Gifted females have less frequently sought high-prestige and high-income careers due to a number of barriers. Some barriers are related to society's expectations of women, and others are related to the workplace itself. The most limiting and pervasive barrier is "sex role socialization's impact on the child's developing self-belief system" (Hollinger, 1991). This questionnaire study examines seven female adolescent college students (three African-Americans, and four Caucasians) identified as gifted in elementary school. The subjects participated in gifted and Advanced Placement programs for an average of six years in rural Georgia. For the most part, the gifted females in this study did not articulate marriage and family plans as influences on their choices of major or career aspirations, but the influence is evident. It is also notable that all participants in the study plan to be employed as adults and generally expect to be in partnership relationships where tasks within the home are shared with their partners. Finally, although none of the participants had to limit their career aspirations due to a lack of mathematics or science preparation, their dislike for mathematics did limit their career aspirations. Further investigation of these findings is recommended to understand their significance. Two tables present participants' pre-college influences and current status. The National Career Development Association (NCDA) questionnaire is appended. Contains 10 references. (KW)
NATIONAL CAREER DEVELOPMENT ASSOCIATION
NATIONAL CONFERENCE
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Cases of Rural Gifted College Females:
Socialization Barriers and Career Choices

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Georgia Southern University, Statesboro, GA.
Objective:
The objective of this research was to determine perceptions of gifted college females regarding influences of rural socialization on career aspirations.

Perspectives:
College graduates are entering a rapidly changing world. The ever evolving technological advances in today's world make it imperative that individuals employed in tomorrow's workplace be willing and able to compete in a global environment.

Gifted females have less frequently sought high prestige and high income careers due to a number of barriers (Reis, 1987; Reis & Callahan, 1989; Callahan, 1991; Arnold, 1993). Some barriers are related to society's expectations of women and others are related to the workplace. The most limiting and pervasive barrier is "sex role socialization's impact on the child's developing self-belief system" (Hollinger, 1991, p. 136). Because of expectations regarding marriage and family responsibilities, some gifted females make decisions which as they progress through formal education lead to underachievement as adult employees (Reis & Callahan, 1992). However, there is some evidence to support the notion that gaps between males and females in terms of similarity of career aspirations are closing (Leung, Conoley, & Scheel, 1994). In addition, although math and science preparation is less likely to be a barrier for females of today, significant attitudinal barriers appear to remain extant (Reis & Callahan, 1992). It is suggested that late marriage (Arnold, 1993) or single status facilitates career achievement for women (Kitano & Perkins, 1992).
Method:

Participants: The adolescent females in this study are seven college students who were identified as gifted in elementary school. They participated in gifted programs for an average of six years. All are high school graduates receiving college preparation diplomas from rural schools in south Georgia that served students with a low to high socioeconomic status. They are in attendance at colleges or universities in the southern states. The participants are three African-Americans and four Euro-Americans. All were involved in advanced placement (AP) or Challenge courses, and half of them were involved in joint enrollment with their local colleges.

Data Sources: This fourth study is in the third phase of data collection of a longitudinal research project using a multiple-case study approach. The primary source of data was a questionnaire which focused on status of college major, career aspirations, and future plans with changes and influences during their first two years of college. Background information came from the first phase of the study which focused on precollege influences on decision making (Battle, Grant, & Heggoy, in press).

Design and Procedure: This research was conducted using a descriptive survey design with a questionnaire and follow-up interviews to determine individual perceptions about change. A cover letter, describing the potential value of the study, and a questionnaire were mailed to participants. A self-addressed, postage paid envelope facilitated return. Three weeks were allowed for a response after which there were follow-up telephone contacts to collect the data. All data were collected within two months and telephone interviews were used to clarify written responses.
Data Analysis: The data collected were compiled to search for patterns and trends regarding influences on the selection of college majors and career aspirations across the two data sets.

Results: Patterns and Trends

Patterns and Trends as Precollege Students: Table 1

- 5 of 7 indicated mathematics as their least favorite subject in high school.
- 3 of 7 chose majors during freshman year which required mathematics competencies.
- All indicated parents were significant influences on career aspiration related decisions.
- 4 of 7 indicated significant experiential influences and those experiences influenced career aspirations.
- 6 of 7 had high achievement and/or held leadership positions through their involvement in extracurricular activities.

