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Analogical Reasoning and Giftedness: A Comparison Between Identified Gifted and Nonidentified Children

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ABSTRACT The purpose of this investigation was to assess the analogical reasoning ability of gifted young children and to examine the influence of gender, socioeconomic status (SES), and ethnicity on that ability. The subjects for the first phase of this investigation were 108 4-, 5-, and 6-year-olds placed in three preschool and primary grade programs; for the second phase, only the subset of gifted children (n = 55) was considered. The analogical reasoning performance of the group identified as gifted was compared with the performance of a group of nonidentified children. The Test of Analogical Reasoning in Children (TARC; Alexander, Wilson, White, & Fuqua, 1987), an individually administered instrument, measured children’s ability to solve geometric analogy problems. Gifted subjects outperformed nonidentified subjects on the geometric analogy task. Within the gifted group, the effects of gender and SES were nonsignificant, but a significant main effect of ethnicity was found. Post hoc analyses indicated that the mean difference in analogical reasoning reflected performance differences between the White and Hispanic groups. The TARC is proposed as an appropriate tool to identify young, gifted children. Instructional and assessment implications related to the use of analogical reasoning in gifted education are also discussed.

As the number of young children entering formal schooling at early ages continues to grow, parents and educators have become increasingly concerned with the identification of intellectually giftedness in preschool and primary grade children. Parents and teachers strongly believe that to fully develop advanced abilities, young children must be reinforced for their efforts and be provided with a nurturing environment (Karnes, 1983; Louis & Lewis, 1992; Parker & Ness, 1987; Robinson, 1987). Many young children who are routinely exposed to academic programs by means of early, formal instruction through both preschool and home experiences may demonstrate apparently advanced cognitive abilities. Because early academic experiences may contribute to some children’s apparent intellectual giftedness, we emphasize identification of giftedness in young children through a multiple-assessment approach. We believe that both psychometric and performance criteria can be used to clearly identify intellectually gifted young children; for example, the gifted subjects in this study were identified with creativity tests, parent and teacher ratings, and standardized intelligence tests.

Gifted preschoolers typically demonstrate advanced ability in both general and specific areas. Also, gifted children often demonstrate superior cognitive skills, including language development, social skills, physical adaptability, creativity, and leadership (Gallagher & Courtright, 1986; Jackson & Butterfield, 1986). For example, they appear to be able to manipulate abstract concepts and symbols and appropriately apply known information to a new situation (Hanninen, 1984), the fundamental skill related to analogical reasoning.

Gifted preschoolers may also demonstrate varying degrees of ability in giftedness across specific mental abilities (Burns, Matthews, & Mason, 1990; Roedell, Jackson, & Robinson, 1980). For example, in Kitano’s (1985) classroom ethnography, she found that young gifted children demonstrated high levels of knowledge in arithmetic and reading, advanced study skills, advanced conceptual knowledge, frequent verbal usage of similes, and incorporation of academic and literary activities in free play and spontaneous conversation.

Few measures have been specifically designed for the identification of preschool and primary-aged gifted children, despite the apparent diversity of expressions of early giftedness. Several reasons can be cited for this. First, early childhood education has traditionally emphasized maturation and learning readiness as indicators of giftedness (Erlich, 1980; Robinson, 1987). Second, a widely held belief among early childhood educators has been that IQ scores obtained during the early years are poor or inappropriate indices because of their instability.

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and relatively low correlation with the more consistently correlated scores obtained in later years (Erlich, 1980; NAEC, 1986; Robinson, 1987; Shepard & Smith, 1986). Third, gifted education specialists who advocate programs for the gifted have not always been trained to work with young gifted children (Karnes, 1983).

Because young children exhibit a wide range of skills, abilities, and behaviors, we believe that emphasis needs to be placed on a multiple-assessment approach. Instruments commonly used to identify young gifted children include parent questionnaires, group and individual intelligence and achievement tests, rating scales, and creativity tests (Torrance & Caropresi, 1991). However, current identification practices continue to focus on intellectual ability as the most routinely used means of identification (Council of the State Director for the Programs for the Gifted, in press). There are a number of standardized IQ tests used to identify young gifted children; however, it is important to recognize that few of these measures, if any, were developed primarily for this purpose. Alternative approaches to assessment of cognitive capabilities, such as the Test of Analogical Reasoning in Children (TARC; Alexander, Willson, White, & Fuqua, 1987), provide important and useful information during the identification process.

