Editorial Policy

The Researcher, MSERA's research journal and newsletter, includes research articles and scholarly material in four of the five issues each year, the exception being issue number 4, the Annual Meeting Program issue. The purpose of the Researcher is to provide a means of communication with members of the organization (MSERA) and to encourage research and to promote the sharing of knowledge through publication of research studies and other articles of interest to the membership.

Manuscripts that meet submission requirements will be acknowledged when received. Notification of the results of the review may take approximately six to eight weeks. The Researcher editorial staff reserves the right to make editorial changes in manuscripts in order to improve clarity, to maintain APA style, to correct grammar and spelling, and to fit available space.

Notification of change of address should be sent to:
Gypsy Abbott Clayton
1709 Woodbine Drive
Birmingham, AL 35209

Submission Requirements and Directions

Length. Text, excluding tables and references, should not exceed 2,000 words, including tables, charts, and figures.

Manuscript preparation. The APA Publication Manual should be used as a style guide. All manuscripts are to be typed and double spaced. Tables, charts, and figures should be kept to a minimum. Each chart and figure should be on a separate page and should be in camera-ready form.

Cover Page. The title of the manuscript should appear on a separate cover page along with the following information about each of the contributing authors: name; position; institution, school or business; and address. Home and work telephone numbers for the primary author should also be included. If the manuscript is based on thesis or dissertation research, the major professor or dissertation director and granting institution should also be included.

Review Process. Each manuscript will undergo blind review by a minimum of two members of the Editorial Review Board of the Researcher.

General Directions.
Send three (3) copies, along with a self-addressed, stamped envelope, to:
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Presidential Comment

Carolyn C. Williams
1988 MSERA President
Mississippi State University

One of the most rewarding experiences as president of MSERA is the many opportunities to express appreciation to the members of the Association for their support and assistance during the year and at the Annual Meeting. The 1988 MSERA Annual Meeting was a successful event. More than 90 members responded to the invitation to participate in the ongoing operations and maintenance of the Association this year. This kind of cooperation by members certainly accounts for MSERA's being the largest and most active regional research association in the United States. As many as 295 members registered, and 230 presentations were made at the Annual Meeting. The featured speaker was outstanding, and the Business Meeting was brief. The newly elected officers and board members were properly installed, and Bill Deaton effectively managed the newly initiated election procedures for state representatives to the Board of Directors. As in the past, this has been a very productive year, and I especially want to thank all members, standing and special committee chairs, and board members for the success of this year's meeting.

Some MSERA members made 1988 especially rewarding, and I want to express my sincere appreciation for their efforts. Mickey Lee managed the arrangements for our Louisville meeting and did an excellent job working with the staff at the Executive West, taking care of routine tasks, and making sure that the accommodations were in order. Lynda Lee chaired the program committee. Lynda and Co-Chair Diana Lancaster are commended for their work in providing an outstanding program. For the second year Gypsy Abbott Clayton handled the registration efficiently. My special thanks to her for also effectively maintaining the membership and financial records of the Association. Carl Martray and the Outstanding Paper and Dissertation Award Committee selected two outstanding winners: Jim McLean and Soo-Back Moon. As usual, John Petry provided a high quality Proceedings this year. Dot Reed admirably arranged the new member reception which again attracted many new members to the Association. Harry Bowman performed his duties as executive secretary of the Association with the ease and confidence that only Harry can do. One revision in the MSERA Bylaws, which extended the amount of time needed for the secretary-treasurer to prepare and distribute minutes to the Board members, was officially passed by the Board of Directors and the members of MSERA. The graduate student session and reception were very successful, thanks to Bruce Crowe. Jim Flaitz redesigned the evaluation process for the Annual Meeting this year, the results of which will probably yield valuable information which the Association will use to improve annual meetings in the future. Robert Kennedy, chair of the 1989 Local Arrangements Committee, and Susan Kappelman, chair of the 1990 Local Arrangements Committee, have already completed preliminary planning for the 1989 and 1990 annual meetings which will be held in Little Rock, Arkansas and New Orleans, Louisiana, respectively. Thanks to Joan Butler, chair of the Future Site Selection Committee, and her committee for the timely completion of their tasks. Appreciation is also extended to Vern Gifford, chair of Archives, and David Morse, chair of the Communications and Publications Committee, for their ongoing contributions to the Association. Last, but certainly not least, Charles Faires and Judy Boser rendered outstanding service to the Association again this year as co-editors of the Researcher. The Association is also fortunate to have such an outstanding Editorial Board. They are: Glenelle Halpin, Anne Tishler, John Burns, John Enger, Ron Adams, Lynda Lee, Jeff Gorrell, Susan Kappelman, Carolyn Reeves-Kazelskis, Tom Saterfiel, E. Dean Butler, Sheldon Clark, Brooks Applegate, and Nan Lintz.

Dean Arnold Moore and Dr. Neil Amos of Mississippi State University hosted another popular reception this year in my honor, and I want to especially thank them, as well as my colleagues and the secretaries in the Department of Curriculum and Instruction and the College of Education, for their support and assistance during my terms of office.

President Thomas Meredith, Vice President for Academic Affairs, Dr. Bob Haynes, Dean J. T. Sandefur, and his clerical staff of Western Kentucky hosted a warm reception in honor of President Carl Martray. President Meredith continued the precedent set by Mississippi State University's President Don Zacharias in 1987. The Association is indeed honored...
to have Presidents of its member institutions actively participate in the annual meetings. It has been predicted that President-Elect John Petry will draw the Governor of Tennessee to MSERA next year. The University of Alabama hosted their annual reception again this year which is always a special treat after the business meeting.

The MSERA Board of Directors meets twice a year to conduct the business of the Association. It is therefore encumbered upon me to share some of the reports and decisions rendered by the board, particularly those which are not announced at the annual business meeting and are of interest to the membership at-large, with the members of the Association. Highlight of those decisions and reports accepted by the board this year are listed below.

★ The Annual Meeting registration fee was increased this year to offset the rising costs of hotel accommodations and publication of the Proceedings within the last three years.

★ The 1989 Annual Meeting of the Mid-South Educational Research Association will be held at the Excelsior Hotel in Little Rock, Arkansas, November 8-10.

★ The 1990 Annual Meeting of the Mid-South Educational Research Association will be held at the Monteleone in New Orleans, Louisiana, November 14-16.

★ The 1991 Annual Meeting will be held in Kentucky again. This is the result of the board decision in 1986 which approved future sites to be held in member states in the odd-numbered years and the Future Site Selection Committee to recommend the location for even-numbered years.

★ The Future Site Selection Committee made a recommendation for the 1992 Annual meeting to be held in New Orleans, Louisiana.

★ The MSERA Archives, containing all MSERA papers, symposiums, etc. presented at the Annual Meetings since 1972 and located at Mitchell Memorial Library at Mississippi State University, has been catalogued. Papers are available upon request.

