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CIS & ICMIC: Norms

Abstract

1361 Ss of ages 8-45 were told that they were to be tested for creative imagination, and were then given the Creative Imagination Scale (CIS), which contains 10 test-suggestions that ask subjects to imagine various sensations and states of awareness: for example, that an arm is light, their hand is becoming warm from the sun, they are eating a delicious orange, they feel that time is slowing down, and they are reexperiencing themselves back in first grade in elementary school. Following administration of the Self-Scoring Form of the CIS, the Inventory of Childhood Memories and Imaginings for Children (ICMIC), a pencil-paper questionnaire, was given. The major purpose of the ICMIC was to find out to what extent subjects remember how they played and imagined during childhood and how their present interests relate to their childhood interests. This paper presents norms for both scales and data pertaining to their reliability, which was satisfactory. In addition, the two scales were compared to investigate the relationship between responsiveness to suggestions on the CIS and the subject's life history of imagining and fantasizing (ICMIC). Finally, responsiveness in children was compared to responsiveness in adults.

The Creative Imagination Scale and The Inventory of Childhood Memories and Imaginings for Children: A Normative Study and Comparison

Until the Creative Imagination Scale (CIS) was constructed, scales that measured responses to suggestions, such as the Barber Suggestibility Scale (BSS), were too authoritarian, implying to the subjects that they were under the control of the experimenter. In addition, the older instruments were not easily administered in group settings. Their wording and their label of "scales for hypnotizability" made it extremely difficult to obtain permission to administer the tests for suggestibility to some subjects, for example, elementary school children, social groups, and church groups, etc.. This greatly limited the population of available subjects (Wilson & Barber, 1978).

The CIS is equally useful in either experimental or clinical settings, as it can be administered quite easily to both individuals and groups. Since it is permissive and nonthreatening, permission can be relatively easily obtained to use the scale in a wide variety of settings, such as school districts, churches, and social clubs, etc..

Workers in the area of cognitive research believe that when subjects are responsive to test-suggestions, such as the CIS, they actually carry out a kind of goal-directed imagining

or fantasy in which they imaginatively "create" the suggested experience (Spanos & Barber, 1974). Therefore, from a theoretical viewpoint, it was appropriate to label this instrument as a creative imagination scale, rather than a suggestibility or hypnotizability scale.

It has been observed in studies using the CIS that subjects find the CIS to be not only a personally valuable experience but also quite enjoyable (Wilson et. al., 1978).

A number of researchers have stated that responding to hypnotic suggestions is similar to becoming involved in imagining while reading a novel, e.g., feeling the emotions, thinking the thoughts in the story and becoming totally absorbed in the story, to the extent that external stimuli are ignored (Barber & Wilson, 1978/1979). Barber (1975) compared the responsive hypnotic subject to the individual who is immersed in watching a movie. Some individuals become so involved with the movie that they can imagine, feel, fantasize and experience the emotions as if they were actually there with the actors, just as a subject might respond to suggestions in a hypnotic situation and experience the feelings and emotions. The ability of the subject to become involved in activities utilizing imagining, such as reading a novel, daydreaming, watching television, etc., has been shown to be positively correlated with hypnotic responsiveness (Barber & Wilson, 1979).

Wilson and Barber (Note 1), presented a preliminary report of a long-term research project of in-depth interviews with excellent subjects, where they have completed interviews with 19 excellent hypnotic subjects (somnambules), all female college students. Their criterion for designating a subject as "excellent" was that she convincingly experienced the classical hypnotic phenomena. The Memory, Imagining, and Creativity Interview Schedule created for this study was derived from the shared characteristics of two excellent hypnotic subjects and items from Josephine Hilgard's interview schedule (Wilson & Barber, Note 1).

The original questions covered areas such as early memories, childhood and adult beliefs and fantasies, empathy and role playing as a child and as an adult, feelings about self, sleep behaviors, hypnogogic hallucinations, psychosomatic and hysterical illnesses, extrasensory experiences, out-of-the-body experiences, eidetic imagery, imaginative involvement in seven areas (reading, dramatic arts, religion, sensory experiences, imagery, imaginary companions during childhood, and physical and mental adventures), identification with parents of the opposite sex, severity of punishments experienced as a child, and positive motivation for hypnosis. The length of time required to interview subjects varied drastically, from four hours to as much as 32 hours. Their preliminary results found that not only do

excellent hypnotic subjects become involved imaginatively in the seven areas of reading, dramatic arts, religion, sensory experiences, imagery, imaginary companions, and physical and mental adventure, but, they have an overriding involvement in fantasizing per se. Wilson and Barber (Note 1) stated that these subjects could even be labeled as "fantasy addicts," and can even "hallucinate" at will.

Two disadvantages of the Memory, Imagining and Creativity Interview Schedule are: First, it can only be administered individually, and secondly, a great deal of time is needed to interview individuals.

Therefore, Wilson and Barber (Note 2) have recently developed from the Memory, Imagining and Creativity Interview, the Inventory of Childhood Memories and Imaginings (ICMI), a 52-item, dichotomous, pencil-paper questionnaire.

The major purposes of this inventory are to determine what percentage of adults remember themselves as very imaginative during childhood, what kinds of childhood imaginative activities and fantasies can be remembered and how much childhood imaginings affect adult experiences or remain a part of adult functioning.

For this study the ICMI has been revised by the present writer to include subjects ages eight through adulthood. This revised instrument, the Inventory of Childhood Memories and Imaginings for Children (ICMIC), which is presented

verbatim in Appendix C, has 48 dichotomous questions and assesses the same imaginative activities and fantasies as the ICMI.

Norms for both the CIS and the ICMIC, both overall and by age levels, will be presented in this paper, together with data pertaining to the responsiveness of children in general to the test items on the CIS. Whether children are more responsive on the items than adults will be investigated also. The relationship between responsiveness to the test-suggestions and imaginative activities and fantasizing will be studied by comparing the total scores of both scales and the total ICMIC scores with scores on each of the CIS test-suggestions.

Method

Subjects

The subjects were 1361 students (674 males and 687 females) from the greater St. Louis area school districts. Of these 445 were elementary school students (ages 8-11); 385 were junior high school students (ages 12-14); 472 were high school students (ages 15-17); and 59 were college students (ages 18-45). The number of students in each subgroup, classified in terms of approximate year in school, age, and sex, is presented in Table 2, columns 1-3.

Not counted in any of the totals were 27 of a total of 78 third grade students who were not able to finish the ICMIC

or CIS Self-Scoring Form because they were not able to read the tests by themselves and there was not enough time in the test session for the tests to be read in their entirety.

The students were from diverse backgrounds and appeared to represent the area population ethnically, racially, and economically.

All of the students were volunteers. In the arrangements made for the experiment, the school district officials asked that participation on the part of the students and the building administrators be voluntary.

Materials

Think-With instructions. These instructions, which are transcribed verbatim elsewhere (Barber & Wilson, 1977), were designed to facilitate the imagination process by demonstrating how to think along with and imaginatively focus on suggested themes. Presentation of the think-with instructions requires seven minutes.

The students were first told: "I'm going to give you a series of tests in which I'll ask you to focus your thinking and to use your imagination creatively."

Then, the students were told how they could prevent themselves from responding to the tests either by saying negative things to themselves, e.g., "This is silly, I can't experience (the suggested effect)" or by waiting passively for something to happen as if by magic.

To encourage responsiveness, however, they were then told that everyone has a creative imagination, but that most of us are not aware of how much we use it, and that they could experience the suggested effects if they would let themselves think and imagine along with the themes of the suggestions.

The final portion of the Think-With Instructions, showing how one can experience suggested effects by thinking and imagining with the suggestions, was altered slightly because of the objections of one parent and a school official to the use of the demonstration utilizing ideomotor action with a pendulum. Instead, different verbal examples of concentration, and deep focusing and imagining were presented. These included experiencing day dreams, e.g., being unaware of anyone or anything else, getting deeply involved in reading a favorite book, and becoming so creatively involved in a television show that one could feel the emotions and become aware of anything but that television show.

The instructions were repeated for the third and fourth grade groups with special explanations, e.g., the word "experience" was explained. These instructions were also extremely valuable as an introduction in order to gain the students' attention.

The creative imagination scale (CIS). The Creative Imagination Scale is presented verbatim in Appendix A. The 10 test-suggestions of the CIS in the order of presentation,

will be briefly summarized as follows:

1. Arm Heaviness. Suggestions are given to guide the subjects to imagine that heavy dictionaries are being placed on the outstretched palm of the hand, causing the arm to feel very heavy.

2. Hand Levitation. Suggestions are given to guide the subjects to imagine that a strong stream of water from a garden hose is pushing against the palm of the outstretched hand, pushing the hand up.

3. Finger Anesthesia. Suggestions are given to guide subjects to imagine that novocain has been injected into the side of the hand, causing two fingers to feel numb.

4. Water "Hallucination." Suggestions are given to subjects to imagine that they are very thirsty and then to imagine quenching their thirst by drinking cool mountain water.

5. Olfactory-Gustatory "Hallucination." Suggestions are given to guide the subjects to imagine that they are smelling and tasting an orange.

6. Music "Hallucination." Suggestions are given to guide the subjects to re-experience "hearing" wonderful music that they had heard previously.

7. Temperature "Hallucination." Suggestions are given to guide the subjects to imagine that the sun is shining on the top of the right hand, causing it to feel hot.

8. Time Distortion. Suggestions are given to guide the subjects to imagine that time is slowing down.

9. Age Regression. Suggestions are given to guide the subjects to recreate the feelings they had experienced when they were children in first grade in elementary school.

10. Mind-Body Relaxation. Suggestions are given to guide the subjects to imagine that they are lying under the sun on a beach and becoming very relaxed.

Immediately following the administration of the CIS, the students reported what they experienced on a written questionnaire, the Self-Scoring Form of the Creative Imagination Scale, as shown in Appendix B.

On the Self-Scoring Form, the students were asked to rate their performance of each of the ten test-suggestions on a five-point scale ranging from "Not at all the same" as the real thing (score of 0) to "Almost exactly the same" as the real thing (score of 4). Thus, scores on each of the 10 test-suggestions range from 0 to 4, and total scale scores on the CIS can range from 0 to 40.

Reliability and validity of CIS. The CIS has been found to be a reliable and valid measure in a series of investigations. Test-retest reliability was evaluated by Wilson and Barber (1978) who tested 22 subjects twice on the CIS. The test-retest correlation was found to be satisfactory, $r = .82$, $p<.01$. In a study by Kiddoo (cited

in Barber & Wilson, 1978/1979), split-half reliability, assessed with 217 subjects, was also found to be highly satisfactory, $r = .89$, $p<.001$. The CIS also was shown to possess factorial validity, that is, each of the test-suggestions primarily measures one dimension of human behavior (Wilson & Barber, 1978). Concurrent validity was demonstrated in a study by Wilson and Barber (1978), which yielded a Pearson correlation of .60 ($p<.001$) between the CIS and the BSS.

The inventory of childhood memories and imaginings for children (ICMIC). The ICMIC was revised from the Inventory of Childhood Memories and Imaginings, which was an abbreviated version of the Memory, Imagining, and Creativity Interview Schedule (Wilson & Barber, Note 2), a test of the characteristics of excellent hypnotic subjects.

This test, a paper and pencil questionnaire with a yes/no format, is presented in Appendix C. Scores on the ICMIC range from 0 to 44, since the first four questions are "warm-up" items and, hence, are omitted in scoring the instrument.

Analyses of data. The scores of the college students 19 years of age and older were placed into a single age category because there were so few of them.

Separate two-way analyses of variance for unequal subclasses were performed on the CIS test-suggestions and

on the ICMIC questions. The SAS computer ANOVA, General Linear Models Procedure, was employed in these analyses. Duncan's multiple-range test for unequal subclasses was used to compare the group means (Kramer, 1956; Kirk, 1968, p. 533). Pearson Product-moment coefficients of correlation were computed between scores on the CIS Self-Scoring Form and the ICMIC scores, between test-retest scores, and in intercorrelations between total ICMIC and each ICMIC question. Kuder-Richardson Formula 20 was used for computing the internal consistency reliability of the ICMIC (Nunnally, 1978, p. 214). Orthogonal Polynomial trend analyses were used to test for age-related patterns (Kirk, 1968). Eta was used to determine the amount of variance that age accounts for in each of the questionnaires.

Procedure

All students, teachers, and school administrators were told that a test of creative imagination was to be administered. All students were tested in their classroom situations. The number of students in each test session ranged from 17 to 48 students, depending on class size. Each test session required approximately 45 minutes. Those students who did not wish to participate in the experiment were sent out of the room, with a few exceptions. Those few who stayed in the room during the testing sat quietly.

Immediately following Think-With Instructions (Barber

& Wilson, 1977), the Creative Imagination Scale was administered to the students via a tape recording produced by Wilson (1977).

Administration of the 10 test-suggestions required 18 minutes. Students were asked to close their eyes and to keep them closed while listening to the tape.

