



Factors of Influence for Females Majoring in the Fields of Architecture, Engineering, and Construction

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Introduction

The professions of Architecture, Engineering, and Construction (AEC) have a history of being male dominated and disallowing female entrance. While some increase of gender diversity has been noted, the Bureau of Labor Statistics recently reported female participation in the AEC industries to be only 7.5 percent (U.S. DOL, 2014a). Not surprisingly, research shows that these same trends extend to the collegiate level despite the fact that females receive more bachelor degrees than males (Hill, 2010; Lopez del Puerto, 2011; Raiola, 2014; U.S. DOL, 2014b). Several research studies have been conducted attempting to define the barriers for women in each of these fields. However, the majority of this research has taken place at the professional level for Architecture and Construction fields with little research done at the collegiate level. While similar barriers may exist for females at the collegiate level, it is conceivable that different barriers exist as well. The purpose of this research is to collect descriptive data on females majoring in AEC disciplines in order to further understand the barriers to entry, to help determine which barriers women encounter when entering these male dominated fields, and their motivations to persevere.

Our work investigates the self-efficacy of women in engineering, construction, and architecture as well as motivating background factors and potential obstructions. Our research question is: *What are some of the factors of influence for female students in Architecture, Engineering, and Construction majors?* We collected this data through an online survey distributed via email to various students groups. The survey consisted of 10 questions centered on obstructions, background factors, and self-efficacy.

Our work is a first round investigation of women in these very similar majors at a university in the southeast United States. Through this research we can begin to understand factors affecting women considering a professional future in these male dominated fields. Our work can help define motivating factors and obstructions for women to enter into male dominated fields. It will also provide opportunity for cross-comparisons of the three professions to identify differing and overlapping factors that can later be used to form more effective recruitment techniques.

Literature Review

The 1960s and 1970s had an emergence for social equal rights, which led to a push for diversity in male dominated fields (Beddoes & Borrego, 2011). Despite decades of attempting to rectify the gender imbalance between males and females in AEC, the bureau of labor statistics cites that Architecture and Engineering maintain an employment rate of only 15% female; Construction is currently only 4.4% female (U.S. Department of Labor, Bureau of Labor Statistics, 2014). The U.S. enrollment rate of female engineers has increased from approximately 1% in the 1970s to 20% today while rates for females entering construction have shown minimal growth. This increase seems promising, but there has been a decrease in the enrollment of female engineers since 2008 in several countries (Beddoes & Borrego, 2011).

Low female enrollment in engineering has long been acknowledged as a problem by engineering education researchers. While the problem is well documented through admissions data, researchers are still in the process of identifying motivational factors for females into the field (Johnson & Sheppard, 2004). Architecture and Construction are experiencing similar issues with lower enrollment rates, but the fields have less data on this phenomenon. One researcher adequately summarized the need to increase female enrollment in engineering into three themes: social, economic, and practical. The social impact of increasing female enrollment is to correct the historical imbalance created by society historically disallowing women into “masculine” fields. Economically, the United States would benefit from increasing the number of females in engineering because the current system is matriculating fewer engineers than the workforce demands, which is resulting in the outsourcing of engineering projects to foreign countries. Lastly, it would be practical to increase the number of female engineers in order to increase diversity which has been found to an increase of innovation (Su, 2010).

Engineering education researchers have acknowledged that females lack neither the ability nor aptitude to enter engineering; however, at some point within their formative years, females lose interest in the STEM fields, yet when and why they lose interest has not been fully researched. Even the females that do decide to major in engineering tend to have lower self-confidence than their male counterparts. Female engineer retention rates are approximately equal to that of males despite their lower self-confidence (Cohen & Deterding, 2009), indicating that the issue for female engineers is not necessarily their retention but their initial interest in the engineering field. Current literature indicates that there may be an unrecognized roadblock for female engineers, which requires an intervention.