★ The Outstanding Paper and Distinguished Dissertation/Thesis Award Committee made recommendations to revise the procedures for submitting papers for the competition. This recommendation was made to facilitate and increase the number of papers for this competition. The Board passed a motion that a paper not be considered for review unless the senior author is a member of MSERA at the time the paper is submitted.

★ The co-editors of the Researcher reported that five research papers were published in 1988. They recommended that MSERA members be encouraged to submit their research to the Researcher.

★ A special committee was appointed to study the editorial policies of the Researcher and will make recommendations to the 1989 board regarding whether research articles published in the Researcher can be subsequently submitted to other journals for publication.

★ The Executive Secretary of MSERA reported that he attended the SIG meeting for state and regional associations at AERA and the LERA meetings. He also plans to discuss joint goals for the two associations.

Finally, I am sincerely honored to have served as President of the Association. Thanks to all of you who made this a rewarding experience. Best wishes to each of you for a Happy Holiday.

OFFICERS ELECTED

Vice-president/president-elect, secretary-treasurer, and state representatives were elected at the Business Meeting on Thursday evening at the Annual Meeting. John Petry, Memphis State University, was elected to serve as vice-president/president-elect of MSERA during 1989. Gypsy Abbott Clayton will continue into a third consecutive year as secretary-treasurer of the organization.

For the first time in MSERA history, state representatives were elected by the members of their states instead of by the Association as a whole. State representatives to the Board of Directors for 1989 and 1990 include Anne Tishler, Alabama; Don Wright, Arkansas; Lynda Lee, Kentucky; Jim Flaitz, Louisiana; Joe Blackbourn, Mississippi; and Tim Pettibone, Tennessee.

Western Kentucky Honors Martray

Following the installation of Carl Martray of Western Kentucky University as the 1989 President of Mid-South Educational Research Association, Dr. Tom Meredith, President of Western Kentucky made a presentation to the members during the business meeting at the 1988 Annual Meeting in Louisville, KY. Western Kentucky hosted a reception in Carl's honor following the business meeting.

Archived Papers Available

Vernon Gifford, chair of the MSERA Archives Committee announced in Louisville at the Annual Meeting that copies of papers presented in previous years can now be obtained by writing or calling the Special Collections Room of Mitchell Memorial Library at Mississippi State, MS 39762 - Telephone (601) 325-3060. Papers are cross-referenced by authors. To expedite service to Association members, xeroxed copies will be mailed and charges "billed."
Moon, McLean, Kaufman, and Reynolds Papers Honored

Soo-Back Moon, who completed his doctoral studies at the University of Alabama under the direction of James McLean, received the 1988 Distinguished Dissertation/Thesis Award for his study, "A Cross-Cultural Validity Study of the Kaufman Assessment Battery for Children with Korean Children." The Outstanding Paper award for 1988 was won by James McLean, the University of Alabama, and co-authors Alan S. Kaufman of the University of Alabama and Cecil R. Reynolds, Texas A & M University. The title or their paper was "What Role Does Formal Education Play in the IQ-Age Relationship Across the Adult Life-Span?" Dr. Moon's paper appears in this issue of the Researcher, and the McLean-Kaufman-Reynolds paper will be presented in the February, 1989 issue.

Second place award in the dissertation/thesis competition was for Dr. Debbie Judd's dissertation "Two Applications of the Neonatal Behavioral Assessment Scale with Mother-Infant Dyads," completed at the University of Southern Mississippi. The runner-up in the Outstanding Paper competition was Robert Marsh, University of Tennessee at Chattanooga, for his paper titled "An Effect of Unstructured Evaluation on Academic Integrity."

Important Papers Destroyed by Efficient Hotel Staff

With his usual foresight and planning, President-Elect Carl Martray distributed the "1989 Invitation for Participation in MSERA: to members at the Thursday evening business meeting in Louisville. Many active, energetic, dedicated MSERA members filled out the blue forms and left them in the designated box in the back of the room when exiting the business meeting. Little did Carl know that the hotel staff at the Executive West routinely did a thorough cleaning of the rooms during the night so that they would be ready for use the following morning, and that their instructions were to remove items that did not belong in the rooms (such as a box of blue papers). By morning, when Carl went to get the box, the room was spotless and the box was nowhere in sight. Local arrangements chair Mickey Lee joined the search, only to learn from hotel personnel that the box was not only out of sight, but out of shape as well. (It had already gone into the trash compactly!) Sometimes it just doesn't pay to be too organized.

Another copy of the Invitation for Participation is included in this issue of the Researcher. Even if you did complete one at the Annual Meeting, please take a few minutes to complete a replacement and put it in the mail today to Carl Martray (his address is on the form). Take the time to get involved in MSERA by serving on a committee or helping with the Annual Meeting. The organization will benefit, and so will you.

Keynote Address by Schlechty Stimulating and Entertaining

Gypsy Abbott Clayton

Dr. Phillip C. Schlechty of the Jefferson County School Board of Education, Louisville, Kentucky, gave an insightful keynote presentation at the 1988 Annual Meeting in Louisville on Wednesday evening. The title of his presentation, "Getting the Hay Down to the Ponies: The Researcher's Dilemma," reflected his experience in both higher education and public schools. Dr. Schlechty began his speech by stating that an appropriate alternative title for his topic would have been, "What good is Alpo if the dogs won't eat it?" This statement defines the major thrust of his speech: the difficult translation of educational theory into educational practice, primarily because educational research is written for an audience that cannot understand it. A major research problem cited by Dr. Schlechty is getting educators to understand and utilize the body of knowledge that is available. Research organizations, such as AERA, focus on improving research itself, rather than education, and they serve as outlets for those in higher education who feel pressured to publish in refereed journals. Research articles are not generally written in language teachers and other educators readily comprehend, creating a dilemma. A dilemma, which can't be solved and requires one to make a choice which was distinguished from a problem that can be solved.

Three dilemmas confronting researchers in higher education who are doing research about public schools were cited as follows: universal (versus particular) audiences, convincing or persuasion, and power or precision. Practitioners are concerned with what will work in a specific situation whereas researchers are often seeking generalizeable truths. Researchers want to remain objective and not intervene in the situation, measuring changes in the situation; local educators are not passive and want to make things happen. Power versus precision is characterized as the choice between full explanation and specific precise answers that have a very narrow focus.
Dr. Schlechty contends that a market research approach to education is more effective than the traditional approach in solving real problems in schools. He differentiated between sales (starting with a product and then attempting to convince people to buy it), and marketing, which starts with the values and needs of the customer and attempts to develop products to satisfy them. The marketing approach includes looking for unexpected happenings, needs determined from the use of something for a purpose for which it was not intended, or things that happen but should not be happening. He pointed out several incongruities, in which what actually exists differs from what is supposed to be. Staff development activities are frequently created by staff development coordinators rather than dictated by the real needs of teachers. In his school system, he began "manufacturing" staff development differently with staff development activities being created to service the teachers who attend them. He also noted that inservice activities are rarely popular, but everyone wants to control these activities; primarily due to the flexible financial resources that are available to support those activities.

