ABSTRACT

Due to the dominance of women in allied health professions, men can be considered as minorities in these fields. Blacks and other ethnic minorities are also under-represented in allied health and other health professions. Yet it is anticipated that an increase in the number of minorities trained as health professionals will result in higher quality health care for minorities. A study was undertaken to determine whether sex-role stereotyping by high school counselors posed a significant barrier to black males interested in allied health careers. A three-part questionnaire was mailed to 360 high school counselors. The first part obtained counselor ratings of the percentage of males and females working in nine health professions, and their perception of the level of ability needed for each profession. Part II consisted of three student profiles, a rating scale for student ability, and a list of nine professions from part I; the third part of the questionnaire asked for demographic information from respondents. The results of data analyses showed that in general, careers selected for males were perceived to be male dominated and careers selected for females were perceived to be female dominated across ability levels. The only exceptions were high-ability black females and average ability black males. The mean of the male/female scores for selected careers for all students at each ability-level was lowest for average-ability students (with the exception of average-ability white males) and the highest for high-ability students. The findings indicate that counselors demonstrate less bias toward male dominated careers when advising average students, suggesting that average ability black males are more readily advised toward allied health careers than are high-ability black males. (NRB)
Sex-Role Stereotyping as a Factor Influencing Counselors' Advising of Black Male Students to Investigate Selected Allied Health Professions

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ABSTRACT

The problem of the influence of counselor's sex-role stereotyping on the advising of high school students was the focus of this study. This investigation was narrowed to counselors' use of sex-role stereotyping in advising high school students to investigate allied health careers. The researcher was specifically interested in the advising of black males.

The researcher assumed first that counselors' perceptions of the percentage of males working in selected allied health professions would influence both their opinion of the level of ability required to enter the field and their advice to male (particularly minority) students with an interest in health careers and second that the sex and ethnic background of the student influences advisement directly and indirectly through their impact upon the counselors' perception of the students' academic ability. Five research hypotheses describing the relationships between the variables in this model were considered relevant. These were tested using a correlational survey research design. A three-part questionnaire was developed and the survey was mailed to 360 Illinois high school counselors. The counselors were selected from high school mailing lists of the American Personnel and Guidance Association and the Illinois Association of College Admissions Counselors.

Of the five research hypotheses tested, the one relating the number of times a career is selected for male students to the counselors' perceptions of the percentage of male workers in the profession was partially supported. The other four were unsupported. The hypotheses were tested using multiple regression analysis, Pearson's coefficient of correlation, t-tests, two-way analysis of variance, and chi-square.
The focus of this study was to identify the influence (if any) of counselors' sex-role stereotyping on the advising of high school students. Sex-role stereotyping occurs in career counseling when the counselors' advice is influenced by the sex of the student. This has been previously reported relative to various types of careers (Borgers, Hendrix & Price, 1977; Donahue, 1976; Fitzgerald, 1980; Harway, 1980; Mercado & Atkinson, 1982; Schlossberg & Pietrofesa, 1973; Thomas & Stewart, 1971). This investigation was narrowed to counselors' use of sex-role stereotyping in advising high school students to investigate allied health careers.

The researcher was specifically interested in the advising of black male students. There are several reasons for this focus:

