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Physical Educators' and Other Majors' Experiences in a College of Education and Their Attitudes Toward Interacting Across Gender and Race

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ABSTRACT: This study compared the demographics of male and female preservice educators college-wide and PE majors and Non-PE majors by gender in a large urban southeast college of education. In addition, female and male PE and Non-PE majors' experiences in the college as well as their attitudes toward interacting with students different from themselves in terms of gender or race were explored. Late spring, early fall 1993, 491 undergraduates across the college completed a 150 item survey. For this analysis, data were collected through 62 items involving demographics, "problems students may be encountering," and students' willingness to interact with other students different from themselves by gender and/or race at varying levels of social closeness. According to the results, females in the college continue to congregate in stereotypical domains such as elementary and special education while males continue to dominate specializations such as physical education and secondary education--domains that can serve as feeder systems to administrative and higher paying positions. PE majors were younger and less heterogeneous in age than other majors in the college. They also had lower high school GPAs than Non-PE majors. However, at the university, PE majors' GPAs were similar to Non-majors. Both groups were predominantly Caucasian. Overall, problems identified were scored relatively low with those related to educational expenses, financial assistance, and advising emerging among the highest for both PE and Non-PE majors although PE majors reported fewer problems. In addition, unlike the male preservice educators in both groups, females identified school-related stress as somewhat problematic for them. Regarding social distance, both male and female students were quite willing to interact closely with others different from themselves both in terms of gender or racial/ethnic origin. Overall, the male PE majors were the least willing to socialize with others different from themselves.

In March, 1994, the "Goals 2000: Educate America Act" created a framework for generating systemic educational reform. In addition to mandating sweeping changes relative to school environments and academic standards, the law stresses that current and future educators must be prepared to work more appropriately and sensitively with an increasingly diverse American student population both in terms of gender and race as well as educational disability.

Regarding diversity in the context of teacher education and professional development, the new law states that American teachers "will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century" (p. 8). Specifically, by 2000, "all teachers will have access to preservice teacher education and continuing professional development activities that will provide such teachers with the knowledge and skills needed to teach to an increasingly diverse student population with a variety of educational, social, and health needs" (p. 8).

This law echoes a prior legislative mandate which called for gender equity in schools through Title IX of the Education Amendment Act. Though passed in 1972 to guarantee equal access and opportunity for females across all levels of education, gender inequities continue to be identified in elementary, middle, and secondary school settings (The AAUW Report, 1992; Sadker, Sadker, & Klein, 1991) as well as in higher education (Gadzella, 1994; Rienzi, Allen, Sarmiento, & McMillin, 1993; Tisdell, 1993).

To respond adequately to the call for greater teacher sensitivity to issues involving multiculturalism and/or gender equity, teacher education programs must deal with preservice students' attitudes toward such issues while attempting to ferret out institutionalized inequities that may be contributing to them. However, few studies have examined preservice educators' attitudes toward multicultural diversity; gender equity; or even these students' willingness to associate at different levels of closeness (i.e. social distance) with members of groups that differ from themselves (Bennett, Niggle, & Stage, 1990; Byrnes & Kiger, 1988; Law & Lane, 1987). Some prior studies, however, have examined social distance between members of racial or ethnic groups in contexts such as Mormon colleges (Kunz & Oheneba-Sakyi, 1989), Hong Kong schools (Brewer, Ho, Lee, & Miller, 1987), national public opinion polls (Smith & Dempsey, 1983), colleges or universities targeting Caucasian and/or African American students (Brigham, 1993; Eisenman, 1986), and social studies classes for ninth and eleventh graders (Avery, 1988).

In response to these questions, in 1993, a college of education at a large urban southeastern university conducted an extensive survey of undergraduate majors to explore preservice teachers' experiences in the college as well as their attitudes toward interacting with students different from themselves in terms of gender or race. One question for this survey was whether physical education majors express different levels of sensitivity or tolerance relative to gender or race since these educators are among the few in schools to interact with all students during the course of a year. In addition, these majors frequently have been socialized into highly competitive environments (Dewar, 1989; Schempp, 1989) which are assumed to be less tolerable and viable for female students and those from ethnic and/or cultural minorities (Kohn, 1992). Also of interest in this study was whether males or females express different levels of sensitivity or tolerance relative to gender or race since males tend to dominate the fields of physical education (Dodds, Placek, Doolittle, Pinkham, Ratliffe, & Portman, 1991) and secondary education while females historically have dominated arenas such as special and elementary education (Bloot & Browne, 1994; Evans & Williams, 1989).