Dr. Schlechty suggested several innovations which could be of help in solving problems faced by the educational community. For example, at the present time, curriculum is driven or set up by the school system; he suggested that teachers, with the use of television, lasers, and computers, could invent their own curricula. He sees the role of the university in such an endeavor as being a catalyst for ideas. Universities provide a safe place for discussion and development of novel ideas. An example of changes in the market structure or in the system and how it functions was the focus on keeping students in school, reducing the number of dropouts, while providing a high quality education for all children, many of whom the schools were not designed to educate.

In summary, Dr. Schlechty stated that great changes in mood, perception, and meaning of public education occurred early in this decade. In order for schools to meet the challenge, personnel who work in schools and universities must be willing to face the dilemmas mentioned earlier and work together to shape a new conception of schools. He believes that a marketing research approach to education is the most useful way to make meaningful changes in American public education. He also sees a solution as being that of understanding the customers (of research), those in the public schools. There is also a place for basic research which is not presently relevant but may become relevant in the future. The researcher must be dedicated to it, obtain resources to stay with it, and be good at it.

Announcements

Charles Achilles, formerly of the University of Tennessee, Knoxville, has accepted the position of Chair of the Department of Educational Leadership at the University of North Carolina, Greensboro. His appointment at UNC became effective in September of 1988.

Deaton Paper Finally Achieves its Potential

A year ago, in the December, 1987 issue of the Researcher, a report was issued regarding the presidential address, made by then-president Bill Deaton, at the Annual Meeting. In order to avoid compromising Dr. Deaton's chances of achieving fame through publication of his address in a national journal of stature, the entire paper was not presented in the Researcher. Dr. Deaton, in a show of support for the Researcher, has given permission, (more accurately stated, he issued a mandate from the populace - although it turned into a people-date when he gained the support of a female MSERA board member who shall remain nameless for her own protection) for the Researcher to print the full, unexpurgated text of his address. In order to show that the Researcher is responsive to the wishes of the populace, we herewith present the text of the 1987 Presidential Address of Dr. William Deaton on the following page.
1987 PRESIDENTIAL ADDRESS BY WILLIAM DEATON

Understanding Nature’s Warnings

The world is in a state of transformation. The way we live and the way we understand our environment are in a state of flux, and the changes are not always for the better. We are being challenged to re-examine our relationship with nature and to consider how we can live in harmony with the Earth.

Recent years have witnessed significant progress in environmental science and technology. We have made strides in understanding the complex systems that sustain life on Earth. However, much remains to be done. We must continue to prioritize conservation efforts and develop new solutions to address the pressing challenges we face.

One of the greatest threats to our planet is climate change. The effects of global warming are already being felt around the world. Rising temperatures, melting ice caps, and more frequent and severe weather events are just a few of the impacts we are seeing. We must take immediate action to reduce our carbon footprint and transition to more sustainable energy sources.

Another critical issue is the loss of biodiversity. Our planet is home to an incredible diversity of life, but this natural wealth is under threat. We must work to protect endangered species and their habitats to ensure that future generations can continue to benefit from the richness of our planet.

In addition to these challenges, we face threats to our health and well-being from pollution and exposure to harmful substances. We must continue to monitor and mitigate these risks to ensure that our communities are safe and healthy.

As we look to the future, we must be guided by principles of sustainability and responsibility. We must work together to find solutions that are not only beneficial for the environment but also create a better quality of life for all people.

We must also recognize that our actions have consequences. We are all connected, and what we do in one part of the world affects others around the globe. We must take a global perspective and work towards a more sustainable future for all.

Ultimately, the choices we make today will shape the world tomorrow. We must act with care and consideration, understanding that our actions have far-reaching impacts. By working together, we can create a better future for ourselves and for the generations that follow.

In closing, I would like to reiterate the importance of understanding and respecting the natural world. We must continue to learn from the warning signs and take action to ensure a sustainable and healthy future for all.

Thank you.
A CROSS-CULTURAL VALIDITY STUDY OF THE KAUFMAN ASSESSMENT BATTERY FOR CHILDREN WITH KOREAN CHILDREN

Soo-Back Moon
Assistant Professor at Hyosung Women's University, Kyungpook, South Korea
Formerly a doctoral student at the University of Alabama

James E. McLean
Major Professor

Introduction

Intelligence testing in the educational area has been the target of repeated waves of criticism and attack (Reynolds, 1982). A primary criticism of intelligence tests is that they are culturally biased, particularly against minority groups. This criticism is based on differential test performance of individuals from different backgrounds, with different experiential opportunities and cultural expectations, and with possible language handicaps when tested in English (Kaufman, 1979a; Oakland & Matuszek, 1977; Reynolds, 1982; Sattler, 1982).

Traditional tests of intelligence are often accused of being culturally biased, discriminating unfairly against racial and ethnic minorities or persons of low socioeconomic status. In these tests, differences in mean IQ scores among individuals of different racial, ethnic, and social classes may be due not to genetic difference between the groups but to the psycholinguistic, cultural, and temporal biases of the tests. Since the outcome of intelligence testing impacts significantly on educational and job opportunities for minorities and on the appropriate selection of certain types of treatment and intervention, the issue of potential bias in intelligence testing has become of increasing concern to the public, to educators, and to psychologists.

When intelligence tests designed for one culture are translated for use in another culture, language becomes a potential source of test bias (Diamond, 1985). As the fourth draft of the Joint Technical Standards for educational and Psychological Tests (American Psychological Association, 1984) points out with respect to translation:

Many words have different frequency rates or difficulty levels in one language or dialect as compared to another. ... (W)ords in two languages that appear to be close in meaning may differ radically in other ways important for use intended. Additionally, the test content may be inappropriate in the translated version. (p. 7-1)

Imperfect translations and adaptations may be largely responsible for observed differences in intelligence test scores among groups having different languages (Reynolds & Brown, 1984). The present objective in cross-cultural testing is to construct tests that presuppose only experiences that are common to different cultures. As Frijda and Jahoda (1966) maintained, for a test to be truly fair it should be either equally familiar or equally unfamiliar to all. As neither option is possible, bias is inherent in all tests.

Potential Bias in Traditional Intelligence Tests for Use with Children of Different Cultures and with Different Brain Functions

Over approximately the past 20 years, significant advances have been made in fields such as cognitive psychology, neurology, and psychometry. This suggests that some major changes in the way intelligence is conceptualized and, more importantly, the way it is measured measured may be due. Despite a great need for new directions in intelligence tests, until
the early 1980s individual intelligence tests had not changed since the time of Binet.

