



# Why (Not) School Psychology?: a Survey of Undergraduate Psychology Majors' Preferences

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## Abstract

As the field of school psychology has expanded, the workforce has not, resulting in critical shortages at both the trainer and practitioner levels. Additionally, practitioners who are racially, ethnically, and linguistically diverse are underrepresented in the field, despite the growing diversity of our nation's schools. The purpose of this paper was to survey undergraduate psychology majors regarding their preferences for graduate studies and eventual career paths, and to examine the variables that might influence the decision to pursue a degree in school psychology. Findings suggested that exposure to the field in undergraduate studies was the only significant variable in predicting level of interest in pursuing graduate study in school psychology, which is similar to previous research. However, there were differences found by gender and ethnicity that might be informative for recruitment of students to the field.

**Keywords** Recruitment · Diversity

There are 7.1 million students in our nation's public schools who are eligible for special education services under the Individuals with Disabilities Education Act (IDEA). This number represents 14% of total enrollment (National Center for Education Statistics 2020). Traditionally, tasks associated with this population of students, including psychometric testing and program planning, have dominated the school psychologist's responsibilities (Fagan 2004). With time, however, the role has expanded to include additional services, such as primary and secondary intervention development, implementation, and monitoring for academic and behavioral needs; consultation with teachers, parents, and other professionals; program development and evaluation; research activities; and supervision (Jimerson et al. 2008). Further, with the changing educational landscape, school psychologists are often engaged at the systems level, as school districts move toward multi-tiered systems of support (MTSS), including Response to Intervention models for academics and behaviors (Bahr et al. 2017).

Because of their many roles and responsibilities, the National Association of School Psychologists (NASP 2017) has recommended a ratio of no more than 1000 students per

school psychologist; when comprehensive and preventive services, including MTSS, are being provided, the suggested ratio is no more than 500 to 700 students per school psychologist. Unfortunately, the recommended standards for service provision are not reflected in the numbers. According to NASP (2017), data collected within the past decade have estimated the ratio of students to school psychologists in the USA to be 1381 to one, with 23 states reporting 1500 or more students to one school psychologist. During that same time period, only seven states met the suggested ratio (NASP 2017). These numbers reflect a critical shortage of school psychologists in the field that is predicted to continue through the year 2025. Factors impacting ratios may include both a limited number of school psychologists and an inadequate number of positions within school districts (Castillo et al. 2014). Nevertheless, an insufficient supply of practitioners can have detrimental effects on the system, including a reduction in the availability, range, and quality of services provided to students, teachers, and families; a role with a narrow focus on special education compliance; and the hiring of unqualified personnel to perform those services in the absence of a credentialed school psychologist (Bocanegra et al. 2017).

Among the ranks of practicing school psychologists, those who are racially, ethnically, and linguistically diverse are significantly underrepresented (Grapin et al. 2016). In fact, NASP's most recent survey of its members revealed that just 13% identified as racial and/or ethnic minorities. Further, only

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14% reported fluency in a language other than English; approximately half of that subgroup revealed that they provided multilingual school psychology services. When results were compared to those of a survey completed 5 years earlier, diversity among NASP members had increased just 4%, suggesting that the degree of diversity among school psychologists has remained relatively stagnant (Grapin et al. 2016). In contrast, the students with whom school psychologists work are becoming increasingly more diverse. Approximately 49% of public school students identify as racial and/or ethnic minorities, and 20% of those individuals report speaking a language other than English at home. Researchers have suggested that recruiting diverse individuals to the field of school psychology will increase the likelihood that underrepresented populations of students will receive appropriate services, as pervasive inequities to service delivery for them will be recognized and challenged (Grapin et al. 2015). This suggests that recruitment of practitioners should include activities that especially target those who are racially, ethnically, and linguistically diverse.

Given shortages of school psychologists, it is important to examine the factors that influence undergraduate decision-making relative to career paths. In their study of undergraduate preferences for graduate training in psychology, Stinnett et al. (2013) surveyed 674 students whose major areas of study included psychology ( $n = 230$ ; 35%), early education ( $n = 22$ ; 3%), secondary education ( $n = 54$ ; 8%), and “other” ( $n = 349$ ; 53%); all participants attended the same university and were enrolled in undergraduate psychology courses. Students ranked from freshman to senior year and 62% identified as female, with 83% of total participants describing their ethnicity as Caucasian. The undergraduate students in this study completed a questionnaire that included 39 items related to interest and preferences for graduate training in psychology. Results indicated that the psychology majors reported significantly more interest in the pursuit of graduate school and in learning about disorders and problems encountered in childhood than other majors. Surprisingly, however, the psychology majors reported significantly less exposure to school psychology within their programs of study than other majors. Further, 20% of all respondents reported they had never heard of school psychology, while 90% indicated that school psychologists do not conduct interventions, therapy, or counseling, suggesting that relevant coursework was limited (Stinnett et al. 2013).