Following the CIS, the students reported what they had experienced on the Self-Scoring Form of the Creative Imagination Scale.

Upon completion of the CIS questionnaire, the students were tested on the Inventory of Childhood Memories and Imaginings for Children. Both written tests were read to the third grade students to ensure their understanding of the instruments.

Retest of the ICMIC. Seventeen students of ages 8-9, 20 students of ages 10-11, 35 students of ages 12-13, 16 students of ages 14-15, 16 students of ages 17-18, and 15 students over 19 were retested on the ICMIC after an average interval of 2.5 days. This second testing was conducted for the purpose of assessing the scale's test-retest reliability.

Results

Sex Differences

Insert Table 1 about here

The analyses of variance, as shown in Table 1, indicate that the sexes did differ significantly in response to the CIS test-suggestions and on the ICMIC questions. In addition, an interaction effect was significant between age and sex on the ICMIC, as shown in Figure 2.

Insert Figures 1 and 2 about here

This interaction did not appear amenable to a clear interpretation: At age 8, boys' means on the ICMIC were greater than the girls' means. However, by age 9 the girls' means on the ICMIC increased dramatically, whereas, the boys' means decreased dramatically. The ICMIC means of both sexes decreased until age 12 when the girls' means showed an almost continual increase through adulthood. The boys' means showed a gradual downward trend, and stayed at a low level through adulthood.

Age Differences

Since the analyses of variance for both scales, as presented in Table 1, showed significant age effects, the data were tested for linearity and nonlinearity with age through the use of orthogonal polynomials for unequal n's (Kirk, 1968).

In addition to having a significant linear relationship with age, scores on both the CIS and the ICMIC also proved

to be significant quadratic function of age. This result indicates the presence of a curvilinear relationship between age and the test scores. The significant cubic trend in the CIS scores reflected a change in the nature of the curvilinear relationship. These functions are shown visually in Figures 3 and 4 in both the smoothed and unsmoothed curves.

The smoothed curves in Figures 3 and 4 were obtained by summing the Kth age-group means, the (Kth - 1) age-group means, and the (Kth + 1) age-group means, and dividing by 3. All but the first and last age-group means were "smoothed" in this fashion, the purpose being to obtain a clearer picture of trends. Male and female means are combined for this analyses.

Insert Figure 3 about here

The CIS smoothed curve in Figure 3 showed the following relationships: At age 9 students were more responsive than at ages 10 through adulthood. There was an increase in responsiveness from age 9 to age 10 with a gradual decrease in responsiveness until ages 13-16 when a low plateau was reached. At age 16 a very slight increase in responsiveness was seen. The CIS quadratic relationship was made clearer in the smoothed curve, whereas the cubic

relationship was more visible in the unsmoothed curve.

Insert Figure 4 about here

The ICMIC smoothed curve in Figure 4 showed the following relationships: At age 9 students responsiveness started high, and then responsiveness decreased until a low point was reached at ages 13-14. The students' responsiveness started increasing again at age 15 and continued rising through adulthood.

For both the CIS and the ICMIC, the proportion of age variance accounted for by each type of relationship was computed via dividing the Sum of Squares for each polynomial by the Sum of Squares for age. The partitioning of the variance due to age yielded the following results: CIS linear trend accounted for 9% of the age variance; CIS quadratic trend accounted for 22%; CIS cubic trend accounted for 33%; ICMIC linear trend accounted for 21%; ICMIC quadratic trend accounted for 61%.

Even though 20% of age variance on the ICMIC was accounted for by linear, the quadratic was overwhelming.

Eta^2, which indicates proportion of test-score variance accounted for by age, was applied to measure the explanatory power and strength of the age variable. This analysis revealed that age accounted for 80% of the variance in

CIS scores and 74% of the variance in ICMIC scores.

Creative Imagination Scale (CIS): Mean Comparisons and Norms

Insert Table 2 about here

The mean total scores on the CIS, along with means and standard deviations for both sexes within the age categories, are presented in Table 2, column 4. These relationships can be observed visually in Figure 1, which shows that female students responded better than male students with less variation. The Duncan Range Test (Kramer, 1956; Kirk, 1968, p. 533) revealed which age groups were significantly different from one another (see Table 2).

Insert Table 3 about here

The mean scores for each of the ten CIS test-suggestions, as a function of age, are presented in Tables 3 and 4.

Insert Table 4 about here

Overall Creative Imagination Scale normative data, which includes all age groups combined, are shown in Table 5.

Insert Table 5 about here

The CIS norms, by age groups, are presented in Tables 6-13. The norms, both overall and by age group, include the percent of the subjects obtaining a given score, cumulative percent, and T scores. Cumulative percents indicate what percentage of the sample a subject equals or excels. For instance, a cumulative percent of 87 means that the subject's raw score is equal to or above the score of 87% of the sample. T scores are standard scores in a normalized distribution with a mean of 50 and a standard deviation of 10. Thus, a T score of 60 states that in a normalized distribution, the subject's raw score is one standard deviation above the mean for the group (Wilson & Barber, 1978).

Insert Tables 6-13 about here

The means for the adult group, as shown in Figures 1 and 3, may reflect systematic bias because the psychology class was atypical and the adult sample size was small. Therefore, the means have been combined with Kiddoo's (cited in Wilson et. al., 1978) sample of 217 subjects also obtained from psychology classes. The weighted means formula was used to combine the 241 subjects, which gave a pooled mean of 21.35. The new normative scale for adults was changed very slightly from Kidoo's (cited in Wilson et.

al., 1978) study by raising the Low Level from the 9-10 category to the 13-14 category; the Medium Low Level was changed from 19-20 to 21-22; the High and Medium High Levels did not change.

Insert Table 14 about here

Inventory of Childhood Memories and Imaginings for Children (ICMIC): Mean Comparisons, Norms, and Psychometric Characteristics

The Duncan range test (Kramer, 1956; Kirk, 1968, p. 533) was applied to the mean scores of the ICMIC, as shown in Table 14 (column 4). The differences between the means of males and females are presented in Figure 2. These data show that females do better on the ICMIC at every age except eight.

Insert Tables 15-23 about here

Tables 15-23 show the norms for the ICMIC by age groups and for the whole population. These norms are presented in the same way as previously shown with the CIS.

Test-retest of the ICMIC. Test-retest reliability refers to the stability of an individual's score over a period of time. To evaluate test-retest reliability, 119

students were tested twice on the ICMIC at an average of 2.5 days between tests, ranging from 5 hours to one week after the first test session. The Pearson *r* was used to determine the strength of relationship between ICMIC scores from both test sessions.

Insert Table 24 about here

The six groups retested on the ICMIC showed significant correlations, as shown in Table 24. Fisher *z* transformation indicated that the six correlation coefficients did not differ significantly ($\chi^2 = 1.30$, df = 5, $p<.90$).

Internal consistency reliability. To assess the internal-consistency reliability of the ICMIC, the Kuder-Richardson Formula 20 was used. The KR-20, based on the data of 1361 students, was found to be moderately high, $r_{kk} = .89$ ($p < .001$).

Factorial validity. In measuring factorial validity, intercorrelations among all the test items were computed. The fact that every item, except number four, was correlated with the total score was presumptive evidence that the ICMIC possesses factorial validity.

The fact that 94% of the students answered question four positively, thereby diminishing its variance, accounts for its lack of relationship with total score.

A formal evaluation of factorial validity will be presented in another paper.

Comparison of the CIS With the ICMIC

Insert Table 25 about here

Table 25 indicates that all age groups, except ages eight and 12, showed significant Pearson correlations between the total ICMIC and the total CIS. The age groups 9, 10, 15, 16, and 17 showed significant correlations between the two tests on almost all CIS items, whereas, the age groups of eight and 12 showed almost no significant correlations. The separate test items of age regression and mind-body relaxation seemed to have more correlation with the ICMIC as age increases, while arm heaviness and finger anesthesia correlated the least with the ICMIC as age increases.

As shown in Figure 5, the females' mean scores on the CIS closely followed their ICMIC scores with the greatest difference between ages 13-14. In contrast, the males' mean CIS and ICMIC scores tended to grow further apart as males got older. The latter trend is shown in Figure 6.

Insert Figures 5 and 6 about here

Discussion

In this study normative data for the Creative Imagination Scale was extended from adults to eight-year olds. Also, the Inventory for Childhood Memories and Imaginings has been normed for the first time for adults as well as for the other age groups from adulthood to age eight. In order to provide a better comparison in norms between adults and children, the small, atypical sample of adults from this experiment was combined with adults from a former study by Kiddoo (cited by Barber & Wilson, 1978/1979).

In contrast to prior studies (Barber & Calverly, 1963), these experimental results indicated that not only was there a sex difference, but also a definite trend along the age line for both instruments.

Barber and Calverly (1963) stated that although their findings in general agreed with the prior conception that suggestibility decreases with age, adults did obtain high mean scores after receiving explicit instructions designed to produce positive motivation. They also suggest that childrens' responses might be enhanced by explicit motivating instructions.

The findings of this study were in contrast with the prior conceptions of suggestibility as the quadratic and cubic relationships of the CIS with age showed that subjects

from ages 17 through the adult years were more responsive than subjects in their early teen years. Responsiveness would then tend to change in a curvilinear fashion with age rather than a monotonic downward pattern that reaches a permanently low plateau by adulthood.

The ICMIC had a quadratic relationship with age, which suggested a curvilinear relationship over the developmental continuum. Whereas eight-year olds didn't respond as well on the Creative Imagination Scale as other age groups, they did have more imagination and felt more creative than all other age groups except adults (19+) on the ICMIC. Students in age groups 12-15 evidenced less imagination and fewer fantasies than the other age groups. In contrast, adult subjects appeared to possess as much imaginative ability as 8-year olds.

The opinion of this writer was that the age trend in responsiveness to the Creative Imagination Scale might tend to reflect where the subject is in social development. The lowest points on the continuum were ages 8, 12, and 15 or grades 3, 7, and 10. Third grade is a point in time where students are trying to 'fit into a pattern', just as in seventh grade, the beginning of junior high, and tenth grade, which, for most students, is the first year in high school. In all three cases the students are facing a somewhat apprehensive condition, in which social control

and wanting to give the "right" appearance are at a peak. This condition may work against the "letting go" required by the CIS.

Along the same line of reasoning, in the grades four through six, eight and nine, and eleven into adulthood, individuals may have more status in their social roles and may be more secure in their respective places.

On the ICMIC, younger children, ages 8-11, showed as much response as the age groups 15 and above, while the age group from 12-15 was the least responsive to the test items. Again it is possible that the age group from 12-15 tends to be more socially conscious than the other age group, especially in the area of imagination or fantasy which they tend to associate with early childhood.

Along the age continuum, responsiveness to the CIS test-suggestions was related to the students' subjective reports on the ICMIC regarding their ability to become involved in an imaginative way both now and when they were younger for ages 10, and 15-17. These results were supportive of other investigations (Wilson & Barber, Note 1) which suggested a relationship between the imaginative-fantasy abilities of individuals and their responsiveness to suggestions. Students ages eight and twelve, who had less responsiveness on the CIS than other groups, also showed no relationship between the two instruments, while

the remaining age groups showed varying levels of relationship between the two instruments.

The following CIS test-suggestions were highly related to the Inventory of Childhood Memories and Imaginings for Children: hand levitation, music "hallucination", temperature "hallucination", age regression, and mind-body relaxation. Arm heaviness and finger anesthesia related less than any of the other 10 test-suggestions.

As the data were collected, some attitudes and behaviors were observed that seemed to coincide with the statistical findings to the extent that reliance can be placed on subjective reports. Some of these findings are as follows:

1. The boys' low means coincided with the areas of their greatest difficulties in concentrating. They appeared more immature than the girls and had problems with giggles and, in general, sitting still for the duration of the tape; contrastingly, the girls were more interested and responsive in general. The girls seemed to try harder.

2. Several concepts were difficult for all of them to understand such as novocain numbing the fingers and the concept of time slowing down or stretching out. At least one-third of the third graders actually stretched their arms and legs during this test-suggestion. Many eight-year old boys had trouble peeling the orange. This phenomenon was more pronounced in the eight-year old boys,

but not limited to them as the means in Tables 3 and 4 show.

3. When asked, all the students stated that they enjoyed the music "hallucination" and felt they did well on that test-suggestion. Arm heaviness was another favorite. However, quite a few students had trouble concentrating at first, and the fact that their arms did feel heavy produced some slight disruptions in the classes in a few instances.

4. The third graders had visible problems concentrating, and their attention span was too short for the length of the CIS recording. However, this is indicative of their age group in general, so it should not affect their norms in a spurious manner.

5. In the age groups of 12-14 years old, a few students, mostly boys, had trouble following the instructions at first, and passively listened to the first test-suggestions even though preliminary instructions did not differ between classes.

6. Those students who acted out the test-suggestions the best often felt that they hadn't experienced anything subjectively. A few individuals peeled the orange so realistically that you could almost see the orange, and yet they scored very low on that test-suggestion. The quieter individuals seemed to be more subjectively responsive.