Prior to the publication of the Kaufman Assessment Battery for Children (K-ABC; Kaufman & Kaufman, 1983c), traditional tests of intelligence had not only failed to keep step with the significant advances in psychology and neurology but had, in fact, not been based upon or closely related to any major theoretical position. The impressive findings in the areas of cognitive development, learning theory, and neuropsychology during the previous 25-50 years had not invaded the domain of the individual intelligence test. Kaufman (1979b) indicated the following:

Stimulus materials have been improved and modernized; new test items and pictures have been constructed with keen awareness of the needs and feelings of both minority group members and women; and advances in psychometric theory have been rigorously applied to various aspects of test construction, norming, and validation. However, both the item content and the structure of the intelligence tests have remained basically unchanged. (p. 4)

Perhaps most central to the new thrust of theory into the topic of intelligence is the treatment of intelligence as a flexible and fluid process, or a process which develops over the life span of the individual (Horn & Cattell, 1966). Also of importance has been the attempt to link cognitive processes with brain psychology. Among the theorists and researchers who have actively sought to introduce this alternative view of intelligence are Piaget (1952); Horn and Cattell (1966); and Das, Kirby, and Jarman (1975, 1979).

To overcome the serious shortcomings inherent in traditional intelligence tests, Kaufman and Kauffman (1983c) developed a new intelligence test, the Kaufman Assessment Battery for Children (K-ABC). The K-ABC was developed (a) to measure intelligence from a strong theoretical or research basis; (b) to separate acquired factual knowledge from the ability to solve unfamiliar problems; (c) to yield scores that translate to educational intervention; (d) to include novel tasks; (e) to be easy to administer and objective to score; and (f) to be sensitive to the diverse needs of preschoolers, minority groups, and exceptional children (Kaufman & Kaufman, 1983b, p. 5).

The K-ABC, as the most complete example of tomorrow's tests of intelligence available today, is founded on a two-pronged theoretical base which merges the Cattell-Horn fluid and crystallized theory of intelligence (Cattell, 1968; Horn & Cattell, 1966) with theories that emphasize simultaneous and successive cognitive processing, made known widely in the Western hemisphere by Das, Kirby, and Jarman (1979).

The theoretical base underlying the K-ABC includes the fluid and crystallized intelligence theory as reflected in the dichotomization of the K-ABC Mental Processing and Achievement Scales. According to Kaufman and Kaufman (1983b),

the Achievement Scale resembles closely the crystallized abilities, and the two Mental Processing Scales together resemble the fluid abilities that characterize the Cattell-Horn theory of intelligence. (p. 1)

Fluid intelligence is thought of as an individual's problem-solving ability in new and unique situations that are not dependent on the past experiences or formal training for successful completion. Crystallized intelligence is considered to be heavily laden with past experiences and more dependent on formal training than fluid intelligence.

The Mental Processing scales of the K-ABC are further dichotomized to reflect the Luria-Das (Das, Kirby, & Jarman, 1975) theory of mental processing' simultaneous versus successive processing. The two K-ABC Mental Processing subscales (Sequential and Simultaneous) are rooted in the theory that:

- sequential processing places a premium on the serial or temporal order of stimuli when solving problems; in contrast, simultaneous processing demands a gestalt-like, frequently spatial, integration of stimuli to solve problems with maximum efficiency. (Kaufman & Kaufman, 1983b, p. 2)

Problems existing in intelligence testing in Korea stem from a lack of appropriate tests. The Stanford-Binet and Wechsler Intelligence Scale for Children-Revised have been translated/adapted into Korean and are used in that country. However, items on these tests are biased against children from different cultural backgrounds (Cotter & Berk, 1981; Mishra, 1982; Murray, 1981; Sandoval, 1979; Smith, 1974).

**Purposes of the Study**

The purposes of this study are to translate and adapt the K-ABC for use with Korean children, and to provide a cross-cultural validation of the K-ABC by collecting evidence to determine whether the K-ABC is a fair instrument for use with Korean children. These goals will help examine the cultural fairness of the K-ABC. In addition, this study attempts to examine the factor structure of the K-ABC derived from the Korean sample whose subjects are of different genetic, cultural, and linguistic systems. Finally, this study will determine if Korean children perform better on Simultaneous Processing than on Sequential Processing on the K-ABC Mental Processing Scales.

**Research Questions**

1. Will sequential and simultaneous factors emerge as significant dimensions in the factor analysis of the Mental Processing subtests of the Korean version of the K-ABC for each age group?

2. Will sequential, simultaneous, and achievement factors emerge as significant dimensions on the factor
analysis of all subtests of the Korean version of the K-ABC for each age group?

3. Is there a significant difference in the mean scores between sequential processing and simultaneous processing for Korean children, relative to American norms?

4. Is any item in the K-ABC Mental Processing Scale biased for Korean children?

5. Are there significant correlations between the IQs of the Korean version of the K-ABC global scales and the Korean version of the WISC-R?

The results of this study provide empirical evidence of the K-ABC's culture-fairness for use with Korean children specifically, and with children raised in oriental cultures in general. Accordingly, the Korean version of the K-ABC might then provide the users of its results more fair information about intellectual ability, helping to ensure fair use of the information for each child. The Korean version of the K-ABC should provide useful and sound information for education and should also be valuable for psychological and clinical assessment, for psychoeducational evaluation of learning disabled and other exceptional Korean children, for preschool assessment, for neuropsychological assessment, and for research in Korea. In addition to these, the results of this study will provide useful empirical information which can be used to develop the final version of the K-ABC and to conduct a cross-cultural comparison of intelligence.

Method

Sample

The sample for this study was comprised of 440 Korean children who were tested for the development and validation of the Korean version of the K-ABC between August, 1987 and November, 1987. The K-ABC American standardization sample tested during the national standardization program of the K-ABC in the spring and summer of 1981 were used in this study. The ages of the subjects in this study ranged from 2 1/2 to 12 1/2 years. The Korean sample was stratified by each age by sex. Equal numbers of boys and girls were included at each age. The sample included 40 children in each of 11 age groups, which comprised each six or eleven month interval between 2 1/2 and 12 1/2 years.

Instrumentation

The tests used in this study included scales of the Korean version of the K-ABC and Korean version of the WISC-R.

The Korean Version of the K-ABC. The Korean version of the K-ABC consisted of the Mental Processing Scales and the Achievement Scale. Several considerations for translating/adapting the subtests of the K-ABC into Korean follow. All items of the K-ABC Mental Processing subtests and some items of the subtests of the Achievement Scale were used without any changes or substitutions in this study since no empirical evidence was available.

The Korean version of the K-ABC used 15 subtests of the K-ABC for this study. The subtests were grouped into three scales: Sequential Processing, Simultaneous Processing, and Achievement.

Reliability data were analyzed using Cronbach's (1970) coefficient alpha to determine the consistency of a child's performance on the Korean version of the K-ABC scales and subtests. Internal consistency reliability coefficients were computed for the separate subtests for each age group. Mean reliability coefficients of Mental Processing subtests ranged from .69 (Gestalt Closure) to .87 (Triangles) for preschool children, whereas at the school-age level the range was between .72 (Photo Series) and .79 (Triangles). Triangles consistently had the highest reliability coefficients for both preschool age and school-age levels.