Methods

In late spring and early fall 1993, 491 undergraduate students in a large urban college of education completed a survey during selected core curriculum classes or during student organizational settings devoted to the needs of minority students in the college. The survey was developed by graduate

students and faculty who volunteered through a college-wide student advocacy committee. Many of the item formats were drawn from a previous, university-wide survey (USF Institute on Black Life, 1991). Prior to administration of the survey, the instrument was pilot-tested with a sample of approximately 15 undergraduate students and was revised based upon their feedback.

Graduate and undergraduate student administrators of the survey followed a scripted protocol and subjects completed it in approximately 20 minutes. For this paper, data were collected through 6 items related to demographics and 34 items related to "problems students may be encountering," ranging from the selection of a major field of study to racism or sexism in the college.

Responses to the latter items were obtained on a four-point Likert scale on which students rated the extent to which each item had been a problem for them (1 = "none" to 4 = "great"). A third set of data was collected from 22 items related to social distance or students' willingness to interact in various ways and at varying levels of intimacy with students of a different gender or race. Social distance or interaction categories included 12 items reflecting students' interests in talking to; mentoring; or being mentored by students different from themselves in terms of gender or racial/ethnic group. Responses to these items were obtained on the same four-point Likert scale. Another 10 items reflected students' willingness to socialize with; be a friend of; study with; room with; or, vote for students of racial/ethnic groups or gender different from their own. Responses to these items were obtained on a three-point Likert scale with one meaning "not willing," two meaning "not sure," and three meaning "willing."

The sample of students in the college included 24% males and 76% females of which 83% were Caucasian American and 17% were non-Caucasian American. The adequacy of the sample was checked by comparing respondents to known college characteristics in terms of student gender and racial/ethnic group. The sample was somewhat over-represented by male respondents and under-represented by females. Seventy-six percent of the survey respondents were female, compared with 80% of the population in the college (chi-square(1) = 6.40, $p<.02$). Similarly, the sample was over-represented by students in racial/ethnic minority groups and under-represented by majority students (chi-square(5) = 109.30, $p<.001$). Eighty-three percent of the students sampled were Caucasian Americans compared with 90% of the college. Six percent of the students sampled were Latino/Latina Americans compared with 5% of the college; and 7% of the students sampled were African Americans compared with 4% of the college. Although the tests of fit between the sample and the college were statistically significant, the difference reflected a greater representation of minority groups in terms of both student gender (more males) and racial/ethnic group members. Of the 491 students in the college sample, 85 were physical education majors. Of these, 47% were females, 53% males; and 81% were Caucasian Americans, 19% non-Caucasian Americans.

Results and Discussion

Demographic differences between the male and female respondents and between PE and Non-PE majors were analyzed using chi-square tests of independence. These tests were used to evaluate differences in proportions for the categorical demographic variables (Glass & Hopkins, 1996). The respondents' profiles of reported problems experienced at the university and social distance perceptions were analyzed using ANOVA. The ANOVA provides a test of differences in means for the ratings (Glass & Hopkins, 1996).

Demographic Characteristics

Respondents' demographic characteristics by gender are reported in Table 1. The distributions of students' ages were approximately the same for male and female respondents (chi-square(4) = 6.01, p>.05). Similarly, no significant differences were observed in the racial/ethnic backgrounds of the respondents (chi-square(5) = 4.47, p>.05), with 85% of the females and 80% of the males being Caucasian.

Table 1

Demographic Characteristics of Survey Respondents by Gender.