When asked for their opinion, most of the students said that they found the CIS and the ICMIC to be personally

valuable and very enjoyable. As Wilson and Barber (1978) predicted, the CIS was easy to give and very useful in group settings.

Limitations of the Data

Since there were only 24 individuals of widely varying ages in the sample of adults (19+) and the adult group differed significantly from the 18 year old group, this group may be atypical. The fact that they were all currently enrolled in psychology courses may have inflated their scores.

In addition to the problem of attention-span length, students in the eight-year old group couldn't read either test sheet completely. Words such as "tasting," "experience," "novocain," "hypnosis," and "leprechaun," etc. were not understood without explanations. Although these problems are not surprising in view of the childrens' age, they do increase the amount of time in giving the tests, which was approximately between one to two hours. Also the fact that the instruments had to be read to these children made it generally hard to find third grade teachers who would cooperate after they noticed the length of the questionnaires.

Future Research Prospects

As males did less well on both scales, further research might be undertaken to find out why there was this significant sex difference. Are the males less creative or just

more bound by their sex-role training? Maybe girls were encouraged to be more imaginative than boys early in life, e.g. in the fairytales that are read to them or their imaginative play.

In future research, preliminary instructions, such as Think-With Instructions (Barber & Wilson, 1977), should not contain suggestions that tend to suggest the mythical qualities of hypnosis. If the CIS was constructed, as Wilson and Barber (1978) stated, for acceptance in a wide variety of situations, then preliminary instructions will need to be considered very carefully. Since the pendulum section of the Think-With Instructions (Barber et. al., 1977) caused a slight problem with school officials in the beginning of this project, it should be revised to coincide closer with the reasoning behind the CIS, namely, that the CIS wording was supposed to be nonthreatening, permissive and not suggestive of a hypnotizability scale.

Further research might be conducted to discover if children produce the same results when tested alone as they do in groups, where they are perhaps more socially conscious.

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Footnotes

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Table 1

Summary of Analyses of Variance for

Test-Suggestions of CIS and ICMIC

		CIS		ICMIC	
Source	df	MS	F	MS	F
Sex (A)	1	1311.21	24.24**	2951.03	56.16**
Age Groups	11	257.58	4.76**	436.82	8.31**
A X B	11	28.97	.54	101.41	1.93*
Trend Analysis of Age Effect					
Linear trend	1	250.02	4.62*	981.37	18.68**
dep from lin trend	10	258.34	4.78**	382.37	7.28**
Quadratic trend	1	616.95	11.41**	2949.01	56.12**
Cubic trend	1	930.84	17.21**	52.89	1.01
Error	1337	54.08		52.55	
Total	1360				

Note. The SAS package general linear models procedure for unequal subclasses, along with orthogonal polynomial trend analysis, was used in these analyses.

*p<.05.

**p<.01.

Table 2

Mean Scores, Standard Deviations and Results of Duncan Tests Applied to CIS Test-Suggestions Totals

Age (1)	School Year (2)	Number of Subjects (3)			Statistics (4)					
					Means			SD's		
		M[a]	F	Tot	M	F	Tot	M	F	Tot
8	3	33	18	51	18.8_{d}	23.0_{abcde}	20.3_{a}	7.6	7.1	7.6
9	4	68	53	121	23.7_{ab}	24.5_{abcd}	24.0_{a}	7.4	8.4	8.0
10	5	91	67	158	22.6_{ab}	25.0_{ab}	23.6_{a}	7.2	7.2	7.3
11	6	55	60	115	21.4_{abcd}	24.7_{abc}	23.1_{ac}	6.3	8.6	7.7
12	7	68	57	125	20.2_{abcd}	21.0_{e}	20.6_{d}	8.1	9.0	8.5
13	8	74	58	132	20.4_{abcd}	22.2_{abcde}	21.2_{cd}	7.7	6.2	7.1
14	9	71	57	128	21.0_{abcd}	22.6_{abcde}	21.7_{cd}	7.2	6.8	7.1
15	10	68	84	152	18.9_{d}	21.2_{e}	20.1_{d}	6.9	6.4	6.7
16	11	49	81	130	18.8_{d}	22.2_{abcde}	21.0_{d}	7.4	7.0	7.3
17	12	74	116	190	21.0_{abcd}	22.7_{abcde}	22.0_{cd}	8.0	7.1	7.5
18	13	12	23	35	19.4_{abcd}	23.7_{abcde}	22.2_{acd}	5.8	6.1	6.3
19	14-15	11	13	24	25.6_{ac}	26.8_{a}	26.3_{a}	7.0	6.8	6.8
Total		674	687	1361	21.0	23.0	22.0	7.2	7.5	7.5

Note. Means in the same column which do not have a letter in common in the subscript differ significantly from each other at the .05 level by Duncan test.

[a]M = male; F = female.

Table 3

Mean Scores on Items of the Creative Imagination Scale as a Function of Age (8-13 years)

Test-Suggestion	Age					
	8	9	10	11	12	13
1. Arm Heaviness	2.33	2.69	2.89	2.98	2.43	2.24
	2.83	2.62	3.18	2.98	2.32	2.76
2. Hand Levitation	1.82	2.47	1.92	1.71	1.91	1.73
	2.17	2.36	2.30	2.18	1.74	1.88
3. Finger Anesthesia	1.33	2.07	1.95	2.11	1.65	1.78
	2.28	2.26	1.96	2.00	1.44	1.78
4. Water	2.18	2.46	2.14	1.98	1.97	2.14
"Hallucination"	1.89	2.42	2.60	2.40	2.26	2.24
5. Olfactory-Gustatory	1.55	2.07	1.93	1.73	2.01	1.89
"Hallucination"	2.44	2.50	2.30	2.15	2.05	2.16
6. Music	2.52	2.63	2.54	2.36	2.10	2.12
"Hallucination"	2.28	2.57	2.64	2.77	2.63	2.17
7. Temperature	1.52	2.34	2.31	2.07	2.12	1.93
"Hallucination"	2.33	2.32	2.54	2.38	1.95	2.12
8. Time Distortion	1.61	2.04	2.00	1.58	1.82	1.96
	1.94	2.51	1.90	2.25	1.88	2.14
9. Age Regression	1.64	2.22	2.45	2.11	2.09	2.27
	2.00	2.34	2.58	2.65	2.16	2.37
10. Mind-Body	2.27	2.68	2.52	2.76	2.13	2.31
Relaxation	2.83	2.62	2.93	2.93	2.54	2.83

Note. Numbers underlined indicate means for females.

Table 4

Mean Scores on Items of the Creative Imagination Scale as a Function of Age (14-19 years)

Test-Suggestion	Age					
	14	15	16	17	18	19
1. Arm Heaviness	2.55	2.10	2.12	2.49	2.42	2.64
	2.61	2.61	2.62	2.72	3.04	2.31
2. Hand Levitation	1.66	1.25	1.37	1.69	1.50	1.73
	1.75	1.86	1.84	1.99	1.61	2.62
3. Finger Anesthesia	1.82	1.57	1.39	1.65	1.50	2.55
	1.96	1.79	1.75	1.93	1.57	2.00
4. Water	1.93	1.81	1.61	1.97	1.92	2.27
"Hallucination"	2.14	2.08	2.00	1.85	2.17	2.69
5. Olfactory-Gustatory	1.79	1.74	1.73	1.92	1.83	2.55
"Hallucination"	2.23	1.95	1.89	1.86	2.00	2.46
6. Music	2.85	2.26	2.53	2.68	2.25	2.82
"Hallucination"	2.56	2.31	2.46	2.58	2.78	3.15
7. Temperature	2.17	1.97	1.76	1.91	1.83	2.27
"Hallucination"	1.98	1.92	1.96	2.13	1.78	2.54
8. Time Distortion	1.51	2.00	1.98	2.31	1.75	2.64
	1.91	1.86	2.43	2.36	2.83	2.92
9. Age Regression	2.01	1.75	1.94	1.91	1.92	2.91
	2.37	2.12	2.26	2.14	2.61	2.77
10. Mind-Body	2.75	2.40	2.41	2.49	2.50	3.27
Relaxation	3.04	2.69	3.04	3.09	3.26	3.38

Note. Numbers underlined indicate means for females.

Table 5

Norms for Creative Imagination Scale, All Ages Combined

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	9		1		100	74
	37-38	14		1		99	71
	35-36	42	178	3	13	98	68
	33-34	52		4		95	65
	31-32	61		4		91	62
Medium High..	29-30	90		7		87	60
	27-28	106		8		80	57
	25-26	125	479	9	36	72	55
	23-24	158		12		63	52
Medium Low...	21-22	130		10		51	49
	19-20	154		11		41	47
	17-18	120	486	9	36	30	44
	15-16	82		6		21	41
Low.....	13-14	79		6		15	39
	11-12	44		3		9	36
	9-10	35		2		6	33
	7- 8	20	206	1	15	4	31
	5- 6	18		1		3	28
	3- 4	9		1		2	26
	0- 2	13		1		1	22
N =		1361		100			

*Mean of 50, standard deviation of 10.

Table 6

Norms for Creative Imagination Scale, Age 8

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	2		4		100	76
	37-38	0		0		96	73
	35-36	1	5	2	10	96	71
	33-34	0		0		94	68
	31-32	1		2		94	65
	29-30	1		2		92	62
Medium High..	27-28	2		4		90	60
	25-26	8	18	16	35	86	57
	23-24	3		6		70	54
	21-22	5		6		64	52
Medium Low...	19-20	8		16		55	49
	17-18	8	19	16	38	39	46
	15-16	2		4		23	44
	13-14	1		2		19	41
Low.....	11-12	5		6		17	38
	9-10	1		2		8	35
	7- 8	1	9	2	17	6	33
	5- 6	1		2		4	30
	3- 4	0		0		2	27
	0- 2	1		2		2	24
N =		51		100			

*Mean of 50, standard deviation of 10.

Table 7

Norms for Creative Imagination Scale, Ages 9-10

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	6		2		100	71
	37-38	6	43	2	16	98	68
	35-36	15		6		96	66
	33-34	16		6		90	63
Medium High..	31-32	12		4		84	60
	29-30	23	85	8	30	80	58
	27-28	23		8		72	55
	25-26	27		10		64	52
Medium Low...	23-24	30		11		54	50
	21-22	23	104	8	37	43	47
	19-20	26		9		35	44
	17-18	25		9		26	41
Low.....	15-16	17		6		17	39
	13-14	11		4		11	36
	11-12	9		3		7	33
	9-10	6	47	2	17	4	31
	7- 8	0		0		2	28
	5- 6	2		1		2	25
	3- 4	2		1		1	23
	0- 2	0		0		0	19
N =		279		100			

*Mean of 50, standard deviation of 10.

Table 8

Norms for Creative Imagination Scale, Age 11

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	1		1		100	72
	37-38	2		2		99	69
	35-36	4	23	3	20	97	67
	33-34	9		8		94	64
	31-32	7		6		86	61
Medium High..	29-30	4		3		80	59
	27-28	12	37	10	31	77	56
	25-26	12		10		67	53
	23-24	9		8		57	51
Medium Low...	21-22	15		13		49	48
	19-20	12	39	10	34	36	45
	17-18	5		5		26	42
	15-16	7		6		21	40
Low.....	13-14	7		6		15	37
	11-12	3		3		9	34
	9-10	2		2		6	32
	7- 8	0	16	0	15	4	29
	5- 6	2		2		4	26
	3- 4	1		1		2	23
	0- 2	1		1		1	20
N =		121		100			

*Mean of 50, standard deviation of 10.

Table 9

Norms for Creative Imagination Scale, Age 12

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	0		0		100	76
	37-38	4		3		100	73
	35-36	6	23	4	17	97	70
	33-34	5		4		93	67
	31-32	3		2		89	65
	29-30	5		4		87	62
Medium High..	27-28	5		4		83	59
	25-26	7	37	6	31	79	57
	23-24	12		10		73	54
	21-22	13		11		63	51
Medium Low...	19-20	13		11		52	49
	17-18	15	47	12	38	41	46
	15-16	9		7		29	43
	13-14	10		8		22	40
Low.....	11-12	5		4		14	38
	9-10	4		3		10	35
	7- 8	1	18	1	14	7	32
	5- 6	3		2		6	30
	3- 4	3		2		4	27
	0- 2	2		2		2	24
N =		125		100			

*Mean of 50, standard deviation of 10.

Table 10

Norms for Creative Imagination Scale, Ages 13-14

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	0		0		100	74
	37-38	0		0		100	72
	35-36	6		2		100	69
	33-34	4	40	2	15	98	66
	31-32	11		4		96	64
	29-30	19		7		92	61
Medium High..	27-28	24		9		85	58
	25-26	25		10		76	55
	23-24	39	113	15	44	66	53
	21-22	25		10		51	50
Medium Low...	19-20	34		13		41	47
	17-18	12	65	5	25	28	45
	15-16	19		7		23	42
Low.....	13-14	14		5		16	39
	11-12	6		2		11	37
	9-10	7		3		9	34
	7- 8	6	42	2	16	6	31
	5- 6	5		2		4	28
	3- 4	1		1		2	26
	0- 2	3		1		1	22
N =		260		100			

*Mean of 50, standard deviation of 10.