Of the five main areas described by Anastasi (1988, pp. 153-161) as contributing to a test's construct validity (developmental changes, internal consistency, factor analysis, convergent and discriminant validation, correlations with other tests), developmental changes, factor analysis, internal consistency, and correlation with other tests were used to examine the construct validity of the Korean version of the K-ABC.

Age differentiation in raw score was one criterion used to validate the Korean version of the K-ABC. Mean raw scores and standard deviations on each subtest of the Korean K-ABC of each of the 11 age groups showed steady increases across the entire age range. Pearson product-moment correlation coefficients were computed to test the statistical significance of the age progression. Chronological age correlated between .90 (Sequential Processing) and .97 (Achievement Scale) with the global scales. For Sequential Processing subtests, correlations ranged from .80 (Hand Movements) to .85 (Number Recall). The Simultaneous Processing subtests showed correlations between .41 (Magic Window) and .87 (Gestalt Closure), while correlations for Achievement subtests ranged from .55 (Expressive Vocabulary) to .94 (Arithmetic and Riddles). All of these correlation coefficients were statistically significant at the .01 level.

Pearson product-moment correlation coefficients were computed between the scale scores and subtest scores of the Korean version of the K-ABC to evaluate the internal consistency construct validity of the scales. Correlations between Mental Processing subtest raw scores and Mental Processing Composite, by age, for the Korean sample were between .40 and .87, with a median of .63, evidence of the construct validity of the Mental Processing Composite. Correlation coefficients for the internal consistency of the Achievement Scale ranged from .56 to .90 with a median of .75, showing the construct validity of the Achievement Scale.
Grade point averages (GPA) on school achievement tests, from a sample of 240 students (grade 1 to grade 7) were correlated with the Korean version of the K-ABC global scales to evaluate the criterion-related validity evidence of the Korean version of the K-ABC scales. Correlations between the Korean version of the K-ABC global scales and GPA, by age, for Korean children were significant for each of the school-age levels. Mean coefficients ranged from .45 (Sequential Processing) to .75 (Achievement). These results offer solid evidence of the construct validity of the Korean version of the K-ABC global scales. All coefficients were significant at the .05 or .01 level.

The Korean Version of the WISC-R. Chang U Lee and Bong Yeon Su (1986) translated/adapted the WISC-R for use with Korean children ages 5 through 16. Two major procedures were employed to develop Korean versions of the WISC-R (Lee & Su, 1986). First, for preliminary scale construction, items in the original WISC-R were translated into Korean, and new items were added. A test to validate each item was conducted on a sample consisting of 440 students ages 5 to 16. Items were examined primarily on the basis of discriminatory effect; items that indicated a low degree of discrimination were eliminated. For the arrangement or ordering of items, the degree of difficulty of each item was also considered. Next, the standardization procedure of the preliminary K-WISC-R was conducted, including a sample of 2,398 students selected from the same population.

To determine reliability, split-half coefficients, standard error of measurement, and stability coefficients were computed. Average split-half coefficients for the 12 subtests ranged from .52 to .91. Verbal, Performance, and Full scale IQs showed high reliabilities across the entire age range; average coefficients were .94, .97, and .98, respectively. Average standard error of measurement for Verbal, Performance, and Full Scale IQ scales were 4.03, 3.43, and 3.10, respectively.

For validity, correlation coefficients between the K-WISC-R and Kodae-Binet Scale were computed. Average correlation coefficients of the K-WISC-R Verbal, Performance, and Full Scale IQ with the Kodae-Binet IQ were .71, .57, and .69, respectively. Average correlation coefficients between the K-WISC-R subtest scale scores and the Kodae-Binet IQ ranged from .14 to .65.

Procedures for Data Collection

Data collection was conducted between August and November, 1987, and involved the testing of 440 children from Teague, Korea. Two elementary schools, four kindergartens, and five day-care centers were involved in this study.

The Korean version of the K-ABC and the Korean version of the WISC-R were administered by the investigator and four trained graduate students in educational psychology. The Korean version of the K-ABC was given to a total sample of 440 children age 2 1/2 to 12 1/2, whereas the Korean version of the WISC-R was administered to 70 children age 6 to 12 1/2. All children were tested individually in facilities provided by the school principals. Each child was escorted by a homeroom teacher to the testing location. Rapport was established and general proceedings of the session were explained to the child prior to the testing.

In addition to these two intelligence tests, GPAs for all school-age children (N=240) were obtained from school authorities. During the administration of the Korean version of the K-ABC and WISC-R, all standardization procedures for testing and scoring described in the manual of each test were followed.

Hypotheses, Data Analyses, and Results

Five null hypotheses were tested in this study. Each is presented followed by its analysis and results.

Hypothesis 1

Sequential and Simultaneous factors will not emerge as significant dimensions in the factor analysis of the Mental Processing subtests of the Korean version of the K-ABC for each age group.

Since each of the original age groups consisted of 40 children, which was not a large enough number of subjects to conduct meaningful factor analysis, the original 11 age groups were combined into four groups based on considerations of the number of subjects and the number of common subtests among the age groups being combined: Ages 2 1/2 through 4, 5 through 6, 7 through 9, and 10 through 12 1/2.

Partial correlations (partialing out the effect of age) between raw scores on the Korean version of the K-ABC Mental Processing subtests were obtained for each of the four combined age groups. These correlation matrices ranged from 5 x 5 for ages 2 1/2 through 4, 7 x 7 for ages 5 through 6, to 8 x 8 for ages 7 through 9 and ages 10 through 12 1/2. Each matrix was subjected to a principal components analysis--value of 1 in the diagonal, no iterations, followed by varimax rotation of all factors obtained from the scree test (Cattell, 1966)--to determine the appropriate number of factors for each combined age group. The principal factor analysis was conducted for each combined age group, with squared R in diagonals as the initial communality estimates. The preferred number of factors for each combined age group was based both on the number of significant components identified by the scree test and psychological meaningfulness of the various varimax principal factor solutions.

Cattell's (1966) scree test indicated that two factors should be rotated for the Mental Processing subtests. This finding, plus examination of the one-factor and three-factor rotated solutions for each of the four combined age groups, made it clear that the two-factor
solution produced the most meaningful reduction of the data.

Overall, most Mental Processing subtests consistently and substantially loaded on their designated factor for all four combined age groups. Hand Movements loaded substantially on the Sequential dimension for ages 2 1/2 through 6 but loaded on either the Sequential or Simultaneous factors for the other combined age groups. Based on these results, the Sequential and Simultaneous factors demonstrated considerable robustness; therefore, the factor analyses of the Korean version of the K-ABC Mental Processing subtests offer clear-cut support for the existence of Sequential and Simultaneous constructs across the four combined age groups.