	Student Gender				Chi-Square
	Female		Male		
Characteristic	N	Pct	N	Pct	
Age					
20 or less	046	12%	009	08%	6.01
21 - 25	229	62%	072	60%	
26 - 30	036	10%	019	16%	
31 - 39	031	08%	008	07%	
40 or more	028	08%	012	10%	
Race/Ethnicity					
African American	022	06%	012	10%	4.47
Asian American	002	01%	000	00%	
Indian American	003	01%	000	00%	
Latino American	022	06%	009	08%	
Caucasian	309	85%	095	80%	
International	007	02%	003	03%	
High School GPA					
3.5 or higher	105	29%	016	13%	19.64 ***
3.00 - 3.49	140	38%	050	42%	
2.50 - 2.99	104	28%	038	32%	
2.00 - 2.49	016	04%	012	10%	
Below 2.00	001	<1%	003	03%	
University GPA					
3.5 or higher	111	30%	026	22%	12.86 **
3.00 - 3.49	151	41%	045	38%	
2.50 - 2.99	086	24%	047	39%	
2.00 - 2.49	017	05%	002	02%	
Primary Major					
Childhood/Lang Arts	116	32%	014	12%	76.15 ***
Physical Education	040	11%	045	38%	
Music	003	01%	003	03%	
Special Education	121	33%	013	11%	
Secondary Education	084	23%	044	37%	
Undecided	003	01%	000	00%	

Note. * p<.05
** p<.01
*** p<.001

In academic achievement, the female respondents reported significantly higher high school grade point averages than the male respondents (chi-square(4) = 19.64, p<.001). Twenty-nine percent of the female respondents reported high school grade point averages of 3.5 or higher, while only 13% of the male respondents did.

Similar differences were reported in grade point averages earned at USF (chi-square(3) = 12.86, p<.01). Thirty percent of the female respondents reported grade point averages of 3.5 or higher, compared with 22% of the males. Significant gender differences were obtained in respondents' major

field of study (chi-square(5) = 76.15, p<.001). Females were approximately equally represented in Childhood/Language Arts (32%) and Special Education (33%). In contrast, male respondents were predominantly majoring in Physical Education (38%) and Secondary Education (37%).

Respondents' demographic characteristics by major field (PE vs. Non-PE) are reported in Table 2. The PE majors were more likely to be male (53%) than were the Non-PE majors (18%). The PE majors tended to be somewhat younger than the Non-PE majors (chi-square(4) = 26.75, p<.001). Eighty percent of the PE majors were between 21 and 25 years of age, while only 58% of the Non-PE majors were. No significant differences were observed in the racial/ethnic backgrounds of the respondents (chi-square(5) = 2.74, p>.05), with 81% of the PE majors and 84% of the Non-PE majors being Caucasian.

Table 2

Demographic Characteristics of Survey Respondents by Major Field.

	Major Field				Chi-Square
	PE		Non-PE		
Characteristic	N	Pct	N	Pct	
Gender					
Female	040	47%	331	82%	45.22***
Male	045	53%	075	18%	
Age					
20 or less	001	01%	054	13%	26.75***
21 - 25	068	80%	233	58%	
26 - 30	013	15%	042	10%	
31 - 39	002	02%	037	09%	
40 or more	001	01%	039	10%	
Race/Ethnicity					
African American	006	07%	028	07%	2.74
Asian American	000	00%	002	01%	
Indian American	000	00%	003	01%	
Latino American	007	08%	024	06%	
Caucasian	069	81%	335	84%	
International	003	04%	007	02%	
High School GPA					
3.5 or higher	013	15%	108	27%	17.30 **
3.00 - 3.49	034	40%	156	39%	
2.50 - 2.99	025	30%	117	29%	
2.00 - 2.49	009	11%	019	05%	
Below 2.00	003	04%	001	01%	
University GPA					
3.5 or higher	021	25%	116	29%	2.17
3.00 - 3.49	031	37%	165	41%	
2.50 - 2.99	028	33%	105	26%	
2.00 - 2.49	004	05%	015	04%	

Note. * p<.05
** p<.01
*** p<.001

In academic achievement, the Non-PE major respondents reported significantly higher high school grade point averages than the PE major respondents (chi-square(4) = 17.30, $p<.01$). Twenty-seven percent of the Non-PE majors reported high school grade point averages of 3.5 or higher, while only 15% of the PE majors did.

In contrast, no significant differences were reported in grade point averages earned at the university (chi-square(3) = 2.17, $p>.05$). Twenty-nine percent of the Non-PE majors reported grade point averages of 3.5 or higher, compared with 25% of the PE majors.

Problems Encountered at the University

Thirty-four items sought ratings relative to the extent respondents had encountered specific problems in the college of education. For each item, students indicated the extent to which each item had been a problem. Responses were obtained on a four-point scale, ranging from "none" (1) to "great" (4).

