Recruitment Strategies for Under-Represented Minority Students in Physical Therapy

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Diversity within the United States continues to grow over time, however, is not reflected in the healthcare workforce. Although race and ethnicity are social constructs, they still play major roles in the U.S. healthcare system, with their main influence on diminished health outcomes and care.1 Diversity within healthcare professions plays an important role in societal health.  Minorities are less likely to seek and receive healthcare services than Caucasians.2 This disparity is multifactorial; however, a component of this disparity is based on under-representation in the medical field.2

Currently, no healthcare profession reflects the diversity of the population. As of the 2014-2015 Physical Therapy Centralized Application Service (PTCAS) applicant pool cycle, Under-Represented Minorities (URM) made up around 33% of the population, but only 17.4% of applicants, and 13.3% of accepted applicants.3 The demographics are reflective of other healthcare professional programs including medicine, nursing, pharmacy, and dentistry with an average of 10-15% being URMs in a report from Sex, Race, and Ethic Diversity of US Health Occupations (2010-2012).2 Table 1 demonstrates the lack of diversity within healthcare providers from the 2000 Census compared to projected population in 2020.1,2,4

Gabard et al, found a more diverse population of healthcare providers will result in at least four positive effects on health care: increased cultural competency among all providers; greater access for minority patients; increased research agenda; and increased minorities in administrative positions who are knowledgeable about the importance of diverse cultures and backgrounds.1 Minority healthcare providers are more likely to serve minority patients and underserved areas than Caucasian providers.5For example, although only 3-5% of U.S. physicians are Black and African American they care for 23-40% of all Black and African American patients.5 Not only does an increase in minority healthcare providers benefit minority patients, it improves the cultural competence and growth of Caucasian healthcare colleagues by expanding individual perspectives that reflect improved patient care.5 Therefore, it is of the utmost importance that healthcare programs are making conscious efforts to recruit URMs.

URM recruitment is crucial for the profession of physical therapy. The American Council of Academic Physical Therapy’s Diversity Task Force defines Under-Represented Minority (URM) population in physical therapy education as “the racial and ethnic populations that are underrepresented in physical therapy education relative to their numbers in the general population, as well as individuals from geographically underrepresented areas, lower economic strata, and educationally disadvantaged backgrounds”.3Therefore, when addressing URMs throughout the paper, the focus will not only be racial and ethnic minorities but will include; sex/gender, age, ability, social economic status, educational status, and geographic location.­3 DiBaise et al, found success in targeting URMs other than racial and ethnic minorities, including sexual orientation, disability ,Veterans, economically disadvantaged, educationally disadvantaged, second careers, LGBTQIA (lesbian, gay, bisexual, transgender, queer, intersex, asexual).6 Recruitment targeting URMs may improve the number of diverse applicants, diverse Doctor of Physical Therapy (DPT) students, and diverse physical therapist.

Lack of diversity has been a perpetual issue in healthcare, with the 1992 council of graduate medical education declaring racial/ethnicity composition would reflect the physician population as a highest priority, but 26 years later, this is still not the case.1 Healthcare programs need to increase their efforts to reach this goal. Physical therapy (PT) has seen a significant increase in total enrollment from 2003 to 2015, however with the 55% increase; Caucasian student enrollment has stayed around 80%, despite the American Physical Therapy Association’s (APTA) vision statement for PT progression and guiding principles to achieve the vision.2,3 This disparity may be due to barriers that URM students may face throughout the process of becoming a PT.2

