

Intent to Apply To Graduate School: Perceptions of Senior Year Psychology Majors

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Senior year psychology majors were surveyed about their perspectives on the graduate school application process. Participants were asked about their own intentions to apply to graduate school as well as numerous questions about the application process. I also measured student locus of control and whether students were of traditional or nontraditional age. Key factors that influence a student's intention to apply to a graduate school in psychology include a student's personal belief in their own academic success, self-perception in the adequacy of their undergraduate preparation, and perceived importance of opportunities outside of the classroom. Participants with higher internal locus of control were more likely to apply to graduate schools in psychology. In addition to knowledge delivery and the fostering of skill development, psychology educators should also focus on helping students build self-confidence to be successful in multiple future endeavors.

Many psychology majors desire to continue their education after earning a bachelor's degree in psychology. Gaining a graduate degree in psychology gives students more career opportunities than an undergraduate degree alone (American Psychological Association, 2007). In 2005, more than 57,000 students were enrolled in psychology graduate programs (Snyder, Dillow, & Hoffman, 2008). According to Rajecki, Lauer, and Metzner (1998), national surveys indicate that 61% of incoming psychology majors have plans for graduate school. Even though many students have psychology graduate school aspirations, only 27.4% of doctoral applicants and 57.4% of master's degree applicants were admitted in 2003 (Norcross, Kohout, & Wicherski, 2005). Because of the popularity of graduate study in psychology and low acceptance rates (i.e., demand exceeding supply), students need to be realistic in thinking about graduate school options. Additionally, psychology educators need to provide pertinent advice so that students can honestly access their prospects of graduate school admission. Although data exist about the number of applications from sources such as graduate admissions committees, very little is known about the perceptions of graduate school applicants themselves. Previous work in this area focuses on data that are more easily attainable, such as the perceptions of

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graduate school admissions committee members (Landrum, Jeglum, & Cashin, 1994) or the analysis of archival admissions data (Landrum & Clark, 2005) to extract variables that predict success. My interest here is to begin to systematically understand the graduate admissions process from the applicant's perspective.

Graduate admissions committees (as indicated by applicants) continue to desire high grade point averages (GPAs), strong General Record Exam (GRE) scores, good letters of recommendation, and a personal desire to excel (Huss, Randall, Patry, Davis, & Hansen, 2002). Other expectations include strong study skills, regular class attendance, active class participation and motivation to learn (Scepansky & Bjornsen, 2003). Additionally, graduate admissions committees look for skills and experiences that will aid students complete their graduate program. Students that form relationships with professors through teaching and research assistant positions, conduct independent research projects for faculty, and present research at conferences (with faculty co-authors or sponsors) are more prepared for graduate school than those who do not form these relationships (Huss, et al., 2002), as well as other factors regarding the 'match and fit' of the applicant with graduate faculty. These faculty-student interactions are vital not only for a mentoring relationship, but higher quality interactions can allow for better letters of recommendation, which are key for students desiring to attend graduate school.

An additional factor that may influence a student's own decisions to attend graduate school is a student's locus of control (LOC) or perception of personal power over situations. Internal LOC is described as expected outcomes being dependent upon a person's behavior whereas external LOC is described as expected outcomes being independent or determined by luck or chance (Rotter & Mulry, 1965). Research concerning LOC has been applied to academic situations for decades. For instance, Onwuegbuzie and Daily (1998) found students with an internal LOC reported better study habits and higher academic achievement than students with an external LOC. Studies suggest that in addition to GPA and GRE scores, LOC should be considered when examining the pursuit of graduate study (Stake, 1979; Trice, 1985).

Although several authors offer advice on how to apply to graduate school and the strategies that aid students in preparing for graduate school (such as in books and student-oriented magazines), there is limited research concerning a student's motivation for applying to graduate school. Heckert and Wallis (1998) found nearly 75% of undergraduates believe they will obtain a graduate degree, although Scepansky and Bjornsen (2003) admit that the proportion that actually enters graduate school is much lower than 75%. Therefore, it may be

helpful to examine both the intent to apply and locus of control in helping to understand interest in graduate school admissions.

