

**FIRST YEAR RETENTION:  
IS IT HOUSING OR AFFILIATION  
THAT MATTERS?**

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## **ABSTRACT**

### **FIRST YEAR RETENTION: IS IT HOUSING OR AFFILIATION THAT MATTERS?**

Researchers attempt to determine how on-campus housing affects first year retention. Additionally, the impact of Greek affiliation on first year retention is investigated, leading one to question whether encouraging first-year students to form group affiliations may be as effective in increasing retention as requiring them to live on campus.

### **Acknowledgement**

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## **FIRST YEAR RETENTION: IS IT HOUSING OR AFFILIATION THAT MATTERS?**

### *Introduction*

Officials at a large public university are considering the possibility of constructing substantial amounts of new on-campus housing, with the ultimate goal of requiring all first-year students to live on campus. One of the primary goals of this proposal is to improve the numbers of students who return for their second year. Currently, anywhere from 15-19 percent of each year's freshman class is lost during or at the end of the first year. Reasons for this are many and varied, but lack of a strong connection to academic and social support services are believed to be strong contributors. The thinking is that having all of these students housed on campus will increase the opportunity to reach them with support services and possibly to reduce the impacts of isolation.

At present, only 16 percent of undergraduates live on campus and only 52 percent of entering freshmen do so. A stated goal is eventually to house 25 percent of the student body in on-campus facilities.

The institutional research office examined the stated freshman retention goal of this proposal, in terms of whether such a relationship exists for students currently housed in university facilities, and whether there were any other factors that might contribute to success of future campus housing policies.

### *Literature Review*

Student persistence and retention are a major concern for higher education institutions throughout the United States, and is a highly studied topic (Tillman, 2000; Tinto 1993). Past research on this topic has stated that the freshman year is the most critical in terms of persistence, with as many as 20 percent dropping out after their first year. Additionally, the degree completion rate for entering freshmen was roughly 50 percent (DEOSNEWS, 2004). For these reasons, many studies have identified the variables involved in student-institutional interaction. Analyses include graduation rates, persistence patterns, and student attrition behaviors (DEOSNEWS, 2004).

Early studies dealing with retention were performed by Tinto (1973) and Astin (1970). Both Astin and Tinto focused initially on characteristics of the individual, whereas later research viewed retention within the context of the student interacting with the institution. Furthermore, Tinto's model of student integration addressed how students' attributes contribute to their persistence in an institution (Tinto, 1975). It is worthwhile to note that these models failed to explore many of the external forces behind student attrition. Bean added to the findings of Astin

and Tinto in that he believed that community (family) and financial support were two external factors that contributed to the return of first year students (Bean, 1985). Recent research in retention attempts to explain the decision making process of retention along three differing areas: personal variables, institutional variables, and circumstantial variables (DEOSNEWS, 2004). Tillman (2002) includes in his factors: lack of preparation, external commitments, social isolation and interaction with faculty members, financial need, and academic failure.

Given this framework, researchers attempt to determine how living in a college residence hall affects the integrative process. Astin (1973) indicated that dormitory residents were more likely than commuters to obtain a baccalaureate degree in four years, reported higher levels of social interaction, had higher levels of self-confidence, and stated that they were more satisfied with their undergraduate experience. In addition, his study showed that, when separated by type of institution, four-year colleges showed the greatest benefit from dormitory living. Findings for men and women were comparable. Astin (1977) later went on to discuss that freshman year residence halls are an important factor associated with graduation rates, which certainly are affected by first year retention.

A similar study was conducted by Levin and Clowes (1982) to determine whether students who live in residence halls have higher social status, higher high school grades, and higher aptitude than students who live at home and commute to campus. Findings indicated that higher socioeconomic status and academic success in high school was associated with living in college residence halls. Results supported earlier propositions made by Tinto (1973) that students attending four-year colleges and living in college-owned facilities were more likely to graduate after four years. Although the effects of socioeconomic status and high school grades on degree completion were uncertain, living in a dormitory increased the likelihood that one would graduate from a four-year college.

