THE VALIDITY OF THE A.C.S.W. EXAMINATION

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CONTENTS

INTRODUCTION ........................................ Page  1
The Problem ............................................. Page  1
Importance of Research ................................. Page  3
CONCEPTUAL SCHEME ................................... Page  4
REVIEW OF LITERATURE ................................. Page 10
THE RESEARCH DESIGN .................................. Page 14
Hypothesis ................................................ Page 14
Statistics ............................................... Page 16
Sampling Plan and Collection Procedures ........ Page 18
CONCLUSIONS .......................................... Page 20
APPENDIX .............................................. Page 22
    Null Hypothesis 2 .................................. Page 22
REFERENCES ............................................ Page 23
INTRODUCTION

The Problem

This proposal addresses the validity assessment of a test said to measure social work competence. Prior to a detailed discussion, it is important to review the development of the Academy of Certified Social Workers, the organization that sponsors the test. Since 1915 the discipline of social work has been emerging as a profession (Morales & Sheafer, 1977). With this development, changes in helping services have occurred. One obvious change is social work's preoccupation with professional competence. Efforts to improve competence have paid off. Condie et al (1979) concluded that the public perception of the social worker is improving and suggested that continued concern about competence will lead social work to an even better image. A milestone in the development of professional standards for social workers occurred in 1961 when the National Association of Social Workers (N.A.S.W.) formed a separate corporation, the Academy of Certified Social Workers (A.C.S.W.). In the beginning, "all members in good standing of N.A.S.W. were blanketed into A.C.S.W. if they so wished" (Kurzman, 1977, p. 1091). Later, N.A.S.W. members were admitted to A.C.S.W. if they fulfilled three criteria:

- Master's degree in social work
- Two years of supervision by an A.C.S.W. member
- Good standing in N.A.S.W.

In the early 1970's, a "stringent examination" was added as a requirement for membership (Kurzman, 1977). At time progressed, requirements for
admission to A.C.S.W. increased; an A.C.S.W. Information Bulletin (1978) required the "submission of three professional references, one from the applicant's immediate supervisor and two from colleagues in the social work profession familiar with the applicant's work." In 1981, a study guide for the A.C.S.W. exam was published by N.A.S.W. (Middleman, 1981). The booklet represents an important phase in the evolution of professional standards for social workers; its preparation signals greater acceptance of A.C.S.W. standards. The examination is conforming to traditional formats of other standardized tests. For example, the Graduate Record Examination (G.R.E.), the Law School Aptitude Test (L.S.A.T.), and the Miller Analogy Test (M.A.T.) all have a published study guide. By standardization of the examination and by rising to the need for assessing competence among social workers, A.C.S.W. has gradually gained acceptance, by M.S.W. social workers and by institutions that employ social workers.

Few people would condemn efforts to improve competence among public service workers. A.C.S.W., however, has been harshly criticised within the past years. The criticism is both published (Sykes, 1981; Hecht, 1976) and non-published. Most of the oral criticism will be neither recorded for history nor systematically documented. The main oral criticisms, though, stem from three divergent areas:

1) Competency testing in general is controversial (Menne, 1981; McClung, 1977). Several authors (Williams, 1972; Pine & Weiss, 1977) have suggested that competency testing may discriminate racially rather than discriminate competency versus non-competency.

2) A female social worker recently admitted into A.C.S.W. commented that the test was "too easy" and added that "90% of all who take the test are accepted." According
to N.A.S.W. NEWS (1981, b), 92\% of females are accepted, but this is not true of other groups.

3) Kurzman (1977, p. 1091) notes that A.C.S.W. A.C.S.W. was originally intended to be separate from N.A.S.W., but "in the early 1970's, the separate corporation idea was dissolved." A great deal of controversy surrounds this idea.

It was not until the publication of N.A.S.W. NEWS (1981, a; 1981, b) that N.A.S.W. started publicly to address criticisms. To meet these criticisms, one must systematically study the A.C.S.W. examination in terms of validity and reliability which is the objective of this proposal. Not only does the examination need to be studied, but completed studies must be replicated (Plumbee, 1975) in order for members to feel confident about A.C.S.W. testing procedures. This proposal will deal with criticisms 1) and 2) in the preceding paragraph.

