

### SHORTAGE OF MALE NURSING STUDENTS: THE EXPERIENCE OF A GROWING NURSING PROGRAM

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#### ABSTRACT

##### **Background and Objective**

The shortage of male nurses in the United States is a well-known phenomenon that the nursing academia is trying to remedy. This case study examines the experience of a new southwest US nursing program in its recruitment and retention of male nursing students. In the process, the case study will attempt to explore insights on opportunities to improve nursing workforce policies to better attract male recruits into the profession.

##### **Methods**

Data related to application, enrollment, and retention were retrieved and merged from the school's application and enrollment systems. Overall, 978 students were enrolled from 2011 to 2019, with 837 females and 141 males. For applications, from 2014 to 2018, there were 2185 applicants, with 1879 females and 306 males. Statistical analyses were done using SPSS version 25 (IBM). Results are shown as means±standard deviation.

##### **Results**

Results show that 14% of the applicants to the program were male, while 14.4% of the enrollees were male. In terms of retention, males had lower (73.8%) retention rates than females (83.9%), although it is not statistically significant ( $p=0.08$ ). On average, there were significantly fewer male applicants and enrollees ( $p<0.001$ ) than females, and the differences are getting larger ( $p<0.001$ ).

## Conclusion

Nursing shortage and, more specifically, the lack of male nurses is a well-known phenomenon in healthcare. Nursing schools have attempted to diversify enrollment through the recruitment of more male nursing students; however, their efforts seem to have hit a barrier with a continued shortage of male applicants. To change outcomes, the nursing profession and academia should consider providing more community education and outreach programs targeting students and their parents earlier in their academic careers

**Key Words:** *baccalaureate; education; male; nurses; nursing; students*

## INTRODUCTION

Teaching and nursing were traditionally considered appropriate professional choices for women in the United States. However, historically, male nurses could be found in the military and in mental health institutions beginning in the 1800s. The poet Walt Whitman was a volunteer nurse during the Civil War. Prior to Florence Nightingale, the founder of modern nursing, many nurses were male. Monks and brothers cared for travelers, soldiers, and the indigent dating back to the 4th century.<sup>1</sup> Nightingale, nevertheless, felt that nursing was naturally a woman's role, which corresponded to the rigid gender divisions of Victorian-era England. Nursing schools then either actively discouraged men or denied them admission.<sup>2</sup> Often, the only choice for men were schools preparing nurses to provide care in mental health hospitals.<sup>1</sup>

The US military finally changed its policies after legislation was passed in 1955, and the first male registered nurse was commissioned in the Army Nurse Corps.<sup>3</sup> Still, men were sometimes refused admission to state-sponsored schools. In 1981, the United States Supreme Court declared the practice unconstitutional, and this opened doors for more men to enter the nursing profession. At the time, men only accounted for about 4.1% of registered nurses.<sup>1</sup>

In spite of the removal of this barrier, today men remain among the underrepresented groups identified by the American Association of Colleges of Nursing (AACN).<sup>4</sup> The United States Census Bureau reported that, in 2017, 89.3% of

registered nurses were female, while 10.7% were male.<sup>5</sup> Men are increasingly entering the profession but may lack role models while in school given that only 6.1% of nursing faculties are male.<sup>4</sup> Male nurses are younger than their female counterparts on average (42.4 years old vs. 44.1 years old), and both are overwhelmingly white (75.6%).<sup>5</sup> While women outnumber men in nursing, men on average earn more—\$63,947 versus \$73,546 per year.<sup>5</sup> Even after controlling for demographics, location and work factors—hours, experience, position, setting and clinical specialty—Muench and colleagues noted a statistically significant earning difference of \$5148 between the genders, favoring male nurses.<sup>6</sup>

Although the growth of the male nursing workforce since the 1980s is encouraging, why aren't more men entering the profession? The removal of bans to admission removed a significant barrier, but men continue to slowly move into nursing. One additional barrier may be the lack of men as nursing faculty. Most of their peers and faculty members are female, and stereotypes about the sexuality of male nurses persist.<sup>7</sup> In addition, due to the limited numbers of male faculty, male students may lack role models and understanding about the role men have played in the history of nursing. Furthermore, as Younas and colleagues noted, because men are a minority in nursing, they are more likely to be remembered by patients, which in turn may increase their chances of receiving a complaint.<sup>8</sup> While all students experience stress in nursing