The relationship between individual differences and intellectual giftedness became an important focus of research based on information processing models of cognitive development in the mid- and late 1980s. This area of research led us to consider and apply the TARC as an assessment of intellectual giftedness in young children. This instrument was specifically designed to assess analogical reasoning performance as an indication of cognitive processing ability in young children.

Information Processing and Giftedness

Information processing models are often derived from theories based on performance expectations; therefore, a typical goal has been relating specified processes, tasks, and behaviors that are expected to demonstrate underlying abilities. For example, Sternberg’s (1977) information processing model focuses on specific cognitive behaviors that he believed were the component processes underlying analogical reasoning.

Developmental research related to information processing theories has helped reveal the need to consider the range and extent of children’s capabilities rather than focusing on when and why children fail. Several theoretical models have been proposed and used as empirical frameworks (e.g., Campano & Brown, 1978; Case, 1985), Sternberg and Davidson (Davidson, 1986; Davidson & Sternberg, 1984; Sternberg, 1981a, 1986; Sternberg & Davidson, 1983) are among the few information processing theorists who have explicitly developed a theory of intellectual giftedness. We modeled our research strategies on several relevant components of their theory of intellectual giftedness. Two elements of Sternberg’s (1982, 1986) triarchic theory were related to the TARC. The two elements are (a) knowledge-acquisition components related to insightful information processing and (b) problem-solving performance in novel and nonen-trenched tasks.

Insightful Information Processing

Problems generally present individuals with large amounts of information often rendering solutions difficult to determine or identified solution plans difficult to apply. One cause of this difficulty may be related to the fact that only some of the information in the problem domain may be relevant to the problem solution. In her investigations of problem solving and insight, Davidson (1986) proposed a model of insightful information processing that includes three components: (a) selective encoding, (b) selective combination, and (c) selective comparison. She theorized that the use of these skills helps identify and organize information leading to a solution of a problem previously considered insolvable.

A selective encoding insight involves cognitively sifting out relevant information from irrelevant information. As an example of selective encoding in the context of science, Davidson and Sternberg (1984) cited Fleming’s discovery of penicillin. They proposed that, despite his apparent failure to culture bacteria that were being destroyed by mold, his exceptional selective encoding abilities allowed him to recognize his unique discovery. A more common example of selective encoding occurs whenever readers derive meanings for unfamiliar words through context clues in the statements in which the unknown word(s) occur. A selective encoding insight allows a problem solver to determine relationships between elements in a stimulus or set of stimuli previously unnoticed or ignored by a problem solver by zeroing in on relevant information from a specific sensory modality.

A selective combination involves combining apparently isolated pieces of information into a unified whole that may no longer resemble its constituent parts. Darwin’s theory of evolution represents an example of selective combination (Davidson & Sternberg, 1984). Though the independent facts and concepts had long been available knowledge, Darwin’s exceptional selective combination of information resulted in a revolutionary perspective on the development of species. The pieces of information are cognitively available, but their interrelationship has not been obvious prior to an insight experience. Whereas selective encoding involves knowing which pieces of information apply to a given problem, selective combination involves knowing how to put the pieces together in a useful, relevant way.

Selective comparison insights involve relating newly acquired information to current or prior knowledge. Comparisons based on analogy represent examples of selective comparison. Again, Davidson and Sternberg
(1984) presented a well-known example from science in Kekule's discovering of the benzene ring. Apparently, Kekule was able to develop a model of the structure of the benzene ring after making an analogical comparison between one of his dreams of a snake biting its own tail and the structure of benzene. However, any analogical reasoning comparison represents some degree of selective comparison when it results in an effective problem solution. An individual realizes that new information is both similar and dissimilar to old information in specific ways. This realization helps the problem solver to use old information and its relationship to new information to better understand the new input or solve a current problem. The TARC represents this component of the relationship between knowledge acquisition and insightful problem solving, especially for young children.

**Nonentrenched Tasks**

The second aspect of Sternberg and Davidson's (1984) information processing theory of intellectual giftedness related to the TARC reflects intellectual performance in novel or nonentrenched task situations. Sternberg (1981b, 1982, 1986) and Sternberg and Davidson (1983) have investigated the relationship between performance on nonentrenched tasks and intelligence, especially exceptional intelligence, in the belief that exceptional intelligence can be appropriately assessed through the use of nonentrenched tasks. According to Sternberg (1981b, 1982), nonentrenched tasks are typically novel for a given individual, that is, beyond their ordinary or routine experiences. Such tasks require the processing of types of information outside an individual's typical knowledge store and processing experiences. Nonentrenched thinking involves the ability to learn and apply new kinds of concepts as well as new concepts from familiar categories. The ability to learn and think in a new conceptual system, one that can be brought to bear on existing knowledge structures, not only describes nonentrenched thinking, but exemplifies the specific type of thinking required to solve analogy problems.

