

KPU Registry ID Number: 1077

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KPU Pre-Registration

1. The title or name of the study (for listing the study in the registry).

An Exploration of the Associations Between Meditation Experience, Extended Human Capacities and Synchronistic Experiences

2. The name, affiliation, and email address for the lead researcher(s) for the study.

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3. A short description or abstract of the purpose and design of the study.

Introduction:

This study will explore the potential associations between meditation experience, extended human capacity measures, and synchronistic experiences. A limited amount of previous research has examined these variables. However, the potential interrelationships between all three constructs have yet to be explored.

Preliminary research and theoretical perspectives suggest potential associations between meditation and psi (Roney-Dougal, 2015) and meditation and synchronicity (Combs & Holland, 1996; Crane, 2018). For example, Radin et al. (2011) found that participants with an average of 20.8 years of Zen-type meditation experience displayed statistically significant pre-sentiment effects on EEG recordings taken *before* being exposed to unpredictable light and sound stimuli compared to non-meditators. In addition, anecdotal evidence suggests that individuals who participate in activities such as meditation retreats sometimes report a heightened number of synchronicities in the time period surrounding their retreat (Combs & Holland, 1996).

While synchronicity and psi are not identical, they share some common features (Mansfield, 1998; Palmer, 2004; Storm, 1999; Tart, 1981), such as a mental event being followed by a closely related physical event in the world around us. However, Mansfield (1998) suggests that synchronicities differ from psi based on two main factors: causality and meaning. Specifically, Mansfield (1998) argues that parapsychological phenomena display “scientific causality” in that they are replicable in experimental settings, whereas synchronicities are not. In addition, Mansfield (1998) suggests that meaning is not considered a necessary component of psi phenomena, strictly defined, whereas meaning is one of the key elements of synchronicity from a Jungian perspective.

Taken together, previous research and theoretical perspectives hint toward potential associations between meditation, extended human capacities, and synchronicity while also highlighting the fact that these constructs are not identical to each other. However, to date, no empirical studies have explored the potential associations between all three of these variables.

From a broader perspective, it is possible that contemplative practices such as meditation might help us enter a liminal space in which psi is heightened (Roney-Dougal, 2015) and synchronicity can be invoked (Crane, 2018). Indeed, idealist perspectives suggest that consciousness might be a fundamental (i.e., ontologically primary) aspect of reality (e.g., Baruš & Mossbridge, 2017; Kastrup, 2018). It could be the case that contemplative practices might give humans access to this fundamental consciousness (Roney-Dougal, 2015; Vieten et al., 2018) and that synchronicity might be one way that this fundamental consciousness reveals itself to us in everyday life (Mansfield, 1995; Peat, 2015).

The current study hopes to shed further light on these ideas by exploring a dataset that includes empirical measures of meditation, extended human capacities, and synchronicity. The data used in these secondary analyses were collected during a prospective, uncontrolled, within-participant design study, where adult participants completed several questionnaires and online tasks before and after various personal growth workshops (Wahbeh, Yount, et al., 2022). Workshop leaders hosted at the Institute of Noetic Sciences (IONS) EarthRise Learning Center (Petaluma, CA) and additional venues were invited to distribute pre- and post-survey links incorporating multiple measures to their participants. We collected surveys from participants who completed 33 different workshops, 17 of which were held at the IONS EarthRise Learning Center and 19 elsewhere. Considering both content and activity format, workshops spanned the key focus areas of the personal development market (i.e., mental health, motivation/inspiration, physical health, self-awareness, and skillset enhancement segments). This research program's three primary outcome measures were changes in participants' sense of interconnectedness, well-being, and extended perception. We found significant increases in interconnectedness and well-being measures and decreases in an extended perception measure after workshop participation (Wahbeh, Yount, et al., 2022), changes in electroencephalography and electrocardiography (Cannard et al., 2021), and marked transformative, noetic, and transpersonal/relational experience (Wahbeh, Vieten, et al., 2022). The unique secondary analyses evaluated here are focused on the relationship between meditation, extended human capacities, and synchronicity.