Item means are reported in Table 3. These group profiles of ratings were analyzed using a 2 X 2 X 34 mixed model ANOVA with two between-subjects factors (student gender and major field of study) and one within-subjects factor consisting of the 34 items. This analysis showed a significant main effect for survey item ($F(33,12111) = 41.91$, $p<.0001$), but no significant main effects for either respondent gender ($F(1,367) = 0.40$, $p>.05$) or major field of study ($F(1,367) = 1.49$, $p>.05$). The significant main effect indicates that the average rating (across all respondents) was not the same for all items. The interaction between item and major field of study was statistically significant ($F(33,12111) = 2.85$, $p<.001$). This interaction suggests that group differences are not consistent across all items (i. e., PE Majors and non-PE majors differ on some items but not others). The other first-order interactions were not significant (for the gender by item interaction, $F(33,12111) = 1.42$, $p>.05$); and for the gender by major field interaction ($F(1,367) = 0.12$, $p>.05$). Finally, the three way interaction was not significant ($F(33,12111) = 0.87$, $p>.05$). The similarity of the profiles in Table 3 is striking and reflects the generally negligible magnitude of interaction effect between respondent major field of study and item response.

Table 3
Mean Responses by Gender to Problems Encountered

		Non-PE		PE	
Item #	Item	Female	Male	Female	Male
1	Selecting Major	1.78 (0.94)	1.84 (0.90)	1.79 (1.03)	2.23 (0.95)
2	Advising Office	2.31 (1.09)	2.24 (1.07)	2.11 (0.94)	1.92 (1.01)
3	Department Office	1.95 (1.07)	1.98 (0.99)	1.88 (0.91)	1.82 (0.94)
4	Joining Social Groups	1.57 (0.83)	1.57 (0.86)	1.32 (0.63)	1.58 (0.81)
5	Lack of Social Life	1.74 (0.97)	1.91 (1.02)	1.32 (0.72)	1.58 (0.99)
6	Educational Expenses	2.52 (1.08)	2.61 (0.97)	2.17 (1.14)	2.23 (0.98)
7	Making Friends Other Race	1.35 (0.70)	1.50 (0.90)	1.29 (0.57)	1.46 (0.78)
8	Sensitivity Dept Faculty	2.04 (1.02)	1.98 (1.14)	1.76 (0.92)	1.74 (0.96)
9	Sensitivity COE Faculty	1.94 (1.01)	1.98 (1.06)	1.85 (0.92)	1.92 (1.08)
10	Feeling Different: Lifestyle	1.56 (0.85)	1.64 (0.97)	1.79 (0.94)	1.66 (0.92)
11	Fear Academic Failure	1.82 (0.96)	1.84 (0.88)	1.88 (1.09)	1.74 (0.84)
12	Relating to Advisor	1.81 (0.96)	1.94 (1.02)	1.58 (0.89)	1.41 (0.78)
13	Faculty of Same Race	1.23 (0.58)	1.26 (0.61)	1.26 (0.56)	1.30 (0.69)
14	Office Staff of Same Race	1.22 (0.53)	1.24 (0.54)	1.26 (0.56)	1.28 (0.68)
15	Relationships With Opposite Gender	1.38 (0.73)	1.36 (0.64)	1.26 (0.56)	1.35 (0.70)
16	Relationships Same Gender	1.28 (0.62)	1.33 (0.57)	1.26 (0.66)	1.28 (0.68)
17	Too Few Minority Students	1.38 (0.73)	1.42 (0.77)	1.26 (0.51)	1.46 (0.78)