Table 11

Norms for Creative Imagination Scale, Ages 15-16

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	0		0		100	76
	37-38	1		1		100	73
	35-36	3	40	1	15	99	70
	33-34	11		4		98	68
	31-32	6		2		94	65
	29-30	19		7		92	62
Medium High..	27-28	20		7		85	59
	25-26	22	98	8	35	78	57
	23-24	31		11		70	54
	21-22	25		9		59	51
Medium Low...	19-20	34		12		50	49
	17-18	35	112	12	39	38	46
	15-16	18		6		26	43
	13-14	25		9		20	40
Low.....	11-12	11		4		11	38
	9-10	7		2		7	35
	7- 8	8	32	2	11	5	32
	5- 6	2		1		3	30
	3- 4	1		1		2	27
	0- 2	3		1		1	24
N =		282		100			

*Mean of 50, standard deviation of 10.

Table 12

Norms for Creative Imagination Scale, Ages 17-18

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	0		0		100	74
	37-38	1		1		100	71
	35-36	6	30	2	13	99	68
	33-34	4		2		97	65
	31-32	19		8		95	63
Medium High..	29-30	17		8		87	60
	27-28	16		7		79	57
	25-26	20	81	9	36	72	55
	23-24	28		12		63	52
Medium Low...	21-22	24		11		51	49
	19-20	27		12		40	46
	17-18	20	81	9	36	28	44
	15-16	10		4		19	41
Low.....	13-14	11		5		15	38
	11-12	5		2		10	36
	9-10	8		4		8	33
	7- 8	2	33	1	15	4	30
	5- 6	3		1		3	28
	3- 4	1		1		2	25
	0- 2	3		1		1	21
N =		225		100			

*Mean of 50, standard deviation of 10.

Table 13

Norms for Creative Imagination Scale, Ages 19+

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	39-40	1		1		100	75
	37-38	4		1		99	72
	35-36	6	47	2	19	98	69
	33-34	14		6		96	66
	31-32	13		5		90	64
	29-30	9		4		85	61
Medium High..	27-28	26		11		81	58
	25-26	16	68	7	29	70	56
	23-24	26		11		63	53
Medium Low...	21-22	19		8		52	50
	19-20	19	73	8	31	44	48
	17-18	21		9		36	45
	15-16	14		6		27	42
Low.....	13-14	13		5		21	39
	11-12	9		4		16	37
	9-10	11		4		12	34
	7- 8	9	53	4	21	8	31
	5- 6	6		2		4	29
	3- 4	3		1		2	26
	0- 2	2		1		1	23
N =		241		100			

*Mean of 50, standard deviation of 10.

Table 14

Mean Scores, Standard Deviations and Results of Duncan Tests Applied to ICMIC Questions

Age (1)	School Year (2)	Number of Subjects (3)			Statistics (4)					
					Mean			SD		
		M[a]	F	Tot	M	F	Tot	M	F	Tot
8	3	33	18	51	24.4_{a}	22.4_{abcde}	23.7_{a}	5.5	7.3	6.2
9	4	68	53	121	20.7_{abc}	25.9_{ab}	23.0_{a}	8.8	7.6	8.6
10	5	91	67	158	21.5_{ab}	23.9_{abc}	22.5_{a}	8.3	7.9	8.2
11	6	55	60	115	17.6_{bcd}	23.4_{abcd}	20.6_{b}	6.9	6.8	7.4
12	7	68	57	125	18.0_{bcd}	19.0_{e}	18.5_{bcd}	7.0	6.1	6.6
13	8	74	58	132	17.7_{bcd}	19.2_{e}	18.4_{cd}	6.3	7.5	6.9
14	9	71	57	128	16.5_{d}	20.1_{e}	18.1_{d}	7.4	7.0	7.4
15	10	68	84	152	17.5_{bcd}	20.0_{e}	18.9_{bcd}	7.9	6.1	7.0
16	11	49	81	130	16.8_{d}	21.6_{cde}	19.8_{bcd}	7.8	7.3	7.8
17	12	74	116	190	18.3_{bcd}	21.4_{cde}	20.2_{bc}	8.2	6.6	7.4
18	13	12	23	35	17.3_{bcd}	21.1_{cde}	21.1_{bcd}	6.9	6.4	6.8
19	14-15	11	13	24	20.3_{abcd}	27.8_{a}	24.3_{a}	4.5	6.9	7.0
Total		674	687	1361	18.9	22.2	20.2	7.1	7.0	7.6

Note. Means in the same column which do not contain a letter in the subscript differ significantly from each other at the .05 level by Duncan test.

[a]M = male; F = female.

Table 15

Norms for ICMIC, All Ages Combined

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	1		1		100	81
	41-42	5		1		99	78
	39-40	6		1		98	75
	37-38	16		1		97	73
	35-36	29	187	2	14	96	70
	33-34	26		2		94	67
	31-32	38		2		92	65
	29-30	66		4		90	62
Medium High..	27-28	95		7		86	60
	25-26	109	455	8	34	79	57
	23-24	121		9		71	54
	21-22	130		10		62	52
Medium Low...	19-20	153		11		53	49
	17-18	122	486	9	35	42	46
	15-16	125		9		33	44
	13-14	86		6		23	41
Low.....	11-12	93		7		17	39
	9-10	62		4		10	36
	7- 8	38	233	2	17	6	33
	5- 6	26		2		4	31
	3- 4	9		1		2	28
	0- 2	5		1		1	26
N =		1361		100			

*Mean of 50, standard deviation of 10.

Table 16

Norms for ICMIC, Age 8

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	0		0		100	77
	41-42	0		0		100	75
	39-40	0		0		100	72
	37-38	0	7	0	14	100	69
	35-36	3		6		100	66
	33-34	4		8		94	64
	31-32	0		0		86	61
Medium High..	29-30	2		4		86	58
	27-28	4	17	8	33	82	55
	25-26	11		21		74	52
Medium Low...	23-24	4		8		53	50
	21-22	8	21	15	41	45	47
	19-20	5		10		30	44
	17-18	4		8		20	41
Low.....	15-16	3		6		12	39
	13-14	1		2		6	36
	11-12	0		0		4	33
	9-10	2	6	4	12	4	30
	7- 8	0		0		0	28
	5- 6	0		0		0	25
	3- 4	0		0		0	22
	0- 2	0		0		0	19
N =		51		100			

*Mean of 50, standard deviation of 10.

Table 17

Norms for ICMIC, Ages 9-10

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	1		1		100	79
	41-42	5		1		99	76
	39-40	2		1		98	73
	37-38	10	49	3	16	97	70
	35-36	13		4		94	67
	33-34	6		2		90	65
	31-32	12		4		88	62
Medium High..	29-30	21		8		84	59
	27-28	21	83	8	31	76	57
	25-26	20		7		68	54
	23-24	21		8		61	51
Medium Low...	21-22	21		8		53	48
	19-20	35	102	13	38	45	46
	17-18	25		9		32	43
	15-16	21		8		23	40
Low.....	13-14	13		4		15	37
	11-12	12		4		11	35
	9-10	9		3		7	32
	7- 8	9	45	3	15	4	29
	5- 6	2		1		1	26
	3- 4	0		0		0	24
	0- 2	0		0		0	20
N =		279		100			

*Mean of 50, standard deviation of 10.

Table 18

Norms for ICMIC, Age 11

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	0		0		100	82
	41-42	0		0		100	79
	39-40	1		1		100	76
	37-38	1		1		99	73
	35-36	1	21	1	18	98	71
	33-34	4		3		97	68
	31-32	5		4		94	65
	29-30	9		8		90	62
Medium High..	27-28	3		3		82	60
	25-26	10	41	9	36	79	57
	23-24	10		9		70	54
	21-22	18		15		61	51
Medium Low...	19-20	7		6		46	48
	17-18	10	34	9	29	40	46
	15-16	13		11		31	43
	13-14	4		3		20	40
Low.....	11-12	9		8		17	37
	9-10	3		3		9	35
	7- 8	5	19	4	17	6	32
	5- 6	1		1		2	29
	3- 4	1		1		1	26
	0- 2	0		0		0	23
N =		115		100			

*Mean of 50, standard deviation of 10.

Table 19

Norms for ICMIC, Age 12

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	0		0		100	85
	41-42	0		0		100	82
	39-40	0		0		100	79
	37-38	0		0		100	76
	35-36	1	15	1	12	100	73
	33-34	2		2		99	71
	31-32	1		1		97	68
	29-30	4		3		96	65
	27-28	7		5		93	62
Medium High..	25-26	10		8		88	60
	23-24	11	42	9	33	80	57
	21-22	8		6		71	54
	19-20	13		10		65	51
Medium Low...	17-18	16		13		55	49
	15-16	20	42	16	34	42	46
	13-14	6		5		26	43
Low.....	11-12	13		10		21	40
	9-10	4		3		11	37
	7- 8	6	26	5	21	8	35
	5- 6	2		2		3	32
	3- 4	0		0		1	29
	0- 2	1		1		1	26
N =		125		100			

*Mean of 50, standard deviation of 10.

Table 20

Norms for ICMIC, Ages 13-14

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	0		0		100	85
	41-42	0		0		100	82
	39-40	1		1		100	79
	37-38	1		1		99	77
	35-36	2	32	1	13	98	74
	33-34	3		1		97	71
	31-32	4		1		96	68
	29-30	9		3		95	66
	27-28	12		5		92	63
Medium High..	25-26	16		6		87	60
	23-24	25	97	10	38	81	57
	21-22	23		9		71	54
	19-20	33		13		62	52
Medium Low...	17-18	19		7		49	49
	15-16	31	94	12	35	42	46
	13-14	22		8		30	43
	11-12	22		8		22	41
Low.....	9-10	17		6		14	38
	7- 8	8		3		8	35
	5- 6	7	37	3	14	5	32
	3- 4	3		1		2	30
	0- 2	2		1		1	26
N =		260		100			

*Mean of 50, standard deviation of 10.

Table 21

Norms for ICMIC, Ages 15-16

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	0		0		100	83
	41-42	0		0		100	81
	39-40	1		1		100	78
	37-38	1		1		99	75
	35-36	3	53	1	20	98	72
	33-34	3		1		97	70
	31-32	8		3		96	67
	29-30	12		4		93	64
	27-28	25		9		89	61
Medium High..	25-26	16		6		80	58
	23-24	21	109	7	38	74	56
	21-22	37		13		67	53
	19-20	35		12		54	50
Medium Low...	17-18	24		9		42	47
	15-16	21	66	7	23	33	45
	13-14	21		7		26	42
Low.....	11-12	17		6		19	39
	9-10	13		4		13	36
	7- 8	7	54	2	19	9	34
	5- 6	11		4		7	31
	3- 4	5		2		3	28
	0- 2	1		1		1	25
N =		282		100			

*Mean of 50, standard deviation of 10.

Table 22

Norms for ICMIC, Ages 17-18

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	0		0		100	82
	41-42	0		0		100	79
	39-40	1		1		100	77
	37-38	2	25	1	12	99	74
	35-36	4		2		98	71
	33-34	3		1		96	68
	31-32	6		3		95	66
	29-30	9		4		92	63
Medium High..	27-28	23		10		88	60
	25-26	19	83	9	37	78	57
	23-24	27		12		69	55
	21-22	14		6		57	52
Medium Low...	19-20	22		10		51	49
	17-18	23	76	10	33	41	46
	15-16	13		5		31	44
	13-14	18		8		26	41
Low.....	11-12	20		9		18	38
	9-10	14		6		9	35
	7- 8	3	41	1	18	3	33
	5- 6	3		1		2	30
	3- 4	0		0		1	27
	0- 2	1		1		1	24
N =		225		100			

*Mean of 50, standard deviation of 10.

Table 23

Norms for ICMIC, Ages 19+

General Level	Raw Score	Number of Subjects		Percent of Subjects		Cumulative Percent	T Score*
High.....	43-44	0		0		100	77
	41-42	0		0		100	74
	39-40	0	4	0	16	100	71
	37-38	1		4		100	68
	35-36	2		8		96	65
	33-34	1		4		88	63
Medium High..	31-32	2		8		84	60
	29-30	0	9	0	38	76	57
	27-28	0		0		76	54
	25-26	7		30		76	52
Medium Low...	23-24	2		8		46	49
	21-22	1	7	4	29	38	46
	19-20	3		13		34	43
	17-18	1		4		21	41
Low.....	15-16	3		13		17	38
	13-14	1		4		4	35
	11-12	0		0		0	32
	9-10	0	4	0	17	0	30
	7- 8	0		0		0	27
	5- 6	0		0		0	24
	3- 4	0		0		0	21
	0- 2	0		0		0	18
N =		24		100			

*Mean of 50, standard deviation of 10.

