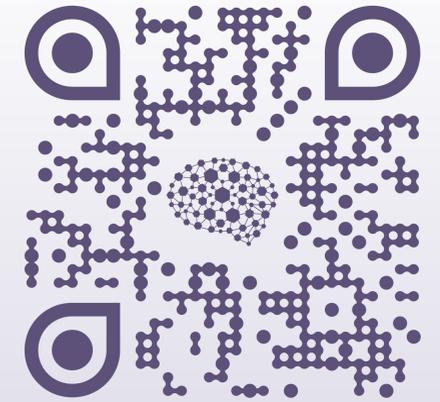


Aesthetic Chills Increase Prayer-Induced Hope and Gratitude: Implications for Personalized Psychedelic Experiences

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& Chills Stimuli Database link

SUMMARY

Self-transcendent experiences (STE) during **prayer** have been linked to various mental health benefits. We explored whether these effects can be reliably induced using chills-eliciting stimuli (e.g., powerful speeches, music) prior to prayer. These stimuli evoke states similar to psychedelics—marked by ego dissolution, emotional breakthrough, and psychological insight—and have shown antidepressant effects. In the current study, Jewish participants (n=92) were exposed to chills-inducing content just before engaging in ritual prayer. Our intervention enhanced participants' sense of gratitude, hope, and vitality, mediated by the effects of chills on prayer quality. This suggests a novel paradigm for psychedelic integration that leverages the power of prayer and aesthetic chills to modulate STE.

MOTIVATION

- Prayer has been shown to induce non-ordinary states of consciousness, associated with mental health benefits, notably anxiolytic effects [1].
- Similar to psychedelics, these effects are mediated by STE (**awe, connectedness, emotional breakthrough**) [2].
- STEs are known to accompany aesthetic chills [3].
- **Hypothesis:** Exposure to chills-eliciting stimuli prior to prayer should lead to more transcendent prayer experiences and better psychological outcomes.

PRAYER & PSYCHEDELICS

- The ineffability of the psychedelic experience makes it difficult to translate insights into daily life and behavior.
- Spiritual practices, like prayer, offer a framework for integrating **STE** by enabling their organization, recall, and expression in a shared cultural framework [4].
- Our study lays a foundation for implementing prayer and aesthetic chills as tools for **psychedelic integration**, particularly in populations inclined to engage in spiritual practice for mental health.

AESTHETIC CHILLS & STE

- **Aesthetic chills** (shivers down the spine, goosebumps) are a strong emotional response to rewarding stimuli, including meditation, music, poetry, films, speeches, as well as religious rituals across cultures.
- Chills have been repeatedly associated to **STEs** and their distinct neurophenomenology (**ego dissolution, emotional breakthrough, psychological insight**). [3,6]
- Chills have been found effective for depressive symptoms including: induction of **peak positive affect** [5], enhanced **reward sensitivity in anhedonia** [6], **deactivation of maladaptive cognitions** [7].

METHODS

Participants: 92 participants took part in the experiment (aged 47±17, 54 F, 50 Reform, 22 Unaffiliated, 19 Conservative, 1 Orthodox).

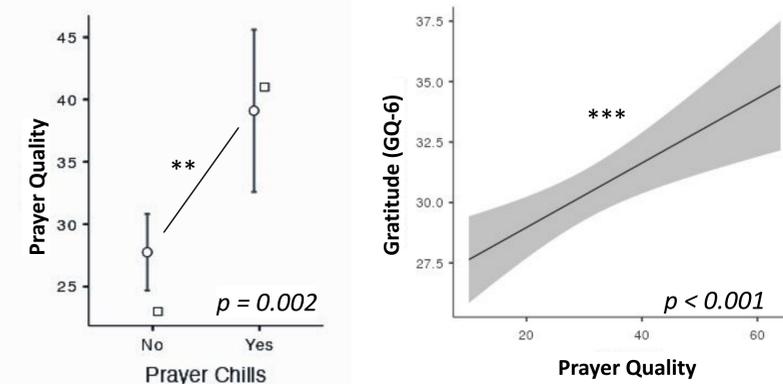
Stimulus validation: Prior to intervention, we tested the chill-efficacy of 20 crowd-sourced stimuli on 540 Jewish participants. The optimal stimulus, defined by eliciting chills in the largest percent of participants across Jewish denomination (57%), was **Charlie Chaplin's speech from *The Great Dictator***.

Prayers: 3 traditional prayers, **Modim, Ashrei, and Havinenu**, reflective of the main forms of Jewish prayers respectively: expressing gratitude to, praising of, and beseeching from God.

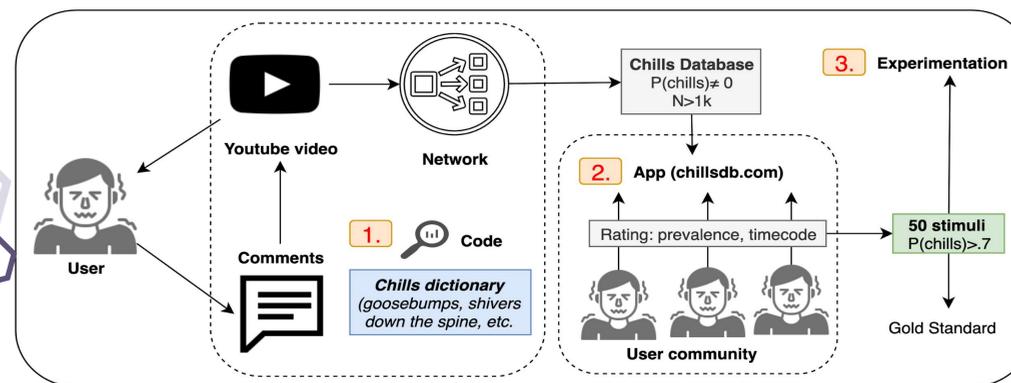
Procedure: Participants first took a battery of personality and religiosity questionnaires (e.g. DUREL, RCI). They then watched the stimulus (see above). Immediately after, they were guided through 3 prayers (*Ashrei, Modim, and Havinenu*) representative of the traditional Jewish prayer liturgy. Following the prayers, they reported their emotional experience and administered scales for hope (AHSC), gratitude (GQ-6), vitality (SVS), and anxiety (STAI).

RESULTS

- 48 participants (**52%**) experienced chills during stimulation and 19 experienced chills during prayer.
- Coherent with previous literature, STE (emotional breakthrough, insight) increased as a function of chills intensity, frequency, duration ($p < .001$).
- **Stimulation chills** significantly improved prayer quality ($p = .032$), as did **prayer chills** ($p = .002$)
- Prayer quality was consistently associated with the positive psychological outcomes: GQ-6, AHSC, and SVS (**all $p < .001$**)



Stimulus Identification



Study Procedure



CONCLUSIONS

- Our results suggest that experiencing aesthetic chills prior to prayer **improves the psychological benefits of prayer**.
- Chills-augmented prayers are a promising tool for the **integration of STE during psychedelic experiences**.
- Future studies should examine the longitudinal effects of multiple **chills-augmented prayers** on clinical outcomes.

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