Pascarella (1984) showed that the impact of living on campus may be more indirect than earlier studies demonstrate. Factors which influence a student's decision to live on-campus include characteristics such as academic aptitude, academic achievement, and degree aspirations. When background factors are held constant, the effects of living on campus have an indirect impact on retention, with personal characteristics being the direct link (Berger, 1997). In a review of the literature on housing and retention, Blimling (1989) reiterated that results are varied and identified this topic as a need for increased research.

In more recent literature, Thompson, et al. (1993) show that retention is significantly higher for on-campus students regardless of race, gender or admission type. Additionally, this study shows that students defined as high risk, meaning they have lower academic credentials, may benefit more from living in on-campus residence halls. In an attempt to determine how freshman seminars affect retention, Fidler and Moore (1996) concluded that students who reside on campus and participate in freshman seminars are more likely to persist beyond their freshman year. In contrast, studies found that living/learning residence halls did increase student grade point averages, but did not significantly impact retention rates (Kanoy and Bruhn, 1996). As Pike, et al. (1997) note, persistence may increase as an indirect effect of positive learning environments.

There is also research examining the impact of Greek systems on educational outcomes such as retention. Rullman (2002) found a positive relationship between Greek membership and retention. However, Kamens (1978) noted that this positive effect is strongest in low-residential institutions. Although Greek letter organizations relate to increased retention, academic performance may suffer as a result. Pike and Askew (1990) found that the cumulative grade point average for Greek men was lower than for independents, but the grade point average for Greek women was higher than for non-Greek women.

### *Research Questions*

- Is there a statistically significant relationship for first-time freshmen between living on campus and first year retention?
- After controlling for ACT scores and gender, is there a significant relationship for first time freshmen between on-campus housing and first year retention?
- After controlling for ACT scores and gender, is there a significant relationship for first time freshmen between Greek membership and retention?

### *Population*

The population consisted of all entering freshmen for the years 2000 through 2003. (See Table 1.) This group totaled 15,466 students, 47.6 percent male and 52.4 percent female. Students living in on-campus housing for their first year represented 45.6 percent of the total, although there were widely divergent patterns for males vs. females (26% of the males and 63.4% of the females).

**TABLE 1**  
**HOUSING PATTERNS**  
**ENTERING FRESHMAN CLASSES**  
**2000 - 2003**

	On-Campus Housing	Entering Freshmen	Returned 2nd Year		Pct. On-Campus
			Number	Pct.	
Total	Yes	7,049	6,146	87.2	45.6
	No	8,417	6,770	80.4	
		15,466	12,916	83.5	
Males	Yes	1,919	1,614	84.1	26.0
	No	5,450	4,419	81.1	
		7,369	6,033	81.9	
Females	Yes	5,130	4,532	88.3	63.4
	No	2,967	2,351	79.2	
		8,097	6,883	85.0	

A subgroup of interest for analysis consisted of entering freshmen who affiliate with Greek social fraternities and sororities (see Table 2). The Greek students comprised 30 percent of the total population, and were much more likely than non-Greeks to select on-campus housing (63.1% vs. 38.1%).

**TABLE 2**  
**HOUSING PATTERNS**  
**ENTERING FRESHMEN BY GREEK AFFILIATION**  
**2000 - 2003**

	On-Campus Housing	Entering Freshmen	Returned 2nd Year		Pct. On-Campus
			Number	Pct.	
Total	Yes	7,049	6,146	87.2	45.6
	No	8,417	6,770	80.4	
		15,466	12,916	83.5	
Greek	Yes	2,926	2,736	93.5	63.1
	No	1,712	1,566	91.5	
		4,638	4,302	92.8	

Non-Greek	Yes	4,123	3,410	82.7	38.1
	No	6,705	5,204	77.6	
		10,828	8,614	79.6	

Table 3 presents retention statistics for entering freshmen for these four classes, distributed by ACT composite score (in quartile ranges). As might be expected, higher test scores generally result in higher first year retention rates, both for those who live on-campus and those who live off-campus.