Table 24

Test-Retest Reliability for ICMIC

Age	n	r
8- 9	17	.82
10-11	20	.80
12-13	35	.79
14-16	16	.88
17-18	16	.97
19+	15	.87
Total	119	.87

Note. All of the correlations are significant at the .01 level.

Table 25

Pearson Correlation Coefficients:

ICMIC Total with CIS Total and CIS Test-Suggestions

		CIS Test Item										
Age	N	Tot	1	2	3	4	5	6	7	8	9	10
8	51	-	-	-	-	-	-	-	-	-	-	-
9	121	.38	.18*	.21*	-	.31	.35	.24	.23	.39	-	.22*
10	158	.52	.23	.49	.27	.28	.26	.21	.30	.30	.28	.31
11	115	.37	-	.28	-	-	.25	.30	-	.35	.20*	.20*
12	125	-	-	-	.23	-	-	-	-	-	-	-
13	132	.33	-	-	-	.20	-	.23	.19*	-	.31	.28
14	128	.41	.19*	.21*	-	-	.40	-	-	.28	.44	.22
15	152	.41	.25	.24	.16	.23	.20	.30	.24	.23	.26	.16
16	130	.54	.35	.42	.24	.31	.26	.25	.28	.22	.44	.50
17	190	.49	.32	.31	.28	.31	.27	.34	.31	.25	.29	.32
18	35	.53	-	-	.44	-	-	.43	.40	-	.58	-
19+	24	.59	-	.43*	-	.54	-	-	.49*	-	.39*	.45*

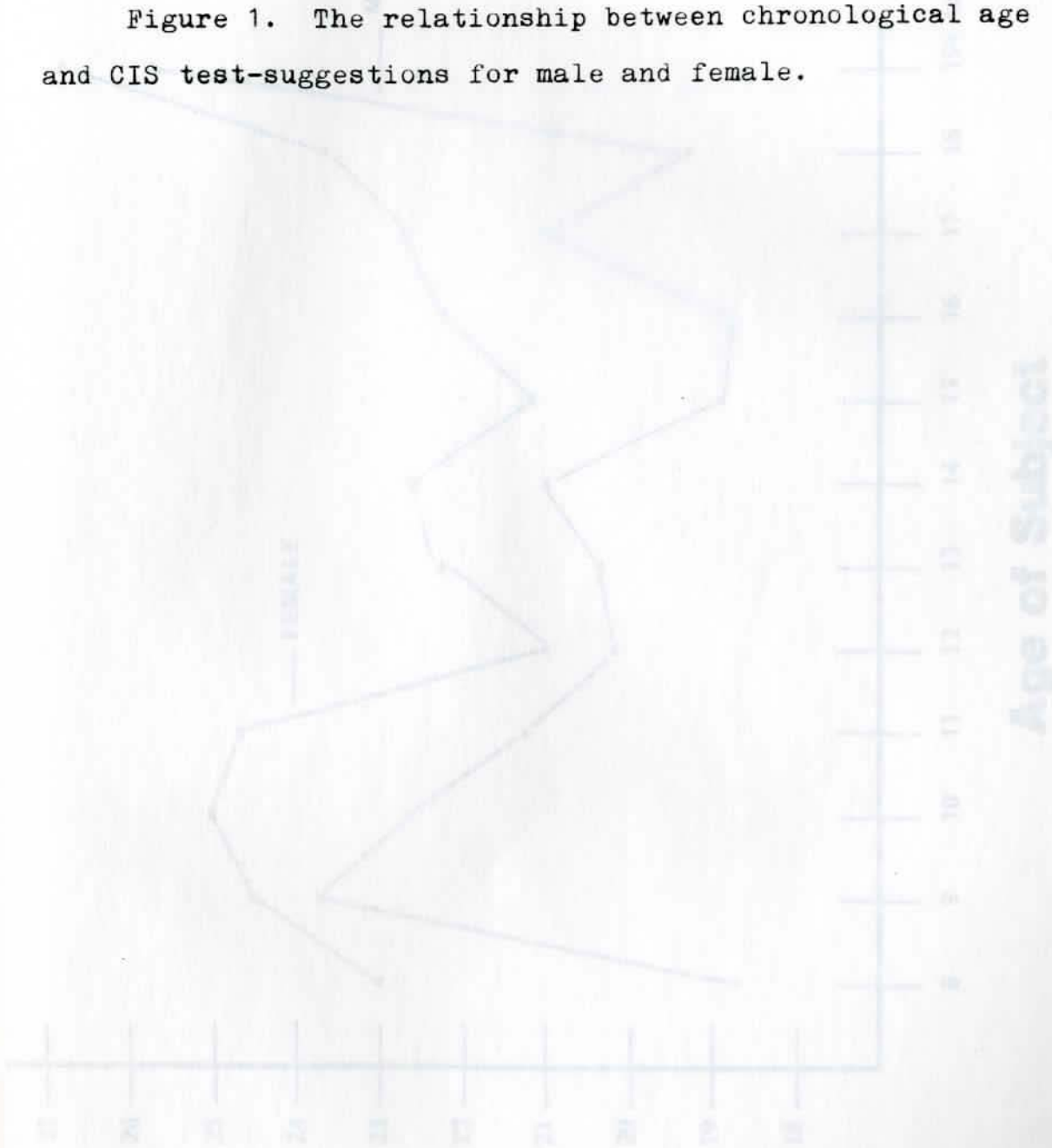
Note. Correlations not shown are not significant.

Note. All given correlations are significant at the .01 level unless otherwise noted.

*p<.05.

Figure Caption

Figure 1. The relationship between chronological age and CIS test-suggestions for male and female.



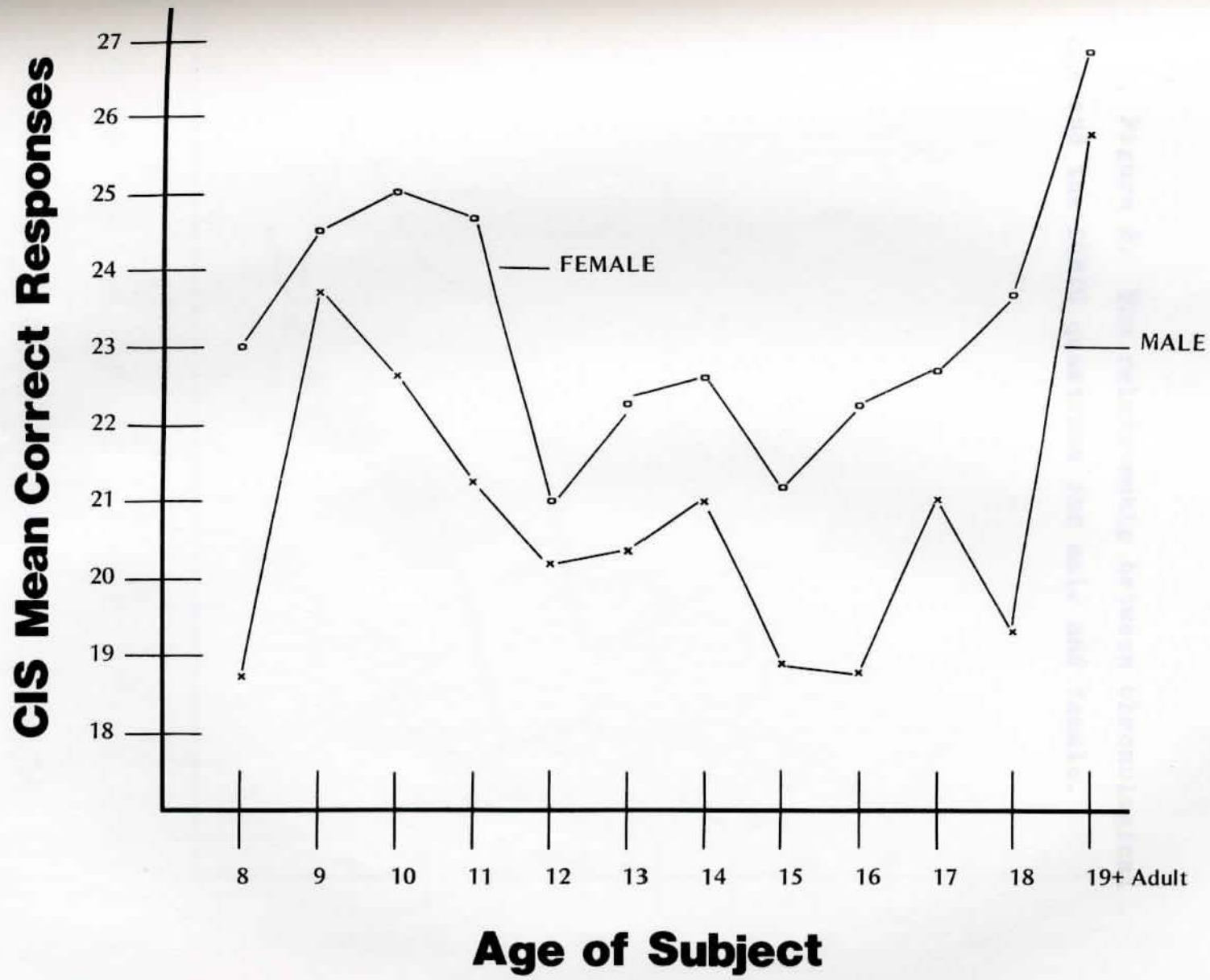
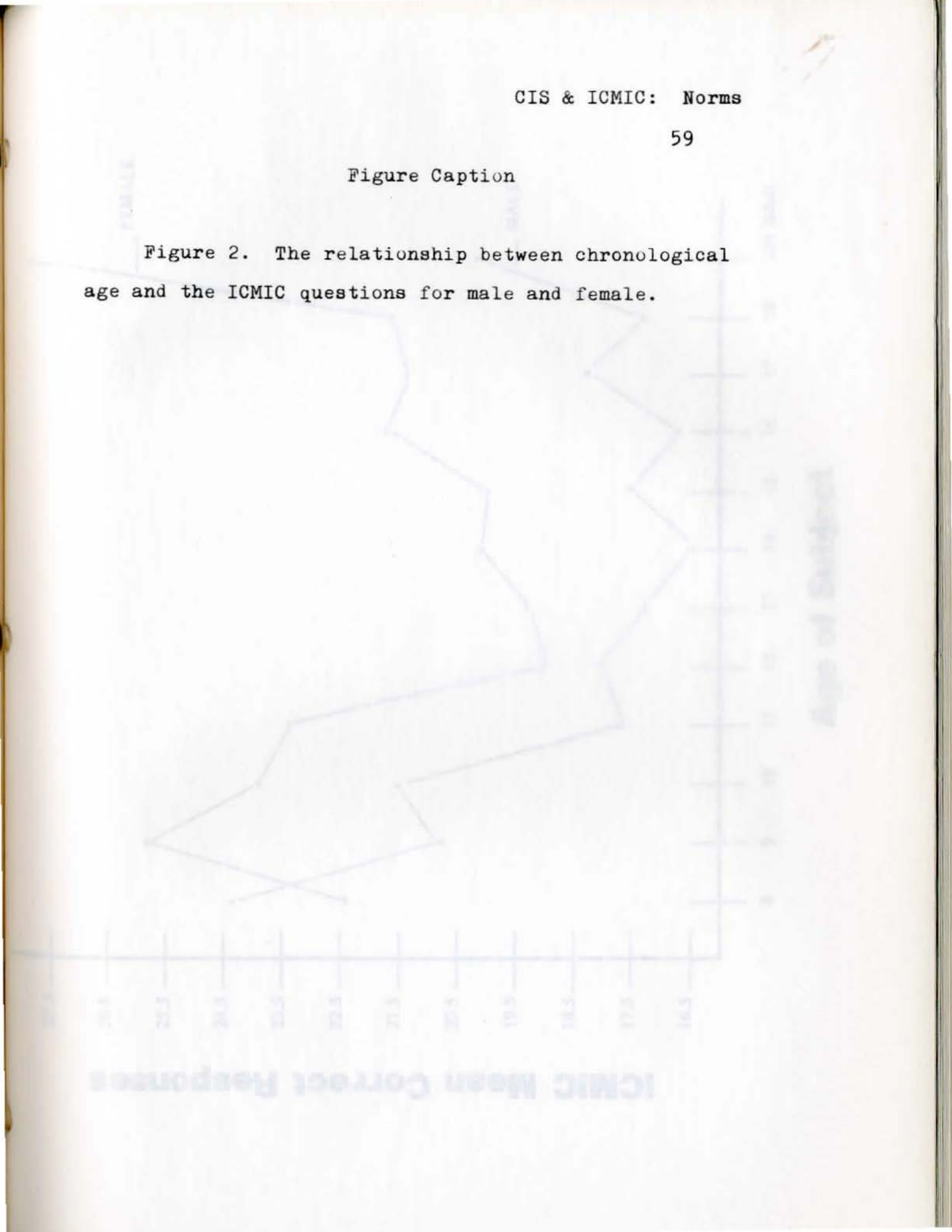