		Non-PE		PE	
Item #	Item	Female	Male	Female	Male
18	Accepted by Other Race/Ethnic	1.31 (0.63)	1.49 (0.80)	1.23 (0.49)	1.41 (0.84)
19	School-related Stress	2.26 (1.07)	1.98 (0.91)	2.02 (1.02)	1.64 (0.87)
20	Financial Assistance	2.19 (1.11)	2.40 (1.09)	2.05 (1.12)	1.82 (1.04)
21	Academic Assistance	1.81 (0.91)	2.10 (1.02)	1.76 (0.92)	1.58 (0.84)
22	Employment Assistance	1.72 (0.95	1.92 (0.92)	1.58 (0.85)	1.69 (0.97)
23	Personal/Family Problems	1.74 (0.93)	1.82 (0.96)	1.79 (0.80)	1.61 (0.90)
24	Assistance in Study Skills	1.51 (0.78)	1.71 (0.99)	1.50 (0.70)	1.58 (0.84)
25	Services re: Cultural Background	1.23 (0.58)	1.38 (0.67)	1.23 (0.55)	1.48 (0.88)
26	Racial/Ethnic Rep on COE Organizatiaons	1.21 (0.56)	1.31 (0.68)	1.26 (0.56)	1.38 (0.78)
27	Student Racism	1.36 (0.70)	1.40 (0.72)	1.26 (0.51)	1.38 (0.81)
28	COE Faculty Racism	1.14 (0.41)	1.19 (0.54)	1.17 (0.45)	1.33 (0.80)
29	COE Office Staff Racism	1.14 (0.44)	1.15 (0.41)	1.17 (0.45)	1.33 (0.73)
30	Student Sexism	1.28 (0.63)	1.28 (0.55)	1.47 (0.74)	1.33 (0.70)
31	COE Faculty Sexism	1.31 (0.70)	1.24 (0.50)	1.44 (0.78)	1.30 (0.69)
32	COE Office Staff Sexism	1.17 (0.50)	1.21 (0.49)	1.32 (0.58)	1.33 (0.77)
33	Transportation	1.52 (0.95)	1.61 (0.95)	1.55 (0.82)	1.43 (0.82)
34	Time Management Skills	1.48 (0.82)	1.64 (0.83)	1.47 (0.70)	1.41 (0.75)

Note. Group standard deviations are provided in parentheses.

A follow-up analysis of the interaction effect was conducted using Dunn's procedure to test major field differences for each item mean. Significant differences were identified for six of the survey items, maintaining Type I error rate of .05 for the set of comparisons. Two of the items related to academic advising: Item 2, Problems with the Advising Office and item 12, Relating to Advisor. For each of these items, the PE majors reported significantly fewer problems than the Non-PE majors. Two other items related to educational expenses: Item 6, Problems with Educational Expenses and item 20, Financial Assistance. Again, for both of these items, the PE majors reported significantly fewer problems than the Non-PE majors. PE majors also reported significantly fewer problems related to academic stress than did the Non-PE majors (item 19), and fewer problems related to lack of a social life (item 5).

A follow-up analysis of the item main effect was conducted using Tukey's HSD procedure using a familywise alpha level of .05. This follow-up analysis suggested that the greatest problem for students was Educational Expenses (item 6). This item was followed by three items which were not significantly different from each other: Problems with the Advising Office (item 2), Lack of Financial Assistance (item 20), and School Related Stress (item 19). The least problematic issues for the survey respondents were a group of thirteen items that were not significantly different from each other. These items included racism from COE staff and faculty (items 29 and 28 respectively); sexism from COE staff and faculty (items 32 and 31); having faculty and staff of the same race with whom to relate (items 13 and 14); and racial/ethnic representation on COE organizations (item 26).

Social Distance

The survey items that measured social distance consisted of (a) 12 items measuring respondents' interest in talking to, mentoring and being mentored by students of the same or different racial/ethnic group and students of the same or different gender, and (b) ten items measuring students' willingness to socialize with students of a different gender or racial/ethnic group. Responses to the student interest items were obtained using a four-point scale, ranging from "none" (1) to "great" (4); and responses to the willingness items were obtained on a three-point scale, ranging from "not willing" (1) to "willing" (3).

Group means and standard deviations for the 12 items measuring respondents' level of interest in talking to, mentoring, and being mentored are presented in Table 4. The analysis of variance of these data revealed no significant main effect for gender ($F(1,418) = 0.00$, $p>.05$), major field of study ($F(1,418) = 0.00$, $p>.05$), or survey item effect for survey item ($F(11,4598) = 2.25$, $p>.05$). In addition, no significant interactions were obtained between gender and major field ($F(1,418) = 0.52$, $p>.05$), between gender and survey item ($F(11,4598) = 2.18$, $p>.05$), or between major field and survey item ($F(11,4598) = 2.31$, $p>.05$). Finally, the second-order interaction effect was not significant ($F(11,4598) = 1.82$, $p>.05$). Because no effects in the ANOVA were statistically significant, further statistical analyses of differences were not conducted.