In another study, 356 NASP student members in school psychology programs were surveyed about their knowledge, perceptions, and input received from various stakeholders regarding the field; the sample included 317 (89%) females and 294 (84%) individuals who identified as Caucasian (Bocanegra et al. 2017). Respondents were asked to identify the source of their first exposure to school psychology and then to rate items pertaining to the following on a 7-point Likert scale: (a) the importance of various resources for

exploring the field (e.g., program websites); (b) the factors influencing their decision to enter the field (e.g., scope and nature of work, salary); and (c) factors contributing to their excitement about school psychology (e.g., opportunity to work with children). Similar to the previous study (i.e., Stinnett et al. 2013), results indicated that very few students (9%) had learned about the role of the school psychologist through undergraduate coursework. Rather, students encountered the field through direct contact with advisers and professors (20%), internet searches (19%), family or friends (16%), or through working with a school psychologist (11%). The NASP and individual program websites were identified as important resources, as were discussions with faculty and practicing school psychologists. Finally, students reported being drawn to the field by the prospect of working with youth, the scope and nature of job roles, and the promise of favorable employment prospects. Once they were accepted into a school psychology graduate program, most participants reported high levels of excitement about the field (Bocanegra et al. 2017).

Because school psychologists who identify as racially, ethnically, and linguistically diverse are sparsely represented in our nation’s schools (Grapin et al. 2016), it is especially important to examine recruitment to the field for this population. In one recent study, Bocanegra et al. (2016a) analyzed scale data from 283 undergraduate psychology students, who self-identified as belonging to a racial and/or ethnic minority group, through the lens of Social Cognitive Career Theory (SCCT). SCCT is a framework that was designed to explain career and academic interests, choices, and performance; choice from this perspective is viewed as a dynamic process that can be impacted by numerous changeable factors (Lent 2005 as cited in Bocanegra et al. 2016a). Bocanegra and colleagues (2016a) utilized SCCT in an attempt to predict and explain factors that impacted the minority undergraduate students’ choices in entering a school psychology program of study. Specifically, these researchers looked at the relationships between self-efficacy, outcome expectations, choice intentions, and knowledge of and exposure to the field of school psychology. Results of mediation analyses for this sample suggested that outcome expectations partially mediated the relationship between exposure to the field and the choice to enter a school psychology program, but not the relationship between knowledge and choice intentions. Additionally, self-efficacy was not identified as a mediator for the relationship between learning experiences and choice intentions. However, the strong positive correlations between both outcome expectations and self-efficacy with the choice to enter a school psychology training program suggested that the SCCT framework might be useful in recruiting minority students to the field (Bocanegra et al. 2016a).

Perhaps one of the more important findings from the previously described study was that of the relationship between exposure to the field of school psychology and choice

intention (Bocanegra et al. 2016a). Although the authors explained several possible reasons for this direct path from exposure to choice, they posited that it was most likely due to the exposure effect, a phenomenon that occurs when repeated exposure to a stimulus results in a positive affect toward that stimulus (Bocanegra et al. 2016a). In a follow-up study, Bocanegra et al. (2016b) completed an item-level analysis of the scale data for minority students included in the larger SCCT study in an effort to determine the types of exposure and knowledge that correlate most strongly with a minority student's intention to pursue a graduate degree in school psychology. Findings suggested several possible influences, including (a) having positive, meaningful contact with a school psychologist; (b) learning directly about the role of the school psychologist as important and satisfying; (c) understanding that within the field there is a strong commitment to both cultural diversity and competence; and (d) cultivating a belief that qualified minority students do successfully complete training programs (Bocanegra et al. 2016b). These results have implications not only for recruitment of minority students to programs of study in school psychology, but for others, as well. Lack of exposure to the field in undergraduate coursework relative to choice of school psychology as a career path is a recurring theme that needs to be addressed in response to the shortage of practitioners.

In one study designed to examine the impact of exposure on choice to apply to a school psychology graduate program, a control group comprised of undergraduate psychology and education majors watched a short video regarding the field (Bocanegra et al. 2019). Results indicated that, immediately after viewing, students reported increased knowledge of the field. However, when measured several years later, it was determined that the video did not result in actual applications to school psychology programs from those who had viewed it. Findings suggest that a one-time exposure might not be as effective as sustained exposure to the field by various stakeholders (e.g., faculty members, practitioners, accrediting bodies) through interpersonal interactions, classroom presentations, and undergraduate coursework specific to school psychology (Bocanegra et al. 2019).