DiBiase et al, found the most perceived barriers to recruitment of URM PA students, based on PA programs responses, for URM matriculation into healthcare professions include: “academic preparation, finances, a lack of minority faculty and mentors, a non-holistic admission process, coupled with high numbers of applicants and recent anti-affirmative action legialtsion”.6 Within the PT field, major barriers are similar to all healthcare professions. The doctoral level of degree required in PT can be a significant barrier for URM with the associated cost, with little financial benefits associated with the degree change.2,7 Many of these barriers specific to URMs may not be addressed within the PT field and therefore the profession continues to see a lack of diversity within the field. Barriers to PT careers that may specifically impact the URM population including; lack of exposure to PT career, grade point average, graduate record examination score, less mentors, cost of application, and cost of tuition.2 In the 2017-2018, PTCAS applicant data report, 8% of accepted applicants were considers economic disadvantaged status, 1.6% of accepted applicants had a language other than English as their primary language, 4% of accepted applicants were from a school district where 50% or less of graduates go to college, 3.3% of accepted applicants come from an area designated as a Health Professional Shortage Area or Medically Underserved Area, 3% of accepted applicants were active duty, veterans, member of reserve, or military dependent, 1% of accepted applicants were foreign citizen or other eligible non-citizens, 31.5% of accepted males and 55% of accepted females were between ages 20-25.8

This literature review compiles strategies specific to URM that have been shown to be effective in healthcare professions. The review addresses the top five strategies supported by the literature for effective recruitment of URM. Due to limitations in the research data is pulled from other allied health and medical programs in addition to physical therapy programs. Due to similarities in disparity, amount of education needed, and cost of schooling, information from other professions should be able to reflect and relate to the field of physical therapy. This literature review should be used as a reference for recommendations of effective strategies for recruiting URM students into physical therapy programs. Further information should be obtained for retention of URMs and cultural competence education within PT programs.

**STRATEGIES:**

Programs that place value on diversity are more likely to have diverse students and faculty.8 A program dedicated to diversity is more likely to attract URM and provide sustainability and retention of URMs within the program.9 Of the 30 allied health programs, including physical therapy, nursing, occupational therapy, physician assistant, and speech-language pathology, evaluated by Cahn et al, only six reported satisfaction with the composition of students in their program.1 Of these six allied health programs, five have active efforts toward recruiting URM.9 Of the 10 allied health programs with no specific strategies, eight report they are “unsuccessful in meeting diversity goals”.9 Allied health programs with missions and core values associated with diversity and underserved populations report the most success with recruitment of URM.9 Therefore, in order to improve overall diversity in the PT profession, programs need to focus and restructure program values with a specify a plan to improve diversity. Inclusion of the below evidence-based strategies for recruitment of URMs, may benefit these plans.

**ADMISSIONS STRATEGIES**

One of the major barriers for URMs in PT is the admissions process.9 Currently there are significant racial performance gaps on standardized tests and other admissions criteria.9 Incorporating a more holistic admission process allows for some of these admission disparities to dissipate*.* A broader definition of merit and deeper look into the applicants are necessary to determine if an applicant would succeed as a PT rather than from standardized scoring.9 When considering levelingthe admission process for URM students, an important strategy is a shift to a holistic admission process. This shift would include multiple considerations that are flexible and consider unusual qualities and circumstance including socioeconomic class, service goals, perseverance over obstacles, essay on problems and opportunities in working with diverse patient population, race/ethnicity (if possible).1 Cahn et al, found six of thirty allied health programs reported success in enrolling a diverse class, with success defined at the discretion of the individual allied health program being interview.9 One of the strategies leading to this success was “giving weight to characteristics that advantage applicants from underrepresented backgrounds”.9 These characteristics included: work experience; cultural sensitivity; and  overcoming hardship.9 Similarly, if two applicants had the same score the preference would go to the applicant who is bilingual or male, in the specific case of one Physician Assistant (PA) program.9 With anti-affirmative action legislation, it may be necessary to focus on race-neutral factors including, economically disadvantaged status, educationally disadvantaged status, geographic residence, and guaranteed admission from state or low-performing schools.6 DiBaise et al, evaluated effectiveness of recruitment strategies in PA programs and found admission consideration of educational disadvantage status and economic disadvantage status, as well as application assistance to be effective in recruiting students from this population.6However, DiBaise et al, does not go into further detail about the details of these strategies.6 Educational disadvantage status consideration in admission was rated an “effective” recruitment strategy in 76.2% of PA programs and “very effective” in 14.3% of PA programs.6Economic disadvantage status was rated “effective” in 73.7% of PA programs and “very effective” in 15.8% of PA programs.6 Application assistance was “effective” in 50% and “very effective” in 33.3% of PA programs.6 DiBaise et al, also evaluated barriers that URM face when applying to PA programs.6 They found that applicant characteristics such as low undergraduate grade point average (GPA), low Graduate Record Examination (GRE) scores, and low quality of schools previously attended, were major barriers in 82.5%, 45.6%, and 38.6% of PA programs respectively.6