Methods

The sample population for this study included female undergraduate and graduate students majoring in the fields of Engineering, Construction, and Architecture. As the basis for a beginning study, the sample was delimited to students attending the same university as the authors. This allowed for a more manageable sample size and made access to potential participants easier through relationships the authors had with each respective program. Students from engineering were further delimited to only those that are members of the participating school’s Society of Women Engineers (SWE). SWE was used as a sample pool because it is an accumulation of female engineers in a variety of different engineering majors with a set population closer in number to the population of the architecture majors. SWE, while allowing access to a diversity of engineering majors, did limit the engineering population to students who are more proactive on campus and may have caused some data bias. The volunteers from SWE could be viewed as a supergroup due to their campus participation and willingness to assist with research. Because there is not a group like SWE for Architecture and construction students, they were contacted through their departments. Based on these contact methods, the authors identified a total accessible population of females in engineering ($n=100$ i.e. the number of women in SWE), architecture ($n=77$), and construction ($n=4$); for an aggregate of $n=181$ total potential participants.

First, we developed a survey focusing on motivation and background questions. The survey consisted of 10 primary questions with some containing multiple sub-items. The first two items

of the survey were demographic questions that discussed the participant's major and how many years they have been in their major. Questions four through seven addressed background factors such as when the student enrolled in their major and if they had family members active within the field they chose. The survey then addressed aspects of self-efficacy using a 5-point Likert scale; asking the students to rate to level of agreement to nine confidence statements, developed by (Fantz, Siller, & Demiranda, 2011). Question 8 asked students to indicate experiences they had in high-school related to their major. Items 9 and 10 contained statements about factors associated with motivations and barriers to entry for their major. Again, the students were directed to respond using the 5-point likert scale. The survey items included in the last two questions were selected from previous studies (Dainty, 2006; Hill, 2010; Raiola, 2014).

Prior to distributing; the survey was validated through a pilot group of eight individuals. Feedback from the pilot group was used to modify the instrument for improved validity and reliability. Upon receipt of Institutional Review Board approval the survey was distributed via email with a link to an anonymous data collection site. The female engineering students were emailed through a professional women's society affiliated with the university. This organization was used as a recruitment tool for female engineers as they have a variety of engineering majors represented within their groups. Students from the construction and architecture disciplines were solicited via email invitation through the use of a student contact database from their respective programs. Administrative assistants for each program worked with the authors to develop and distribute an email list of all female students within each program. Because the program databases contained contact information for male students as well, the developed lists were reviewed by the authors and administrative assistants prior to delivery to ensure only female students were included in the solicitation.

The survey data was collected through SurveyMonkey and subsequently downloaded and analyzed for descriptive statistics using IBM SPSS data analysis software. Quantitative data gathered from the survey was analyzed to identify mean, standard deviation, and percentile ranks. Qualitative data was analyzed using data reduction and coding to find common themes among responses. Then a t test was conducted to determine if the results were significant given $p < 0.05$. The full survey can be found in Appendix A.

Results

A total of 57 of the 181 potential participants completed the survey; representing a response rate of 27.62% (Table 1). Participants from engineering ($n=35$) covered the largest portion of respondents followed by architecture ($n=19$), and construction ($n=3$). This follows suit with the percentage of accessible participants by discipline as indicated earlier. While students in the second year of their program made up the largest percentage of respondents, there was a fairly even distribution across year levels one through four ($M=2.47$, $SD=1.08$). Responses from fifth year, and graduate students were evenly matched and represented the smallest portion of respondents. This was not surprising given these year levels represented the smallest portion of potential respondents. Responses from female construction students in year levels three and beyond could not be gathered because there were no enrolled females in those year levels. As well, graduate student responses came only from engineering students because architecture and construction did not have graduate programs. Of all the respondents 77% ($n=44$) indicated they entered their major when entering college directly from high school. Nine of the remaining 13

students indicated selecting their major during their first or second year of college; while the other four selected sometime after their second year in college. For 74% ($n=42$) of the students their identified major was the only major they have had. Another nine indicated only having one prior major before selecting their identified AEC major.