**TABLE 3**

**FIRST YEAR RETENTION RATES  
BY RANGE OF ACT COMPOSITE SCORES  
ENTERING FRESHMEN, 2000 - 2003**

Housing	ACT Composite Score			
	≤ 20	21-23	24-25	≥ 26
<i>Females</i>				
On-campus	81.2%	87.8%	89.0%	92.7%
Off-campus	72.7%	77.8%	82.9%	85.6%
<i>Males</i>				
On-campus	79.2%	84.5%	81.2%	86.4%
Off-campus	75.6%	79.7%	81.4%	85.9%

*Statistical Analysis*

The technique used to evaluate the relationships was Chi-square. Observed retention rates for various categories of students were compared to the expected values in a normal distribution. The differences between the observed and expected values were then evaluated for statistical significance. Because of substantial structural differences in the housing patterns between male and female students, all models examined each gender group separately.

Research Question 1. *Is there a statistically significant relationship for first-time freshmen between living on campus and first year retention?*

Table 4 displays the Chi-square results for female entering freshmen, which is the model followed for all of the analyses. Table 5 presents results for male entering freshmen, but only the Residuals table is shown.

For female students, all relationships are significant at the 0.05 level. The results suggest that a) female entering freshmen who select to live in campus housing tend to return for the second year at higher than the expected rate, while b) those who opt for other housing arrangements tend not to return for the second year, also at a higher than expected rate.

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**TABLE 4**  
**CHI-SQUARE ANALYSIS**  
**ENTERING FRESHMEN**  
**FEMALE STUDENTS, 2000 - 2003**

*Observed Values*

Housing Choice	Retained for Second Year		
	Yes	No	Total
On-campus	4,532	598	5,130
Off-campus	2,351	616	2,967
Total	6,883	1,214	8,097

*Expected Values*

Housing Choice	Retained for Second Year		
	Yes	No	Total
On-campus	4,361	769	5,130
Off-campus	2,522	445	2,967
Total	6,883	1,214	8,097

*Residuals*

Housing Choice	Retained for 2nd Yr.	
	Yes	No
On-campus	<b>2.59</b>	<b>-6.17</b>
Off-campus	<b>-3.41</b>	<b>8.11</b>

**Bold:**  $p < .05$

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The results for male students are not so decisive. The only significant result is that male students who choose campus housing fail to return for a second year at a lower than expected rate. All of the other relationships may be the result of chance.

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**TABLE 5**

**CHI-SQUARE ANALYSIS  
ENTERING FRESHMEN  
MALE STUDENTS, 2000 - 2003**

*Residuals*

Housing Choice	Retained for 2nd Yr.	
	Yes	No
On-campus	1.08	<b>-2.30</b>
Off-campus	-0.64	1.37

**Bold:**  $p < .05$

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Research Question 2. *After controlling for ACT scores and gender, is there a significant relationship for first time freshmen between on-campus housing and first year retention?*

Table 6 presents Chi-square residuals for retained and non-retained students, distributed by ACT composite score quartiles. Again, there is in general a strong statistical relationship between housing choice and first year retention, even when allowing for the impact of differing levels of ability, as measured by the ACT. However, this relationship holds only for female students. None of the relationships meet the test of statistical significance for male students.

TABLE 6

CHI-SQUARE ANALYSIS  
BY RANGE OF ACT COMPOSITE SCORES  
ENTERING FRESHMEN, 2000 - 2003

*Residuals*

	ACT Composite Score							
	20 or below		21-23		24-25		26 & above	
Housing	Retained	<i>Not Retained</i>	Retained	<i>Not Retained</i>	Retained	<i>Not Retained</i>	Retained	<i>Not Retained</i>

*Females*

On-campus	1.36	<b>-2.49</b>	1.58	<b>-3.66</b>	0.71	-1.83	0.94	<b>-2.86</b>
Off-campus	-1.41	<b>2.59</b>	<b>-2.17</b>	<b>5.04</b>	-1.00	<b>2.57</b>	-1.34	<b>4.11</b>

*Males*

On-campus	0.48	-0.85	0.89	-1.83	-0.04	0.09	0.10	-0.24
Off-campus	-0.19	0.34	-0.49	1.01	0.03	-0.06	-0.07	0.17

**Bold:**  $p < .05$

Research Question 3. *After controlling for ACT scores and gender, is there a significant relationship for first time freshmen between Greek membership and retention?*

The analysis presented in Table 7 examines the relationship between Greek-letter organization affiliation and first year retention, distributed by ACT quartiles. The residuals show generally strong relationships, even when different levels of aptitude, as measured by ACT, are accounted for. Generally, Greek affiliation for male students has a strong relationship to first year retention at most levels of ACT score, a relationship not seen between housing choice and retention. For female students, Greek affiliation also is generally related to first year retention, although not significantly at higher ACT ranges. Further, for females, lack of Greek affiliation, is related to non-retention at every ACT level.