Analogy, a central task in both the theory and measurement of intelligence (Brown, Kane, & Echols, 1986; Crisafi & Brown, 1986; Vosniadou, 1989), represent a type of nonentrenched task that has a long history of acceptance and use in psychological and educational assessment. The analogy task found in the TARC is typically both unfamiliar and novel for young children. It therefore represents a developmentally appropriate nonentrenched task that may be applied to the assessment of higher level thinking skills of young gifted children.

**Purpose**

We had a twofold purpose in this study. First, we wanted to determine if the TARC would discriminate gifted from nonidentified children, that is, on average would young gifted children demonstrate higher levels of analogical reasoning performance than young nonidentified children. The TARC allowed us to compare the performance of young gifted and nonidentified children on a high-level cognitive skill through the use of a nonentrenched task. Second, given significant group differences, we wanted to identify potential effects of ethnicity, socioeconomic status (SES), and gender on the analogical reasoning performance of the gifted sample.

**Method**

**Subjects**

The subjects for the first question involved in this investigation were 108 children between the ages of 48 and 83 months ($M = 62.3$ months). The distribution of subjects by independent variables used in the study is presented in Table 1. The children were enrolled in three preschool sites containing gifted programs, two located in central and northwest Texas and one in northeast Georgia.

The focus of the second question involved the set of gifted children ($n = 55$; ages 48–83 months; $M = 62.3$ months). Subjects designated as gifted were identified by measures of creativity, standardized intelligence tests (e.g., the Peabody Picture Vocabulary Test [PPVT]; Dunn & Dunn, 1981), and parent questionnaires. At the Georgia site, teacher interviews were also used.

**Materials**

The Test of Analogical Reasoning in Children was used to assess analogical reasoning performance. The TARC, presented in a game-playing format, is composed of 16 geometric analogy problems assembled in an A : B :: C : ? array. We used a manipulative gameboard version, Form A, and a paper-and-pencil version, Form E. A sample item from each of the two forms is presented in Figure 1. The reliability and validity for the TARC have-

| Table 1.—Distribution of Subjects by Independent Variables |
|-----------------|-----------------|-----------------|
| Variable/level   | Gifted          | Nonidentified   |
| Gender           | Male            | Female          |
|                  | 23              | 31              |
|                  | 32              | 22              |
| Socioeconomic status | Middle/high     | Low             |
|                  | 26              | 21              |
|                  | 29              | 32              |
| Ethnicity        | White           | African American|
|                  | 32              | 5               |
|                  | 18              | 3               |

Note. Although some cell sizes are small, the principal purposes of this study were to identify overall performance differences in analogical reasoning between the gifted and nonidentified groups and then, within the gifted group, to examine performance differences that may be related to demographic variables.

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been established through a series of studies and been reported elsewhere (Alexander, Willson, White, Fuqua, Clark, Wilson, & Kulikowich, 1989; Willson, Alexander, White, Fuqua, Clark, & Wilson, 1986).

The game version is a manipulative task. The analogy problem stem consists of three attribute blocks varying on the dimensions of size (large, small), shape (square, rectangle, circle, triangle), and color (red, blue, yellow) representing the A, B, and C terms. The solution options are arranged vertically to the right of the gameboard. Subjects indicate a solution to a problem by selecting and placing one solution block into the fourth, empty space on the gameboard.

The size and format of the reduced paper version resemble the type of analogy problems included on aptitude or achievement tests, such as the Kaufman Assessment Battery for Children (Kaufman & Kaufman, 1983), and Raven's Coloured Progressive Matrices (Raven, 1973). Presented with a card representing the analogy problem, the child marks the selected option with either a grease pencil or a marker. Alexander et al. (1989) includes an extensive discussion of the development and psychometric properties of the different forms of the TARC.