Table 1

Breakdown of Response Sample by Major and Year Level

	Year Level in Program						Overall Response Rate
	1st Year UG	2nd Year UG	3rd Year UG	4th Year UG	5th year UG	Graduate Student	
Engineering	$n=6$ (55%)	$n=7$ (41%)	$n=7$ (64%)	$n=11$ (92%)	$n=1$ (33%)	$n=3$ (100%)	$n=35$ 35%
Construction	$n=1$ (9%)	$n=2$ (12%)	$n=0$	$n=0$	$n=0$	$n=0$	$n=3$ 75%
Architecture	$n=4$ (36%)	$n=8$ (47%)	$n=4$ (36%)	$n=1$ (8%)	$n=2$ (67%)	$n=0$	$n=19$ 25%
Total	$n=11$ (19%)	$n=17$ (30%)	$n=11$ (19%)	$n=12$ (21%)	$n=3$ (5.5%)	$n=3$ (5.5%)	$n=57$ 27.62%

Note. UG = Undergraduate

Background factors

The students were asked about background factors related to exposure that may have had an influence on them in selecting their current major. Sixty percent indicated they had someone in their life that was involved in the same major field of study. The responses indicated no predominant type of individual and included a range of parents, aunts/uncles, brothers (none indicated a sister), family friends, neighbors, bosses, and teachers. Students indicated first hearing about their major at a median age of 16 with the interquartile range being 13.25 - 18 years of age; which would indicate most students are hearing about the major during their high school years. Over half of the respondents ($n=42$) indicated participating in some type of activity related to their major before entering college. Thirty-one students responded that they took at least one class in highschool related to their major, while $n=25$ said they participated in an extracurricular activity that related to their major. However, a pearson correlation indicated no statistically significant relationship at the $p=.005$ level when considering the age at which students heard about their major and courses taken ($r=-.081$) or extracurricular activities ($r=-.026$) during high school.

Self-Efficacy

The self-efficacy section of our survey was taken from a survey conducted and validated by (Fantz et al., 2011) that discussed how background factors affected self-efficacy. The questions asked the participants to rank their confidence in their ability to excel in different areas of their major and their ability to complete tasks. The likert scale questions were rated with Strongly Disagree = 0 to Strongly Agree = 5. Of the 9 questions, 5 of them were averaged between Agree (4) and Strongly Agree (5), with the strongest response being to the statement “I am confident I can understand the basic concepts in my classes for my major,” with 47.4% of respondents answering that they “Strongly Agree.” The last 4 questions ranked between Neither Disagree and Agree with the lowest rating of $M = 3.67$ for “I am confident I can do an excellent job on the tests in my courses for my major.” This indicates that female students are confident in their ability to understand the basic material presented to them; but they lack confidence in their ability to excel on areas of more difficult tasks and tests.

Motivational factors

Students were asked to consider five items of motivational factors and indicate to what level - on a five-point Likert scale - each of those factors played a role in selecting their major (Table 3). Overall the distribution of answers across the five items was fairly even ($M=3.45$, $SD=0.121$). Four of the five factors were identified as playing “some” (3) to “quite a bit” (4) of a role in selecting their major. The top three slots were more career focused direct factors such as pay, advancement, and challenges of the work. A less direct benefit of helping others was not far behind the top three but still not considered as large of a factor. The students indicated that they gave little consideration to the percentage of females in the field when selecting their major. This is interesting considering these disciplines are so well known for being male dominated; suggesting students at this age are possibly not aware or it is simply not a concern.

Table 3

Factors that Played a Role in Selecting Your Major

Motivational Factors	<i>n</i>	Level of Consideration					<i>M (SD)</i>
		1 None	2 Little	3 Some	4 Quite a Bit	5 Extreme Amount	
Progressive career advancement	57	3	3	8	27	16	3.88 (1.05)
Challenging work environment	57	1	3	12	30	11	3.82 (0.87)
Higher salaries than other professions I was interested in	57	4	7	16	23	7	3.39 (1.08)

Opportunity to help others	57	8	9	10	16	14	3.33 (1.38)
Low percentage of females in profession	57	18	7	8	15	9	2.82 (1.51)

Perceived Barriers

When asked about perceived barriers to more females entering their major; an average of 69% of the respondents indicated that six of the nine listed factors were barriers to entry (Table 4). The factors of “male dominated field” and “lack of awareness of the profession” received the highest marks at 80.7% ($n=46$) and 77.2% ($n=44$), respectively. However, two students included write-in responses in the “other” category citing “Lack of awareness of architecture” and “Lacking exposure to subjects related to the program at the high school and lower education levels” were additional barriers. These responses could be included in the factor of “lack of awareness to the profession” and in so doing makes the response rate for that field equal to that of “male dominated field”. Similarly, two respondents suggested factors of discrimination in the “other” category; stating “thinking there is only a certain amount of talent we have and cannot achieve past this”. One student was much more direct in saying “a lot of females think that they aren’t intelligent enough to succeed in the engineering fields”. The remaining responses cited factors such as “intimidation” and “harsh learning environment” while a couple simply indicated that “it’s just not something they’re interested in”. Only seven ($M=12.3$) of the respondents thought “slow career progression” was a barrier. This makes sense considering the respondents identified “progressive career advancement” as the highest ranked motivational factor when considering entry into their major.