Results from various studies have suggested that undergraduate students have less knowledge of and exposure to school psychology than they do to other fields, including clinical and counseling psychology (Bocanegra et al. 2019). To address the shortage of practicing school psychologists, it stands to reason that exposure to the field during undergraduate coursework, or perhaps even in high school, should occur. However, it is also important to examine other factors that might influence a student's decision to pursue a graduate degree in school psychology to enhance recruitment efforts. This is particularly true for minority students, who are underrepresented in graduate programs and in the field. Thus, the purpose of this study was to explore the following questions:

1. What factors, if any, predict which undergraduate psychology majors will eventually pursue training and a career in school psychology?
2. What sub-fields of psychology are most appealing to undergraduate psychology majors relative to eventual graduate studies and career paths? What factors are important in deciding on a sub-area to pursue as a possible career?
3. For those undergraduate students deciding to pursue a graduate degree, what factors influence their choice of program? Are there differences among ethnic groups?
4. For those undergraduate students deciding to pursue a graduate degree in school psychology, what aspects of the career are most appealing? Are there differences among ethnic groups and genders?

## Methods

### Participants

Undergraduate psychology students in four states (i.e., New Jersey, New York, Pennsylvania, and Delaware) were invited to complete an online survey of their preferences for graduate studies and eventual career paths. A link to the survey was emailed to the psychology department chair, as identified on the website, for 80 institutions that were randomly selected; because only five programs were identified in the state of Delaware, all were included, whereas 25 programs were randomly selected from each of the three remaining states. The email requested the chair to share the link with undergraduate psychology majors. The study was fully approved by the Institutional Review Board of the author's university. The survey was administered via Qualtrics, and four \$25 gift cards, to be awarded through a random drawing, were offered as incentive.

Table 1 represents the demographic data for the 617 students who responded to the survey. Not all participants provided a response to individual questions or statements, which explains the differences in totals across categories. Similar to previous studies of this type, the sample was overwhelmingly female (86%); however, this sample was more diverse, with 52%, or approximately half, of respondents identifying as Caucasian. Participants attended either public or private institutions, with the majority of schools (40%) located in New York. Most students were juniors or seniors (65%) and half reported GPAs in the 3.5–4.0 range. Participants were also asked to report scores for the SAT® (College Board 2021) Evidence-Based Reading and Writing and Math sections. The average score for the reading and writing section was 601.9 (range = 230–800; standard deviation = 105.6), and for math, the average score was 586.2 (range = 250–800; standard deviation = 108.6). However, only 114 of the 617 respondents

**Table 1** Participant demographic characteristics

Characteristic	<i>n</i>	Percentage of sample
Gender	617	
Female	532	86
Male	61	10
Transgender female	0	0
Transgender male	2	0.3
Gender nonconforming	17	3
Other	2	0.3
Prefer not to answer	3	0.4
Ethnicity	617	
Caucasian	319	52
African-American	74	12
Hispanic	113	18
Native American	1	0.2
Asian American	40	7
Pacific Islander	2	0.3
Other	59	10
Prefer not to answer	9	2
State	594	
New Jersey	165	28
New York	233	40
Pennsylvania	163	27
Delaware	33	5
Type of institution	572	
Community	5	1
Public	272	48
Private	286	50
Other	9	1
Class rank	605	
Freshman	72	12
Sophomore	103	17
Junior	210	35
Senior	182	30
Super senior	24	4
Other	14	2
GPA	605	
3.5–4.0	302	50
3.0–3.4	219	36
2.5–2.9	65	11
2.0–2.4	17	3
Below 2.0	2	0.3

reported SAT® (College Board 2021) scores, so the decision was made to drop the variable from analyses.

## Measure

In addition to the questions pertaining to demographics, the survey included a page that had brief descriptions of nineteen

psychology-related careers (American Psychological Association [APA] 2011). Examples of three career descriptions are offered below. (For descriptions of the other 16 psychology-related careers included in the study, the reader is referred to the APA's (2011) *Careers in Psychology* resource guide.)