Motivation is a key indicator in whether someone is likely to enter a graduate program (Scepansky & Bjornsen, 2003). Lent, Brown, and Gore (1997) found that academic self-efficacy and academic achievement predicted continued learning as well as career direction. These findings indicate that undergraduate students who not only do well in academics but also enjoy learning are more likely to continue in the educational pursuits. Certain subgroups of students may have more challenges than other students, such as nontraditional students. Nontraditional students (over age 22) may have families to support and hold a full time job to support those families (Luzius & Webb, 2002). Nontraditional students tend to be motivated by intrinsic qualities such as trying their best, understanding the subject, and learning something new (Landrum, McAdams, & Hood, 2000). Expectations regarding economic success may also be a driving force behind applying for graduate school (Day & Newburger, 2002) for both nontraditional and traditional students. Students today face various challenges such as optimal technology use, the increasing need for education and re-training, and financial burdens.

The purpose of this study is to examine decision-making from the student perspective, including one's locus of control as well as traditional and nontraditional student differences. In understanding the internal qualities and external circumstances of students choosing to attend graduate school, potential graduate students may be better prepared for the application process. Furthermore, psychology educators and advisors aware of this knowledge can help students realistically optimize an application strategy to help facilitate student success. An honest self-assessment may help students clarify their next best steps, such as applying immediately, delaying graduation and adding another year of undergraduate study to strengthen their credentials (and build confidence), or perhaps not apply to graduate school at all. Some students, after such careful self-reflection, might realize that without a strong drive or passion for graduate education, their odds of admission into graduate school are low.

METHOD

Participants

Senior psychology majors from 10 post-secondary institutions participated in this study (Boise State University, Chadron State College, D'Youville College, Edgewood College, George Fox University, Lasell College, Northern Kentucky University, Randolph College, Russell Sage College, and the University of San Diego). Institutional participation was recruited as part of the PSYCDATA national coalition (for more information, see www.psychologydata.org). Students were recruited for

this study via email request by faculty members from each participating institution. A total of 348 students participated in this study. There were 45 men and 219 women, and 84 students did not specify their gender. The participants reported an average age of 23.54 ($SD = 5.1$), ranging in age from 18 to 54 years old. Participation in this study was voluntary and no compensation was provided.

Materials

This study was conducted using 58 original survey items and the *Academic Locus of Control* (ALOC) scale (Trice, 1985) for college students, which contains 28 items associated with personal control over academic outcomes. The 58 original survey items (Tables 1 and 2) were pilot tested prior to use. Items in Table 1 were answered on a Likert-type agreement scale from 1 = *strongly disagree* to 5 = *strongly agree*. Items in Table 2 were answered either *yes* or *no*.

Procedure

This survey was conducted online via surveymonkey.com and was available for 2½ months. Institutions were recruited via the PSYCDATA national coalition. Senior psychology majors were contacted by professors from their university by email and given the survey link. Each faculty member at each institution secured local IRB approval prior to inviting students to participate. The survey items presented in Tables 1 and 2 were part of a larger national survey (see www.psychologydata.org for more information). Time permitted to complete the survey was unlimited. At the completion of the survey, participants were thanked for their participation.

RESULTS AND DISCUSSION

General Outcomes. I asked those participants with graduate school intentions how many graduate schools they were applying to for fall admission. In this sample, the mean number of schools was 4.05 ($SD = 4.4$), ranging from 1 to 30 schools, with the modal number being one school. The mean GPA of all respondents was 3.15 ($SD = 0.4$). Students were asked if they planned to attend graduate school in psychology, but also asked if they planned to attend graduate school in a subject matter area other than psychology. From Table 2, 26.9% indicated that they plan to attend graduate school in psychology, and 24.8% indicated they plan to attend graduate school in a subject other than psychology. About one-third (32.3%) indicate that they will take a break from school before applying to graduate school. Given the lack of literature about the non-psychology related graduate education pursuits of psychology graduates and prior experience, I was surprised to learn that nearly one-quarter of

psychology graduates apply to graduate programs, but not graduate programs in psychology.