Table 4

Perceived Barriers to more Females Entering the Discipline

Barriers to Entry	Discipline			Response Rate
	Engineering	Construction	Architecture	
Male dominated field	$n=28$ (80%)	$n=2$ (66%)	$n=16$ (84%)	$n=46$ 80.7%
Lack of awareness of profession	$n=28$ (80%)	$n=3$ (100%)	$n=13$ (68%)	$n=44$ 77.2%
Difficulty balancing work/family pressures	$n=22$ (63%)	$n=3$ (100%)	$n=15$ (79%)	$n=40$ 70.2%

Overly masculine culture	<i>n</i> =27 (77%)	<i>n</i> =2 (66%)	<i>n</i> =11 (58%)	<i>n</i> =40 70.2%
Lack of mentors/role models	<i>n</i> =21 (60%)	<i>n</i> =2 (66%)	<i>n</i> =13 (68%)	<i>n</i> =36 63.2%
Discrimination	<i>n</i> =14 (40%)	<i>n</i> =3 (100%)	<i>n</i> =12 (63%)	<i>n</i> =29 51%
Lack of community	<i>n</i> =10 (29%)	<i>n</i> =1 (33%)	<i>n</i> =7 (37%)	<i>n</i> =18 31.6%
Slow career progression	<i>n</i> =3 (9%)	<i>n</i> =0 (0%)	<i>n</i> =4 (21%)	<i>n</i> =7 12.3%
Other	<i>n</i> =5 (14%)	<i>n</i> =1 (33%)	<i>n</i> =2 (11%)	<i>n</i> =8 14%
	<i>n</i> =35 (61.4%)	<i>n</i> =3 (5.3%)	<i>n</i> =19 (33.3%)	<i>n</i> =57 100%

Discussion

The statistic of “low percentage of females in the profession” having a low impact factor is interesting considering these disciplines are so well known for being male dominated. In general, researchers have noted lack of community as being a barrier for females in male dominated fields. One inference is that students at this age are possibly not aware of the lack of community or that the use of “profession” in the survey slanted the answers. However, the results of question ten related to barriers to entry suggested that female students are aware of their status as minorities in these fields. Perhaps this awareness does not occur until after they have entered their respective programs. Regardless, this is an area worth further investigation to better understand the issue. If students are not aware of the factor when selecting their major and then become attuned to it after entry; this could be a major factor contributing to female attrition rates in these disciplines during the college years.

The self-efficacy section revealed some interesting results for female engineers in that the women answered with fairly strong self-efficacy in their ability to complete homework, master basics of the material, and do well in the classes. There is an obvious drop in self-efficacy for students to master more complicated tasks, do well on tests, and excel in classes. These results show that the students do believe in their ability to understand AEC material but lack confidence in their testing abilities and almost a lack of confidence in their instructors for more complicated material.

The lack of community for females can also be seen in this data as the most cited issue for these women was the fact that engineering is a “male dominated field.” Previous studies have

shown that women tend to rely more on community in their studies, and AEC fields lacking women is causing there to be a cultural barrier for female students. Further research could be done to find how the background factors helped these women overcome the perceived barriers that they listed. As well, further understanding of the factors that support females' self-efficacy development once they have enrolled in these programs would be beneficial in reducing the attrition rates seen in all three disciplines.

Conclusion

In response to our research question: *What are some of the factors of influence for female students in Architecture, Engineering, and Construction*, we have found data on both the motivations and barriers present to these students. The most prominent background factors of influence were an early exposure to these fields which generally came from a family member. For motivational factors, the most prominent reason for women to enroll in these fields was for career advancement, but many women indicated that they also are motivated by the challenging environment. The data we gathered in this study can be used to inform future research on women in male dominated fields in terms of their motivations and barriers.