There is a negative differential in the quality of health for minorities when compared to Whites in the U.S. This situation can be explained in part by the fact that the minority population has fewer health professionals and health-care facilities serving its communities (U.S. Dept. HEW, 1979a). However, Blacks and other ethnic minorities are also under-represented in allied health and other health professions. This is true for both health profession educational programs and the labor force. Males can also be considered as minorities in allied health professions due to the dominance of females in these areas. Blacks and other minority males are therefore highly sought after as minority recruitment for health professions educational programs continues to be a priority (AAMC Task Force Report, 1978; Elder, Kincaid & Russell, 1977; Kinsinger, 1980; U.S. Dept. HEW, 1979b; U.S. Dept. HHS, 1980). Also, it is anticipated that an increase in the number of minorities trained as health professionals will result in an increase in the quality of health-care in minorities.
Many barriers to minorities who wish to pursue health careers have been reported in the literature (Blewett, 1974; Roberts and Plunkett, 1974; Bruhn & Hrachovy, 1977; Walker, 1982) as well as the effects of the perception of the male/female ratio of the labor force on the desirability of professions to male and female students (Heilman, 1979; Touhey, 1974a). Therefore, the current study was undertaken to determine whether or not sex-role stereotyping by high school counselors poses a significant barrier to black males who may be interested in allied health careers. This study differs from the majority of the previous studies in that it focuses on possible bias against males pursuing predominantly female professions rather than possible bias against females pursuing predominantly male professions.

If sex-role stereotyping existed, the researcher assumed that counselors' perceptions of the percentage of males working in selected allied health professions would influence both their opinion of the level of ability required to enter the field and their advice to male students with an interest in health careers. The researcher also assumed that the sex and ethnic background of the student also influenced student advising directly and indirectly through their impact upon counselors' perception of the student's academic ability.

PROCEDURE

The five hypotheses selected for testing are listed below:
H1. Counselors will attribute a higher ability level needed to enter the field to those professions that they perceive as having a higher percentage of male workers than they will attribute to those professions that they perceive to have a lower percentage of male workers.

H2. The number of times a career is selected for a male student will increase as percentage of males working in selected professions (as perceived by the counselor) increases.

H3. Counselors will discourage males of high-ability from pursuing fields they perceive to be female-dominated more frequently than they will discourage low-ability males from pursuing fields perceived to be female-dominated.

H4. Counselors will discourage minority males from pursuing fields perceived to be female-dominated, more often than they discourage majority males from this pursuit.

H5. Counselors' perception of students' ability-level will be influenced by sex and ethnic background of the student.

A correlational survey research design was used to test the hypotheses. The survey was mailed to 360 Illinois high school counselors. An additional 30 counselors were used in a pilot survey to establish the reliability and validity of the questionnaire. The counselors were selected through random
sampling using a tab.e of random numbers from mailing lists of members of the American Personnel and Guidance Association and the Illinois Association of College Admissions Counselors. The participants were counselors working in both public and private high schools throughout the state. Only these respondents who indicated that counseling was their primary responsibility or, if not, indicated that they counseled at least 100 students per year were included in the analysis of the data.

The questionnaire developed for the survey consisted of three parts. The first part obtained counselor ratings of the percentage of males and females working in each of nine health professions and their perception of the level of ability needed to enter each profession. The professions used in the survey were: dentist, dietician, emergency medical technician, medical social worker, operating room technician, orthotist, pharmacist, physical therapist, speech pathologist. They were chosen from twenty careers included in the pilot survey in such a way as to provide variance in the male/female ratio of the labor force and ability level needed to enter the field. A booklet entitled: "Selected Health Careers", was developed and enclosed with the questionnaire. It provided the participants with accurate descriptions of the careers included in Part I in the event they were unfamiliar with any one of them.

Part II of the questionnaire consisted of three student profiles, a rating scale for student ability, and a list of nine professions from Part I. The profiles represented three different academic ability levels (high, average, and low) and included the levels and grades of science and math
courses completed, SAT scores, teacher comments, extra curricular activities, OVIS (Ohio Vocational Interest Survey) scores, part-time employment, and attendance record. The three different student profiles were further diversified by varying the sex and ethnic backgrounds of the students. There were twelve different student profiles in all: a white male, a white female, a black male, and black female at each of three academic ability levels. One profile from each ability-level was randomly assigned to each counselor so that they each received different combinations of students as far as the students' sex and ethnic background were concerned. The counselors were asked to review the profiles, rate student's ability, and make a first, second, and third choice career recommendation for each one. See Figure 1 for an example of a student profile. Part III of the questionnaire asked for demographic information on the participants, their schools, and their students.