TABLE 1 Overall Means and Standard Deviations Survey Items
Measured on an Agreement Scale

Items	<i>M</i>	<i>SD</i>
1. Perseverance is a factor needed when deciding to apply to graduate school.	4.37	.81
2. My personal finances will affect my decision to go to graduate school.	3.61	1.21
3. I will apply to graduate school because of pressure from my family.	2.09	1.11
4. I am very well organized and that will help in graduate school.	3.94	1.01
5. My desire to succeed will influence my decision to apply to graduate school.	4.19	.92
6. The hard work I have shown during my undergraduate education will be a factor in my graduate school acceptance.	4.06	.87
7. I will not apply to graduate school unless there is a local program.	2.60	1.24
8. I enjoy going to class.	3.88	.82
9. Self motivation plays an important role in academic success.	4.58	.63
10. Student research is a valuable learning opportunity.	4.23	.80
11. Self discipline plays an important role in academic success.	4.58	.63
12. I enjoy learning new things.	4.49	.66
13. I believe I am ready for graduate school because of my undergraduate educational experience.	3.80	.97
14. The profession I desire requires a graduate degree.	3.99	1.13
15. I need to attend graduate school to prepare for my career.	3.94	1.15
16. I have all the tools to succeed in graduate school.	3.76	.87
17. I can have a successful career without graduate school.	3.31	1.05
18. It is better to accomplish short term goals than long term goals.	2.78	.89
19. I am applying to graduate school because my parents have advanced degrees.	1.80	1.02
20. I am anxious to begin my career.	3.79	.96
21. My family is an obstacle in applying for graduate school.	2.08	1.20
22. My finances are an obstacle in applying for graduate school.	3.29	1.33
23. My GPA is an obstacle in applying for graduate school.	2.25	1.32
24. I find it difficult to ask for letters of recommendation.	2.61	1.20
25. The application process is confusing to me.	2.66	1.15
26. It is easier to find a job than to apply to graduate school.	3.02	1.09
27. Graduate school is for younger students.	1.96	.88
28. I will be a better employee than graduate student.	2.68	1.09
29. Without a graduate degree I will fail.	2.07	1.08
30. I think graduate school will not be easy.	4.12	.75
31. I actively participate in class.	3.89	.90
32. I am nervous about the cost of graduate school.	3.74	1.12

33. I set goals.	4.25	.68
34. I enjoy reading.	4.01	.89
35. I complete my goals.	4.14	.72
36. Class attendance is important to me.	4.16	.87
37. Class participation is important to me.	3.92	.87
38. Group work is important.	3.36	1.07
39. Internships are important.	3.86	.10
40. Research assistantships are important.	3.67	1.01
41. Teacher assistantships are important.	3.56	1.00
42. Career goals are important when deciding to go to graduate school.	4.29	.75
43. My parents desire me to further my education.	3.32	1.24

Note. These items were answered on an agreement scale with 1 = *strongly disagree* and 5 = *strongly agree*.

Prior to examining the relationships between items in Table 1 and other variables (such as intent to apply, academic locus of control, and traditional/nontraditional student status), factor analysis was used for

TABLE 2 Survey Items and Percentage of Yes Responses from Dichotomous Survey Items

Items	% Yes
1. I am currently in a relationship that will affect my decision to apply to graduate school.	23.8
2. I am employed less than 20 hours a week.	24.8
3. I have children.	8.5
4. I am married or currently in a long term relationship.	33.7
5. I am a nontraditional student.	18.0
6. My family thinks I should go on to graduate school.	39.1
7. I am a transfer student.	22.4
8. I am a full-time student.	58.8
9. I plan to continue education after I receive my bachelor's degree.	50.3
10. I plan to attend graduate school in psychology.	26.9
11. I plan to attend graduate school in a subject other than psychology.	24.8
12. I have applied (or will apply soon) to a graduate program in psychology.	20.4
13. I plan to take a break from school before applying to a graduate program.	32.3
14. I do not wish to attend graduate school in psychology at anytime.	19.7
15. My goal is to obtain a good job with my bachelor's degree in psychology.	23.5

Note. Above items were answered as 0 = *no* and 1 = *yes*.

data reduction purposes—a five factor solution is easier to comprehend than individual patterns of responding on 43 variables. First, a principle components analysis was used, followed by a varimax rotation, eigenvalue = 2.0, and factor loading > .50, five factors emerged, ex-

plaining 49.7% of the variance. The verbal descriptions for these factors are (followed by Cronbach α inter-item reliability coefficients): personal belief in academic success ($\alpha = .0.86$), personal belief in adequate undergraduate preparation ($\alpha = 0.86$), outside of class opportunities ($\alpha = 0.81$), cost of graduate school ($\alpha = 0.75$), and application challenges ($\alpha = 0.68$). Although the last factor has less than adequate reliability, it was retained to explore its relationship to the key variables of primary interest. For the actual items that load on each factor, see Table 3.