**TABLE 7**  
**CHI-SQUARE ANALYSIS**  
**BY RANGE OF ACT COMPOSITE SCORES**  
**ENTERING FRESHMEN, 2000 - 2003**

*Residuals*

Affiliation	ACT Composite Score							
	20 or below		21-23		24-25		26 & above	
	Retained	<i>Not Retained</i>	Retained	<i>Not Retained</i>	Retained	<i>Not Retained</i>	Retained	<i>Not Retained</i>

*Females*

Greek	<b>3.24</b>	<b>-5.95</b>	<b>3.13</b>	<b>-7.28</b>	1.84	<b>-4.76</b>	1.43	<b>-4.39</b>
Non-Greek	<b>-2.23</b>	<b>4.09</b>	<b>-2.77</b>	<b>6.44</b>	-1.58	<b>4.09</b>	-1.14	<b>3.48</b>

*Males*

Greek	<b>2.27</b>	<b>-4.05</b>	<b>2.60</b>	<b>-5.33</b>	<b>2.38</b>	<b>-4.97</b>	1.64	<b>-4.07</b>
Non-Greek	-1.07	1.91	-1.36	<b>2.79</b>	-1.22	<b>2.54</b>	-0.74	1.84

**Bold:**  $p < .05$

*Discussion*

Findings generally were in line with expectations. With respect to female students living on campus, first year retention rates were higher for that group and lower for those living off campus. Conversely, non-retention rates were lower than would be expected for those living on campus and higher for those living off campus. For male students, although all Chi-square statistics pointed in the expected direction, the only statistically significant statement that can be made is that on-campus students have a lower non-retention rate than would be expected by chance.

This difference could be due to several factors. Primary is the differing residence pattern between males and females. A much higher proportion of female freshmen (63.4%) live on campus than do male freshmen (26%). Further complicating the matter is the fact that a large proportion of on-campus female students choose that housing option because of the location of social sorority activities. Thus, the male students have much less of a tie to campus housing and both on-campus and off-campus males more likely reflect the general student body in terms of first year retention.

Since it logically may be assumed that students affiliated with Greek-letter social organizations typically are more affluent and likely better prepared for college-level work than the “average” entering freshman, it is necessary to examine the impact of general academic aptitude on the retention rates. That is, if by definition the on-campus students represent a more academically able group of students, the analysis should attempt to correct for this. Conducting the analysis by ACT composite score quartiles reveals that the statistically significant relationships for female students generally still hold, although they are somewhat weaker and non-significant in some cases. For male students, however, the relationships, though as expected, are still all non-significant.

In carrying the analysis one step farther, the impact of affiliation with Greek-letter social organization appears to have a substantial influence. For female freshmen in most ACT quartiles, the effect is much stronger than when adjusting only for ACT composite. All relationships are statistically significant, except at the upper two quartiles, where neither ACT nor housing preference appear to have as strong an impact on whether students are retained. Most interesting is the impact on male students. Relationships that were insignificant for ACT scores and housing preference show up strongly when Greek affiliation is included, significant at almost every point for Greek males. This suggests that, especially for males, Greek affiliation is much more of a determinant of retention than housing preference.

### *Conclusions*

In general, it is safe to conclude that living in on-campus housing has a positive impact on whether or not entering freshmen return for the second year, and off-campus living works to the detriment of retention. This tends to be true, even when differing levels of academic ability are taken into account.

Whether this relationship would transfer to the entire freshman class, were on-campus housing available and on-campus residency required for all entering freshmen, is not so clear. Since Greek affiliation appears to have so much stronger an impact on first-year retention, this suggests that it is not housing choice alone, but the sense of affiliation and involvement that helps the student to attain academically and want to remain in attendance.