The validity of the student profiles was established through the consensus of the ratings of the counselors who participated in the pilot survey. The ability levels of the students were also confirmed through the construction of the interval estimates of the mean ability ratings from the final survey (see Table 1). The validity of the career descriptions used in the Selected Health Careers booklet was established prior to the survey through review by several health professionals and an academic advisor for health professions. Overall and split-half reliability coefficients of .99 were obtained for the rating scales in Parts I and II of the questionnaire.
RESULTS

Of the five hypotheses tested, only the one relating the counselors' perception of the percentage of males in selected health professions to the number of times these professions were selected for male students (hypothesis #2) was supported. The other four were unsupported. Counselors' perception of the numbers of male and female workers in the field influenced their choice of careers for seven out of twelve student profiles. Professions perceived to have a higher dominance of males (high M/F score) were selected more often for males while professions perceived to have a higher dominance of females (low M/F score) were selected for females. This was evidenced by a significant difference in the M/F scores of those professions chosen and those not chosen for the students (see Table 2). Those profiles having significant differences were: high-ability males, high-ability black females, average-ability white males, average-ability females, and low-ability black males.

Sex of the student was the most significant factor related to the M/F score of the careers selected for students to investigate (see Table 3). Careers selected for males were perceived to have a higher percentage of male workers than were those selected for females. Ability-level of the student was also significant when the M/F scores of the careers chosen were partitioned according to sex of the student. Professions perceived to have a higher dominance of females (or low M/F score) were more often chosen for average-ability students than for either high- or low-ability students. The low M/F score attributed to the average-ability students was due in most part to the low ratings given to females in this ability group.
These findings support the previously reported literature regarding sexual bias in counseling (Donahue, 1976; Schlossberg & Pietrosefa, 1873). They would also seem to support the findings of Schwartz (1974) in regard to the existence of both sex role and ability-level bias. However, there was no evidence that counselors' sex was a significant factor in this bias in contrast to earlier findings by Persons (1972) and Mercado and Atkinson (1982).

Review of Table 3 reveals that there was a difference in the way in which high-ability white and black females were advised. Careers perceived to have a higher percentage of males were most often chosen for black females along with both black and white males, while careers perceived to have a more equal distribution of male and female workers were chosen for white females. The difference between black and white females seen at the high-ability level disappears at the average-ability level. There is a negative correlation between the percentage of males perceived to be working in the field and the selection score for the career for both white and black average-ability females.

Just the opposite however, was true for males. High-ability black and white males were treated the same but average-ability males were treated differently. The M/F scores of the careers selected for average-ability black males more closely resembled those for average-ability females. The careers chosen for them were perceived to have only a slight dominance of male workers while those chosen for white males were perceived to have a higher dominance of male workers. Another possible interpretation is that although the trend was for lower M/F scores for the careers selected for average-ability stu-
dents, the careers selected for white males at this level were still those perceived to be high in male dominance.

Low-ability level back males showed a significant difference between the careers selected for them and those that were not selected however, the correlation between the M/F scores and the career selection scores were almost non-existent. Careers perceived to have a high percentage of male workers were selected for both black and white males and careers perceived to be dominated by women were selected for both black and white females.

In general, careers selected for males were perceived to be male dominated and careers selected for females were perceived to be female dominated across ability levels. The only exceptions being high-ability black females and average ability black males. The mean of the M/F scores for selected careers for all students at each ability-level was lowest for average-ability students (with the exception of average-ability white males) and the highest for high-ability students.