The TARC’s game-playing format begins with children being told that they will play a game during which they must find the piece that goes with the C term in the same way that the A and B terms go together. The game’s rules are stated before the game begins and are repeated with each new item. Credit is given only for the selection of a correct option. The number correct, a subject’s raw score, determines the level of analogical reasoning proficiency. The first two items, serving as practice items, are not scored. Administration of either version of the TARC requires approximately 25 min.

**Results and Discussion**

The first purpose of this study, identifying group differences in analogical reasoning performance, was assessed through a one-way analysis of variance (ANOVA) of analogical reasoning as measured by the TARC, with children grouped as gifted or nonidentified. Means and standard deviations for the gifted and nonidentified groups are displayed in Table 2. These results indicated that the TARC discriminated young gifted children from their
nonidentified peers, $F(1, 106) = 13.65; p < .0004; MS_e = 16.88$.

On average, the young gifted children solved significantly more geometric analogy problems (approximately 1.63 times more) than the nonidentified group did. The potential for a higher order interaction was assessed with a three-way factorial ANOVA (Group × Ethnicity × SES). This analysis resulted in a nonsignificant three-way interaction, $F(1, 97) = 1.32; p > .25; MS_e = 14.37$. We also examined the apparent differences in analogical reasoning of these two groups in terms of the degree of overlap in their TARC performance. Overlap was examined in two ways: first, in terms of a .95 confidence interval around the mean difference of 2.92 in TARC scores of the gifted and nonidentified groups; second, in terms of .95 confidence intervals around each group’s mean TARC performance. The confidence interval around the mean difference using the pooled standard error equal to .790 ranged from 1.36 to 4.48; given that the interval did not include 0, this outcome provided further evidence of distinct performance differences. Finally, the confidence interval around the gifted group’s mean ranged from 6.42 to 8.74 ($SE = .58$), whereas the interval around the nonidentified group’s mean ranged from 3.59 to 5.73 ($SE = .53$). The difference between intervals provided further evidence of the difference in analogical reasoning performance between these two groups.

Given the distinct performance differences between the gifted and nonidentified children, we explored the potential effects of gender, ethnicity, and SES on the gifted group’s analogical reasoning, as measured by the TARC. The descriptive statistics for gifted children grouped by these demographic variables are presented in Table 3.

A one-way ANOVA was used to test for effects of gender on the gifted children’s analogical reasoning. No gender effects were evident related to TARC performance, $F(1, 63) = .54; p > .47; MS_e = 18.78$; therefore, additional analyses pooled gifted subjects across gender. A one-way ANOVA grouped gifted children by two levels of SES: low SES, as determined by the criteria specified in the Procedures section, and middle/high, that is, any children not meeting the low-SES group criteria. This analysis revealed nonsignificant effects of SES on the children’s TARC performance, $F(1, 53) = 2.71; p > .11; MS_e = 18.05$. The effects of ethnicity were assessed with a third one-way ANOVA that grouped gifted children by three levels: White, African American, and Hispanic (see Table 3 for cell sizes, means, and standard deviations). This analysis revealed a significant main effect of ethnicity. Post hoc t tests using the least squares means procedure indicated that the only significant difference in TARC performance was between the White and Hispanic children ($p < .002$); no significant differences were found between the White and African American children’s performance ($p > .23$) or between the African American and Hispanic children’s performance ($p > .21$).

One hypothesis suggested by these results involves language or linguistic differences between the White and Hispanic groups. TARC performance has been found to covary with language ability, as measured by PPVT standard score (White, 1989; White & Caropreso, 1989). Optimal analogical reasoning performance on the TARC may therefore be related to children’s language abilities and linguistic knowledge, especially in terms of the question-and-answer routine used during the assessment procedure. Hispanic children may not have been as familiar with the type of verbal interaction or dialogue involved in the presentation of TARC problems. In this case, analogical reasoning performance would be confounded with language ability.

To test for this potential, we examined children’s language ability in terms of PPVT standard scores (data collected on all children as part of the overall identification procedure) for the gifted group by ethnicity. A significant main effect for language was revealed, $F(2, 52) = 15.72; p < .0001; MS_e = 226.42$. Post hoc t tests using the least squares means procedure indicated that the White and Hispanic children were significantly different ($p < .0001$); White and African American children were marginally significantly different ($p < .04$); and no significant differences were found between African American and Hispanic children’s performance ($p > .23$).