CIS Mean Correct Responses
27
26
25
24
23
22
21
20
19
18
FEMALE
MALE
8
9
10
11
12
13
14
15
16
17
18
19+ Adult
Age of Subject

Figure Caption

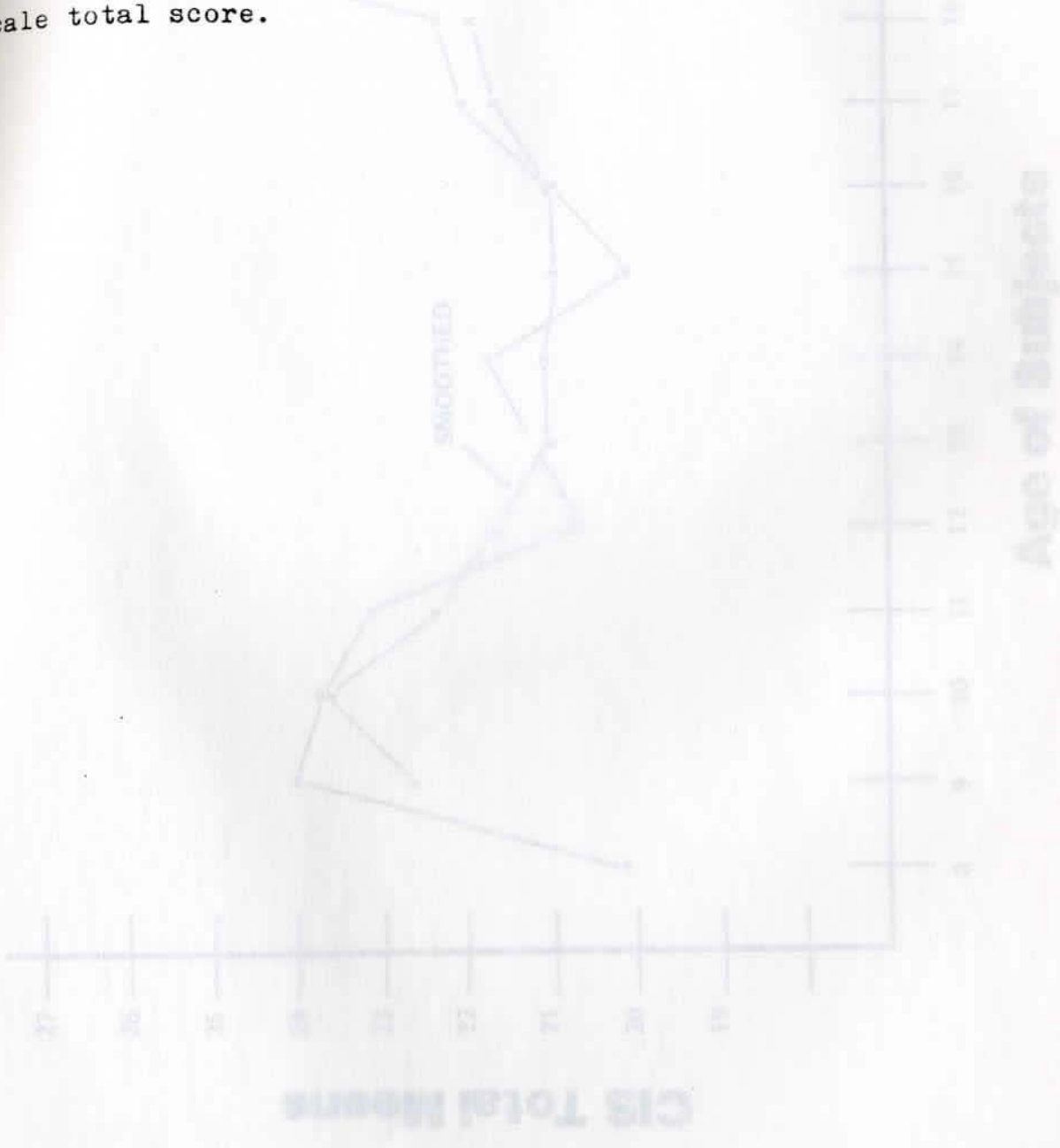
Figure 2. The relationship between chronological age and the ICMIC questions for male and female.




ICMIC Mean Correct Responses
27.5
26.5
25.5
24.5
23.5
22.5
21.5
20.5
19.5
18.5
17.5
16.5
FEMALE
MALE
8
9
10
11
12
13
14
15
16
17
18
19+ Adult
Age of Subject

Figure Caption

Figure 3. The smoothed and unsmoothed relationship between chronological age and the Creative Imagination Scale total score.




CIS Total Means
27
26
25
24
23
22
21
20
19
UNSMOOTHED
SMOOTHED
8
9
10
11
12
13
14
15
16
17
18
19+ Adult
Age of Subjects


CIS Total Means
27
26
25
24
23
22
21
20
19
UNSMOOTHED
SMOOTHED
8
9
10
11
12
13
14
15
16
17
18
19+ Adult
Age of Subjects

Figure Caption

Figure 4. The smoothed and unsmoothed relationship between chronological age and the ICMIC total scores.

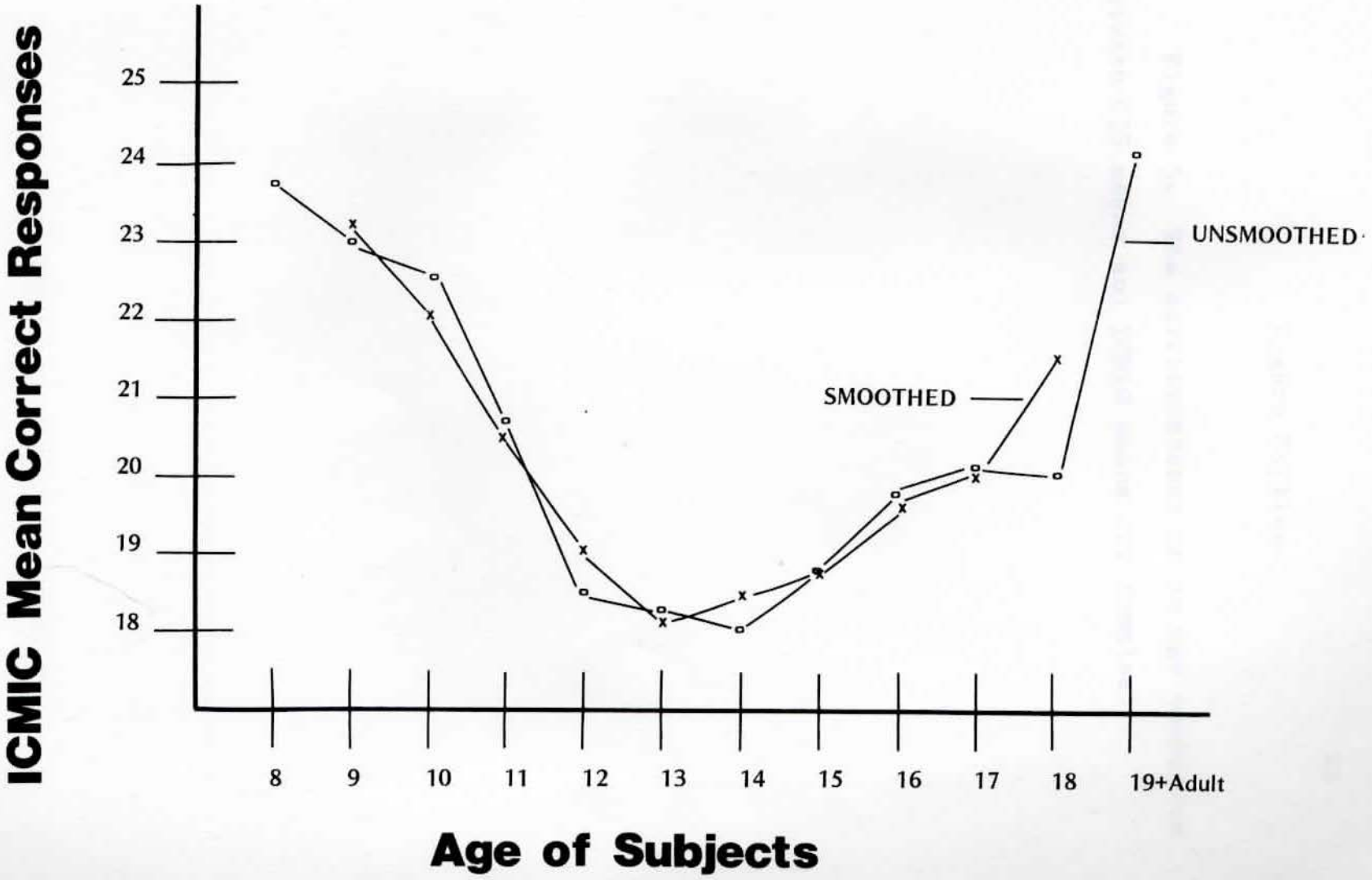

ICMIC Mean Correct Responses
25
24
23
22
21
20
19
18
UNSMOOTHED
SMOOTHED
8
9
10
11
12
13
14
15
16
17
18
19+Adult
Age of Subjects

Figure Caption

Figure 5. The correspondence on an age continuum between CIS means and ICMIC means for females.

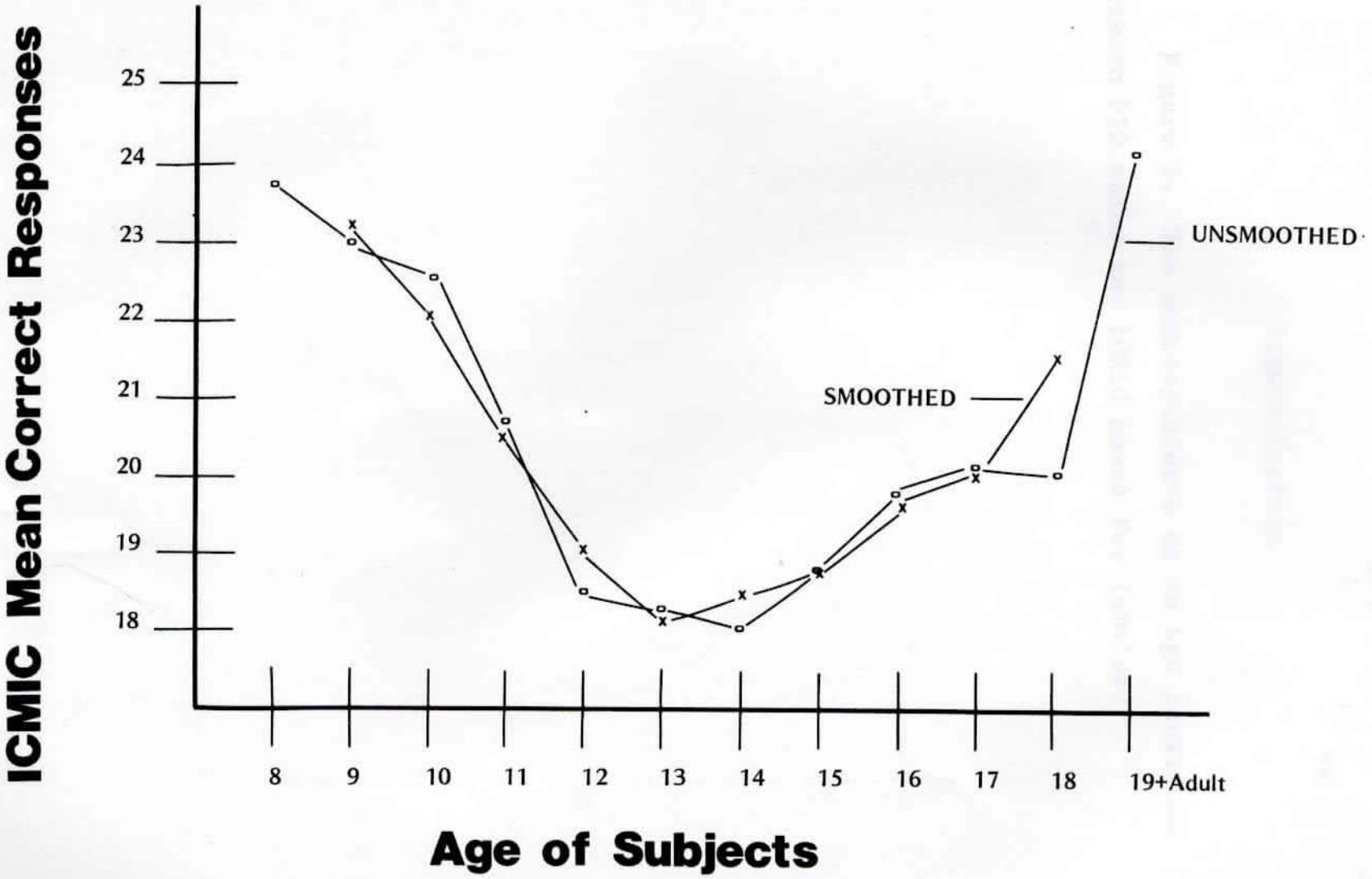

ICMIC Mean Correct Responses
25
24
23
22
21
20
19
18
UNSMOOTHED
SMOOTHED
8
9
10
11
12
13
14
15
16
17
18
19+Adult
Age of Subjects

Figure Caption

Figure 5. The correspondence on an age continuum between CIS means and ICMIC means for females.