Whatever decision is made about housing and living requirements in the future, these findings indicate that they should be accompanied by strong programs to encourage student involvement and affiliation with some group. Physical facilities and residence policies alone are not enough. The student needs a strong support network both to perform well academically and to develop a sense of attachment to the institution.

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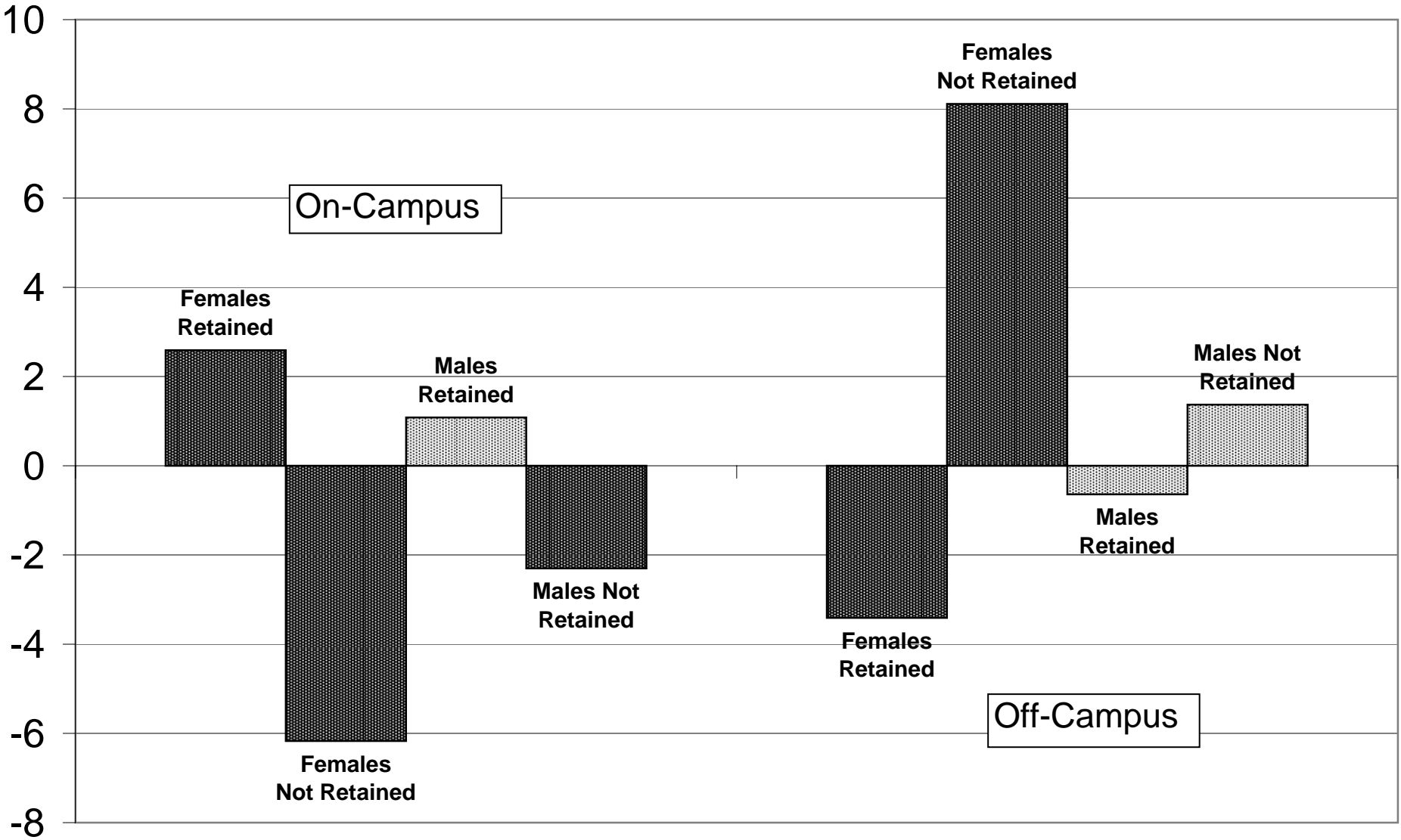
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## APPENDIX