CONCLUSION

The implications of these results for the recruitment of black males into female dominated allied health careers are two-fold. First of all, if consideration is limited to students with a potential for success (average-and high-ability students) counselors demonstrate less bias toward male dominated careers when advising average students. This would suggest that
average black males are more readily advised toward allied health careers than are high-ability black males. This is further supported by the finding that there was no significant difference between the male/female ratings of the careers most often selected and those least often selected for average black males while there was a significant difference for high-ability black males. Secondly, the ability ratings of the professions was not biased by the counselors' perception of the percentage of males in the field. This would suggest that if allied health professions seemed to require high-ability, they would be selected more often for these students. Therefore, an increase in the counselors' perception of the ability needed to enter allied health careers should enhance the image of the careers regardless of the predominance of women in the field. Finally, increased participation of males will enhance male recruitment since careers with a high percentage of males were more often selected for male students. This would suggest that increased visibility of males working in the allied health field would benefit recruitment efforts.

In generalizing these findings, consideration must be given to the possibility of bias resulting from self-selection since non-respondents were not interviewed subsequently. Another major consideration is the use of simulated student profiles since important student characteristics, such as motivation, are omitted and counselors may respond differently to profiles than they would to actual students. Other limitations include geographic distribution of the sample, lack of information on the sexual composition of the population from which the sample was drawn, and possible bias caused by counselors, differing degrees of knowledge concerning allied health careers.
Future research into barriers to recruitment of minority males into allied health schools and the labor force can focus on several areas. The collection of data on males who are presently in the field can be undertaken to gather information on what attracted them to the field in spite of the predominance of women. A survey of prospective minority students and their families might be useful to find out what benefits they anticipate from the careers they are considering. This information can then be used in public relations campaigns and recruitment programs by allied health college recruiters and professional organizations. Finally, a field project can be developed to offer career counselors a continuing education program whereby they can obtain a "hands on", practical exposure to allied health careers much in the same way prospective students are exposed to these professions in career awareness programs.
REFERENCES


LIST OF FIGURES

Figure 1. Sample of Student Profile
Figure 1

Profile No. 1

Name: Robert
Age: 17
Year in School: Senior

Ethnic Background
X Black (Not Hispanic)
____ White
____ Hispanic
____ Asian/Pacific Islander
____ Other

Math/Science Courses completed:
Biology - A
Chemistry - B
Honors Algebra - B
Honors College Algebra/Trig. - B
Geometry - A

SAT:
Verbal - 590
Math - 560
Reading - 59
Vocabulary - 60

Ohio Vocational Interest Score:
Health Sciences - 50
Medical Services - 48

Activities:
Student Council, Chemistry Club, Student Newspaper

Part-Time Employment:
Sales Clerk

Home-Room Teacher Comments:
Hard worker, gets along well with other students, student leader.

Attendance:
Excellent
## TABLE 1

**SUMMARY DATA OF ABILITY SCORES OF TWELVE STUDENT PROFILES**

<table>
<thead>
<tr>
<th>Level</th>
<th>Profile</th>
<th>Mean</th>
<th>N</th>
<th>S.D.</th>
<th>S.E.</th>
<th>Interval* Estimate of Mean</th>
<th>Overall Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. White Male</td>
<td>7.54</td>
<td>35</td>
<td>.66</td>
<td>.11</td>
<td>7.27-7.80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Black Female</td>
<td>7.66</td>
<td>32</td>
<td>.70</td>
<td>.12</td>
<td>7.36-7.95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. White Female</td>
<td>7.59</td>
<td>29</td>
<td>.63</td>
<td>.12</td>
<td>7.29-7.88</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>5. Black Male</td>
<td>5.72</td>
<td>25</td>
<td>.54</td>
<td>.11</td>
<td>5.45-5.99</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>6. White Male</td>
<td>5.80</td>
<td>30</td>
<td>.66</td>
<td>.12</td>
<td>5.50-6.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Black Female</td>
<td>5.79</td>
<td>34</td>
<td>.77</td>
<td>.13</td>
<td>5.47-6.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. White Female</td>
<td>5.73</td>
<td>33</td>
<td>.67</td>
<td>.12</td>
<td>5.44-6.02</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>9. Black Male</td>
<td>3.26</td>
<td>26</td>
<td>1.00</td>
<td>.19</td>
<td>2.79-3.73</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>10. White Male</td>
<td>3.53</td>
<td>38</td>
<td>.69</td>
<td>.11</td>
<td>3.00-3.26</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. Black Female</td>
<td>3.53</td>
<td>30</td>
<td>.97</td>
<td>.18</td>
<td>3.09-3.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12. White Female</td>
<td>3.59</td>
<td>22</td>
<td>.85</td>
<td>.18</td>
<td>3.14-4.04</td>
<td></td>
</tr>
</tbody>
</table>