school, this adds another hurdle that male students must face.<sup>9</sup>

As noted, men who enter nursing face significant hurdles. Working as a nurse was and may still be seen as acceptance of a deferential, lower status position, particularly since the “high-status” profession of medicine worked side by side with nursing, and salaries were and continue to be lower in nursing than in medicine. Nevertheless, men are attracted to nursing for many of the same reasons that women are. Nursing as a profession offers a wide range of opportunities including the ability to provide tangible physical and emotional assistance to others. In addition, the profession is expected to remain a viable career for many years to come. As studies have shown that patients are satisfied with the care provided by male nurses,<sup>8</sup> and specific patient populations tend to look for male caregivers,<sup>10,11</sup> increasing the number of male nurses represents a way to increase the diversity and population of new nurses.<sup>4</sup> This case study intends to look at male nursing student application, enrollment, and graduation statistics of a relatively new baccalaureate nursing program and attempts to explore potential opportunities to recruit and retain more male students in the nursing profession.

### METHODS

This case study focuses on the application, enrollment, and retention data of a baccalaureate nursing program located in a suburban area of Southwest United States, which draws students from the surrounding urban, suburban and rural areas. The program keeps application and enrollment data in two separate data systems. Data were pulled and merged from these systems. The academic program operates on a semester system, and each academic year consists of a fall semester, a spring semester, and two shortened summer sessions. Program enrollment was semi-annual, with classes enrolling in both the spring and fall semesters. However, during the program’s infancy,

no class was enrolled for the Spring 2012 semester. Data on enrollment were available from Spring 2011 through Fall 2019, while data on applications were only available from Spring 2014 through Fall 2018. Overall, a total of 978 students were enrolled from 2011 to 2019, with 837 females and 141 males. For applications, from 2014 to 2018, there were a total of 2185 applicants, with 1879 females and 306 males. Statistical analyses were done using SPSS version 25 (IBM). Results are shown as means±standard deviation.

### RESULTS

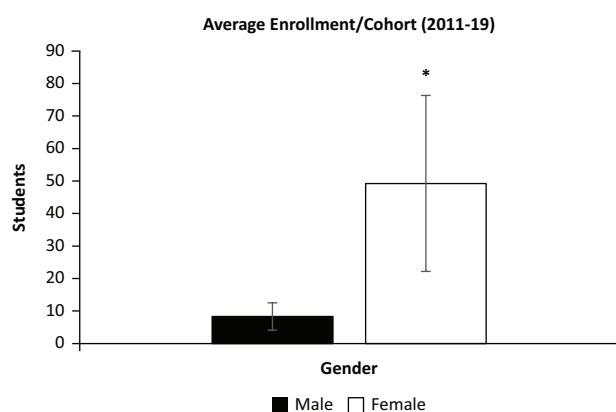
Since program inception in Spring 2011, descriptive application and enrollment data show that overall about 14% of the students who applied to and enrolled in the program are male (Table 1). Taking into consideration that application data were only available from Spring 2014 to Fall 2018 as observed in Table 1, from semester to semester, it is possible that the proportion of male enrolled students may be higher than the proportion of male applicants, contributing to the overall slightly higher percentage of enrolled male (14.4%) than male applicants (14%). In terms of retention (Table 2), overall, female students (83.9%) have higher retention rates than their male (73.8%) counterparts.

A further look at the enrollment numbers alone, over the 17 cycles of enrollment from 2011 to 2019, indicates that a total of 141 (14.4%) males and 837 females were enrolled. On average, there were significantly fewer male students enrolled per semester than female students,  $8.3 \pm 4.2$  versus  $49.2 \pm 27.1$ , respectively (Figure 1). When graphed over time, the enrollment trend as presented in Figure 2 shows that the slopes of the generated regression lines for both males (0.05) and females (4.67) were significantly different ( $p < 0.001$ ), indicating a trend of much faster growth rate for female enrollees than males.

As shown in Figure 3, additional analysis of the application data shows a significant difference

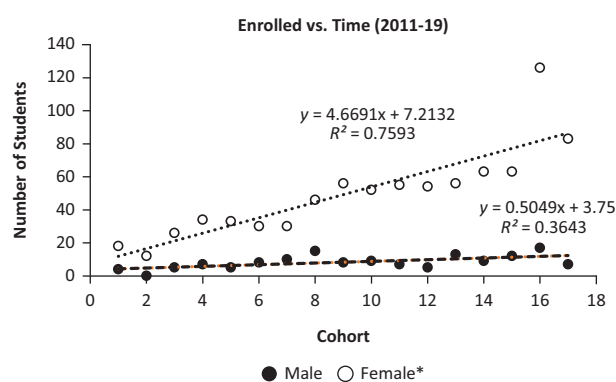
**TABLE 1** Application and Enrollment Data Since Program Inception