Importance of Research

The importance of research on the A.C.S.W. examination goes beyond the issues of the validity and reliability of a test. For years, the discipline of social work has faced criticism concerning its alleged lack of a unique knowledge base. Many social worker textbooks have attempted to refute these criticisms, but the greatest impact has come from two issues of Social Work (1977; 1981). Both issues deal with conceptual frameworks. Another method to address the problem of the discipline's knowledge base is the investigation of the A.C.S.W. exam. If the A.C.S.W. exam is shown to measure knowledge that is unique to social workers, two important conclusion might be drawn:

- The discipline of social work has a unique knowledge base distinct from other professions.
Although the knowledge base of social work is an important issue faced by social workers, it is not the main focus of this proposed research. The conclusions of this study should, however, have a significant impact on the perception of social work by the public and by social workers themselves. The results of such research would be significant without regard to the final outcome. In most social science research, the investigator is concerned with rejecting the null hypothesis. The statistical significance will support the confirmation of some theoretical construct. In this proposed research, rejecting the null hypothesis becomes less salient. If the null hypothesis (which will be stated in detail later) is not rejected, a great deal will be learned about the A.C.S.W. examination. The same statement could be made if the null hypothesis is rejected. Both results will provide valuable information about the A.C.S.W. examination.

CONCEPTUAL SCHEME

This proposal addresses issues related to the validity and reliability of the A.C.S.W. exam. The conceptual scheme for the proposal examines one analysis associated with the test: construct validity. Anastasi (1976) defines construct validity as "the extent to which the test may be said to measure a theoretical construct or trait" (p. 151). Later, she contends that in a "thoughtful analysis of construct validation," one needs to compare respondents not eligible to take the test to respondents who are eligible. Theoretically, there should be a significant difference between the two populations. This type of analysis is referred to as discriminant construct validity, and it will be addressed throughout this proposal.
The test is assumed to measure the knowledge base of social work, which is illustrated by the Venn Diagram on the following page. In most professions today, some knowledge overlap into other disciplines is to be expected. Statistically significant overlap into other disciplines, though, would raise questions about A.C.S.W. assessment and about social work in general. First, if significant overlap is discovered, the A.C.S.W. examination would project the image of being an invalid test. It would not really be measuring social work knowledge, but rather, it would measure some undefined knowledge which would not be unique to social workers. Secondly, and probably more importantly, if the test validity could not be improved, one would have to seriously reconsider the need for social workers in our society. If anyone without special training in social work could respond to social work examination questions with the same frequency of correctness as social workers, then there would be a clear indication that social work education is an exercise in futility. Even though the second issue addressed has far-reaching implications, it is not the focus of this proposed research. Such conclusions cannot be seriously considered until several construct validity studies on the A.C.S.W. examination have been completed.

In order to complete a solid research project of this type, one must select other disciplines to take the A.C.S.W. exam and compare their performance to that of qualified social workers. The discipline selection for this study was based their primary approach to client contact and their degree of training. The categories of client contact and training are as follows:
THE OVERLAP IN SOCIAL WORK KNOWLEDGE

I. Graduate social work students*
II. Undergraduate social work students*
III. Sociology
IV. Psychology
V. Medicine
VI. Undergraduate engineering students

*Programs accredited by the Council on Social Work Education
1. Primarily applied practice rather than theoretical.
2. Primarily theoretical practice rather than applied.
3. An equal emphasis on both applied and theoretical.
4. Association with clients but on a less complex level.
5. No professional practice or theory of client contact.

As illustrated on the Venn Diagram, the disciplines selected are: 1) Medicine; 2) Sociology; 3) Psychology; 4) Social Work Students (graduate and undergraduate); 5) Engineering Students. Besides selecting disciplines based on their approach to client contact, it is also important to select disciplines whose primary professional activities represent a distance between social work and themselves. For example, students in a M.S.W. program have less distance between themselves and professional social workers than do engineering students and professional social workers. Although the distances among these professional groups are unequal, unmeasureable and probably four-dimensional, this simple concept will assist in the assessment of construct validity. For example, among all the groups, the engineers should exhibit the lowest scores if the test is valid, since they also exhibit the greatest distance from social work compared to the other groups.