*Clinical psychologists* assess and treat mental, emotional, and behavioral disorders. These range from short-term crises, such as difficulties resulting from adolescent conflicts, to more severe, chronic conditions, such as schizophrenia. Some clinical psychologists treat specific problems exclusively, such as phobias or clinical depression. Others focus on specific populations— for instance, youths; families or couples; ethnic minority groups; gay, lesbian, bisexual, and transgender individuals; or older people. They also consult with physicians on physical problems that have underlying psychological causes. (p.4)

*Counseling psychologists* help people recognize their strengths and resources to cope with everyday problems and serious adversity. They do counseling/psychotherapy, teaching, and scientific research with individuals of all ages, families, and organizations (e.g., schools, hospitals, businesses). Counseling psychologists help people understand and take action on career and work problems, they pay attention to how problems and people differ across the life span, and they have great respect for the influence of differences among people (such as race, gender, sexual orientation, religion, disability status) on psychological well-being. They believe that behavior is affected by many things, including qualities of the individual (e.g., psychological, physical, or spiritual factors) and factors in the person's environment (e.g., family, society, and cultural groups). (p.5)

*School psychologists* are engaged in the delivery of comprehensive psychological services to children, adolescents, and families in schools and other applied settings. They assess and counsel students, consult with parents and school staff, and conduct behavioral interventions when appropriate. Most school districts employ psychologists full time. (p.8)

Participants were asked to rank the careers in order of appeal and then were asked to rank nine factors (i.e., interest in area of psychology, interest in population served, salary/potential for earning, setting, potential for professional growth, flexibility of schedule/work hours, prestige of position, potential for professional advancement, and ease of obtaining a position) in order of their influence on decision-making. The next set of questions asked participants about plans to attend graduate school and factors impacting their decision regarding where to apply (i.e., appeals to my area of interest, cost, opportunities for field-based work, funding, proximity to home, opportunities to conduct research, reputation of the faculty, time to completion, and workload). Finally, the questionnaire surveyed participants' awareness of the field of school psychology and likeliness to apply to a school

psychology program. For those indicating little to no interest in the field, the survey ended. For students who stated that they were “very likely,” “somewhat likely,” or “not sure,” the survey continued; students were asked to identify the factors that drew their interest to school psychology in order of importance (i.e., interest in area of psychology, interest in population served, salary/potential for earning, setting, potential for professional growth, flexibility of schedule/work hours, prestige of position, potential for professional advancement, and ease of obtaining a position).

## Data Analysis

First, a multiple linear regression was conducted in an effort to determine which variables, if any, predicted the 379 students from the larger sample of 617 who indicated some level of interest in the field of school psychology. Interest served as the dependent variable, whereas gender, ethnicity, GPA, and exposure to the field in undergraduate studies were entered as independent variables. Because only 18% of all respondents and 5% of those indicating some interest in school psychology supplied SAT® (College Board 2021) scores, this variable was dropped from the regression analysis, although it may have added more information about the participants. Next, chi-square analyses were conducted to examine the relationships between reported race/ethnicity and exposure to and interest in school psychology, as minority students are grossly underrepresented in the field. Finally, the survey items were analyzed descriptively in an effort to determine the psychology fields that most appeal to students and what factors influence a student’s choice to seek graduate training in school psychology; rankings were examined by reported ethnicity and gender in an effort to determine differences between groups that might be important to recruitment activities for underrepresented populations in the field.

## Results

A multiple linear regression was conducted in an effort to determine which variables, if any, predicted the 379 undergraduate students from the larger sample of 617 participants who indicated that they were very or somewhat interested in the field of school psychology and those who responded that they weren’t sure. The independent variable was interest, and gender, ethnicity, GPA, and exposure to the field in undergraduate studies were entered as independent variables. The data met the assumption of independent errors (Durbin-Watson = 2.02). Results indicated a significant effect between the independent variables and interest in a career in school psychology ( $F = 2.9, p < 0.02, R^2 = 0.03$ ). When the individual predictors were examined further, exposure to the field in undergraduate coursework ( $\beta = 0.16, p = 0.002$ ) was the only

significant predictor in the model. Because minority students, in particular, are underrepresented in school psychology, chi-square analyses were conducted to examine the relationships between exposure to and interest in an eventual career in the field and race/ethnicity, as reported. The relationship between race/ethnicity and exposure to the field for the participants who provided this information was significant ( $\chi^2 [18, N = 400] = 56.6, p = 0.000$ .) When the four largest groups of respondents were considered, 91% of Caucasian students, 92% of African-American students, and 89% of Hispanic students noted at least some exposure to the field in undergraduate classes. In contrast, 63% of students who identified as Asian American indicated some level of exposure. The chi-square analysis conducted to examine the relationship between race/ethnicity and interest in school psychology as an eventual career path was not significant.