Table 4
Mean Responses by Gender to Interest Items

		Non-PE		PE	
Item #	Item	Female	Male	Female	Male
1	Talking to Minority Student	1.74 (1.01)	1.90 (1.06)	1.94 (1.02)	1.80 (0.95)
2	Talking to Nonminority Student	1.75 (0.97)	1.75 (1.00)	2.00 (1.05)	1.90 (0.96)
3	Talking to Same Gender	1.84 (1.01)	1.88 (1.04)	2.18 (1.10)	1.75 (0.88)
4	Talking to Different Gender	1.83 (1.00)	1.88 (1.07)	2.18 (1.10)	1.78 (0.96)
5	Mentoring Student of Same Racial/Ethnic Background	1.96 (1.05)	2.09 (1.19)	1.97 (1.01)	1.92 (1.00)
6	Mentoring Student of Different Racial/ Ethnic Background	1.90 (1.01)	2.06 (1.15)	1.97 (1.01)	1.90 (0.99)
7	Mentoring Same Gender	1.95 (1.04)	2.09 (1.15)	1.97 (1.01)	1.87 (0.97)
8	Mentoring Different Gender	1.94 (1.03)	2.16 (1.24)	1.97 (1.01)	1.97 (1.08)
9	Being Mentored by Student of Same Racial/Ethnic Background	1.97 (1.08)	1.96 (1.11)	1.86 (1.03)	1.92 (1.10)
10	Being Mentored by Student of Different Racial/Ethnic Background	1.89 (1.03)	1.96 (1.08)	1.86 (1.03)	1.87 (1.02)
11	Being Mentored by Same Gender	1.96 (1.05)	1.98 (1.12)	1.86 (1.03)	1.90 (1.11)
12	Being Mentored by Different Gender	1.91 (1.04)	2.01 (1.13)	1.86 (1.03)	1.97 (1.15)

Note. Group standard deviations are provided in parentheses.

Group means and standard deviations for the 10 survey items addressing respondents' willingness to socialize are presented in Table 5. The analysis of variance of these data revealed no significant main effects for gender ($F(1,409) = 1.11$, $p>.05$), or major field of study ($F(1,409 = 0.95$, $p>.05$), but a significant main effect for survey item ($F(9,3681) = 23.67$, $p<.0001$). Significant first-order interaction effects were obtained for gender by survey item ($F(9,3681) = 7.10$, $p<.0001$), and gender by major field of study ($F(1,409) = 7.30$, $p<.01$), but not for major field by survey item ($F(9,3681) = 2.56$, $p>.05$). Finally, the second-order interaction effect was not significant ($F(9,3681) = 0.89$, $p>.05$).

Table 5
Mean Responses by Gender to Social Willingness Items

		Non-PE		PE	
Item #	Item	Female	Male	Female	Male
1	Socialize with Different Racial/Ethnic Group	2.90 (0.34)	2.89 (0.30)	3.00 (0.00)	2.78 (0.52)
2	Have Friend with Different Racial/Ethnic Group	2.93 (0.31)	2.96 (0.18)	3.00 (0.00)	2.80 (0.51)
3	Study with Different Racial/Ethnic Group	2.92 (0.33)	2.93 (0.31)	2.94 (0.33)	2.75 (0.58)
4	Roommate of Different Racial/Ethnic Group	2.63 (0.65)	2.74 (0.57)	2.85 (0.42)	2.56 (0.77)
5	Vote for Different Racial/Ethnic Group	2.93 (0.30)	2.88 (0.41)	2.97 (0.16)	2.68 (0.64)
6	Socialize with Different Gender	2.95 (0.28)	3.00 (0.00)	2.88 (0.47)	2.87 (0.33)
7	Have a Friend with Different Gender	2.96 (0.25)	3.00 (0.00)	3.00 (0.00)	2.85 (0.42)
8	Study with Different Gender	2.94 (0.31)	2.98 (0.13)	2.94 (0.33)	2.82 (0.44)
9	Roommate of Different Gender	2.32 (0.87)	2.71 (0.61)	2.57 (0.77)	2.78 (0.52)
10	Vote for Different Gender	2.96 (0.23)	2.96 (0.18)	2.94 (0.33)	2.80 (0.45)

Note. Group standard deviations are provided in parentheses.