Another method of assessing construct validity will also be utilized in this proposal. Anastasi (1976) contends that to assess construct validity, a test should be compared to another test known to measure a different phenomenon. It is suggested that the results of the A.C.S.W. examination be compared to the results of an I.Q. test. If A.C.S.W. social workers take the A.C.S.W. examination and an I.Q. test, the results of a simple correlation will provide insight into the quality of the A.C.S.W. test.

The results will assist in answering the question, "Does the A.C.S.W. exam-
ination really measure social work knowledge, or does it merely assess test-wiseness or an individual’s ability to adapt to white American middle-class standards?" Administering an I.Q. test to A.C.S.W.-eligible social workers, though, will not alone answer this important question of validity. This I.Q. test must also be administered to a group that exhibits the greatest distance between themselves and social workers. In this case, the group will be engineers.

Actually, the statistical correlation between the A.C.S.W. examination and the I.Q. test for eligible social workers is expected to be quite high. In other words, it is suspected that a substantial overlap exists. If, however, there exists a high correlation between the A.C.S.W. examination scores and the I.Q. test scores for engineers, there would be serious questions of test validity. If the A.C.S.W. test is valid, engineers with high scores on the I.Q. test should not receive significantly higher scores on the A.C.S.W. exam compared to engineers with lower I.Q. scores. The Venn Diagram below illustrates how a valid A.C.S.W. test would exhibit the relationship:

\[
\begin{align*}
&\text{A.C.S.W.-eligible Social Workers} \\
&\text{Engineering Students}
\end{align*}
\]

\[
\begin{array}{c}
\text{A.C.S.W. Scores} \\
\text{Scores}
\end{array}
\quad\quad
\begin{array}{c}
\text{I.Q. Scores} \\
\quad\quad
\end{array}
\quad\quad
\begin{array}{c}
\text{I.Q. Scores} \\
\quad\quad
\end{array}
\quad\quad
\begin{array}{c}
\text{A.C.S.W. Scores} \\
\text{Scores}
\end{array}
\]
By comparing I.Q. scores with A.C.S.W. examination scores, one can learn much about the validity of the A.C.S.W. examination. A problem rests in the fact that I.Q. scores are difficult to procure from large samples. To resolve this problem, an I.Q. estimate will be utilized. The Shipley Institute of Living Scale (Shipley, 1967) has been found to be a good estimate of the Wechsler Adult Intelligence Scale (W.A.I.S.) I.Q. scores. A formula for converting raw Shipley scores in W.A.I.S. I.Q. estimates was developed by the Department of Clinical Psychology at The Ohio State University (Marson, 1976, p. 65). The Shipley is a timed test which requires the participant to spend 20 minutes on the entire test. The test could be administered with ease to a large group of A.C.S.W.-eligible social workers and to a large group of engineers prior to the administration of the A.C.S.W. examination.

An item analysis should occur after the correlations have been completed. The items of primary interest are the ones that fall in the shaded area of the Venn Diagram. Serious consideration should be given to eliminating these items from the test. Of course, all the shaded items should not be eliminated but should be severely limited. The items of the test that do not fall in the shaded area should also be intensely studied. These types of items should be increased. Thus, a unique knowledge base is measured that is likely to be social work knowledge.
REVIEW OF LITERATURE

There have been many studies of validity on tests for instruments said to measure professional performance with clients and knowledge of subject matter (Baker et al., 1975; Bonk, 1978; Fischer et al., 1977; Hickey, 1978; Jordan, 1980; La Crosse, 1980; Omizo et al., 1979; Schaffer, 1980; Seay et al., 1975; Stokes et al., 1978). Unlike the problem addressed within this proposal, these studies are very specific and focus on one microscopic aspect of client/professional interaction: for example, predictive validity of a counselor rating form as it relates to client drug use. Closer to the methodological problems presented in this proposal is the work of Shrader (1980). He reviewed the literature on construct and content validity of examinations for professional practice in psychology. In terms of the literature on construct validity, the authors Shrader cites used at least one of seven groups for comparison:

1) Ph.D. Psychology
2) Psy.D. Psychology
3) Ed.D Psychology
4) Master's Degree Psychology
5) Graduate Students in Psychology
6) Undergraduate Honor Students in Psychology
7) Other Psychology Undergraduate Students

These groups are arranged in order of high to low mean scores on the Examination for Professional Practice in Psychology. Of the fourteen references Schrader cites, only two were published. After completing an intense review of literature, one realizes that validity testing of comprehensive professional performance tests is not a popular topic.
of publication.