Materials and Methods:

Measures

Meditation Experience will be formatted into two variables - a binary grouping variable and a continuous measure of meditation frequency.

- 1) Binary: Before their workshop, participants answered "yes" or "no" to a question that asked, "Do you meditate?"
- 2) Continuous: Participants who answered "yes" were then asked, "How often do you usually meditate." Possible answers were offered, such as "Daily," "1-2 times per week," etc. These responses will be transformed into a continuous measure of meditation frequency in units of average meditation sessions per month (e.g., "Daily" will be transformed to 30).

Extended Human Capacities will be evaluated with three variables, Objective Psi, Noetic Experience, and Noetic Belief. The participants completed the following tasks and questionnaires before and after their workshop. However, the current study will only focus on the pre-workshop values only.

- 1) *Objective Psi* is a composite score generated from the values of the quick remote viewing, object counting, and bubble tasks (Wahbeh, Yount, et al., 2022). A factor

analysis will be used to reveal a single latent variable that captures the common components of these three tasks.

- 2) The Noetic Experience and Belief Scale (Wahbeh et al., 2020) is a self-report questionnaire that results in two sub-scores, each on a continuous scale from 0-100. The Noetic Belief sub-score quantifies subjective beliefs. The Noetic Experience sub-score quantifies participants' past experiences of paranormal phenomena.

Synchronistic Experiences will be assessed with pre- and post-workshop responses.

- 1) Participants responded to the following pre-workshop question regarding synchronistic experiences: "I have personally had the experience of "synchronicity," or "meaningful coincidences" that occur with no causal relationship yet seem to be meaningfully related," which was rated on a scale ranging from 0 (strongly disagree) to 100 (strongly agree). This measure will be used for Research Questions 1, 2, and 4.
- 2) Immediately following their workshop, participants were asked to indicate whether they had several experiences *during their workshop*, one of which was the following: "I had the experience of "synchronicity", or "meaningful coincidences" that occur with no causal relationship yet seem to be meaningfully related." This binary variable (yes/no) will be used for Research Question 3.

Research Questions and Data Analyses:

The study aims to explore the following four research questions:

- 1. Are there associations between synchronistic experiences, extended human capacities, and meditation experience?**

Multivariate Analysis of Variance (MANOVA) will assess how meditators and non-meditators differ across the four dependent variables: Objective Psi, Noetic Experience, Noetic Belief, and Synchronistic Experiences. If the omnibus MANOVA is significant, post-hoc *t*-tests will assess which of these dependent variables differs between meditators and non-meditators. If the data do not satisfy the assumption of multivariate normality, the MANOVA and *t*-tests will be replaced with their nonparametric counterparts.

- 2. Are there associations between synchronistic experiences, extended human capacities, and meditation frequency?**

Associations will be evaluated using correlations (Pearson's *r* or Spearman's rho, depending on data normality) between pre-workshop synchronicity experience and each of the four following variables: Objective Psi, Noetic Belief, Noetic Experience, Meditation Frequency. False discovery rate (FDR; Benjamini & Hochberg, 1995) will be used to account for multiple comparisons.

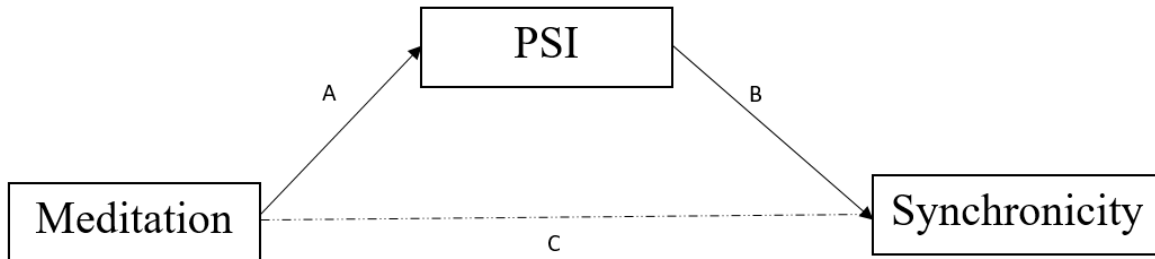
- 3. Do synchronistic experiences occur during meditation-based workshops compared to non-meditation-based workshops?**

Independent-samples *t*-test (or Mann-Whitney U-test depending on data normality) comparing participants who engaged in meditation-based retreats vs. non-meditation-based retreats on post-workshop synchronicity experience.