Hypothesis 2

Sequential, simultaneous, and Achievement factors will not emerge as significant dimensions in the factor analysis of all subtests of the Korean version of the K-ABC for each age group.

For conducting these factor analyses, the original 11 age groups were combined into four age groups: ages 3 through 4, ages 5 through 6, ages 7 through 9, and ages 10 through 12. Ages 2 1/2 through 2 3/4 were excluded from this analysis because only one Achievement subtest (Expressive Vocabulary) was supposed to be given this age group, and this was not a large enough number of subtests to extract a stable Achievement factor. The same rationale was applied to this analysis to yield new combined groups.

Principal component analyses of the subtests of the Korean version of the K-ABC produced two significant factors for ages 3 through 4 and ages 5 through 6 and three significant factors for ages 7 through 9 and ages 10 through 12. The scree test (Cattell, 1966) and examination of one-factor, two-factor, and four-factor solutions for the two school-age groups were used to determine the most significant and appropriate number of factors to be rotated.

In conclusion, only two factors, labeled Sequential and Simultaneous/Achievement, emerged for ages 3 through 4 and ages 5 through 6. For school-age children, three factors, labeled Sequential, Simultaneous, and Achievement, were extracted as the most meaningful reductions of the data. Based on these results, the three-factor structure of the Korean version of the K-ABC may be defensible for only school-age children, not for preschool children.

Hypothesis 3

There will be no significant difference between the mean scores of Sequential Processing and Simultaneous processing for Korean children.

For each age group, raw scores of the Mental Processing subtests were computed; the computed raw scores of each subtest were converted to scaled scores based on the American norms provided by the K-ABC Administration and Scoring Manual (Kaufman & Kaufman, 1983a); the scaled scores of the Sequential Processing and Simultaneous Processing Scales were computed by summing the designated scaled scores of the subtests and the standard scores of these two processing scales corresponding to the sum of the scaled scores were identified from the norm tables of the Global scale score presented in the K-ABC manual.

Using the standard scores of the Mental Processing Scale, mean standard scores of Simultaneous and Sequential Processing were computed for each of the 11 age groups and the total sample of 440 children and then tested by the two-tailed correlated t-test, applying the Bonferroni correction (Games, 1971) for multiple comparisons. Korean children demonstrated a distinct processing profile: high Sequential-low Simultaneous. The total sample of 440 children earned Sequential scores that were 13.74 points higher than their Simultaneous scores. The discrepancies between the Sequential and Simultaneous scores ranged from 6.88 points at age 6 to 22.33 points at age 3. The t-tests showed the discrepancies at each age level and for the total sample of 440 proved to be statistically significant, favoring Sequential over Simultaneous processing (p<.001).

Hypotheses 4

The items of the K-ABC Sequential and Simultaneous scales will not be biased by race using Angoff's definition of bias.

The fourth hypothesis was tested using Angoff's transformed item-difficulty or delta-plot method (Angoff & Ford, 1973). Item-difficulty values (p-values) for the American sample and the Korean sample were calculated. Each p-value was then transformed, by reference to a table of the normal curve, to normal deviates and from the normal deviates to delta-values by the linear transformation. The delta values obtained in two groups were plotted on a bivariate graph (Angoff, 1982; Jensen, 1980). Deviations of each item from the major axis of the bivariate plot are direct indications of the extent to which items have different difficulties in the two groups. A large deviation from the major axis was taken as evidence of bias for that item. Finally, the perpendicular distance values of items were tested at the .01 level to assess the statistical significance of each item's deviation from the major axis. The rationale for selecting the .01 level of significance rather than the .05 level was that because of the number of multiple comparisons, this level decreases the possibility of an experimentwise type I error.

No item of the Sequential Processing subtests was found to be biased against either Korean or American children, but six items of the Simultaneous Processing subtests were biased against either Korean or American children. In an examination of the absolute values of the perpendicular distances among the Sequential Processing subtests, ranges were observed between .03
and 1.32 for Hand Movements, .00 and 1.10 for Number Recall, and .01 and 1.97 for Word Order. The range of perpendicular distance values of the Simultaneous Processing items was between .05 and 3.35 for Magic Window, .02 and .99 for Triangles, .0 and 2.30 for Matrix Analogies, .07 and 1.41 for Spatial Memory, and .09 and 1.19 for Photo Series. Based on these results, three items of the Mental Processing subtests were found to be significantly biased against Korean children (p<.01). These were item 12 (saw) in Magic Window and items 7 (camel) and 17 (shovel in Gestalt Closure). Item 14 (watch) in Magic Window, item 1 in Face Recognition, and item 5 (camera) in Gestalt Closure were found to be biased against American children.

**Hypothesis 5**

There will be no significant correlation between the Korean version of the K-ABC global scales and the Korean version of the WISC-R IQs.

Partial correlations (partialing out the effect of age) between raw scores of the Korean version of the K-ABC global scales and the Korean version of the WISC-R IQs were computed. The statistical significance of the correlation coefficients was determined for all pairwise correlations at the .01 level.

The Korean version of the K-ABC Global Scales was significantly correlated with the Korean version of the WISC-R IQs. The Sequential Processing Scale correlated between .41 (Performance IQ) and .48 (Full Scale IQ) with the Korean version of the WISC-R IQs; Simultaneous Processing showed correlations in the .62 to .66 range; the Mental Processing Composite had correlations ranging from .66 to .74; the Achievement Scale had substantial correlations between .63 and .80; the Nonverbal scale showed correlations ranging from .64 to .74 with the Korean version of the WISC-R IQs. The Verbal IQ correlated with the global scales in the .44 to .80 range; Performance IQ had correlations between .41 and .72; and the Full Scale IQ showed correlations between .48 and .78, all significant (p<.01).

**Conclusions**

Based on the results and discussion presented in this paper, the following conclusions were derived.

1. The data collected for this study support the existence of the Sequential and Simultaneous Processing factors in the Korean version of the K-ABC Mental Processing subtests alone across the four combined age levels.
2. The three-factor structure (Sequential, Simultaneous, and Achievement) of the Korean version of the K-ABC, all subtests, is defensible for ages 7 and above but not for ages 6 and below. Only two factors, labeled Sequential and Simultaneous/Achievement, might legitimately be used to explain the Korean children's performance on all of the Korean versions of the K-ABC. For elementary-school-age children, a new way of viewing performance should be considered because greater amounts of crossover occurred among the Mental Processing subtests and the Achievement subtests.
3. A high Sequential-low Simultaneous Processing profile on the Korean version of the K-ABC might be applicable to preschool-age youngsters only, but not to the school-age children because at this age the high Sequential-low Simultaneous profile was heavily dependent upon the performance on Hand Movements (Sequential Processing subtest) and Gestalt Closure (Simultaneous Processing subtest) rather than those on all Mental Processing subtests.
4. Overall, most items of the Korean version of the K-ABC Mental Processing subtests were found to be unbiased against Korean children, using Angoff and Ford's (1973) definition. Only three items were found to be biased against Korean children due to cultural bias or verbal labeling difficulty. These three items should be changed in the final version of the K-ABC for use with Korean children.
5. There were significant correlations between the Korean version of the K-ABC Global Scales and the Korean version of the WISC-R IQs, providing solid evidence of construct validity as predicted by theory.