The unpopularity of publications of this kind of material hold true for past validity studies of the A.C.S.W. examination. Hecht (1976) cites two unpublished works concerning A.C.S.W. validity. She writes:

Research on the test reported by Boyd (1975) noted no item clusters were large enough or differentiated enough to provide sub-scores--subjects doing well in one subject area would do well in another. Biographical data showed blacks with consistently higher failure rates. Further study (Sharon, 1975) recommended reduction of jargon and wordiness, that study guides be provided, and that the test be empirically validated.

The reports she discusses were printed by Educational Testing Service (E.T.S.) of New Jersey. In an attempt to read the reports, this author telephoned E.T.S. The studies they printed concerning the A.C.S.W. examination were misfiled or lost.

As a result, this author contacted Amiel T. Sharon, one of the authors Hecht cited. Sharon (1981) noted that the methods of seeking construct validity within this proposal are considered "traditional" and encouraged that the method be pursued in studying the A.C.S.W. examination. He also noted that although he was unable to find a copy of his final draft, he recalled that the research had a major sampling problem. This problem will be discussed in detail later. His major suggestion was to add M.S.W. students to the study. At his suggestion, M.S.W. students were added, as seen on page 6.
Standards for organizations like A.C.S.W. are set by the National Commission for Health Certifying Agencies (N.C.H.C.A.) which is, "an organization of organizations. Its members include voluntary certifying agencies that issue credentials attesting to the competence of individual health professionals in their field" (National Commission for Health Certifying Agencies, no date, p. 4). With much governmental assistance, the commission was chartered in 1977: "The federal government played a lead role in bringing the Commission into being. A series of reports published between 1971 and 1977 urged the establishment of a voluntary Commission composed of certifying agencies. Later, the federal government supplied start-up costs to assist in the early development of the Commission" (p. 5). Within the N.C.H.C.A., there are two types of members: 1) Category A: non-profit organizations with an interest in the issuing of credentials to their members; 2) Category B: state agencies, employer organizations and professional organizations which grant credentials but want to be sure that their standards are reasonable and are truly competence-based. According to Schlecht (1981), N.A.S.W. and A.C.S.W. are neither members nor applicants for membership. The only social work organization that is a member of N.C.H.C.A. is the National Federation of Societies for Clinical Social Workers. The National Federation has been granted a Category B membership.

The N.C.H.C.A. is an important organization because it provides objective methods for assessing an organization's certification process. This organization has established a standard process for the study of reliability and validity or professional competence examinations.
Specific standards involve five criteria (National Commission for Health Certifying Agencies, 1978):

a. shall provide evidence that the mechanism used to evaluate individual competence is objective, fair and based on the knowledge and skills needed to function in the health profession;
b. shall have a formal policy of periodic review of evaluation mechanisms and shall provide evidence that the policy is implemented to insure relevance of the mechanism to knowledge and skills needed in the profession;
c. shall provide evidence that appropriate measures are taken to protect the security of all exams;
d. shall provide evidence that pass/fail levels are established in a manner that is generally accepted in the psychometric community as being fair and reasonable. This criterion will be effective 1-1-81, after standards have been established;
e. shall provide evidence that the evaluation mechanisms include evidence of attempts to establish both reliability and validity for each form of the examination.

Unfortunately, the specific standards that are based on the above criteria are not available to the public. The N.C.H. C.A.'s Board of Directors has not yet approved the standards. It is hoped that this approval will take place in February, 1982, when the results are likely to be made to the public. Such objective standards would enhance any study of the A.C.S.W. examination.
THE RESEARCH DESIGN

Hypothesis

The design for this study can best be described as experimental. The flow chart of the design can be found on the following page. There are two major null hypotheses that will be addressed within this project. They are:

1. There is no mean difference in A.C.S.W. examination scores between the A.C.S.W.-eligible sample and the other six samples (graduate social work students, undergraduate social work students, sociology, psychology, medicine and engineering students).

2. There is no difference between the correlation of A.C.S.W. examination scores and I.Q. estimates for A.C.S.W.-eligible social workers compared to the correlation of A.C.S.W. examination scores and I.Q. estimates for engineering students (see Appendix for clarification).