TABLE 3 Factor Analysis Outcomes with Survey Items and Factor Loadings

Items	Personal belief in academic success	Personal belief in adequate undergraduate preparation	Outside of class opportunities	Cost of graduate school	Application challenges
Self motivation plays an important role...	.79				
Self discipline plays an important role...	.77				
I enjoy learning new things.	.70				
Perseverance is a factor needed when...	.69				
Career goals are important when67				
I have all the tools to succeed in graduate...		.72			
I believe I am ready for graduate school...		.65			
The hard work I have shown during my...		.61			
My desire to succeed will influence my...		.57			
I am very well organized and that will...		.51			
I enjoy going to class.		.54			
I need to attend graduate school to...		.59			
The profession I desire requires a...		.54			
Research assistantships are important.			.87		
Teacher assistantships are important.			.85		
Internships are important.			.65		
Group work is important.			.57		
Student research is a valuable learning...			.54		
My finances are an obstacle in applying...				.86	
I am nervous about the cost of graduate...				.76	
My personal finances will affect my...				.76	
My family is an obstacle in applying...				.50	
The application process is confusing to me.					.72
I find it difficult to ask for a letter of...					.69
It is easier to find a job than to apply...					.67

Intent to Apply. To examine the relationship between intent to apply to a graduate program in psychology (yes or no) and other survey questions, *t*-tests were conducted. Those planning to apply to a graduate program in psychology ($M = 4.54$, $SD = 0.5$) agreed significantly more than those not planning to apply to a graduate program in psychology ($M = 4.29$, $SD = 0.6$) with the factor 'personal belief in academic success with' (with regards to graduate school), $t(253) = 3.21$, $p < .005$. Those planning to apply ($M = 4.08$, $SD = 0.5$) agreed significantly more than those not planning to apply ($M = 3.66$, $SD = 0.7$) with the factor 'personal belief in adequate undergraduate preparation,' $t(253) = 4.68$, $p < .001$. Those planning to apply agreed significantly more ($M = 4.01$, $SD = 0.7$) than those not planning to apply ($M = 3.60$, $SD = 0.8$) with the factor 'outside of class opportunities,' $t(253) = 4.11$, $p < .001$. In each instance, those applying to graduate programs scored higher (that is, agreed more) with the factor items than those students not intending to apply. Students who intend to apply to graduate school in psychology believe more in their own academic success, believe more in their academic preparation, and believe in the importance of outside of class opportunities. For the remaining two factors (cost of graduate school and application challenges), there were no significant differences.

The 'intent to apply' dichotomy was also analyzed with other yes/no items using chi square analyses. Only one significant association emerged between answers to the item "I am a transfer student" and "I plan to attend graduate school in psychology," $X^2(1, N = 255) = 4.16$, $p < .05$. Whereas 52.1% of transfer students intended to apply to graduate school, 39.0% of non-transfer students intended to apply to graduate school.

LOC and Intent to Apply to Graduate School. Academic locus of control (Trice, 1985) is scored on a scale such that the higher the score, the greater external locus of control (conversely, lower scores indicate greater internal locus of control). Each respondent's ALOC score was correlated with the scores for each of the five factors depicted in Table 3. ALOC scores correlated significantly with all five factor scores, $ps < .001$. ALOC scores were significantly correlated with: (a) personal belief in academic success, $r(268) = -0.38$; (b) personal belief in adequate undergraduate preparation, $r(268) = -0.51$; (c) outside of class opportunities, $r(268) = -0.23$; (d) cost of graduate school, $r(268) = 0.25$; and (e) application challenges, $r(267) = 0.44$. Participants with a higher *internal* locus of control (low ALOC score) reported greater personal belief in academic success, greater belief in their undergraduate preparation, and placed greater importance on outside of class opportunities. Participants with an *external* locus of control (high ALOC score) reported more concerns about the cost of graduate school, and