Semester	Enrollment					Applications				
	Females	Males	Total	Females (%)	Males (%)	Females	Males	Total	Females (%)	Males (%)
Spring 2011	18	4	22	81.8	18.2	-	-	-	-	-
Fall 2011	12	0	12	100.0	0.0	-	-	-	-	-
Fall 2012	26	5	31	83.9	16.1	-	-	-	-	-
Spring 2013	34	7	41	82.9	17.1	-	-	-	-	-
Fall 2013	33	5	38	86.8	13.2	-	-	-	-	-
Spring 2014	30	8	38	78.9	21.1	98	21	119	82.4	17.6
Fall 2014	30	10	40	75.0	25.0	137	33	170	80.6	19.4
Spring 2015	46	15	61	75.4	24.6	161	28	189	85.2	14.8
Fall 2015	56	8	64	87.5	12.5	178	27	205	86.8	13.2
Spring 2016	52	9	61	85.2	14.8	143	27	170	84.1	15.9
Fall 2016	55	7	62	88.7	11.3	220	26	246	89.4	10.6
Spring 2017	54	5	59	91.5	8.5	204	25	229	89.1	10.9
Fall 2017	56	13	69	81.2	18.8	225	32	257	87.5	12.5
Spring 2018	63	9	72	87.5	12.5	241	38	279	86.4	13.6
Fall 2018	63	12	75	84.0	16.0	272	49	321	84.7	15.3
Spring 2019	126	17	143	88.1	11.9	-	-	-	-	-
Fall 2019	83	7	90	92.2	7.8	-	-	-	-	-
Grand Total	837	141	978	85.6	14.4	1879	306	2175	86.0	14.0



**FIG. 1** Average enrollment per semester/cohort.

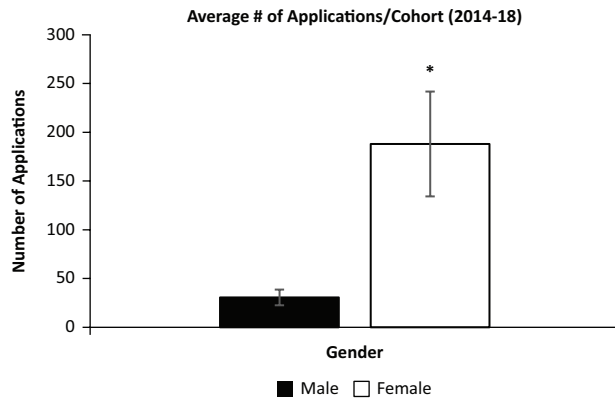
between the average number of male ( $30.6 \pm 8.0$ ) and female ( $187.9 \pm 53.8$ ) applicants ( $p < 0.001$ ). When graphed over time (Figure 4), there is again



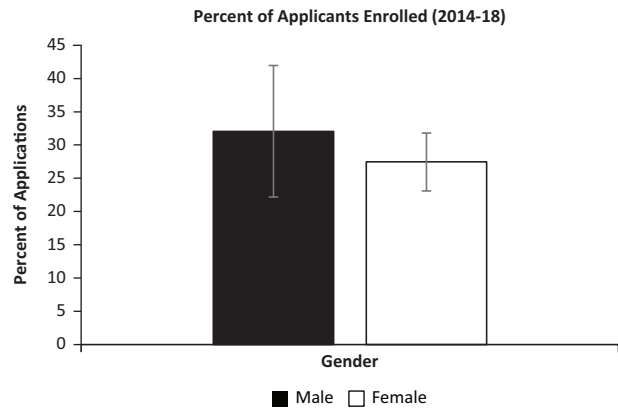
**FIG. 2** Enrollment over time.

a significant difference in the trends in applications between males and females ( $p < 0.001$ ). However, comparing male and female enrolled students as a percentage of applications found no difference between the two groups (Figure 5). The