The null and research hypothesis are symbolically represented below:

1. $H_0: \mu_1 - \mu_2 = 0$
   $H_1: \mu_1 - \mu_2 > 0$

2. $H_0: \rho_1 = \rho_2$
   $H_1: \rho_1 > \rho_2$

In a close inspection of the above symbols, one can ascertain that this research deals with one tail statistical testing. This fact means that to reject the null hypothesis, the difference must occur on a specific side of the distribution. For example, the mean scores on the A.C.S.W.
THE FLOW OF THE RESEARCH

I) A.C.S.W. - eligible
II) Graduate students
III) Undergrad students
IV) Sociology
V) Psychology
VI) Medicine
VII) Engineering

Results

Item
Analysis

Z-test

Results

Correlation

A.C.S.W.
EXAM

SHIPLEY

I & VII

Appropriate or partial Education but no Experience

Inappropriate Education & Experience

I

II

III

IV

V

VI

VII
examination for A.C.S.W.-eligible social workers must be significantly
greater than mean scores on the same examination for engineers and for
each other sample group.

Statistics

A t-test for independent samples will be utilized to test the null hypothesis 1 (Glass and Stanley, 1970, p. 297):

\[
t = \frac{\bar{X} - \bar{X}}{\sqrt{\frac{(n_1 - 1) s_1^2 + (n_2 - 1) s_2^2}{n_1 + n_2 - 2} \left( \frac{1}{n_1} + \frac{1}{n_2} \right)}}
\]

Klugh (1970, p. 197) states that:

the t distribution is based upon the assumption that samples have been drawn from normally distributed populations, and that there populations have the same variance. In fact, the t test is fairly robust. This means that even if the proper assumptions cannot be met exactly, the probability of obtaining significant t's under the null hypothesis will still be quite close to the alpha levels given in Table T for the specific degrees of freedom.

This information will be addressed later as the problem of sampling is discussed.

In terms of null hypothesis 2, Glass and Stanley (1970, p. 311) provide a formula for making inferences about the difference between the correlations of two independent populations. This statistical technique is clearly appropriate for the needs of this research:
\[
Z = \sqrt{\frac{1}{n_1 - 3} + \frac{1}{n_2 - 3}}
\]

In the formula, Glass and Stanley utilize Fisher's Z-transformation. The Z-transformation of any correlation coefficient is denoted by \(Z_r\), and a table is used to transform correlation coefficients in order for inferences to be made.

A significance level of .05 will be utilized for rejecting both null hypotheses. It is expected that a higher level could be used in comparing some of the groups to the A.C.S.W.-eligible group, especially for groups that display the greatest distance between themselves and social work. Engineering would be the best example. If the null hypothesis can be rejected at a level greater than .05, the greater level, as well as the original level, will be exhibited within the final draft.

On a different aspect of statistical analysis to be considered by this proposal, an item analysis must be completed. The item analysis would label each question with the A.C.S.W. examination as discriminative or non-discriminative between the A.C.S.W.-eligible sample and the other sample groups. Such labeling would assist in locating types of questions that should be increased or eliminated. Pine and Weiss (1976) demonstrate two objective methods in completing an item analysis. Presently, the Cleary Index appears to be the better method of item analysis and is likely to be used.
Sampling Plan and Collection Procedures

Sharon (1981) stated that the major problem faced by this project is sampling. For comparison purposes, it is important to have the same proportion of major demographic characteristics within each group. As a result, all the groups sampled need the same proportion of race and gender as that of the A.C.S.W.-eligible group. To insure proper sampling, a quota sampling technique might be employed (Bailey, 1978). This technique is likely to contaminate attempts for randomness but, according to Klugh (1970), the t-test is robust enough to take this fact into account. If it becomes impossible to obtain the necessary proportions, a random selection of all white males will be utilized. This method will control for demographic characteristics, but it is certainly the least desirable method. Fewer generalizations about the A.C.S.W. examination could be made.

Actually, random sampling may not be a problem at all. According to Bailey (1978), random sampling becomes increasingly less important as the homogeneity of the studied population increases. The aspect addressed here is social work knowledge. The selection of sample groups was based on educational background. Within each group, it might be assumed that the variation in educational background in minimal—particularly in academic programs that offer accreditation (i.e., engineering, medicine, social work). If homogeneity can be assumed among individual groups, then random sampling becomes a minor issue.