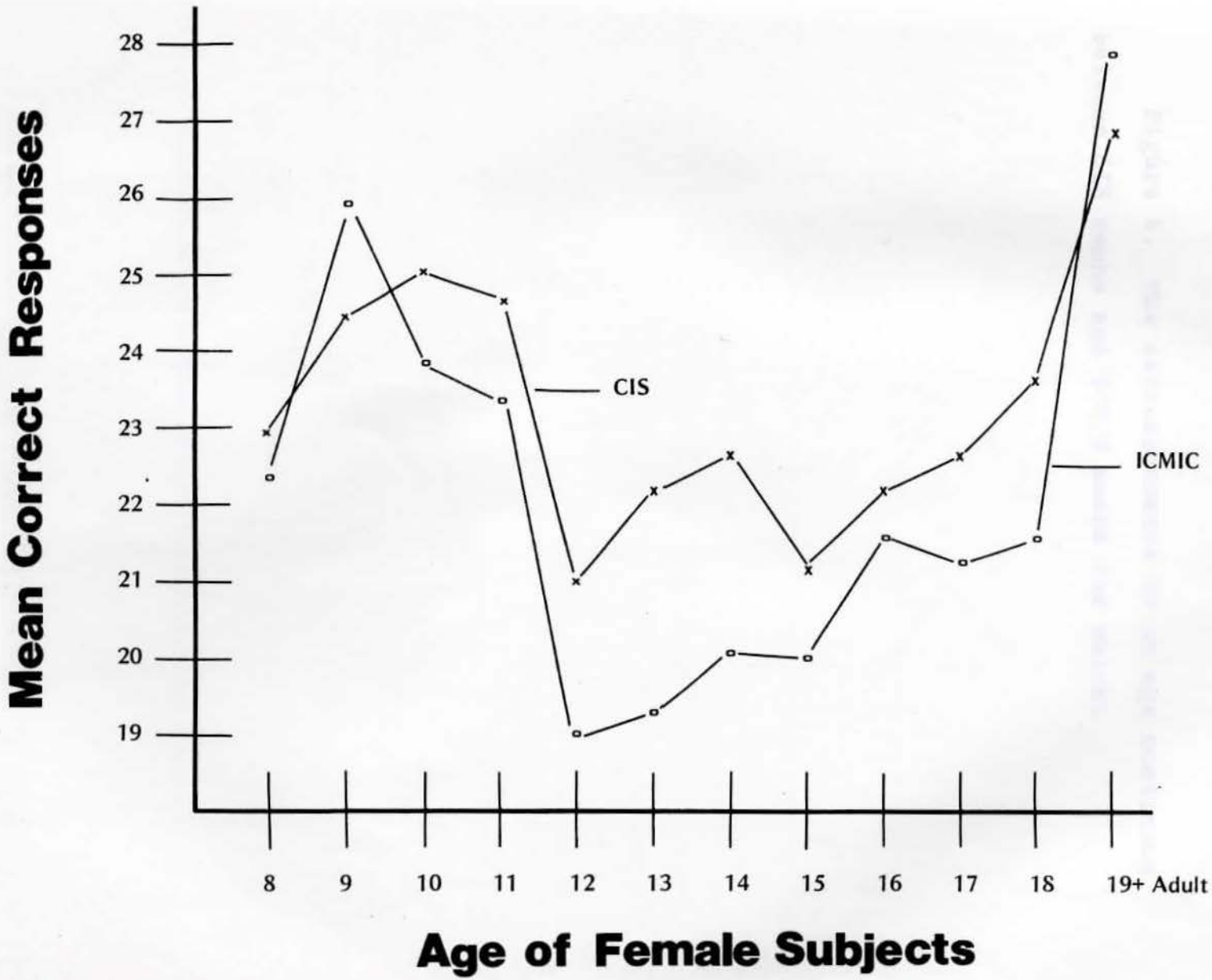
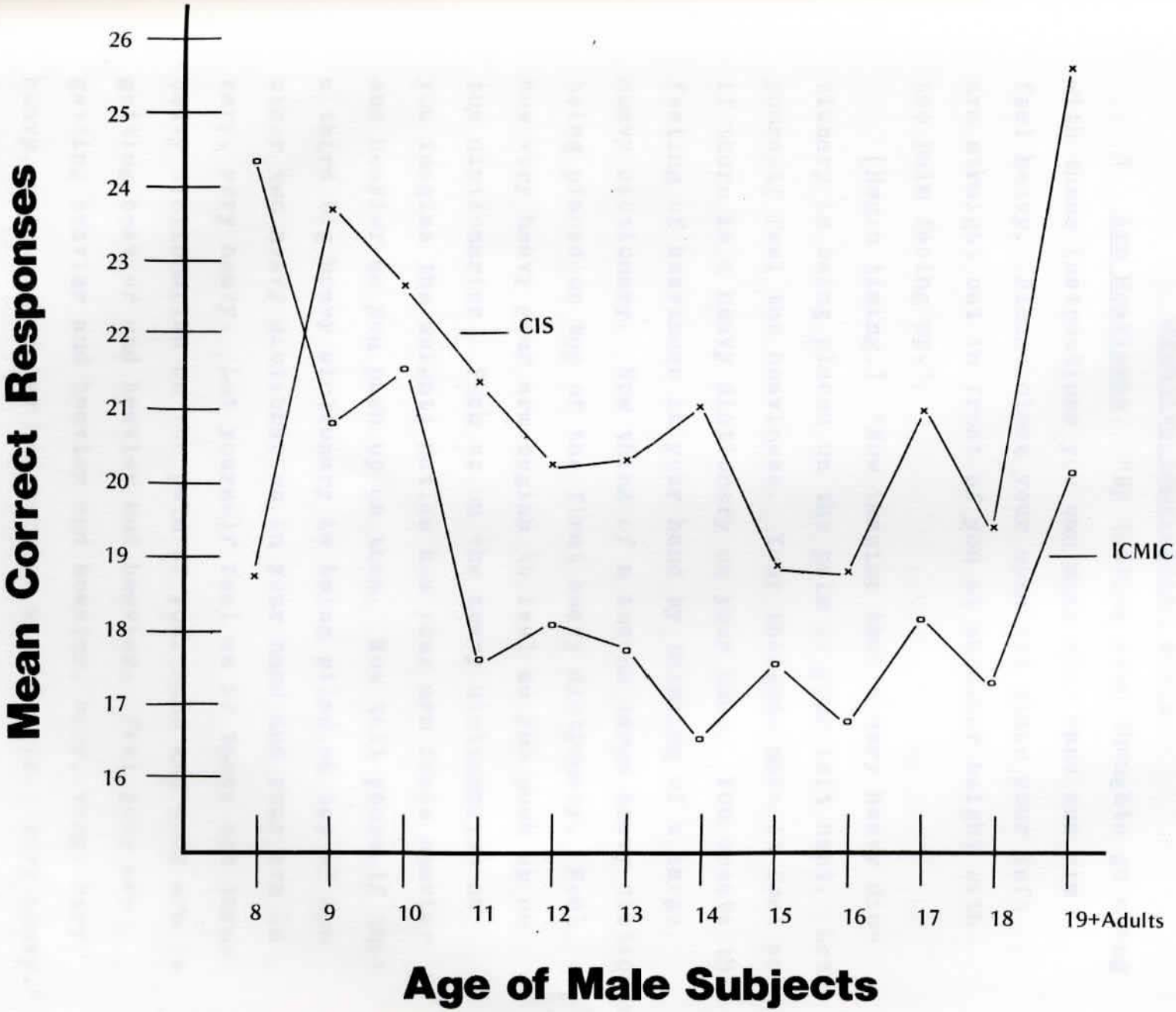

Mean Correct Responses
28
27
26
25
24
23
22
21
20
19
CIS
ICMIC
8
9
10
11
12
13
14
15
16
17
18
19+ Adult
Age of Female Subjects

Figure Caption

Figure 6. The correspondence on an age continuum between CIS means and ICMIC means for males.


Mean Correct Responses
26
25
24
23
22
21
20
19
18
17
16
CIS
ICMIC
8
9
10
11
12
13
14
15
16
17
18
19+Adults
Age of Male Subjects

Appendix A

Creative Imagination Scale

1. Arm Heaviness. "By letting your thoughts go along with these instructions you can make your hand and arm feel heavy. Please close your eyes and place your left arm straight out in front of you at shoulder height with the palm facing up."

[Begin timing.] "Now imagine that a very heavy dictionary is being placed on the palm of your left hand. Let yourself feel the heaviness. Your thoughts make it feel as if there is a heavy dictionary on your hand. You create the feeling of heaviness in your hand by thinking of a large heavy dictionary. Now think of a second large heavy dictionary being placed on top of the first heavy dictionary. Feel how very heavy your arm begins to feel as you push up on the dictionaries. Push up on the heavy dictionaries as you imagine the weight; notice how your arm feels heavier and heavier as you push up on them. Now tell yourself that a third big heavy dictionary is being piled on top of the other two heavy dictionaries in your hand and your arm is very, very heavy. Let yourself feel as if there are three heavy dictionaries on the palm of your hand and your arm is getting heavier and heavier and heavier. Feel your arm getting heavier and heavier and heavier, very, very, very heavy, getting heavier and heavier and heavier...very heavy." [Approximately 1'20" since beginning of timing.]

"Now tell yourself that your hand and arm feel perfectly normal again and just let your hand and arm come back down and relax."

2. Hand Levitation. "By directing your thoughts you can make your hand feel as if it is rising easily, without effort. Keep your eyes closed and place your right arm straight out in front of you at shoulder height with the palm facing down."

[Begin timing.] "Now, picture a garden hose with a strong stream of water pushing against the palm of your right hand, pushing up against the palm of your hand. Think of a strong stream of water pushing your hand up. Let yourself feel the strong stream of water pushing up against the palm of your hand, pushing it up. Feel the force of the water, pushing your hand up. Feel it pushing against the palm of your hand. Tell yourself that the force of the water is very strong and, as you think about it, let your hand begin to rise. Feel your hand rising as you imagine a strong stream of water pushing it up, and up, and up, higher and higher. Tell yourself that a strong stream of water is pushing your hand up and up, raising your arm and hand higher and higher as the strong stream of water just pushes it up, just rises and pushes and just pushes it up, higher and higher." [End of timing: about 1'10".]

"Now tell yourself its all in your own mind and just let your hand and arm come back down and relax."

3. Finger Anesthesia. "By focusing your thinking you can make your fingers feel numb. Please place your left hand in your lap with the palm facing up. Keep your eyes closed so you can focus fully on all the sensations in the fingers of your left hand."

[Begin timing.] "Now, try to imagine and feel as if Novocain has just been injected into the side of your left hand next to the little finger so that your little finger will begin to feel like it does when it 'falls asleep.' Focus on the little finger. Become aware of every sensation and the slight little changes as you think of the Novocain slowly beginning to move into your little finger, just slowly moving in. Notice the slight little changes as the little finger begins to get just a little numb and a little dull. The little finger is becoming numb as you think of the Novocain moving in slowly."

"Now think of the Novocain moving into the second finger next to the little finger. Tell yourself that the second finger is getting duller and duller, more and more numb as you think of how the Novocain is beginning to take effect."

"Tell yourself that these two fingers are beginning to feel kind of rubbery and are losing feelings and sensations. As you think of the Novocain moving in faster, the fingers feel duller and duller...more and more numb...dull, numb and

insensitive. As you think of the Novocain taking effect, the two fingers feel duller and duller...more and more numb... dull...numb...insensitive."

"Keep thinking that the two fingers are dull, numb, and insensitive as you touch the two fingers with your thumb. As you touch the two fingers with your thumb notice how they feel duller and duller, more and more numb, more and more insensitive...dull, numb, rubbery and insensitive." [End of timing: about 1'50".]

"Now tell yourself its all in your own mind and you're going to bring the feeling back; bring the feeling back into the two fingers."

4. Water "Hallucination." "Keep your eyes closed. By using your imagination constructively you can experience the feeling of drinking cool, refreshing water."

[Begin timing.] "First, imagine you've been out in the hot sun for hours and you're very, very thirsty and your lips are dry and you're so thirsty. Now, picture yourself on a mountain where the snow is melting, forming a stream of cool clear water. Imagine yourself dipping a cup into this mountain stream so you can have a cool, refreshing drink of water. As you think of sipping the water tell yourself its absolutely delicious as you feel it going down your throat...cold and beautiful and delicious. Feel the coolness and beauty of the water as you take a sip. Now, think of taking another sip of water and feel it going over your lips

and tongue, going down your throat, down into your stomach. Feel how cool, refreshing, delicious and beautiful it is as you take another sip...so cool...cold...sweet...beautiful... delicious and refreshing. Think of taking another sip now and feel the cool water going into your mouth, around your tongue, down your throat and down into your stomach...so beautiful and cool and wonderful...absolutely delicious... absolute pleasure." [End of timing: about 1'30".]