- 4. Does PSI mediate the relationship between Meditation Frequency and Synchronicity Experience?**

Mediation analysis (Baron & Kenny, 1986; Shrout & Bolger, 2002) will investigate to what extent the relationship between Meditation Frequency and Synchronicity Experience is mediated by Psi (See Figure 1 representing this analysis).

Figure 1.



4. A statement or list of the specific hypothesis or hypotheses being tested, and whether each hypothesis is confirmatory or exploratory. A discussion of confirmatory and exploratory analyses is provided [here](#).

All hypotheses are exploratory and are as follows:

Research Question 1: Meditators compared to non-meditators will report more synchronicity experiences, higher Objective Psi, Noetic Experience, and Noetic Belief scores than non-meditators.

Research Question 2: Pre-workshop synchronicity experience will be positively correlated with Objective Psi, Noetic Experience, Noetic Belief, and Meditation Experience.

Research Question 3: Participants who engaged in workshops with meditation will be more likely to report synchronicity experiences during their workshop than workshops without meditation.

Research Question 4: Meditation will show a positive association with synchronicity (i.e., people with more meditation experience will report encountering more synchronistic experiences; path C). Meditation will also show a positive association with psi (i.e., people with more meditation experience will report better performance on the "objective" psi tasks and/or more noetic experiences/beliefs on the self-report questionnaire; path A). However, when you put both meditation and psi into a regression model predicting synchronicity, the association between meditation and synchronicity will no longer be statistically significant. The association between psi and synchronicity will remain statistically significant. This latter point would suggest that psi mediates the association between meditation and synchronicity (i.e., meditation is associated with synchronicity because of psi) although this would not be necessarily causal because there was no experiment with manipulated variables related to these relationships.

5. The planned number of participants and the number of trials per participant.

Analyses will be conducted on data already collected from a study conducted between March 17, 2018, to November 4, 2020. Two datasets were generated: 1) 1175 unique pre-workshop records and 2) 534 paired pre- and post-workshop records. The synchronicity variables were added to the surveys on July 5, 2019, so records prior to these were not included in this

analysis. In addition, we removed records from participants who took multiple workshops for the latter dataset. For example, 11 people took two workshops, and one took three. Only the record with the longest workshop timeframe for the same participant was kept to ensure adequate time for a synchronistic event. For example, some records were collected before and after a one-hour sound healing, whereas others were multi-day workshops. Only one record for the longest workshop from each person was retained. The paired database will only be used for Research Question #3 looking at the incidence of synchronistic events during the workshops with meditation versus those without. Thus, the final participant numbers were 725 for the pre-workshop surveys and 282 for the pre- and post-workshop surveys. resulting in 282 unique pre-post records from unique individuals.

Missing data:

6. A statement that the registration is submitted prior to collecting data for the first participant, or indicating the number of participants that have provided data when the registration (or revision to the registration) was submitted.

Data for these analyses have already been collected. The analyses outlined in this pre-registration have not been conducted nor will they be conducted prior to the registration of this document.

725 records were collected since July 5, 2019. Of these 725 observations, 53 (7%) contain missing data. In accordance with the standards proposed by (Mirzaei et al., 2022), this falls in the “grey area” for whether to pursue deletion methods or multiple imputation. Little’s test of missingness resulted in a nonsignificant p -value, indicating that these data are Missing Completely at Random, in which case deletion or imputation are both acceptable. We will implement listwise deletion, for simplicity, as well as to not introduce additional noise from imputed data.

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