difference this study has shown across different substance categories. It may also be that other factors, such as our environment and other life experiences besides substance use, may have a greater impact on our belief maturity.

This study has laid the foundations for investigating belief maturity and outlined the factors contributing to this construct. However, further research should create a scale that explicitly tests belief maturity and has been tested for reliability. This will aid with the operationalisation and accuracy of findings.

References:

Miller, L., Davies, M., & Greenwald, S. (2000). Religiosity and Substance Use and Abuse Among Adolescents in the National Comorbidity Survey.

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