### ADDITIONAL CHARTS USED FOR PRESENTATION

# Chi-square Analysis

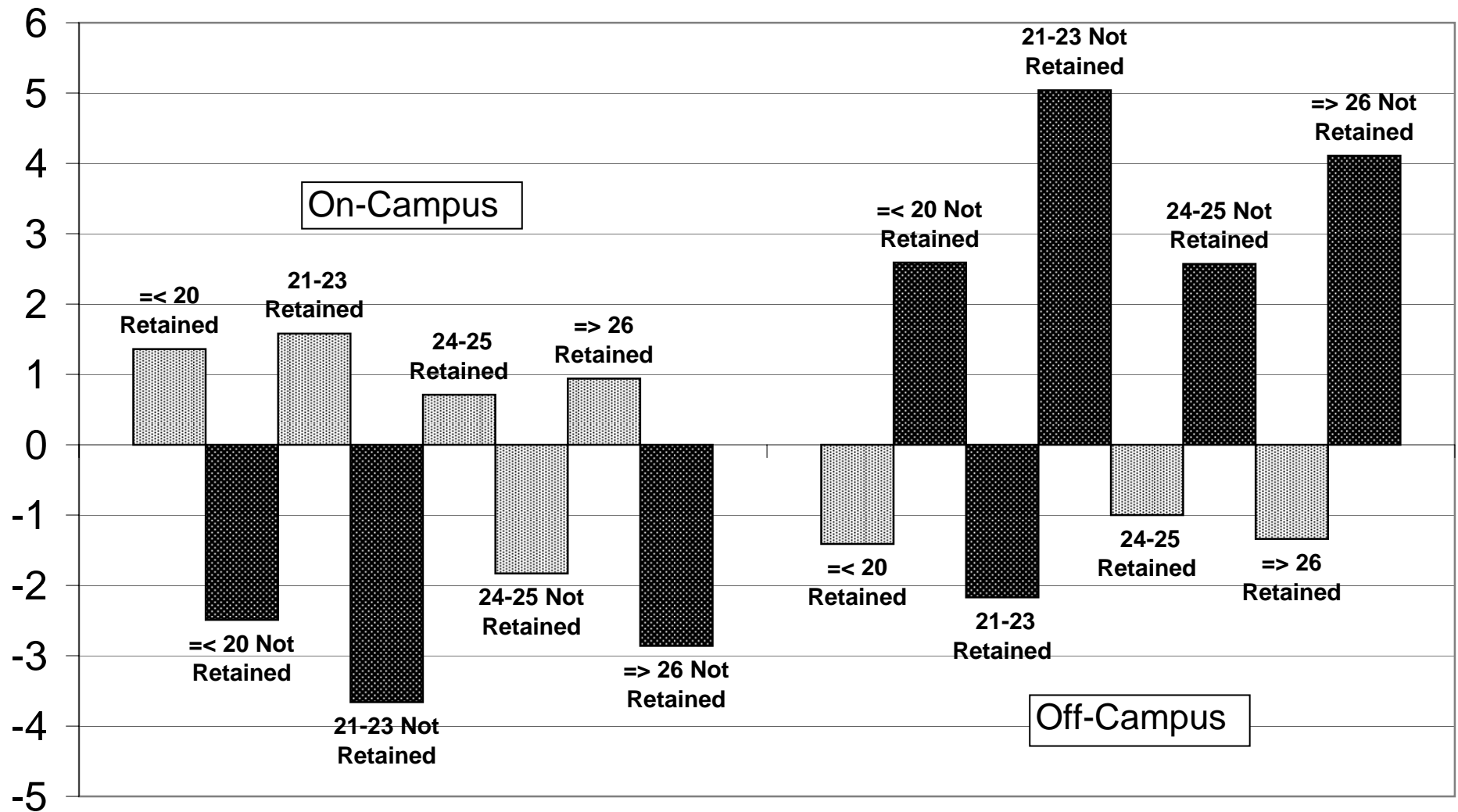
## Entering Freshmen, 2000 - 2003



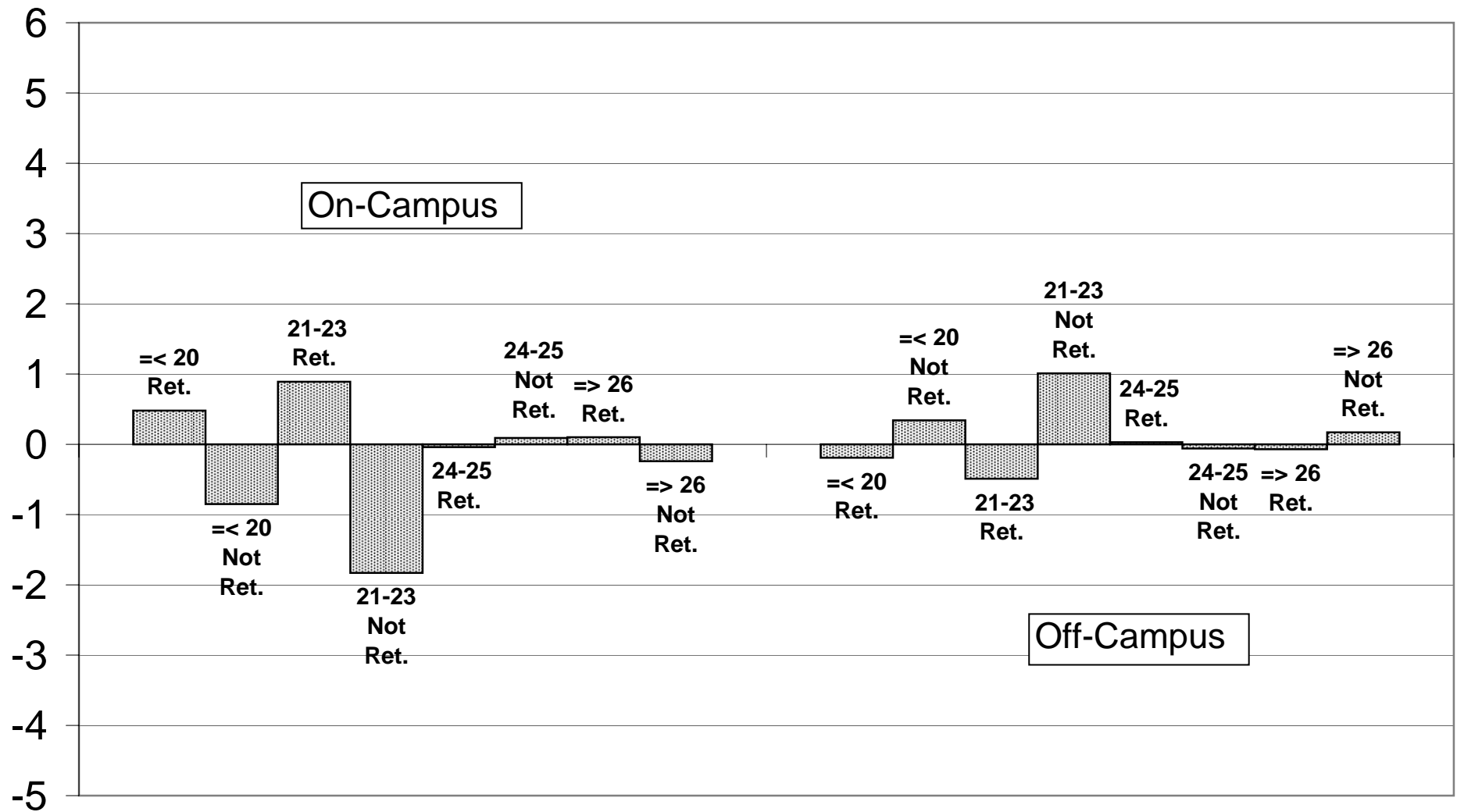