The results related to ethnicity and language need to be interpreted with caution, especially given limitations resulting from cell magnitudes. Also, these results reflect...
TARC performance differences in this sample of young gifted children. These results tend to support a hypothesis reflecting the potential influence of language on TARC performance. PPVT performance has typically been considered an indication of receptive vocabulary (Dunn & Dunn, 1981). According to this interpretation, the Hispanic children in this study may not have clearly understood the directions, the question-answer testing procedure, or both. We therefore cannot conclude either that Hispanic gifted children were less competent analogical reasoners or that the TARC did not tap analogical reasoning performance of young gifted Hispanic children. Given an opportunity to demonstrate their analogical reasoning ability without language bias or constraints, gifted Hispanic children may demonstrate levels of analogical reasoning comparable to those of the gifted White children in this study.

Several general conclusions can be cited based on these results. First, gifted children demonstrated higher levels of analogical reasoning than nonidentified children. Second, in the gifted group, this outcome seems to have been unbiased by any effects of either gender or SES. These results are particularly important for assessment practices given the tendency for both gender and SES effects to occur when using various types of assessments to identify gifted children as they progress through the grades. Third, these results provide educators and researchers with an additional indicator of superior cognitive competence to be considered for inclusion in identifying young gifted children. Finally, the effects of language ability may influence the results of an assessment of analogical reasoning with the TARC in linguistically diverse populations. The potential for language effects on TARC performance should be the subject for future research intended to explore both the extent of the potential effects as well as the possibility of minimizing these effects.

This study explored the potential for discriminating young gifted children from nonidentified children using the geometric analogical reasoning problems presented in the TARC, a nonentrenched or novel task (Davidson, 1986; Davidson & Sternberg, 1984). Gifted preschoolers were successfully discriminated from their nonidentified peers with the TARC regardless of performance differences related to gender or SES. Effects of ethnicity may have resulted from language or linguistic differences rather than directly from ethnic differences. Therefore, analogical reasoning tasks, in particular the geometric analogy problems used in the TARC, appear to be a useful method of assessing high-level cognitive skills and consequently could be used to identify gifted young children capable of demonstrating such skills. The TARC may prove to be useful in locating gifted children from low-SES populations as well. The usefulness of the TARC for identification of gifted children from ethnically diverse populations is still in question.

Given that the TARC is a nonentrenched task, performance differences were not necessarily attributable to or dependent upon prior knowledge, a performance requirement of other types of cognitive assessment instruments. These results indicated that, in general, gifted children displayed the skills necessary to solve novel analogical reasoning problems without prior explicit training or instruction.

The gifted group’s superior analogical reasoning performance can be related to Sternberg’s (1977) theory. Davidson (1986) and Davidson and Sternberg (1984) have suggested that a key psychological basis for intellectual giftedness relates to what they term insight skills. They stress the inclusion of such skills as an important aspect of an information processing theory of intellectual giftedness. The gifted group’s solutions to the novel analogical reasoning tasks presented in the TARC can be interpreted as a reflection of their more frequent and appropriate use of insight skills.

Implications for Assessment and Instruction

Instructional implications involve the inclusion of analogical reasoning strategies and problem-solving activities as part of a curriculum for young gifted children. Analogies can be used to present information in terms of “well-structured” associations. This type of instructional format may facilitate the building of cognitive connections between different concepts, events, persons, or objects that are part of the content or represent important instructional objectives. For example, young learners can be asked to identify the relationship between specific emotions expressed in a variety of different pictures depicting animals, persons, or objects. Analogical reasoning can also be used as a strategy to enhance the understanding of novel or unfamiliar information. After the introduction of unfamiliar content, familiar information can be used to illustrate and clarify the unfamiliar information. For example, with young children who are not reading, pictures can be placed in an analogy format to illustrate the relationships between particular ideas, persons, or events. The results of this study indicated that young children could solve the type of novel, unfamiliar geometric analogy problems presented in the TARC, but those identified as gifted children solved significantly more analogy problems than the nonidentified children did. This cognitive competence, which is apparently present to some degree in all young children, but especially in young gifted children, may be maintained and potentially developed by incorporating training in analogical reasoning into the instructional strategies used with these children.

Future Research

In our attempt to answer several questions regarding assessment procedures and tools used for the identifica-
tion of young gifted children, we have raised a number of new issues. Replications of this study with culturally and ethnically diverse samples of gifted children would clarify the findings related to the demographic variables. Also, expanding the analyses to include a diverse sample of nongifted children could result in further clarification of these findings by determining whether a similar pattern of results regarding the potential influence of language on analogical reasoning performance would emerge.