greater concern about application challenges. Regarding the specific likelihood of applying to graduate school, *t* test results indicated that there is a significant difference between those planning to attend graduate school in psychology ($M = 73.14$, $SD = 11.5$) and those not planning to attend graduate school in psychology ($M = 77.79$, $SD = 11.1$) on ALOC scores, $t(253) = -3.25$, $p < .005$. Participants planning to apply to graduate programs in psychology reported a higher internal locus of control than students not intending to apply to a graduate program in psychology.

Differences Between Traditional and Nontraditional Students. The same five factor scores were subjected to *t* tests to determine if there are significant differences between traditional and nontraditional students. Across all five factor scores, there were no significant differences between traditional and nontraditional students.

Conclusions

About 27% of the respondents from this sample indicated that they will (or have) applied to graduate school in psychology. Interestingly, almost 25% indicated that they will (or have) applied to graduate school, but in an area different from psychology. This latter group of senior year psychology majors is certainly understudied by researchers in this area, and psychology educators need to know more about these students, and determine how we can best help these students achieve their goals.

When factor scores (personal belief in academic success, personal belief in adequate undergraduate preparation, outside of class opportunities, cost of graduate school, and application challenges) for the five factors were compared in *t* tests with the question "I am planning to apply (or have applied) to a graduate program in psychology," those planning to apply scored higher in their personal beliefs in academic success, undergraduate preparation, and the importance of outside of class opportunities. It is important to note that these outcomes are not cause and effect relationships. That is, if an advisee wishes to attend graduate school in psychology, I would not advise him or her to score high in these areas. However, those students who tend to score higher in these areas may be more likely to apply to graduate school. But educators can work to encourage students to believe in themselves (academic self-efficacy), prepare undergraduates better, and continue to stress the importance of outside-of-class activities, such as research assistantships, internships, and participation in Psi Chi and psychology clubs to students with graduate school aspirations. Higher levels of academic self-efficacy have been shown to be consistent predictors of both retention and GPA (Robbins, Lauver, Le, Davis, Langley, & Carlstrom, 2004).

Interestingly, students who transfer tend to be more likely to apply to graduate school. One explanation could be that those students who transfer are seeking out superior educational opportunities, and the same type of student who seeks out a better educational opportunity may also be more likely to apply to graduate school in psychology. In addition, the age of the student (traditionally-aged or nontraditionally-aged) did not lead to significant differences in any of the five factor scores; all students, regardless of age, scored similarly on the factors.

Based on the results of this study, the internal motivations of senior level psychology majors may also influence one's intention to apply to graduate school in psychology. Using Trice's (1985) *Academic Locus of Control* scale, correlational analyses revealed that those students having higher *internal* locus of control (i.e., a student believe that life's outcomes are dependent on their own behavior) report higher personal beliefs in their own academic success, greater belief in their own level of undergraduate preparation, and placed greater importance on outside of class activities (as compared to students having an *external* locus of control). This pattern overlaps precisely with those intending to apply to graduate school. Again, these results cannot be used causally. Advisees with a high *external* LOC who wish to pursue a graduate education in psychology should not be dissuaded in applying to graduate school based on these data; these data only suggest that those with an internal locus of control tend to apply to graduate schools in psychology more. Further research should examine actual student acceptance or rejection decisions into graduate schools to better understand the relationships between these variables.

More systematic research needs to be conducted with the students applying to graduate programs across the country; further, psychology educators need information about the outcomes of specific applications. That is, are there personality or demographic variables, from the student (applicant) perspective, that would better help us predict application success to graduate programs in psychology? Continuing the quest to understand the graduate admissions process from the student's perspective may allow educators to help future students better understand the process, suggest careful decision-making that leads to the development of knowledge, skills, and confidence (i.e., self-efficacy), and more accurately help students gauge their own application strategies (i.e., metacognition) that lead to the best chances of success.

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