# Chi-square Analysis

## By Range of ACT Composite Scores

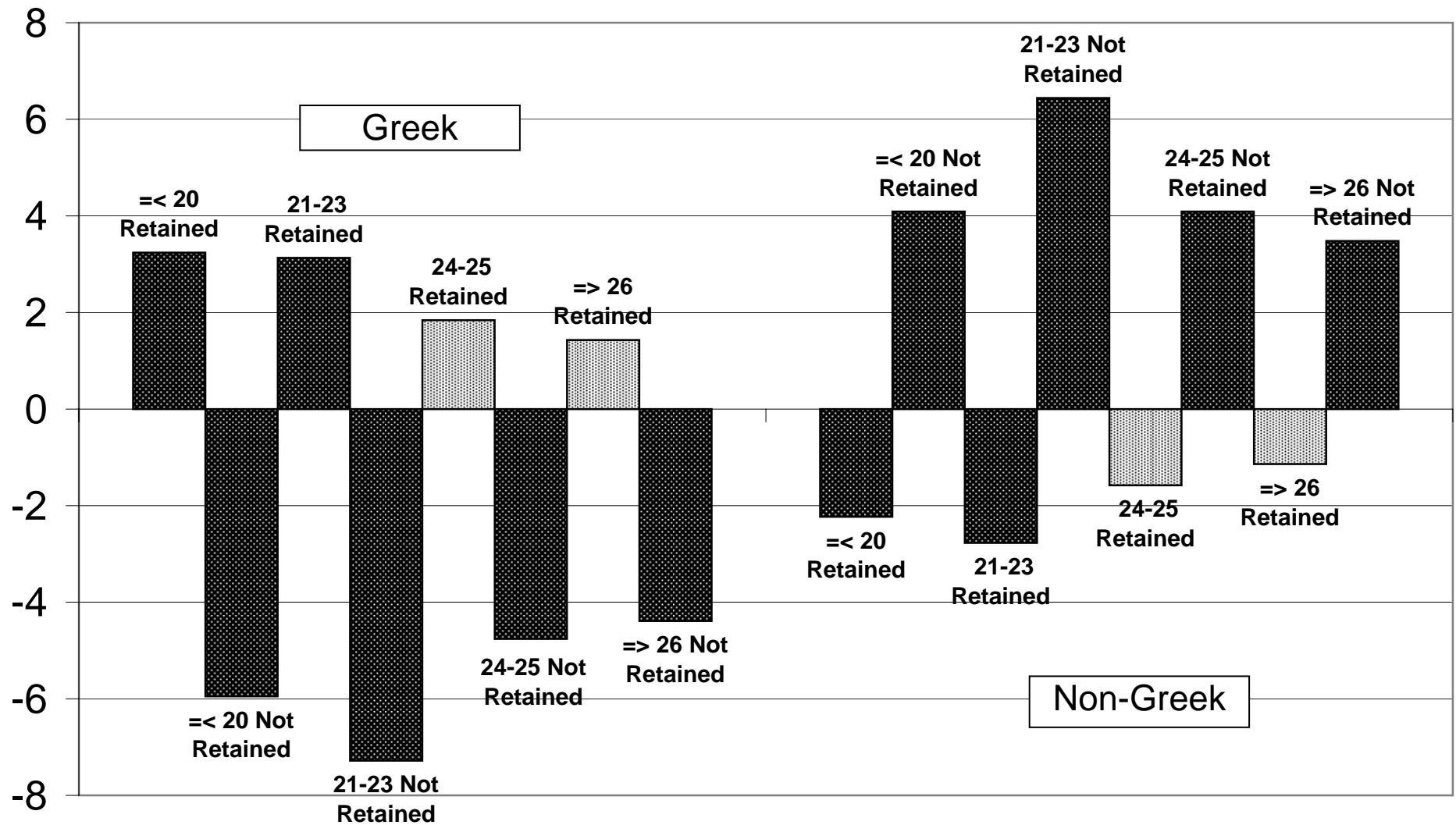
### Entering Female Freshmen, 2000 - 2003



# Chi-square Analysis By Range of ACT Composite Scores Entering Male Freshmen, 2000 - 2003



# Chi-square Analysis By Range of ACT Composite Scores Entering Female Freshmen, 2000 - 2003



# Chi-square Analysis By Range of ACT Composite Scores Entering Male Freshmen, 2000 - 2003