Dunn's procedure was used to follow-up the gender by item interaction effect, while controlling Type I error at .05 for the set of pairwise tests of gender differences. Only two of the ten items showed significant gender differences in mean ratings. Females reported themselves significantly more willing to vote for a candidate from a different racial/ethnic group for student government office than males (item 5); and male respondents reported themselves more willing to have a roommate of the opposite gender than females (item 9).

Dunn's procedure was also used to follow-up the gender by major field interaction effect. In the Dunn analysis, controlling the Type I error rate at .05 for the set of two contrasts, the differences between average item responses for male respondents majoring in PE reflected significantly less willingness to socialize with others different from themselves than male respondents who were not PE majors. In contrast, no significant differences were obtained for female respondents majoring in PE when compared to female respondents not majoring in PE.

Tukey's HSD procedure was used to follow-up the main effect for survey item. This analysis suggests that students' willingness to have a roommate of the opposite gender (item 9) was lower than their willingness to engage in any of the other nine social behaviors in this section of the survey. The second lowest rated item, reflecting significantly less willingness than any of the remaining eight survey items, was item 4 (having a roommate of a different racial/ethnic group). No significant pairwise differences were noted on the remaining eight survey items.

Conclusions and Implications

According to these data, in the college, female preservice educators continue to congregate in stereotypical educational domains such as Childhood/Language Arts and Special Education while male preservice teachers dominate specializations such as physical education and secondary education--domains that can serve as feeder systems to subsequent administrative and higher-paying positions (outside of elementary schools) (Bloot & Browne, 1994; Evans & Williams, 1989). Regarding physical education majors, gender roles may continue to contribute to a reversed dominance by gender with males out- numbering females (both relative to the college's ratio by gender and the actual demographics by gender in the nation). Historically, gender has been identified as an important factor for participation in arenas such as physical activity, sports, coaching and athletic administration--areas that continue to be dominated by male administrators (Smeal, Yard, & Jackman, 1995). Since the need for more diverse role models and leaders has become evident both to researchers and public policy makers, perhaps additional studies are warranted to determine why female and male preservice teachers might avoid non-stereotypical occupations (*Goals 2000*, 1994). In addition, such research might reveal if obvious or subtle barriers exist to prevent pedagogical role reversals for students who might entertain such interests.

Though male and female respondents across the college did not differ significantly by age, PE majors, as a group, were significantly younger than Non-PE majors and their age range reflected less heterogeneity than Non-PE majors. The fact that PE majors were younger, male, and less heterogeneous age-wise could be symptomatic of the American culture's (macro-level) and college's (micro-level) value systems which could privilege body fitness, atheleticism, and youthfulness over experience or more academically-oriented skills. Also, non-traditional age students (who perhaps carry greater family and/or professional responsibilities while receiving less parental support) may be hindered from applying or continuing in PE programs due to the requirements of full-time status and daytime availability for classes and internships.

Although there were no significant differences between PE and Non-PE majors regarding race/ethnicity, the demographic data could be viewed as troubling in light of the call for more representative and diverse teaching populations (Banks & Banks, 1993; *Goals 2000*, 1994). In this analysis, both PE and Non-PE majors were predominantly Caucasian (81% and 84% respectively). Since this university serves large populations of ethnically and racially diverse students as well as students with educational disabilities, this lack of diversity across the college might indicate a need for more equitable, or even affirmative, recruitment practices relative to students from minority populations or those with educational disabilities. In addition, with females being underrepresented in PE and secondary education and males being underrepresented in most other areas in the college, more equitable, or even affirmative, recruitment practices relative to these student populations may

be needed. Should the current trends relative to gender, race, and age continue, greater efforts may be warranted for teacher preparation programs regarding sensitivity to diverse populations and their potentially diverse learning styles or instructional needs.

Regarding physical educators' academic achievement, the study's findings are consistent with other research efforts that identify lower high school grade point averages for physical educators than for others in settings such as colleges of education (Belka, et al, 1991; Dodds, Placek, Doolittle, Pinkham, Ratliffe, & Portman, 1991). However, this trend did not continue at the college level as PE majors' grade point averages were found to be similar to Non-PE majors. An explanation for this may be the nature of the PE program which provides cohort support or one of the program track's systematic exclusion of participants by competitive GPAs in the second of five semesters.