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Appendix A

Factors of Influence_Female AEC Students

1. What is your major?

Engineering

Construction

Architecture

2. Please indicate your year level in your major.

1st year in major

2nd year in major

3rd year in major

4th year in major

5th year in major

Other (please specify)

3. Please indicate at what point you entered your current major.

Entering college from high school

During first year in college

During second year in college

After second year in college

Other (please specify)

4. How many majors did you have prior to entering your current major?

None

One

Two

Three or more

5. Approximately at what age did you first hear about your major?

6. Please identify any (you may select more than one) close relatives or mentors you had that are currently, or were at some point, involved in your major field of study.

- None
- Mother
- Father
- Aunt
- Uncle
- Brother
- Sister
- Family Friend
- Other (please specify)

7. Please indicate your level of agreement with the following statements about courses related to your major.

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree
I am confident I can understand the basic concepts in my classes for my major.	<input type="radio"/> <input type="radio"/> I am confident I can understand the basic concepts in my classes for my major. Strongly Disagree	<input type="radio"/> <input type="radio"/> I am confident I can understand the basic concepts in my classes for my major. Disagree	<input type="radio"/> <input type="radio"/> I am confident I can understand the basic concepts in my classes for my major. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> I am confident I can understand the basic concepts in my classes for my major. Agree
I expect to do well in my classes for my major.	<input type="radio"/> <input type="radio"/> I expect to do well in my classes for my major. Strongly Disagree	<input type="radio"/> <input type="radio"/> I expect to do well in my classes for my major. Disagree	<input type="radio"/> <input type="radio"/> I expect to do well in my classes for my major. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> I expect to do well in my classes for my major. Agree
I am certain I can master the skills being taught in my classes for my major.	<input type="radio"/> <input type="radio"/> I am certain I can master the skills being taught in my classes for my major. Strongly Disagree	<input type="radio"/> <input type="radio"/> I am certain I can master the skills being taught in my classes for my major. Disagree	<input type="radio"/> <input type="radio"/> I am certain I can master the skills being taught in my classes for my major. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> I am certain I can master the skills being taught in my classes for my major. Agree

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree
I am confident I can do an excellent job on the assignments in my classes for my major.	<input type="radio"/> <input type="radio"/> I am confident I can do an excellent job on the assignments in my classes for my major. Strongly Disagree	<input type="radio"/> <input type="radio"/> I am confident I can do an excellent job on the assignments in my classes for my major. Disagree	<input type="radio"/> <input type="radio"/> I am confident I can do an excellent job on the assignments in my classes for my major. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> I am confident I can do an excellent job on the assignments in my classes for my major. Agree
Considering the difficulty of the courses and teachers in my major, and my skills, I think I can do well in my courses.	<input type="radio"/> <input type="radio"/> Considering the difficulty of the courses and teachers in my major, and my skills, I think I can do well in my courses. Strongly Disagree	<input type="radio"/> <input type="radio"/> Considering the difficulty of the courses and teachers in my major, and my skills, I think I can do well in my courses. Disagree	<input type="radio"/> <input type="radio"/> Considering the difficulty of the courses and teachers in my major, and my skills, I think I can do well in my courses. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> Considering the difficulty of the courses and teachers in my major, and my skills, I think I can do well in my courses. Agree
I am confident I can do an excellent job on the tests in my courses for my major.	<input type="radio"/> <input type="radio"/> I am confident I can do an excellent job on the tests in my courses for my major. Strongly Disagree	<input type="radio"/> <input type="radio"/> I am confident I can do an excellent job on the tests in my courses for my major. Disagree	<input type="radio"/> <input type="radio"/> I am confident I can do an excellent job on the tests in my courses for my major. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> I am confident I can do an excellent job on the tests in my courses for my major. Agree
I am confident I can understand the most complex material presented by the instructors in my courses for my major.	<input type="radio"/> <input type="radio"/> I am confident I can understand the most complex material presented by the instructors in my courses for my major. Strongly Disagree	<input type="radio"/> <input type="radio"/> I am confident I can understand the most complex material presented by the instructors in my courses for my major. Disagree	<input type="radio"/> <input type="radio"/> I am confident I can understand the most complex material presented by the instructors in my courses for my major. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> I am confident I can understand the most complex material presented by the instructors in my courses for my major. Agree
I am certain I can understand the most difficult material presented in the readings for my courses in my major.	<input type="radio"/> <input type="radio"/> I am certain I can understand the most difficult material presented in the readings for my courses in my major. Strongly Disagree	<input type="radio"/> <input type="radio"/> I am certain I can understand the most difficult material presented in the readings for my courses in my major. Disagree	<input type="radio"/> <input type="radio"/> I am certain I can understand the most difficult material presented in the readings for my courses in my major. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> I am certain I can understand the most difficult material presented in the readings for my courses in my major. Agree
I believe I will receive excellent grades in my courses in my major.	<input type="radio"/> <input type="radio"/> I believe I will receive excellent grades in my courses in my major. Strongly Disagree	<input type="radio"/> <input type="radio"/> I believe I will receive excellent grades in my courses in my major. Disagree	<input type="radio"/> <input type="radio"/> I believe I will receive excellent grades in my courses in my major. Neither agree nor disagree	<input type="radio"/> <input type="radio"/> I believe I will receive excellent grades in my courses in my major. Agree

