

FINAL REPORT: EVALUATING BOTH PRECOGNITION AND PRESENTIMENT
AMONG CHILDREN IN DIFFERENT AGE GROUPS.

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Abstract

The proposed goal of this study was to investigate possible differences in precognition and presentiment performance among children in different age groups. Prior studies have examined precognition and presentiment in both adults and children, but have not examined age-related differences in performance. The experiment was designed to be as simple and transparent as possible. Testing was conducted in a single 20-minute session with a computer-based task. Statistical analyses revealed significant differences among the three age groups, with best performance in the youngest (3 to 7 years of age).

Introduction / Background

A literature review of psychical research with children over the past 100 years identified 47 precognition studies within the field of parapsychology, but few that examined the effects of age in childhood. This study was designed to examine different age groups of children and their precognition and presentiment test results according to their age.

A pilot study of memory and ESP by Blackmore (1980) was conducted in which a group of 19 children (ages 3-6 years) were tested for clairvoyance using candy and 48 children (ages 3-5 years) were given a memory and preference test using colored pictures. The memory and clairvoyance tests both found no significant correlation of ESP ability with age, although the investigator acknowledged the limitation of a small sample size.

A review of presentiment experiments prior to 2006 can be found in Radin's (2006) *Entangled Minds: Extrasensory Experiences in a Quantum Reality*. Radin, in 1997, measured emotional arousal as participants viewed a series of pictures on a computer screen. Most of the pictures were emotionally neutral, but randomly a negative or erotic image was displayed, which elicited a strong emotional response in the participant. Radin also observed an increased arousal a few seconds before the picture appeared, even before the computer had selected the picture to be displayed, that suggested the presence of presentiment or precognitive awareness.

Bem (2011) reported even stronger evidence of precognition in nine different experiments including over 1000 participants, which tested for precognitive effects in different contexts. All but one of the experiments yielded statistically significant results. The experiments were designed to test for influence by "time-reversing" several well-established psychological paradigms so that the participants responses were obtained before the experimental intervention actually occurred. Again, study results strongly suggested the presence of precognition effects.

Methodology

Study Sample

The planned sample consisted of 120 children participants from 3 different age groups, 40 in each group. The group ages are 3 to 6 years, 7 to 10 years, and 11 to 14 years. The sample participants were recruited through local school programs and network recruitment methods. All took part with parental informed consent and the assent of the child if age-appropriate.

Procedure

Informed Consent. The experimental protocol was approved by the Institutional Review Board of the Rhine Research Center that sponsored the study. The consent forms were sent beforehand to the schools and teachers. The consent forms were then distributed to parents, signed and collected before participation.

Computerized Precognition Task. The computer software protocol was based on the Precognitive Detection of Erotic stimuli (PDE) task created and distributed by Bem (Bem, 2011) with age-appropriate modification of image stimuli. The task was run on a laptop computer. Images used in the experiment were selected from International Affective Picture System and Google images based on specific age search results.

For each trial of the experiment, images of two curtains appeared on a computer screen side by side. The participant's task was to choose the curtain that would reveal a picture behind it. This choice was made by pressing one or another specified key on the keyboard. After selection, the curtain opened, revealing either a picture or a blank screen depending on the success of the choice on that trial. The task comprised a total of 36 trials. Pilot work determined that even the youngest subjects could complete this number of trials. Each test was comprised of 18 trials that included positive emotional pictures and 18 trials using non-emotional pictures as targets. Pictures used in the experiment were selected from the International Affective Picture System and Google images based on specific age search results. The sequencing of the pictures was determined by a randomizing algorithm devised by Marsaglia (1997), and their left/right target positions were determined by an Araneus Alea I hardware-based random number generator. In each trial, the picture and its left/right position were determined after the participant made his or her response, which made the task precognitive.

Testing procedure. Testing was conducted individually in a quiet room. The PI completed the participant information for the session prior to participant arrival. Upon arrival an explanation of the study and specific directions for completing the task was presented by the PI. The participant's hands were positioned on the two response keys used to select the left or right curtain image. Any questions were answered, and the participant was told that the PI would be nearby in case other questions or problems arose. Once the testing had begun, the PI withdrew to an adjacent room.

When all trials were completed, the program provided feedback (percentage of hits achieved) to the participant, which the PI incorporated into the post-experiment briefing. All participants received a \$5 toy for taking part in the study, regardless of outcome.

