

Progress Report
528/2014 - Psi Performance in Attenuated Electromagnetic Fields
July 31, 2018

Summary

We completed data collection on December 16, 2017. We had previously set the goal of completing a minimum of 100 runs for the study with a maximum of 150. In the end, 44 people completed the three sessions necessary for their data to be included in the analysis, yielding data from a total of 132 runs.

Data entry began in March 2018 and data cleaning ended in June 2018. Data analysis found no statistically significant difference in psychic performance between any of the four experimental conditions with varying exposure to electromagnetic fields. We found multiple significant correlations between psychometric characteristics and psychic performance. Details of the statistical analyses are included below. We have not yet begun collecting the data for the series of analyses looking at correlations between psychic performance and geomagnetic activity and sidereal time.

Publications and Conferences

We are currently preparing a manuscript for publication reporting the findings of our primary hypotheses about the possible influence of electromagnetic fields on psychic performance. Once that has been accepted for publication, we will next prepare a manuscript reporting the correlations between scores of the psychometric assessments and psychic performance.

We are scheduled to present our results at the Association for Transpersonal Psychology's conference to be held at Asilomar in Pacific Grove, CA on April 12-14, 2019. We will look for more presentation opportunities. Should we also budget travel and lodging to present at Bial's 2019 conference?

Results

Primary hypothesis: There will be a statistically significant difference in psi performance among the four experimental conditions.

To evaluate this hypothesis, a randomized permutation technique was employed, as follows: (a) Hits per trial were determined by comparing matches between the Sender's (S) target positions and the Receiver's (R) responses. (b) The total number of hits were obtained across all trials conducted in each of the four conditions. Call this total in the TG condition H_{TG} . (c) For each trial in each condition, S's targets were randomly permuted and compared against R's responses. Call such hits in the TG condition H_R . (d) The previous step was repeated 5,000 times to form an H_R array. (e) A z score for the TG condition was formed as $z_{TG} = (H_{TG} - \text{mean}(H_R)) / \text{std}(H_R)$. A similar approach was used to determine z_{TU} , z_{TR} , and z_{OT} . (f) The two-tailed p-values associated with these z scores were then determined.

This analysis (Table 1) showed that none of the conditions resulted in significant deviations from chance expectation. A Kruskal-Wallis nonparametric ANOVA, based on the number of hits per trial per condition, showed that none of these results significantly differed from each other (Table 2).

Table 1. Results of the 4 conditions.

Cond	Hits	Trials	z	p(2tail)
TG	133	144	-0.905	0.365
TU	138	144	-0.535	0.592
TR	136	144	-0.588	0.556
OT	139	144	-0.441	0.659

Table 2. Kruskal-Wallis ANOVA.

Kruskal-Wallis ANOVA by Ranks; Hits (ACESANOVA.sta) Independent (grouping) variable: Cond Kruskal-Wallis test: H (3, N= 576) =.2238275 p =.9737			
Depend.: Hits	Code	Valid N	Sum of Ranks
1		144	41691.50
2	2	144	41165.50
3	3	144	41114.00
4	4	144	42205.00

Regarding hypotheses of personality correlates with psi performance, Table 3 shows that out of 14 factors, all of the correlations in the OT condition were in alignment with the prediction, and of those 8 were statistically significant at $p < 0.05$. Four of those correlations remained significant after Bonferroni adjustment for multiple testing. In the TG, TU and TR conditions, two correlations were significant at $p < 0.05$, but none were significant after adjustment.

Table 3. Spearman Rank Order correlations for the four conditions. Correlations significant at $p < 0.05$ are highlighted in bold. The 5th column shows the 2-tailed p-values associated with the OT condition.

	TG	TU	TR	OT	OT 2-tail p value
Transliminality	0.06	-0.29	0.07	0.36	0.014
IRI fantasy	-0.00	-0.24	0.07	0.18	0.223
IRI empathic	-0.04	-0.20	-0.02	0.20	0.186
IRI perspective	-0.11	-0.01	-0.05	0.19	0.208
IRI distress*	0.24	-0.06	-0.01	-0.53	0.0001
Tellegen	-0.01	-0.12	-0.09	0.46	0.001
MAIA Noticing	-0.12	-0.06	-0.10	0.23	0.113
MAIA Not Distracting	-0.06	-0.19	-0.13	0.14	0.334
MAIA Not Worrying	-0.02	0.02	0.07	0.17	0.259
MAIA Attention	-0.16	-0.23	0.10	0.30	0.043

MAIA Emotional	-0.22	-0.29	-0.28	0.34	0.021
MAIA Self Regulation	-0.21	-0.22	-0.08	0.48	0.0006
MAIA Body	-0.26	-0.04	-0.08	0.31	0.033
MAIA Trusting	-0.08	-0.11	0.07	0.39	0.006

* All psychometric correlations were predicted to be positive with respect to psi performance, except for the IRI “distress” correlation, which would be predicted to be negative.