In the next section of the survey, respondents were asked how likely they were to pursue a career in a psychology-related field. Of the 602 participants who answered this question, 325 (54%) indicated “definitely yes,” whereas 154 (26%) responded with “probably yes.” Seventy-three (12%) participants answered “might or might not.” In sum, 92% of the participants indicated some degree of interest in pursuing a psychology-related career. The following page included brief descriptions of nineteen careers for psychologists from a booklet published by the American Psychological Association (2011), and participants were asked to rank the careers in order of appeal. Table 2 includes the percentages of

**Table 2** Percentages of participants ranking career as most appealing

Career	Percentage
Clinical psychologist	29
Counseling psychologist	14
School psychologist	11
Forensic psychologist	8
Neuro and behavioral neuropsychologist	8
Industrial/organizational psychologist	5
Cognitive and perceptual psychologist	4
Social psychologist	4
Sport psychologist	4
Community psychologist	4
Developmental psychologist	2
Health psychologist	2
Educational psychologist	2
Rehabilitation psychologist	2
Engineering psychologist	1
Experimental psychologist	1
Environmental psychologist	0.7
Evolutionary psychologist	0.4
Quantitative and measurement psychologist	0

**Table 3** Percentages of participants ranking career factor as most important

Factor	Percentage
Interested in area of psychology	65
Interested in population served	14
Salary/potential for earning	12
Setting	2
Potential for professional growth	2
Flexibility of schedule/work hours	2
Prestige of position	1
Potential for professional advancement	0.6
Ease of obtaining a position	0.4

participants who ranked the respective careers in the top spot. The majority (54%) ranked either clinical (29%), counseling (14%), or school (11%) as their top choice for a psychology-related career.

Considering how they ranked the psychology career options, participants were next asked to rank the factors that influenced their choices from most to least important. Table 3 includes these results. The overwhelming majority (65%) ranked interest in the area of psychology in the top position. The population served (14%) and the salary potential (12%) were the next highest factors influencing decisions for careers to pursue. Other factors, including setting (2%), potential for professional growth (2%), flexibility of work schedule (2%), prestige of position (1%), potential for professional advancement (0.6%), and ease of obtaining a position (0.4%), were ranked first among influences on career decisions by few participants.

The next section of the survey asked students about their likelihood to apply to a graduate program in the future. Of the 602 participants who completed this section, 65% responded that they were “extremely likely,” 20% indicated that they were “moderately likely,” and 8% responded that they were “slightly likely” to apply to a graduate program; of those who

**Table 4** Percentages of participants ranking graduate school factor as most important

Factor	Percentage
Appeals to my area of interest	69
Cost	17
Opportunities for field-based work	4
Funding	3
Proximity to home	3
Opportunities to conduct research	2
Reputation of the faculty	1
Time to completion	1
Workload	0

responded in the three aforementioned categories (93% of all participants), 66% indicated that they planned to apply to a graduate program in a psychology-related field. Next, respondents were asked to rank the influences on selection of a graduate program from most to least important. Table 4 includes these rankings. Of the 602 respondents to this question, the majority (69%) rated “appeals to my area of interest” as the reason for selecting a graduate program. The next factor, cost of program, was ranked as the most important by 17% of the participants. The remaining factors, including opportunities for field-based work (4%), funding (3%), proximity to home (3%), opportunities to conduct research (2%), reputation of the faculty (1%), time to completion (1%), and workload (0), were rated as the most important influences on selection of graduate program by few participants. There were notable differences between the responses from the four largest ethnic groups, Caucasian, Hispanic, African-American, and Asian American. Whereas 9% of Caucasian participants rated program cost as the number one factor in graduate school selection, 20% of Hispanic and 11% of African-American respondents ranked program cost in the top position. Further, 12% of Hispanic and 9% of African-American students rated funding as the top influence; funding was placed at the top by 6% of Caucasian participants. When proximity of program to participant homes was considered, 9% of Caucasians ranked this as the top factor, whereas 3% of Hispanic and 0.6% of African-American respondents did. Among those participants identifying as Asian American, the overwhelming majority (86%) placed “appeals to my area of interest” as the top influence on selection of program for graduate study, with funding (2%) and proximity to home (0.9%) rarely selected as the top influence.

The final section of the survey asked participants questions about the field of school psychology, specifically. The majority of the 602 students (88%) who answered the first question in this section indicated some exposure to school psychology in undergraduate studies. When asked about interest in pursuing a career in school psychology, 14% of respondents indicated that they were “very interested”; 35% responded that they were “somewhat interested”; 14% of participants indicated “not sure”; 24% responded with “somewhat uninterested”; and 13% indicated that they were “not at all interested.” The students ( $n = 379$ ) who responded with the first two affirmative answers and “not sure” continued the survey, whereas the survey ended for the others.