**Implications and Discussion**

The factor analytic results of this study have useful practical and clinical implications for use of the Korean version of the K-ABC. The invariance of the two-type or two-mode of processing, Sequential Processing and Simultaneous Processing, for Korean children ages 2 1/2 to 12 1/2 encourages the use of the Korean version of the K-ABC in academic areas to develop teaching methods and instructional materials that are geared to a child's most efficient mode of processing information.

As Fedrico (1980) suggested, cognitive processes should be considered in the design and development of an adaptive instructional system. More attention and considerations should be given to the mediating processes, not just the perceptual (input) or expressive (output) processes in the creation of the instructional systems (Kaufman & Kaufman, 1983b).

Several studies have reported successful results for remedial approaches based on identification of individuals who demonstrated a strength or weakness in two-mode processing (Krashen, Seliger, & Hartnett, 1974; Pask & Scott, 1972; Krashen, 1975)) in instructional settings. Krashen, Seliger, and Hartnett (1974) applied the two-mode approach based on Sequential and Simultaneous processes in teaching Spanish to English-speaking adults. They found that students who have a preference for a sequential style of processing information were most successful when taught by the sequential approach Pask and Scott.
(1972) categorized students as serialists (sequential) or holists (simultaneous) and taught new material to students using either a predominantly serial or a predominantly holistic approach. When the teaching method (treatment) was matched to a student's problem-solving processing strengths, nearly perfect performance resulted, while much lower scores on the criterion measure were earned by students not instructed by a teaching method matched to their processing strength. Hartlage (1975) also identified the processing strengths of beginning grade children, and then assigned these children a reading method that correspond to their best mode of processing information. A control group was randomly assigned to a reading instructional method. Children whose processing strength matched their treatment earned much higher scores on the Reading subtest of the Wide Range Achievement Test (WRAT) at the end of first grade than did a control group.

In light of the factor analytic results, the Korean version of the K-ABC Mental Processing Scales might be used to identify Korean children's processing strengths as well as to measure a summary score providing a global estimate of a child's overall IQ or general intelligence. Korean teachers could develop efficient instructional systems based on children's performance on the Korean version of the K-ABC Mental Processing scales.

An implication for cross-cultural comparison of intelligence defined as an individual's style of solving problems information might be ascertained from the factor analytic results of this study. Since the intelligence being measured by the K-ABC and factor structure of the K-ABC was found to be fairly constant from American children to Korean children as well as Jordanian children (El-Mneizel, 1987) it might be legitimately concluded that children having different cultural backgrounds and language perceive and react to the stimulus materials of the K-ABC in a common manner. The K-ABC met the two basic concepts relevant to conducting cross-cultural comparisons indicated by Irvine and Carroll (1980) and Drasgow (1984), making the K-ABC the intelligence test to be considered the first cornerstone for conducting research in international Iqs.

Based on research design and results of this study, the following considerations are encouraged. First, children who composed the sample for this study were selected from two elementary schools, four kindergartens, and five day-care centers located in Teague, Korea. Therefore, a replication of this study should be undertaken with a representative sample of Korean children. Second, factor structure of the Korean version of the K-ABC was examined on the data obtained from four combined age groups rather than the original 11 age groups due to the small number of subjects of each age group. Therefore, the unique characteristic of factor structure of each age group, which might provide more specific clinical information for users, could not be examined.

Third, Korean children's poor performance on Gestalt Closure was speculated to be due to the verbal labeling difficulty or cultural bias in this study. A comprehensive study should be done to ascertain why. To do this, a new set of items should be developed using objects more common to Korean children and labeled by Korean children. Fourth, because of the small number of subjects in each group, the analyses of the item bias were conducted on the data obtained on the total group, including all age groups designated to a given subtest. By doing this, no information of item bias for each age group was available to examine the trends of item bias across age levels. Therefore, a comprehensive study is needed to figure out the exact age levels being subjected to item Sequential processing should be reexamined on the data obtained from the final Korean version of the K-ABC in which items of Gestalt Closure and biased items are changed to work properly for Korean children.

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A Validity Study of Self-Concept and Adolescent Suicide Probability

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Adolescent suicide is not a new problem. In fact, Lewis Terman in 1914 (cited in Freece, 1979) once reported that "The problem of juvenile suicide has been sensationalized in newspapers ... for several years. Suicides are becoming more and more prevalent.

Suicide is the third leading cause of death for individuals under the age of 25. Only accidents and homicides are responsible for more deaths in this age group. The suicide rate for adolescents has tripled since 1955 (U.S. Bureau of the Census, 1975-1984). During the past thirty years, the adolescent period has demonstrated the greatest suicide rate increase of any age group, although it is not the highest rate among all age groups, as DenHouter (1981) incorrectly reported. According to the U.S. Bureau of the Census (1975-1984), the elderly continue to have the highest suicide rate.

Who is at risk?

Currently, the rate of suicide for males aged 15-24 is 19.7 (per 100,000 in that population), compared to 6.6 in 1950. For females, the rate is 4.6, compared to 2.7 in 1950 (U.S. Bureau of the Census, 1975-1984). Females make three times as many attempts as do males, but males actually complete suicide three times as often as do females (Thomas & Thomas, 1985). Some authorities place the ratio even higher. For example, Schneidman believes that men are four times more likely to complete suicide than are women (cited in Price & Lynn, 1981).

Kubler-Ross (1983) reported that in some communities in which she has worked, up to 30% of the teenagers have attempted or committed suicide. Both genders prefer ingestion as a means for attempts, whereas hanging and shooting are the preferred means for completed suicide (Lipsitz, 1977).

College students seem to be twice as likely to attempt suicide as their same-age counterparts who are not enrolled in college (Price & Lynn, 1981). Alcoholics are also at higher risk; 40% eventually attempt suicide (Thomas & Thomas, 1985). In addition, approximately 25% of the completed suicides suffered from chronic alcoholism (Price & Lynn, 1981).

Many researchers (e.g., DenHouter, 1981; Stein & Davis, 1982; and Toolan, 1975) agree that a large number of suicides are disguised as accidents. In 1982, automobile accidents were the leading cause of death for 25-24 year-olds (Marks, 1985). Perhaps some of these accidents, particularly those involving only one car, are suicides. Often a suicide is listed as an accident in order to protect life insurance benefits or to shield the family from the social stigma associated with such deaths (Thornton, 1983). The Suicide Prevention Center of Los Angeles estimated that up to 50% of all suicides are mistakenly reported as accidents (Toolan, 1975). Accidents are the leading cause of death among adolescents, and many of these accidents may actually be suicides. The rate of suicide may, in reality, be the second or even first leading cause of death for this age group.