Patterns and Trends as College Students Two Years Later: Table 2

- Regarding status of major and attendance
  All declared a major while in their freshman year.
  All had changed majors in college at two years later.
  4 of 7 refined their college majors relative to their career aspirations.
  3 of 7 had changed their major because of an expressed dislike for courses.
  All but one were enrolled in their original institution.
  All are classified as college sophomores or above.
• Regarding future plans

As precollege students, 6 of 7 discussed marriage plans.

4 of 7 discussed partnership relationship with children where both parents work.

1 of 7 recognized the possibility of being single or married.

1 of 7 discussed a more traditional marriage relationship.

Of the 6 of 7 who discussed marriage plans as precollege students, 5 of 7 have maintained that expectation two years later and 3 of 5 are undecided about career aspirations.

2 of 7 indicated traditional female career aspirations and have maintained and refined those career plans.

5 of 7 had graduate school plans at least at master’s degree level with 3 of 5 indicating terminal degree levels of educational achievement, two years later, the numbers are the same but the individuals are different.

Educational Significance:

• The gifted females in this study did not articulate marriage and family plans as influences on their choices of major or career aspirations, but the influence is evident. Career counselors and educators need to assist rural gifted females in linking their career aspirations with the marriage and family expectations starting no later than the high school years to increase their ability to make major/career decisions and to develop more contingencies regarding their futures.

• It is notable that all of these gifted females from rural backgrounds plan to be employed as adults and for the most part expect to be in partnership relationships
where the tasks within the home are shared with their partners. This observation is counter to the expectation articulated by Kleinsasser (1986) that women in rural environments are expected to maintain the stable, sometimes conservative, educational, religious, and social life associated with rural communities. The socialization influences on these expectations need further investigation.

• Although none of these rural gifted females had to limit their career aspirations due to a lack of mathematics or science preparation, their dislike for mathematics did limit their career aspirations. Counselors and educators need to be sensitive to the affective factors associated with mathematics and science for females and researchers need to investigate the influences on the association and articulation of “dislike” for mathematics among gifted females.
Bibliography


Table 1. Precollege: Influences on Academic Decisions and Extracurricular Activities

<table>
<thead>
<tr>
<th>Student</th>
<th>Favorite High School Subject</th>
<th>Least Favorite High School Subject</th>
<th>Significant Influences People / Experiences</th>
<th>Consistent Involvement with Leadership Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cassandra</td>
<td>Speech/Drama</td>
<td>Mathematics</td>
<td>Mother, Volunteer tutoring with children</td>
<td>Competitive public speaking (State winner)</td>
</tr>
<tr>
<td>Tye</td>
<td>English</td>
<td>Calculus</td>
<td>Parents</td>
<td>Cheerleading (Captain; All-American)</td>
</tr>
<tr>
<td>Ann</td>
<td>Mathematics/History</td>
<td>English</td>
<td>Parents</td>
<td>Tri-athlete (State Qualifier; Coach)</td>
</tr>
<tr>
<td>Rose</td>
<td>English</td>
<td>Mathematics/Science</td>
<td>Parents, Friend</td>
<td>Competitive Literary Activities (State winner)</td>
</tr>
<tr>
<td>Kay</td>
<td>Ethnic Studies</td>
<td>History</td>
<td>Parents</td>
<td>None</td>
</tr>
<tr>
<td>Lisa</td>
<td>Economics/Government</td>
<td>Mathematics</td>
<td>Parents, Employer, High School Business Ed. Teacher</td>
<td>Business Club (President; State Representative; Award Winner)</td>
</tr>
<tr>
<td>Beth</td>
<td>World History/Music</td>
<td>Calculus</td>
<td>Parents, Friends</td>
<td>Music/Band Activities (1st Chair; Section Leader)</td>
</tr>
</tbody>
</table>

(Grant, Heggoy, Battle, NCDA, 1995)
Table 2. Two Years College Experiences: Status of Attendance, Major, Influences, and Future Plans