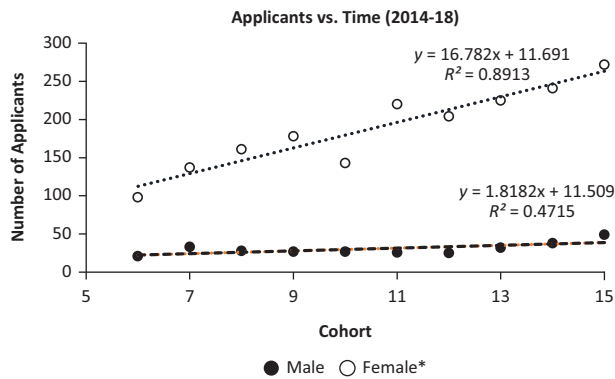
Shortage of male nursing students



**FIG. 3** Average number of applications per semester/cohort.



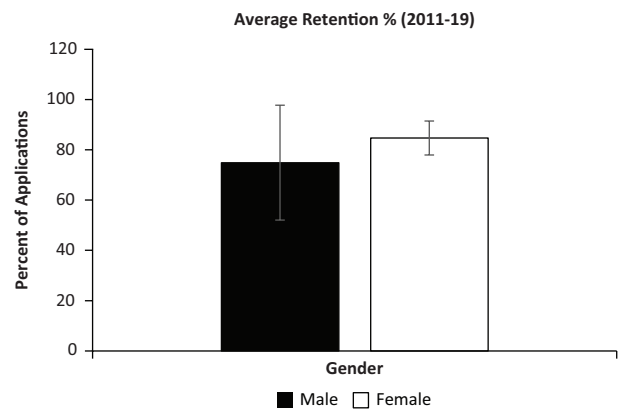
**FIG. 5** Percent male versus female applicants enrolled.



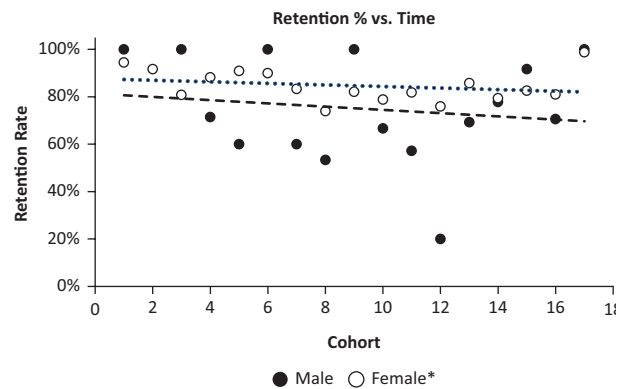
**FIG. 4** Applications over time.

results indicate that on average many more females apply to the program than males, and the trend is growing. On the other hand, the program does not discriminate against male applicants and enrolls a similar percentage of male applicants as compared to female applicants.

Finally, looking at retention rates as indicated in Figure 6, the average retention rate for males ( $74.9 \pm 22.8\%$ ) was lower than the average retention rate for females ( $84.7 \pm 6.8\%$ ). However, this was not found to be statistically significant ( $p=0.08$ ). Nevertheless, Figure 7 shows male retention rates to be much more random than female rates, a possible outcome of small male cohort sizes. A further examination of the individual timeframes for leaving or being dismissed showed



**FIG. 6** Average retention rate.



**FIG. 7** Retention over time.

that 31 of the 38 students who were dismissed for failure or decided to change their major were in

**TABLE 2** Student Retention

Semester	Enrolled			Graduated or Active			Retention (%)		
	Females	Males	Total	Females	Males	Total	Females	Males	Total
Spring 2011	18	4	22	17	4	21	94.4	100.0	95.5
Fall 2011	12	0	12	11	0	11	91.7	-	91.7
Fall 2012	26	5	31	21	5	26	80.8	100.0	83.9
Spring 2013	34	7	41	30	5	35	88.2	71.4	85.4
Fall 2013	33	5	38	30	3	33	90.9	60.0	86.8
Spring 2014	30	8	38	27	8	35	90.0	100.0	92.1
Fall 2014	30	10	40	25	6	31	83.3	60.0	77.5
Spring 2015	46	15	61	34	8	42	73.9	53.3	68.9
Fall 2015	56	8	64	46	8	54	82.1	100.0	84.4
Spring 2016	52	9	61	41	6	47	78.8	66.7	77.0
Fall 2016	55	7	62	45	4	49	81.8	57.1	79.0
Spring 2017	54	5	59	41	1	42	75.9	20.0	71.2
Fall 2017	56	13	69	48	9	57	85.7	69.2	82.6
Spring 2018	63	9	72	50	7	57	79.4	77.8	79.2
Fall 2018	63	12	75	52	11	63	82.5	91.7	84.0
Spring 2019	126	17	143	102	12	114	81.0	70.6	79.7
Fall 2019	83	7	90	82	7	89	98.8	100.0	98.9
Grand Total	837	141	978	702	104	806	83.9	73.8	82.4

the first or second semester of their five-semester program, while the remaining seven students departed in the fourth semester. Students who departed earlier changed their majors 58% of the time or failed two courses 42% of the time. Students at the upper levels left the program after they failed two courses, which is academic failure.