Those who continued the survey were asked to rank the same factors for interest in the field of school psychology that they did for a psychology-related field in general. These results are included in Table 5. Factors ranked as the most important were interest in the area of psychology (42%), interest in population served (20%), salary (14%), and setting (12%). The other factors, which included flexibility of schedule (5%), potential for professional growth (2%), ease of obtaining a

**Table 5** Percentages of participants ranking school psychology career factor as most important

Factor	Percentage
Interested in area of psychology	42
Interested in population served	20
Salary/potential for earning	14
Setting	12
Flexibility of schedule/work hours	5
Potential for professional growth	2
Ease of obtaining a position	2
Potential for professional advancement	1
Prestige of position	1

position (2%), potential for professional advancement (1%), and prestige (1%) were placed in the top position by few respondents. These findings differ somewhat from the responses for psychology careers in general; interest in the area of general psychology was ranked as the number one factor by 65% of participants, whereas 42% ranked interest in the area of school psychology as number one. Additionally, 14% of respondents ranked the population served as most important when considering psychology careers, as compared to 20% of the respondents when thinking only about school psychology. Of note were the gender differences in the rankings. Interest in area of psychology was ranked as the number one factor by 62% of females and 24% of males. Conversely, 46% of males ranked salary as the most important factor, whereas 19% of females ranked salary as their top reason for interest in the field of school psychology. There were no notable differences in the rankings by ethnic/racial groups.

## Discussion

With the passage of federal legislation relative to the provision of special education in the late 1970s came a period of rapid growth for the field of school psychology (Bocanegra et al. 2019). Since that time, the field has expanded to include additional roles and responsibilities, such as consultation and program development, and evaluation at the systems level (Bahr et al. 2017; Jimerson et al. 2008). However, as the field has expanded, the workforce has not, resulting in critical shortages both at the practitioner and trainer levels (Bocanegra et al. 2019). Although the shortage might be explained in part by the retirement of those individuals hired with the burgeoning of the field in the 1970s, there are likely other causes. As Fagan (2004, p. 419) noted, “there has never been a time when the supply of school psychologists was sufficient to meet demand.” Further, although the student body of our nation’s public schools is quickly increasing in

diversity, the numbers of racially, ethnically, and linguistically diverse practitioners have remained essentially unchanged (Grapin et al. 2016). The shortage of practitioners, especially those who come from minority backgrounds, may result in detrimental effects on the system, including a reduction in the availability, range, and quality of services provided to students, teachers, and families (Bocanegra et al. 2017). As such, efforts to recruit students, especially those who are diverse, into the field of school psychology must be increased.

The purpose of this paper was to build on previous work (e.g., Bocanegra et al. 2016a, b, 2017, 2019; Stinnett et al. 2013) that surveyed student preferences for graduate training in psychology. Specifically, the variables that might influence the decision to pursue a degree and eventual career in school psychology were examined among a sample of 617 undergraduate psychology majors attending institutions in four northeastern states. First, a multiple regression analysis was conducted for the 379 participants who indicated some interest in school psychology. Gender, ethnicity, GPA, and exposure to the field in undergraduate studies served as independent variables, with interest in school psychology as the dependent variable. This analysis revealed only one significant predictor—exposure. A post hoc chi-square analysis indicated some differences by ethnicity for exposure to the field in undergraduate coursework. Specifically, 91% of Caucasian, 92% of African-American, and 89% of Hispanic participants noted at least some exposure to the field, whereas only 63% of those who identified as Asian-American indicated exposure. The reason for this difference is unknown, but may lie with the fact that “exposure” was not defined, which could have led to differing interpretations. The chi-square analysis that examined the relationship between race/ethnicity and interest in school psychology was not significant. These findings, which mirror previous studies (e.g., Bocanegra et al. 2016a, 2019; Stinnett et al. 2013), suggest that student level factors, such as gender, ethnicity, and school performance, do not play as crucial a role as exposure to the field does in predicting which students are likely to pursue training in school psychology. Thus, school psychology faculty, practitioners, and national and state associations are encouraged to increase their presence among undergraduate students to enhance knowledge and attract students to the field. Exposure can take many forms, including guest lectures, shadowing on the job, undergraduate internships, and mentoring relationships between undergraduate and school psychology graduate students.