* 99% Level of Confidence.
TABLE 2
MEAN SELECTION SCORES AND COMPARISONS OF M/F SCORES
OF MOST POPULAR AND LEAST POPULAR CAREER CHOICES

<table>
<thead>
<tr>
<th>Profile</th>
<th>Student</th>
<th>Mean Career Selection Score</th>
<th>N</th>
<th>Mean(^a) Score</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Black Male</td>
<td>Most Popular</td>
<td>44.5</td>
<td>2</td>
<td>75.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Least Popular</td>
<td>13.6</td>
<td>7</td>
<td>48.1</td>
</tr>
<tr>
<td>#2</td>
<td>White Male</td>
<td>Most Popular</td>
<td>63</td>
<td>2</td>
<td>78.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Least Popular</td>
<td>11.7</td>
<td>7</td>
<td>44.7</td>
</tr>
<tr>
<td>#3</td>
<td>Black Female</td>
<td>Most Popular</td>
<td>46.5</td>
<td>2</td>
<td>77.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Least Popular</td>
<td>12.7</td>
<td>7</td>
<td>47.1</td>
</tr>
<tr>
<td>#6</td>
<td>White Male</td>
<td>Most Popular</td>
<td>24.5</td>
<td>1</td>
<td>71.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Least Popular</td>
<td>8.25</td>
<td>8</td>
<td>51.3</td>
</tr>
<tr>
<td>#7</td>
<td>Black Female</td>
<td>Most Popular</td>
<td>30.8</td>
<td>6</td>
<td>40.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Least Popular</td>
<td>3.6</td>
<td>3</td>
<td>76.5</td>
</tr>
<tr>
<td>#8</td>
<td>White Female</td>
<td>Most Popular</td>
<td>30.8</td>
<td>6</td>
<td>40.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Least Popular</td>
<td>3.3</td>
<td>3</td>
<td>73.2</td>
</tr>
<tr>
<td>#9</td>
<td>Black Male</td>
<td>Most Popular</td>
<td>23</td>
<td>1</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Least Popular</td>
<td>3</td>
<td>8</td>
<td>49.2</td>
</tr>
</tbody>
</table>

\(^a\) Mean expressed per cent male

* p. .025 for one-tailed test

** p. .01 for one-tailed test
<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
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</thead>
<tbody>
<tr>
<td>Between Ability</td>
<td>2</td>
<td>697.2</td>
<td>348.6</td>
<td>5.6</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Between Sex</td>
<td>1</td>
<td>907.1</td>
<td>907.1</td>
<td>14.6</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex x Ability</td>
<td>2</td>
<td>84.7</td>
<td>42.4</td>
<td>.68</td>
<td>n.s.</td>
</tr>
<tr>
<td>Residual</td>
<td>6</td>
<td>373.8</td>
<td>62.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>2064.4</td>
<td></td>
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</tbody>
</table>
TABLE 4
MEAN SCORES AND COMPARISONS OF M/F CORES BY ABILITY LEVEL

<table>
<thead>
<tr>
<th>Ability Level</th>
<th>Mean M/F Score* of Career Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>71.1</td>
</tr>
<tr>
<td>Average</td>
<td>52.8 *(.10)</td>
</tr>
<tr>
<td>Low</td>
<td>65.3</td>
</tr>
</tbody>
</table>

* Mean expressed in per cent male
* p. ≤ .05 for one-tailed test
** p. ≤ .10 for one-tailed test