8. Please indicate if you had experience with any of the two items listed below.

	No None	Yes, One	Yes, Two
Did you take any courses in high school that related to your current major?	<input type="radio"/> <input type="radio"/> Did you take any courses in high school that	<input type="radio"/> <input type="radio"/> Did you take any courses in high school that	<input type="radio"/> <input type="radio"/> Did you take any courses in high school that

	No None	Yes, One	Yes, Two
related to your current major?	No None	Yes, One	Yes, Two
Were you involved in any extracurricular activities prior to college that related to your current major?	<input type="radio"/> <input type="radio"/> No None	<input type="radio"/> <input type="radio"/> Yes, One	<input type="radio"/> <input type="radio"/> Yes, Two

9. Please indicate, to what level, any of the following factors played a role in selecting your current major.

	None	A little	Some	Quite a bit
Opportunity to help others (i.e. habitat for humanity, mission work, etc)	<input type="radio"/> <input type="radio"/> Opportunity to help others (i.e. habitat for humanity, mission work, etc) None	<input type="radio"/> <input type="radio"/> Opportunity to help others (i.e. habitat for humanity, mission work, etc) A little	<input type="radio"/> <input type="radio"/> Opportunity to help others (i.e. habitat for humanity, mission work, etc) Some	<input type="radio"/> <input type="radio"/> Opportunity to help others (i.e. habitat for humanity, mission work, etc) Quite a bit
Higher salaries than other professions I was interested in	<input type="radio"/> <input type="radio"/> Higher salaries than other professions I was interested in None	<input type="radio"/> <input type="radio"/> Higher salaries than other professions I was interested in A little	<input type="radio"/> <input type="radio"/> Higher salaries than other professions I was interested in Some	<input type="radio"/> <input type="radio"/> Higher salaries than other professions I was interested in Quite a bit
Challenging work environment	<input type="radio"/> <input type="radio"/> Challenging work environment None	<input type="radio"/> <input type="radio"/> Challenging work environment A little	<input type="radio"/> <input type="radio"/> Challenging work environment Some	<input type="radio"/> <input type="radio"/> Challenging work environment Quite a bit
Low percentage of females in the profession	<input type="radio"/> <input type="radio"/> Low percentage of females in the profession None	<input type="radio"/> <input type="radio"/> Low percentage of females in the profession A little	<input type="radio"/> <input type="radio"/> Low percentage of females in the profession Some	<input type="radio"/> <input type="radio"/> Low percentage of females in the profession Quite a bit
Progressive career advancement	<input type="radio"/> <input type="radio"/> Progressive career advancement None	<input type="radio"/> <input type="radio"/> Progressive career advancement A little	<input type="radio"/> <input type="radio"/> Progressive career advancement Some	<input type="radio"/> <input type="radio"/> Progressive career advancement Quite a bit

Other (please specify)

10. Please indicate any of the following factors that you believe prevents more females from entering your major

- Male dominated field
- Slow career progression
- Difficulty balancing work-family pressures
- Overly masculine culture

- Lack of mentors/role models
- Discrimination
- Lack of awareness of the profession
- Lack of community
- Other (please specify)

Prev Done