The consistent identification of young gifted children through assessment of their analogical reasoning performance with the TARC would be another important aspect of future research. Such findings would strengthen the construct validity relating intellectual giftedness and nonentrenched tasks as well as the use of analogies as nonentrenched tasks. This evidence would, in turn, support the use of the TARC as an effective assessment tool for the identification of giftedness in young children. The potential relationship between the gifted children’s TARC performance and their performance on other assessment instruments typically used to identify young gifted children, such as checklists and parent or teacher questionnaires, needs to be further investigated. For example, previous investigations conducted with different socioeconomic populations have shown that the TARC is significantly correlated with the Peabody Picture Vocabulary Test (White, 1989; White & Caropreso, 1989).

By continuing to investigate the relationships between factors such as ethnicity, cultural diversity, and the assessment practices used to identify children for special placement or services, research will ultimately aid educators in their efforts to appropriately identify those children who could benefit from special placement or services. Only by recognizing all such children, notwithstanding the effects of their social or ethnic experiences, will their educational experiences be appropriate to their needs and abilities.

NOTES
1. The construct validity of the Test of Analogue Reasoning in Children (TARC) has been determined by using information processing theory as a general model in which analogical reasoning has been demonstrated to be a fundamental cognitive process. The specific theoretical construct underlying the TARC has been derived from Sternberg’s (1977) information processing theory of analogical reasoning. A number of investigations (Alexander, Willson, White, & Fuqua, 1987; Alexander, Willson, White, Fuqua, Clark, Wilson, & Kulikowich, 1989; White, 1989; White & Alexander, 1986; White & Caropreso, 1989) have yielded consistent results demonstrating that the TARC assesses analogical reasoning performance as delineated by Sternberg’s theory. Test-retest reliabilities were determined using different cohorts for different forms of the TARC (see Figure 1). For the game version, 15 pairings yielded a reliability of .644; for the paper version, one pairing yielded a reliability of .301.
2. To assess the probability of a Type II error, we estimated the power of the analysis of the gifted children’s language ability based on Peabody Picture Vocabulary Test standard scores. The estimate of the power of the analysis was obtained from tables included in Glass and Hopkins (1984). In calculating the noncentrality parameter needed to determine the tabled power value, we used as an estimate of the population standard error the sample pooled standard error of 226.42 (Glass & Hopkins, pp. 353–356). Using this error estimate, we found that the noncentrality parameter equaled 3.42. The tabled power of the test was greater than .9 (at α = .05, noncentrality = 3.4, and df = 2, 52). The probability of a Type II error under these circumstances was therefore less than .10.

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NOTICE

Mr. Joseph DeMeis and Ms Eleanor Stearns, the authors of a manuscript published in the Journal of Educational Research titled “Relationship of School Entrance Age to Academic and Social Performance,” September/October 1992, recently submitted to the Editors a list of errors that were included in their manuscript. The changes pertain to Table 2 of that document. The corrected Table 2 is published below, with the emended values entered in bold type. The authors write to say that “one of our original claims was not supported by the new corrected findings. That is, significantly more young students with social/behavioral difficulty were not referred for psycho-educational evaluation. These corrected results are more consistent with other findings in our paper which indicate that age does not affect psycho-educational referral, placement in the Primary Mental Health Project, or the gifted program” (DeMeis, 1994).

Table 2—Correlation Between Study Groups, Total Population, and Birth Month

<table>
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<tr>
<th>Study group</th>
<th>Total population</th>
<th>Birth month</th>
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<tbody>
<tr>
<td>Psycho-educational referrals</td>
<td>Tau 0.71</td>
<td>0.37</td>
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<td></td>
<td>z 3.20**</td>
<td>1.67</td>
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<tr>
<td>Academic referrals</td>
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<td>0.32</td>
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<tr>
<td></td>
<td>z 1.98*</td>
<td>1.45</td>
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<tr>
<td>Social/behavioral referrals</td>
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<td>−0.13</td>
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<tr>
<td></td>
<td>z 2.16*</td>
<td>−0.57</td>
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<td>PMHP</td>
<td>Tau 0.28</td>
<td>0.36</td>
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<tr>
<td></td>
<td>z 1.27</td>
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<td></td>
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<td>Gifted placement</td>
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<td></td>
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<td>Pre-first grade</td>
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<td>z 1.19</td>
<td>2.04*</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01.

The Editors and the authors regret the errors included in the original article.

REFERENCE