To answer the second research question regarding the sub-fields of psychology that appeal to students, participants were first asked to rank fields, as described by the American Psychological Association (2011), in order of preference. Twenty-nine percent of respondents placed clinical psychology in the top position, and 14% ranked counseling psychology as their number one preference. Together, these two sub-fields were ranked as top choices for 43% of the sample. In contrast,

11% of participants ranked school psychology at the top, with other fields being ranked as number one by 8% or less of respondents. Again, as suggested by prior research (Bocanegra et al. 2015, 2016a, 2019), exposure to the different fields may have influenced rankings. Although 88% of participants in the current study reported some level of familiarity with the role of the school psychologist, the source, breadth, and quality of their knowledge were not surveyed, which markedly limits conclusions that can be drawn regarding this sample's exposure.

Previous studies that have examined the amount and types of exposure to school psychology that undergraduates receive have suggested scant coverage of the field. For example, research has found that a majority (~ 84%) of psychology departments offer courses in clinical and counseling psychology, whereas only 8.9% of students report having encountered the field of school psychology in their undergraduate coursework (Bocanegra et al. 2019). Further, undergraduate students have reported receiving less information about school psychology than other professional psychology fields from their professors, advisers, and textbooks. In fact, a review of introductory psychology textbooks indicated that the field of school psychology is minimally represented (Bocanegra et al. 2015). These findings are important to highlight, as research has suggested the influence of an exposure effect on decision-making and intention. The exposure effect posits that repeated exposure to a stimulus results in a positive affect toward that stimulus (Bocanegra et al. 2016a). In other words, the more exposure a student has to the field of school psychology, the more favorably he or she might regard the field. Future studies should examine both the quantity and sources (e.g., whole or parts of courses, textbooks, mentoring, etc.) of exposure that are sufficient to inform students about the myriad roles and responsibilities of the school psychologist in an effort to recruit students to the field.

The second part of the research question on sub-fields of psychology pertained to the factors that influenced the undergraduates' rankings. The majority of participants (65%) ranked "interested in area of psychology" in the top position. The next two factors, "interested in population served" (14%) and "salary/potential for earning" (12%), were ranked at the top by approximately a quarter of the participants. The remaining factors were seldom considered as the most important influence on the decision to pursue a certain area of psychology as an eventual career. There were no detectable differences among ethnic or gender groups for these rankings. Given that most of the participants selected the appeal that a sub-field of psychology holds as the number one influence on how they ranked careers, the need for sustained exposure to school psychology is once again underscored. Increased knowledge of the field through different sources, such as coursework, reading, and faculty mentoring, might lead to an increase in appeal.

The next section of the survey asked students about their likelihood to apply to a graduate program in the future. Of the 602 participants who completed this section, 65% responded that they were "extremely likely," 20% indicated that they were "moderately likely," and 8% responded that they were "slightly likely" to apply to a graduate program, indicating that most students had some degree of interest in attending graduate school. Participants also were asked to rank order the influences on where to apply to a graduate program from most to least important. As with the psychology sub-fields, "appeals to my area of interest" was rated as the most important factor in selecting a program of study by the majority of participants.

It is vital to attract diverse students to the field of school psychology, as they might bring differing perspectives and knowledge to the field that would be beneficial to the increasing numbers of children entering our nation's schools in need of culturally competent services (Bocanegra et al. 2016a). Thus, the rankings of the factors that influence choice to apply to a particular graduate program were examined for variations among the four largest ethnic groups, Caucasian, Hispanic, African-American, and Asian-American. Twice as many participants who identified as Hispanic ranked cost of the program and funding opportunities in the top position, as did respondents from other ethnic groups. Additionally, three times as many Caucasian students ranked proximity of the program to home as a top consideration, than did Hispanic, African-American, and Asian-American students. Although gross generalizations about student groups should not be drawn from these results, they do suggest that recruitment efforts might need to extend beyond exposure to the field. Faculty who are responsible for recruitment should consider other factors of importance to potential students, such as cost, funding, and location, and have knowledge of the supports that students can access.

The final section of the survey asked participants questions about school psychology, specifically. For the 379 participants who indicated some level of interest in the field of school psychology, the survey continued, asking them to rank order career-related factors for school psychology from most appealing to least. The top ranked factors were "interest in the area of psychology" and "interest in population served." In an effort to answer research question four, rankings were analyzed descriptively for differences among ethnic and gender groups. There were no large differences by ethnic group, but there were differences in rankings found by gender regarding factors considered most important when choosing school psychology as a career path. Specifically, more than twice as many females than males ranked "appeals to my area of interest" as the top influence. Conversely, more than twice as many males than females ranked salary as the most important factor.

This finding is important to consider because the field of school psychology is dominated by females (Little et al.