The data also reflect an unexpected trend relative to students' grade point averages at the university compared to high school GPAs. For female students entering the college, 29% had earned a 3.5 or higher grade point average while in high school as opposed to 13% of the male students. Conversely, only 5% of the female students reported high school grade point averages of less than 2.5 while 13% of the male students reported similar GPAs. However, while at the university, only one percent more of the female students (30%) reported grade point averages at 3.5 or above versus 9% more of the male students (22%). Perhaps additional research is needed relative to students' gender-related experiences with course work, faculty expectations and attitudes, extracurricular responsibilities, and other stressors to explore this trend.

Regarding problems encountered in the college, though there were no significant differences across the combined domains identified by gender, PE majors and Non-PE majors did report different experiences with PE majors reporting significantly fewer problems with academic advising than Non-PE majors. A possible explanation could be that PE majors' programs of study are prescribed in advance for students and they are guaranteed enrollment in required sequences over five semesters (the least possible number of semesters) of course work. As a result, few decisions are left to students and, therefore, stresses related to identifying and acquiring space in appropriate courses is reduced along with the need for additional advising. In addition, literature about program requirements and course sequences is hand-delivered or mailed upon request and, supplementing these programmatic resources for academic advising, are additional personnel in the college-wide advising program. Perhaps, similar back-up or supplementary advising systems would be facilitative for Non-PE majors in the college thus reducing amounts of stress for these students.

A stress-related factor identified as the greatest problem for all students in the college was educational expense. However, PE majors reported significantly less problems related to educational expense than Non-PE majors. They also reported significantly less problems with academic stress. Reasons for these differences are unclear. Perhaps because the PE group is statistically younger than the Non-PE group, they may have fewer responsibilities outside the university or enjoy more parental financial support. Another explanation may revolve around gender differences between PE and Non-PE majors. Since the vast majority of Non-PE majors are female (who traditionally earn less than males (Adams, Bell, & Griffin, 1997)), this group might be expected to endure greater stress relative to educational expenses than the predominantly male PE majors. Research may be needed to discover if financial resources for female PE majors are available since less financially able females may be

precluded from considering this major without additional economic resources. Similarly, if more non-traditional age students are returning to Non-PE domains, research relative to equitable distribution of financial support might be in order to determine if barriers are more problematic for these students.

Another significant difference regarding problems encountered in the college was related to a lack of social life. Again, PE majors reported less of a problem which may be linked to the cohort nature of their programs. Students move through these programs together, and form bonds within and relationships outside of academic activities (such as participating together on teams). Supporting this assumption could be research which links students' sense of belonging to interpersonal structures such as peer cohorts and faculty continuity or that which cites sports participation as enhancing to relationships.

Relative to problems encountered in the college, though a couple of differences were noted by PE versus Non-PE majors, no item in this section generated a mean above 2.61 on the 4-point scale. Of the items reflecting above 2.0, both female and male Non-PE majors selected educational expense, advising office, and financial assistance as somewhat problematic. However, for both female and male PE majors, the only item reflecting a mean above 2.0 was educational expenses. Regarding school-related stress, both groups of females rated this item higher than their male counterparts. Perhaps qualitative research methods are warranted here to help determine sources of such gender-related stresses.

Regarding items involving social distance, though two gender-related differences were identified, both male and female students were quite willing to relate to members of racial or ethnic groups different from themselves across all items with mean responses at 2.56 or higher. Relative to gender and social distance, females were less willing to have a roommate of the opposite gender. Regarding their willingness to vote for a candidate from a different racial/ethnic group for student government office, males in PE were lower than all other groups. Similarly, PE males were less willing to socialize with; have friends from; study with; or room with students different from themselves in terms of racial or ethnic group than any other category in the study (PE Females, Non-PE Females, Non-PE Males). PE Males were also less willing to socialize with; have friends from; study with; or vote for female students than other groups in the study. When it came to rooming across gender, however, PE males were more willing to do so than any other category.

These data indicate that the current cohort in the college which, presumably, represents the next generation of teachers required to deal with very diverse student populations is both interested and willing to interact closely with others different from themselves both in terms of gender and racial/ethnic group. However, caution relative to generalizability is warranted because race/ethnic group was not used as a variable in the analysis and because the sample consisted primarily of full-time students at only one of several campuses in a university featuring more than 36,000 students (with approximately 6,000 undergraduates in the college). In addition, responses were limited to those provided in a forced choice questionnaire format.

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