5. Olfactory-Gustatory "Hallucination." "Keep your eyes closed. By using your imagination creatively, you can experience the smell and taste of an orange."

[Begin timing.] "Picture yourself picking up an orange and imagine that you're peeling it. As you create the image of the orange, feel yourself peeling it and let yourself and see and feel the orange skin on the outside and the soft white pulp on the inside of the skin. As you continue peeling the orange, notice how beautiful and luscious it is and let yourself smell it and touch it and feel the juiciness of it. Now think of pulling out one or two of the orange sections with your fingers. Pull out part of the orange and bite into it. Experience how juicy, luscious and flavorful it is as you imagine taking a deep, deep bite. Let yourself smell and taste the orange and notice that it's absolutely delicious. Let yourself feel how delicious, beautiful, and luscious it is. Just the most beautiful, juicy orange...

absolutely juicy and wonderful. Let yourself taste and smell the juicy orange clearly now as you think of taking another large bite of the delicious, juicy orange." [End of timing: about 1'30"]

6. Music "Hallucination." "Keep your eyes closed." [Begin timing.] "Now, think back to a time when you heard some wonderful, vibrant music; it could have been anywhere, and by thinking back you can hear it even more exquisitely in your own mind. You make it yourself and you can experience it as intensely as real music. The music can be absolutely powerful...strong...exquisite...vibrating through every pore of your body...going deep into every pore...penetrating through every fiber of your being. The most beautiful, complete, exquisite, overwhelming music you ever heard. Listen to it now as you create it in your own mind." [End of timing: about 45".]

[15 second pause] "You may stop thinking of the music now."

7. Temperature "Hallucination." "Keep your eyes closed and place your hands in your lap with the palms facing down and resting comfortably on your lap. By focusing your thinking you can make your right hand feel hot."

[Begin timing.] "Picture the sun shining on your right hand and let yourself feel the heat. As you think of the sun shining brightly, let yourself feel the heat increasing.

Feel the sun getting hotter and feel the heat penetrating your skin and going deep into your hand. Think of it getting really hot now...getting very hot. Feel the heat increasing. Think of the sun getting very, very hot as it penetrates into your hand...getting very hot. Tell yourself, 'The rays are increasing...the heat is increasing...getting hotter and hotter.' Feel the heat penetrating through your skin. Feel the heat going deeper into your skin as you think of the rays of the sun increasing and becoming more and more concentrated...getting hotter and hotter. Feel your hand getting hot from the heat of the sun. It's a good feeling of heat as it penetrates deep into your hand...hot, pleasantly hot, penetrating your hand now. It's a pleasantly hot feeling, pleasantly hot." [End of timing: about 1'15".]

"Now tell yourself it's all in your own mind and make your hand feel perfectly normal again."

8. Time Distortion. "Keep your eyes closed. By controlling your thinking you can make time seem to slow down."

[The following is to be read progressively more and more slowly, with each word drawn out and with long, i.e., 2-6 second, pauses between statements.] [Begin timing.] "Tell yourself that there's lots of time, lots of time between each second. Time is stretching out and there's lots of time...more and more time between each second.

Every second is stretching far, far out...stretching out more and more...lots of time. There's so much time...lots of time...Every second is stretching out. There's lots of time between each second...lots of time. You do it yourself, you slow time down." [End of timing: about 1'40".]

[The following is to be read at a normal rate.] "And now tell yourself that time is speeding back up to its normal rate again as you bring time back to normal."

9. Age Regression. "Keep your eyes closed. By directing your thinking you can bring back the feelings that you experienced when you were in elementary school -- in first grade."

[Begin timing.] "Think of time going back, going back to elementary school and feel yourself becoming smaller and smaller. Let yourself feel your hands, small and tiny, and your legs and your body, small and tiny. As you go back in time feel yourself sitting in a big desk. Notice the floor beneath you. Feel the top of the desk. You may feel some marks on the desk top, or maybe it's a smooth, cool surface. There may be a pencil slot and perhaps a large yellow pencil. Feel the under side of the desk and you may feel some chewing gum. Observe the other children around you, and the teacher, the bulletin board, the chalkboard, the cloak room, and the windows. Smell the eraser dust or the paste. You may hear the children and the

teacher speaking. Now just observe and see what happens around you." [End of timing: about 1'20".]

[15 second pause] "Now tell yourself its all in your own mind and bring yourself back to the present."

10. Mind-Body Relaxation. "Keep your eyes closed. By letting your thoughts go along with these instructions you can make your mind and body feel very relaxed."

[The following is to be read slowly.] [Begin timing.] "Picture yourself on a beautiful, warm summer day lying under the sun on a beach of an ocean or lake. Feel yourself lying on the soft, soft sand or on a beach towel that is soft and comfortable. Let yourself feel the sun pleasantly warm and feel the gentle breeze touching your neck and face. Picture the beautiful clear blue sky with fluffy little white clouds drifting lazily by. Let yourself feel the soothing, penetrating warmth of the sun and tell yourself that your mind and body feel completely relaxed and perfectly at ease...peaceful, relaxed, comfortable, calm, so at ease, at peace with the universe...completely relaxed...relaxed, peaceful, lazy, tranquil...calm...comfortable. Your mind and body are completely realxed...completely relaxed...calm, peaceful, tranquil, flowing with the universe." [End of timing: about 2'05".]

"Now as you open your eyes let yourself continue to feel relaxed and yet perfectly alert...peaceful, alert and normal again. Open your eyes."

Appendix B

Self-Scoring Form for the Creative Imagination Scale

Please answer each item as honestly as possible. There are no right or wrong answers.

Read the statements below describing the possible responses for each item. Then, circle the number (0, 1, 2, 3, 4) which corresponds to the statement that most nearly matches your experience.

1. In the first test you were asked to imagine that one, two, and then three dictionaries were being piled on the palm of your hand. Compared to what you would have experienced if three dictionaries were actually on your hand, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

2. In the second test you were asked to think of a strong stream of water from a garden hose pushing up against the palm of your hand. Compared to what you would have experienced if a strong stream of water were actually

pushing up against your palm, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

3. In the third test you were asked to imagine that Novocain had been injected into your hand and it made two fingers feel numb. Compared to what you would have experienced if Novocain had actually made the two fingers feel numb, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

4. In the fourth test you were asked to think of drinking a cup of cool mountain water. Compared to what you would have experienced if you were actually drinking cool mountain water, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

5. In the fifth test you were asked to imagine smelling and tasting an orange. Compared to what you would have experienced if you were actually smelling and tasting an orange, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

6. In the sixth test you were asked to think back to a time when you heard some wonderful music and to re-experience hearing if. Compared to what you would have experienced if you were actually hearing the music, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

7. In the seventh test you were asked to picture the sun shining on your hand making it feel hot. Compared to what you would have experienced if the sun were actually shining on your hand, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

8. In the eighth test you were asked to imagine time slowing down. Compared to what you would have experienced if time actually slowed down, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

9. In the ninth test you were asked to think back to a time when you were in first grade in elementary school. Compared to the feelings you would have experienced if you were actually in elementary school, the feelings you experienced were:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

10. In the tenth test you were asked to picture yourself lying under the sun on a beach and becoming very relaxed. Compared to what you would have experienced if you were actually relaxing on a beach, what you experienced was:

0	1	2	3	4
0%	25%	50%	75%	90 %
Not at all the same	A little the same	Between a little and much the same	Much the same	Almost exactly the same

Appendix C

Inventory of Childhood Memories and Imaginings for Children

The major purpose of this questionnaire is to find out to what extent people remember how they played and imagined during childhood and how their present interests relate to their childhood interests.

Please place a check (✓) in front of each item below that applies to you. Please answer as honestly as possible and do not be concerned if you find that you are either checking almost all the items or almost none.

___1. When I was younger, I enjoyed active playing such as running and jumping.

___2. When I was younger, I enjoyed swinging (on a swing).

___3. When I was younger, I liked lots of music.

___4. When I was younger, I enjoyed cartoons (on TV or in movies).

___5. I can remember clearly one or more things that happened to me when I was three years of age or younger.

___6. When I remember back to when I was 6, or 7 years of age, I can "see" and "hear" again what I saw and heard then, and I can feel again the feelings (happy, sad, afraid, etc.) I felt then.

___7. Although I have grown, I still feel almost the same as I did when I was younger.

___8. When I was younger, I believed in such beings as elves,

witches, leprechauns, fairies, etc.

___9. Now that I am older, I still in some ways believe in such beings as elves, witches, leprechauns, fairies, etc.

___10. When I was younger, I would dream or make-believe I was flying so clearly, that I felt as if I really did fly.

___11. When I was younger, I enjoyed fairytales.

___12. Now, I would still enjoy fairytales.

___13. When I was younger, I was very good at make-believe and imagining.

___14. At the present time, I am still very good at make-believe and imagining.

___15. When I was younger, I spent time thinking about such things as the meaning of life, and of death.

___16. When I was a young child (below age 8), I liked playing make-believe games such as cowboys, school, house, etc. I liked them better than games without make-believe such as checkers, building things, ball games, hopscotch, etc.

___17. When I was playing make-believe games as a young child, I would make believe so well that what I pretended seemed real to me.

___18. When I was younger, I lived in a make-believe world much or most of the time.

___19. Now, I still live in a make-believe world some of the time.

___20. When I was much younger, I believed that my doll(s) or stuffed animal(s) were alive and had feelings (that is, they could feel hurt, lonely, happy, etc.)

___21. When I was younger, I had a pretend friend or companions such as a make-believe person, animal, or object which I talked to, or took along with me.

___22. When I was younger, I would at times pretend and in some ways believe I was someone else such as a prince, princess, Snow White, Peter Pan, etc.

___23. Now, I sometimes pretend I am someone else.

___24. When I was younger, I would have liked to take ballet lessons or I do or did enjoy taking ballet dancing lessons.

___25. At times I have been afraid my pretending would become so real to me that I would be unable to stop it.

___26. At least once, someone thought I was lying when I was just telling what I was making-believe.

___27. When I was younger, I would spend at least half of the time I was awake pretending or imagining.

___28. Now, I still spend a large part of the day pretending and imagining.

___29. If I could not pretend or make-believe anymore, I wouldn't be me -- I wouldn't be the same person.

___30. At times, when I was younger, it was hard for me to tell if something had actually happened or if I made believe it happened.

___31. If given the chance, I would be very eager to feel an entirely new feeling -- a feeling such as sight, hearing, smell, or touch, but as different from all of these as they are all different from each other.

___32. I have had an important religious, or spiritual experience.

___33. I have felt, heard, or seen a ghost or spirit.

___34. I have had an out-of-body experience; that is, I have felt as if "I" (my mind or my spirit) left my body and lived for awhile without my body.

___35. I have known something would happen before it happened even though there was no <u>real</u> way I could have known.

___36. I have at times written poems, stories, or songs, etc., and I did not feel it was I who was thinking of them.

___37. I have at times felt that I <u>just had</u> to go somewhere or to do something I wouldn't usually do (such as call someone I wouldn't usually call) and then found out there was a reason for this feeling. (For instance, the person I called really needed me at that time.)

___38. I believe being born again in a different life is possible, and I think I may have lived more than one life.

___39. I would like to try hypnosis.

___40. I think I could be hypnotized.

___41. I have at times thought something happened to me, but later I found out that what I thought happened never did. (Some possible examples to show you this are as follows: (a) you thought you got something in your eye, your eye hurt, but you couldn't find anything in your eye; (b) or you thought you ate spoiled food, got sick, but found out later that the food was not spoiled; (c) or you thought you touched poison ivy, started itching, but the doctor said it wasn't poison ivy.)

___42. While listening to my favorite music, in addition to feeling calm, relaxed, happy, etc. I often have a feeling of oneness with the music, or of being in another place or time, or vividly remembering the past.

___43. When I remember important events in my life, in addition to thinking about them, I can also see again what I saw then, hear again the sounds, voices, etc., as I heard them before, feel the feelings I felt then. I can live them all over again

-- not just think about them.

___44. I can clearly feel again in my imagination such things as: the feeling of a gentle breeze, warm sand under bare feet, the softness of fur, cool grass, the warmth of the sun, and the smell of freshly cut grass.

___45. When asked to close my eyes and pretend I am holding an animal (dog, cat, etc.) on my lap, I can feel its weight and warmth, touch it, see it, hear it, etc., as if it were really there.

___46. At times just before I fall asleep, I see very clear pictures or images.

___47. Many or most of my dreams tend to be at least as real as things in my real life.

___48. If I wish, I am usually able to finish or change a dream after I wake up.