Suicidal Profile

There have been attempts to produce a profile of the "typical" suicidal adolescent (e.g., Petzel & Riddle, 1981; and Crumley, cited in McCoy, 1982). Although there is some commonality among the findings, no consensus has yet been reached. For example, Petzel and Riddle concluded that the suicidal adolescent is shy; self-conscious; inclined to overreact, worry, and indulge in self-pity. The youngster is immature in understanding, attitudes, and judgment; lacks self-confidence; and reacts emotionally rather than intellectually. In addition, the individual has inadequate recreational outlets, is indecisive about the future, and has trouble controlling impulsivity. Crumley also found that the "typical" young suicide attemptor is a girl with a history of drug abuse who is depressed and impulsive. She has a tendency to react severely to loss and has poorly controlled rage.

Other researchers (e.g., Kovacs, Beck, & Weissman, 1975; and Toolan, 1975) have found that several general factors seem to be involved. These include emotional, familial, personality, social, imitative, and physical factors.

Contributing Factors

As a possible contributing factor in suicide probability, low self-esteem has been discussed by
several researchers. Low self esteem is considered a contributing factor in many cases of suicide (Thornton, 1983) and is one of the symptoms typical of suicidal adolescents (Stein & Davis (1982). Freese (1979) considers that the loss of self-esteem (a term frequently used interchangeably with self-concept) may often be more than a contributing factor in teenage suicide, becoming the precipitating factor.

According to Toolan (1975, 1981), low self-esteem is an important symptom of depression. He speculated that depression may be the major precipitating factor in adolescent suicide and that low self-esteem might be related to suicide probability.

In light of the previous research and assumptions (e.g., Freese, 1979), this study was conducted to evaluate one possible factor in adolescent suicide -- self-concept. It was the contention of the researchers that suicide probability would be related to low self-concept in adolescents.

Method

Subjects

A total of 25 students, aged 12 through 17 years, were obtained from a summer program for disadvantaged high school students (n = 11) at a regional university in southern Arkansas and from sixth grade classes (n = 14) at a public elementary school in rural Arkansas. These students were selected because they were conveniently available during this time period. There were 13 white and 12 black students. Fourteen of the students were females and 11 were males. The sample was representative of the local student population from a disadvantaged rural area in Arkansas.

Instruments

The instrument selected to measure suicide probability was the Suicide Probability Scale (SPS) by Cull and Gill (1982). This appeared to be a reliable instrument with a test-retest correlation coefficient of .92. Scores range from 0 to 99 and indicate a level of probable suicidal behavior. On the Subclinical (low probability) scale used for the general population in this study, scores from 0 to 24 would indicate low risk. Thus, the higher the score, the more probable an individual will be to attempt suicide. Cross-validation studies indicated that the SPS correctly identified normal, psychiatric inpatient and suicide attempt groups with an 84% to 88% accuracy rate.

The Tennessee Self-Concept Scale (TSC) by Fitts (1964), an instrument with a reported test-retest reliability coefficient of .92 for the Total Positive score, was selected for measurement of self-concept. The range of scores on the TSC is from 150 to 450, with higher scores indicating a more positive self-concept. Cross-validation studies indicated that the TSC discriminated well between a hospital group, a community mental health center group, and a VA psychiatric group.

Procedure

The high school students were administered the Tennessee Self-Concept Scale when they entered the university's special program. Within two weeks they were administered the Suicide Probability Scale. The same procedure was used for those sixth grade students who were selected at the beginning of the term.

Results

A Pearson product-moment correlation was used to determine the relationship between scores on the TSC and the SPS. The a priori region of rejection was at p < .05. The results indicated a significant negative correlation between self-concept and suicide probability; that is, the higher the reported self-concept, the lower the suicide probability (r = .56, p < .05). Scores on the TSC ranged from 250 to 398, with a mean and standard deviation of 322 and 43, respectively, differing slightly from the mean of 345.57 and standard deviation of 38.70 of the normative sample. The subjects in this study were comparable to the norm group.

For the SPS, the scores ranged from 1 to 14, with a mean of 6 and a standard deviation of 4. These scores were not within the clinical range of probable suicidal behavior.

Discussion

Although this study may be limited by the fact that it utilized a small, convenience sample of subjects from rural Arkansas, it supports the findings of Stein and Davis (1982) and Thornton (1983). The present findings also lend credence to Freese's (1979) assumption that low self-concept may be a precipitating factor in adolescent suicide attempts.

Interestingly, the mean and standard deviation for the normal standardization sample for the SPS were 44.9 and 11.3, respectively (Cull & Gill, 1982). By inspection, there appears to be an obvious difference between the mean score in the present study and that of the standardization sample. That is, the mean and variance were smaller for the present group than those found in the Cull and Gill study. But these differences may be due to the differences in population sizes or in differences in the normative sample (i.e., the present study had 25 participants, whereas the normal standardization sample included 281 participants). Also, in the Cull and Gill study, only 10.2% of the sample were less than or equal to 19 years of age, and none were in junior high school. Furthermore, only 1.4% of the normal sample had some high school education. Even though there were differences in sample sizes, the mean (6) and standard deviation (4) of the present study
are still quite low. The readability level of the two instruments did not appear to affect the results.

The results of this study show that students who have positive self-concepts are not likely to attempt suicide, as determined through the SPS. This may help counselors to determine which adolescents are more likely to attempt suicide.

All school counselors need to be aware of the warning signs of possible suicide intent, such as low self-concept, and be knowledgeable about crises intervention techniques to offset these tendencies. Often the counselor is the person the parent or teacher turns to when it becomes apparent that there is "something wrong" with the student. Those students who appear to have a low self-concept could be considered at risk, and the counselor could then administer the Suicide Probability Scale. The schools that routinely administer self-concept scales could screen for those students with low scores and then give them the Suicide Probability Scale to identify the at-risk students. Perhaps all schools should screen their students for low self-concept.

By knowing which characteristics, such as low self-concept, are most typical of suicide attemptors (or those who think about suicide), counselors can investigate and take preventive measures with those adolescents who display these characteristics, hopefully reducing the number of suicide victims. Because of the relatively small sample included in this study, which reduces the power of the results, they should not be generalized to other populations.

References


Attention Computer Users!

Next spring the Researcher will publish an updated MSERA Membership Directory. Jim McLean offered an excellent suggestion for improving the Directory. Many MSERA members may be connected to an electronic network, such as Bitnet. If you have access to a computer and do have an electronic mail address that you would like included with your directory listing, please send it to either the Researcher editors or to Secretary-Treasurer Gypsy Abbott Clayton. Those members who may not have yet paid their dues for 1989 may include the electronic mail address information on their membership renewal forms.
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