### DISCUSSION

The shortage of men and minorities in nursing in the United States is a well-known issue. Prompted by the landmark report produced by the Sullivan Commission on the lack of a diverse healthcare workforce, which creates barriers to accessing care,<sup>12</sup> the AACN has placed a high priority on promoting student diversity by aiming to increase the proportion of males and minorities in nursing schools.<sup>4</sup> The efforts may be gleaned

from the results of this case study, where a slightly higher percentage of enrolled population than application population is male (14.4% vs. 14%). In addition, the 14.4% enrollment is higher than the current proportion of male registered nurses of 10.7%, which means that in the long run, if this trend holds and is applicable to all US nursing schools, the proportion of male registered nurses in the population will increase.

However, the results for this program also show that over time as the program grows, more and more females are applying and enrolling than males (Figures 2 and 4, respectively), and the trends are statistically significant. These trends are concerning because if they continue, it is likely that the proportion of male students in the program will see a decrease in the future if class sizes continue to increase as the program grows.

Another downside of attempting to increase male enrollment is the potential of recruiting inferior students as compared to females. Although not statistically significant ( $p=0.08$ ), descriptive statistics do show that the retention of male students is lower than that of females (Figure 6). One potential solution would be to attract more male applicants who have not previously considered the profession of nursing to the program, but there are cultural and perceptual challenges.

Overall, it seems that although the program is making an attempt to promote male nursing student enrollment, there are just not that many qualified male applicants to draw from. Nursing is a desirable profession as witnessed by the much higher demand than supply for nursing school open spots—over 51,000 qualified applicants were refused admission in the 2017–2018 academic year across the United States.<sup>13</sup> Why are there not more men wanting to pursue nursing then? Hodges and his team noted that the vast majority of male nurses are satisfied with their careers, but they faced many stereotypes about nursing before entering nursing school.<sup>7</sup> Potential students do not know historical male nursing role models well, but characters in popular movies who are male nurses, like Ben Focker in the film “Meet the Parents,” are readily recognized by pre-nursing and nursing students of both genders, which may be all that students know about nursing for men.<sup>7</sup>

There is a pervasive misconception that nursing is typically viewed as a job for white females, and male nurses may be seen as “emasculated, homosexual, or sexually deviant.”<sup>7</sup> Having role models in male faculty and working male nurses would assist in the recruitment, orientation, and retention of male nursing students.<sup>14</sup> The importance of seeing a male role model has been mentioned by some of the male students in this program, and males do constitute 12.9% of this program’s faculty currently. From a workforce policy perspective then, it is important to reach

out to potential male applicants much earlier in their academic career to overcome misconceptions, perhaps as early as high school.

Other studies of aggregate cohort trends in US nursing also showed that financial or resource challenges may be factors for male nursing students; therefore, financial assistance and continued efforts to facilitate movement from lower-cost avenues, such as community colleges, may help men to apply, enroll and complete nursing school.<sup>15</sup> Tutoring, peer mentors, and support groups may also be helpful.<sup>7</sup> In addition, efforts to promote diversity in other health professions facing similar issues demonstrated that education and outreach to high school students and their parents decreased barriers to understanding the profession and the educational requirements of getting into the profession.<sup>1</sup> To overcome entrenched nursing stereotypes and familiarize potential students of the educational path leading to the profession, longer and more persistent outreach and education by the nursing profession may be required.

A major limitation of this case study is that it is about the experience of one baccalaureate nursing program in one location. The results may not apply to the entire United States. However, the shortage of male nursing students is a known issue in nursing academia as evidenced by the AACN’s continued efforts to promote gender diversity. Another limitation is that the data collected were from a relatively new program experiencing tremendous enrollment growth over time. A future long-term study including more data from a matured program would perhaps present a different trend in student populations. Efforts to monitor this high-priority issue will be continued.

## CONCLUSION

The nursing shortage and, more specifically, the lack of male nurses is a well-known phenomenon in healthcare. Nursing schools have

attempted to diversify enrollment through the recruitment of more male nursing students; however, the efforts seem to have hit a barrier with a continued shortage of male applicants. To change outcomes, the nursing profession and academia should consider providing more community education and outreach programs targeting students and their parents earlier in their academic careers. This can take place at area high schools and community colleges, which already host recruiting events, to reach out to young men as they are making their plans for college and their eventual profession. Male nursing graduates and faculty members could be recruited to attend these events. Having male role models could help broaden the viewpoint of high school faculty, advisors, and students regarding nursing as a desirable and viable option for men. Combatting stereotypes about men in nursing at this early point could help improve the image of men in nursing. Another strategy would involve developing a list of male graduates who could be available through a speakers' bureau set up for local high schools and colleges.

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#### CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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