2012). Although the reasons for the disparity among genders for choice to work in the field of education are not fully understood, research has suggested that there may exist biases about working with children as being a female role and the perception that there are better paying jobs for men (Drudy 2008). Despite the reasons, it is important to attract males to the field of school psychology, as studies have indicated that the relationships young men form with other males are positively associated with educational outcomes, employment, and psychological and physical health (Wilson et al. 2014). As such, recruitment tactics should include materials referencing earning potential, opportunity for advancement, and the positive impact male mentors might have in the schools, in addition to information about the roles and responsibilities of school psychologists.

## Limitations

Despite some of its unique contributions to the study of recruitment, this investigation had its limitations. The most obvious limiting factor to generalization of the results is the sample of students. First, all students attended institutions in four states, all located geographically close. Second, because survey links were sent to select department chairs, there is no way to determine the response rate. Chairs were not asked to confirm distribution, neither were they asked to provide enrollment numbers. Additionally, although academic performance, as measured by GPA, did not play a significant role in participants' interest in school psychology, this may have been a result of selection bias. Survey responses indicated that 86% of respondents reported carrying a GPA of 3.0 and higher. It is unknown whether higher performing students are drawn to the field of psychology or whether it is this group of students who is most apt to complete a survey. Too few students reported SAT® scores (College Board 2021) to be meaningful, so these data were dropped from the analyses, although they could have added information regarding the student level factors that predict interest in school psychology. Another limitation lies with the ethnicity/racial variable, "Hispanic or Latino." This choice does not adequately represent cultural classification and could have been further delineated to include categories such as "Hispanic/Black" for clarity (Hitlin et al. 2007). Finally, the survey was disseminated at a time when the USA was in the midst of a novel situation for the country, quarantine due to the COVID-19 pandemic; this circumstance may have impacted potential participants' ability to respond.

Further limitations involve the survey itself. Participants were asked to rank order the factors most appealing when selecting both an area of psychology to study and a career path. Given that the sample was comprised of undergraduate students, participants may not have been advanced enough in

their studies to make informed decisions. However, the findings do suggest that there needs to be a greater focus within coursework on psychology careers beyond clinical and counseling psychology. Although 88% of respondents indicated some familiarity with the field of school psychology, the survey offered no insight into the accuracy of their knowledge relative to the roles and responsibilities of the practitioner, which may have impacted responses to the question about interest in the field.

Finally, the wording of the survey responses that pertained to the rankings of the sub-fields of psychology and the career-related factors specific to school psychology limited the information gathered. Specifically, the majority of students placed "appeals to my area of interest" in the top position when ranking psychology sub-fields and when ranking factors that influence their desire to pursue graduate studies in school psychology. This response option provides no information regarding why undergraduates are interested in different psychology careers. A future study should attempt to understand the factors, such as practice framework and approach to service provision, that promote interest in a particular sub-field. This knowledge could inform the development of coursework for undergraduate students that might ultimately attract more to the field of school psychology.

## Conclusion

The findings of this study mirror others that have found that exposure to the field of school psychology is important to recruitment of undergraduate students to the field. Although the participants in this study were predominantly Caucasian and female, which limits generalizability, there were a few interesting results that might inform recruitment efforts. First, although the majority of students ranked "appeals to my area of interest" as the top factor in deciding on a graduate program of study, there were differences by ethnic/racial groups. For example, twice as many students who identified as Hispanic ranked "program cost" as their top consideration than did those who identified as Caucasian. The same holds true for "funding" opportunities within programs of study. Further, three times as many Caucasian students ranked "proximity of program to home" in the top position than did African-American, Latino, or Asian-American respondents. Finally, more than two times as many males than females ranked "salary" as a top consideration in pursuing a career in school psychology.

Although conclusions that can be drawn from these findings are limited to this sample of undergraduate students, they do have implications for future research and for recruitment activities. As suggested by the findings here and of other researchers, exposure to the field plays a vital role in students' decisions to pursue school psychology. More research into the

quantity and quality of exposure needs to be conducted in an effort to determine the most effective means for informing students about the field. Further, in addition to information about the roles and responsibilities of the school psychologist, practical information about graduate programs, including the financial aspects and housing, should be disseminated to undergraduate students. Finally, future studies should investigate more closely the student level factors, including academic achievement and motivation, that best predict which students are most likely to show interest in school psychology, so that faculty can begin to counsel these students early.

### Compliance with Ethical Standards

This study was fully approved by the IRB of the author's institution, and informed consent was obtained from each participant. At the beginning of the survey was a letter describing the purpose. Participants who clicked "I agree" proceeded to the survey. The survey ended for those who did not provide consent. No identifying information was collected for any respondent.

**Conflict of Interest** The author declares that she has no conflict of interest.

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