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Classification</th>
<th>College</th>
<th>Major</th>
<th>Background and *Articulated Influences on College Majors</th>
<th>Precollege</th>
<th>2 years later</th>
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<tbody>
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<td></td>
</tr>
<tr>
<td>Cassandra</td>
<td>Private Coed</td>
<td>Sophomore</td>
<td>Freshman</td>
<td>History</td>
<td>Mother: Retired teacher</td>
<td>Bachelor's</td>
<td>Master's level</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 years later</td>
<td>English</td>
<td>High School: History related activities</td>
<td>Education</td>
<td>Teaching English in private high school or Write adolescent fiction or Radio broadcasting</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>* Volunteer/tutor with adolescents</td>
<td>Career</td>
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<td></td>
<td></td>
<td>Family</td>
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<tr>
<td>Tye</td>
<td>Public Coed</td>
<td>Sophomore</td>
<td>Freshman</td>
<td>Engineering</td>
<td>Parents: Terminal degrees</td>
<td>Terminal Degree</td>
<td>Undecided</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2 years later</td>
<td>Biology</td>
<td>Father: Scientist</td>
<td>Biomedical or Genetic Engineering</td>
<td>Partnership Marriage/Children</td>
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<td></td>
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<td>High School: A P Biology</td>
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<td></td>
<td></td>
<td></td>
<td>* Dislike for courses</td>
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<tr>
<td>Ann</td>
<td>Public Coed</td>
<td>Sophomore</td>
<td>Freshman</td>
<td>Recreation</td>
<td>Father: Terminal degree &amp; management professor</td>
<td>Graduate School</td>
<td>Undecided</td>
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<td></td>
<td></td>
<td></td>
<td>2 years later</td>
<td>Business</td>
<td>Summer jobs: Business</td>
<td>Coaching or Teaching or Medicine</td>
<td>Partnership Marriage/Children</td>
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<tr>
<td>Rose</td>
<td>Private Female</td>
<td>Junior</td>
<td>Freshman</td>
<td>Chemistry</td>
<td>Father: Terminal degree</td>
<td>Terminal Degree</td>
<td>Undecided</td>
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<td></td>
<td></td>
<td></td>
<td>2 years later</td>
<td>Studio Art</td>
<td></td>
<td>Medical Doctor</td>
<td>Married or single</td>
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<tr>
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<tr>
<td>Kay</td>
<td>Private Coed</td>
<td>Sophomore</td>
<td>Freshman</td>
<td>Biology</td>
<td>Parents: Medical professionals</td>
<td>Terminal Degree</td>
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<td></td>
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<td>2 years later</td>
<td>Psychology</td>
<td>High School: Biology teacher</td>
<td>Psychiatry</td>
<td>Partnership Marriage/Children</td>
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<tr>
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<td>* Interest in subject</td>
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<tr>
<td>Lisa</td>
<td>Public Coed</td>
<td>Sophomore</td>
<td>Freshman</td>
<td>International Business</td>
<td>Parents: Business owners</td>
<td>Bachelor's</td>
<td>Undecided</td>
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<td>Public Relations</td>
<td>High School: Business teacher</td>
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<tr>
<td>Beth</td>
<td>Public Coed</td>
<td>Sophomore</td>
<td>Freshman</td>
<td>Early Childhood</td>
<td>Sunday school teaching</td>
<td>Graduate School</td>
<td>Terminal Degree</td>
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<td></td>
<td>2 years later</td>
<td>Special Ed.</td>
<td>High School: Music/.band</td>
<td>Elementary Teacher</td>
<td>Special Ed. Teacher (LD)</td>
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<tr>
<td></td>
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<td></td>
<td></td>
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<td>* Enjoys children and LD more challenging</td>
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<td>Partnership Marriage/Children</td>
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(Grant, Hegoy, Battle, NCDA, 1995)
NCDA QUESTIONNAIRE
Gifted Adolescent Females

1. Name: ___________________________ Date:____________________
   Age: __________________________________________
   College: ________________________________
   Class Level: ________________________________
   ______ hours completed by spring break, _____ Qtr. _____ Semester

2. a. What is your college major? ________________________________

   b. Have you changed your major since you started college?
      _____ Yes  _____ No

      If yes, what was/were your previous major(s) and in what quarter(s) or semester(s) did you change?

      Previous Major                                           Quarter/Semester Changed
      1. ________________________________________________________
      2. ________________________________________________________
      3. ________________________________________________________

      c. Why did you change your major? ____________________________
         ________________________________________________________

3. a. What is your current career aspiration? _______________________

   b. Has your career aspiration changed since you started college?
      _____ Yes  _____ No

      If yes, what was /were your previous career aspiration(s)?

      1. ________________________________________________________
      2. ________________________________________________________
      3. ________________________________________________________

   c. Why did your career aspirations change? ______________________
      ________________________________________________________

(Grant, Heggy, Battle, NCDA, 1995)
4. What have been the major influences on your current choice of major in college?

5. What have been the major influences on your current career aspiration(s)?

6. How would you describe your life immediately after graduation?

7. How would you describe your life five years from now?

8. How would you describe your life ten years from now?

9. What other influences on your current college major and current career aspirations would you like to mention?

(Grant, Heggoy, Battle, NCDA, 1995)