If permission is gained to proceed with this project, half of the sample groups will be immediately available. The A.C.S.W. sample will be derived from the next cohort of applicants for admission. It is proposed that the M.S.W. students with no experience be taken from two
accredited schools of social work (to be named at a later date). The sample of undergraduate social work and engineering students could be derived from North Carolina State University. Both programs are accredited by their appropriate agency. It is suspected that the demographic characteristics and randomness will cause no problem in these areas.

The major problem will be in securing samples of psychologists, sociologists and physicians. Two methods for obtaining these sample groups have been planned. The first plan proposes that this author contact the American Medical Association, the American Psychological Association and the American Sociological Association. An explanation of the project will be introduced both orally and by letter. It will be suggested that the test could be administered at the organization's next convention. A financial donation of approximately $100.00 will be offered to the association that produced a sample. More money will be offered for samples containing an oversupply of blacks and women. If the first plan fails, an alternative is necessary. Plan #2 involves the use of medical students and Ph.D. psychology and sociology students. Realistically, it is not expected to obtain cooperation from all the professional associations and universities. In that case, particular groups will be dropped from the research.

All sample groups will be administered the A.C.S.W. examination under approximately the same conditions. The A.C.S.W.-eligible and engineering groups will also complete the Shipley. Because of confidentiality and copyright laws, sample questions of the A.C.S.W. examination and the Shipley will not be included in this proposal. There is a
substantial number of example questions of the A.C.S.W. examination that are printed in Middleman (1981). The Shipley Institute of Living Scale is published by Western Psychological Services.

CONCLUSIONS

It is expected that the results of each comparison will be significantly different at the .05 level, as the table below illustrates. The possible exception for this exception might be the sample of M.S.W. students without experience (Sharon, 1981). Recent students are likely to be more test-wise than practitioners. If the A.C.S.W. examination contains construct validity, non-social work populations should have significantly lower mean scores. A blank table has been constructed to portray the potential relationship between the A.C.S.W.-eligible sample and the other five groups.

MEAN SCORES FOR A.C.S.W.-ELIGIBLE COMPARED SEPARATELY TO FIVE (5) GROUPS THAT ARE NOT A.C.S.W.-ELIGIBLE

<table>
<thead>
<tr>
<th>Number Passed</th>
<th>Number Failed</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.C.S.W. Eligible</td>
<td></td>
<td>t= , df= , p .05</td>
</tr>
<tr>
<td>Graduate Students</td>
<td></td>
<td>t= , df= , p .05</td>
</tr>
<tr>
<td>Undergrad Students</td>
<td></td>
<td>t= , df= , p .05</td>
</tr>
<tr>
<td>Sociology</td>
<td></td>
<td>t= , df= , p .05</td>
</tr>
<tr>
<td>Psychology</td>
<td></td>
<td>t= , df= , p .05</td>
</tr>
<tr>
<td>Medicine</td>
<td></td>
<td>t= , df= , p .05</td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td>t= , df= , p .05</td>
</tr>
</tbody>
</table>
The results addressed in null hypothesis 2 would be inappropriate to illustrate in a table. The results of each correlation coefficient would be exhibited followed by a discussion of their meaning in relationship to the null hypothesis.

An extensive table must be developed to illustrate the item analysis. With approval first, each question on the A.C.S.W. examination will be printed. Next to each question will appear a series of percentages indicating the proportion of correct and incorrect responses by each of the sample groups. A critical ratio for each comparison will be illustrated; "*" will indicate a rejection level of .05, and "**" will indicate a rejection level greater than .05. This table is likely to be complex to read, and much experimentation will be needed to make it more manageable.

Finally, Sharon (1981) projected a problem with research that has not been discussed until this point. The problem involves loyalty. Other authors have also discussed this problem but in terms of the context of the research (Katzer, Cook and Crouch, 1978). In attempts to secure solid research findings, the funding for this research project will be independent of any agency. The money to finance this project will come from extra contracts the researcher has acquired (i.e., teaching an extra course, consultation with agencies). However, none of this money will come from sources related to A.C.S.W.
Null hypothesis 2 is difficult to comprehend in written form. Thus, a diagram was developed for clarification.

Null Hypothesis 2: There is no difference between the two correlation coefficients.
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