Results

The final study sample was comprised of three age groups as follows: Young group, $N = 39$, with 15 females and 24 males; Middle group, $N = 40$, with 18 females and 22 males; and Older group ($N = 41$) with 17 females and 24 males. All participants completed the 36 trials of the protocol. Task performance was assessed as the percentage of correct choices in the completed trials (hit rate) for each participant.

The primary hypothesis that task performance differs among the three age groups was tested by a one-way ANOVA that compared mean hit rates in the young, middle, and older groups. The result of this ANOVA indicated significant differences among the three age groups ($F(2,117) = 3.11, p = .049$). Results for the three groups are shown in Table 1. Post-hoc comparisons revealed significant differences only between the Young and Middle groups ($p = .01$).

Exploratory analyses investigated possible differences in performance between the emotional and non-emotional images. Separate ANOVAs were conducted to test age group differences for these two image categories. For emotional images, significant differences were found ($F(2,117) = 5.38, p = .006$). Pair-wise comparisons found significant differences between Young and Middle age groups ($p = .001$) and Young and Older age groups ($p = .04$). For non-emotional images, no significant differences were found among the groups ($F(2,117) = 0.29, p = .75$).

A repeated-measures analysis (mixed design) was also conducted to test the interaction of age group X image category on performance. The test of interaction approached significance ($F(2,117) = 2.78, p = .07$), although the main effect of image category was not itself significant ($F(1,117) = 1.34, p = .25$). Follow-up tests indicated that the image category difference approached significance in the Middle age group ($t = 1.86, p = .07$), with higher hit rates for non-emotional images, but was not significant for the Young and Older groups ($p > .15$). Results are presented in Table 1.

Table 1. Mean (SE) hit rates for Young, Middle, and Older age groups for all trials and separately for Emotional and Non-emotional image trials.

Age Group	All Trials (N = 36)	Emotional Images (N = 18)	Non-emotional Images (N = 18)
Young	53.2 (1.3)	54.8 (1.8)	51.6 (1.9)
Middle	48.8 (1.2)	46.4 (1.8)	51.3 (1.9)
Older	51.3 (1.2)	49.5 (1.8)	53.1 (1.8)

Exploratory tests were also conducted to determine whether performance differed from chance expectation. A series of one-sample *t*-tests compared mean hit rate against a constant equal to the expected value. Results for the full sample ($N = 120$) indicated that the hit rate ($M(SE) = 51.1 (0.7)$) did not differ from chance ($t(119) = 1.49, p = .14$).

Tests of the three age groups found that performance in the Young group ($M(SE) = 53.2 (1.1)$) differed from chance ($t(38) = 3.03, p = .004$). However, results for the Middle and Older age groups did not differ from chance (both $p > .30$).

Discussion

This pilot study was successful in demonstrating that precognition or presentiment could be tested in children using a simple, computerized program that requires only a laptop computer for assessment. The primary hypothesis, that performance on the task would vary depending on the age of the child, was confirmed. Results also showed that, as predicted, the youngest group would perform best. With these outcomes, the study achieved its objectives.

Other features of the results raise questions for further study. The relationship of age group to performance was not monotonic and linear. The Middle age group (7 to 10 years of age) showed the poorest task performance of the three. This group also performed worst for the category of positive emotional pictures. Whether these patterns of performance result from true age differences in precognition or perception, from the specifics of the testing protocol (especially the nature of the positive emotional images), or were just the result of chance cannot be decided in these data. Answers remain to be determined by further research.

The generally low rates of performance are a concern. Mean hit rates for the entire sample did not differ from chance. Among the age groups, only the Young group performed at rates significantly above chance. Overall effects might be accounted for by the interaction of age group and category of photo. The Young group did better for positive-emotion targets compared to neutral targets, but the Middle and Older groups did worse with the positive-emotion targets than with neutral targets. Perhaps this was a result of the specific nature of the images in the positive-emotion pictures having greater appeal to the Young groups and more aversive effects in the children aged seven to 14 years.

Evidence suggests that the task itself is not too difficult for children. All participants confirmed an understanding of what was expected before beginning, and each completed all 36 trials on their own. The task might be expected to be more difficult for the youngest participants, but the Young group showed the greatest success. The successful completion of data collection with a computerized test of precognition or presentiment in children of a broad age range should encourage future studies of PSI abilities in similar age groups. Certainly the anecdotal reports of PSI experiences in children deserve experimental attention.

Overall, we conclude that this was a very successful pilot study that fully accomplished its objectives. We hope that the findings help to reignite interest in the testing of PSI in children, and we plan to continue such ourselves. A better understanding of the relationship between PSI and children will have a benefit in both the field of parapsychology and for child development in their early years.

References

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