Currently, 91.7% of PT programs on PTCAS require the GRE as a part of the DPT school applicantion.9One PT program, stated the GRE is a “gatekeeper, not a predictor”.9 Out of the 94 allied health programs, studied, that eliminated the GRE in admission criterion, 53% reported the decision due to the “inability of a standardized test to predict future academic and clinical performance”, 30% due to “discriminatory against minority and disadvantaged students, 30% due to “not relevant to the health professions”, and 27% due to “too costly and burdensome for applicants”.9 Many allied health programs, who have eliminated the GRE, have found no evidence to support the GRE as a predictor of success in healthcare graduate programs and eliminated the use of the GRE to align with the evidence based practice commitment they try to instill in their students.9 A large meta-analysis of the GRE found the test scores to moderately be able to predict correlation between faculty rating, graduate GPA, and comprehensive exams but was a weak predictor of healthcare professional success such as degree attainment, research productivity, and publication citation count.1 Use of the GRE is a major barrier in URM applications to healthcare programs and the scores are not useful in determining success for any students, therefore do not add quality information to admission applications.9 However, if GRE scores are to be used in application process, heavy weight should not be placed on the scores and the scores should not be used as a cut off for applicants.1,9 The GRE board itself states, test scores should always be used in conjunction to other sources of applicant information and that cut-off scores, or minimum scores, “should not be used as the criterion for making a decision about graduate admission”.1Although elimination of the GRE has its advantages in health programs, this strategy alone without other recruitment strategies, is not likely to increase the number of URMs in health professional programs.8 However, elimination of the GRE is an evidence supported strategy for holistic admissions.

Glazer et al, found two years after the College of Nursing adopted a holistic admission process there was a 10% increase of confirmed students from under-represented race, 17% increase of first generation confirmed students, and 33% increase of students with financial needs.10 Implementing a holistic admission process may place an increased burden on the admission committee, however the benefits of a holistic DPT student body, not just related to URMs, will allow for a holistic next generation of physical therapist. A holistic approach to admissions allows for increased chance for URMs to be accepted into PT programs and enrich healthcare with PTs who have wider perspectives.10

**OUTREACH STRATEGIES**

Nine of the articles reviewed support outreach as an effective recruitment strategy for URM students. Outreach efforts can include pipeline programs, career fairs/days, mentorship, minority specific outreach, community health events, and undergraduate and high school counselor relationships. Outreach efforts have been found to be an effective way to expose URM to careers in healthcare.1 Many URMs are not exposed to allied health careers until college which is missing an opportunity to reach URMs who do not attend college.1 Outreach events, especially when starting young, allow education about health career options and promote higher education in general with associated interest. With the minority disparity seen across the board in all health professions, one study suggested combining interdisciplinary efforts within the same geographic area or school for student outreach a beneficial strategy to implement this recruitment strategy.1 Combining interdisciplinary efforts may assist with success due to increased resources.

*Pipelines*

Pipeline, partnerships, and enrichment programs with local K-12 and undergraduate schools have been a huge strategy in the reviewed articles. Pipeline is defined as a “series of numerous contact points throughout the educational career of an URM student, focused on preparing the student to enter the health professions”.6 The Department of Health and Human Services 2009 reports, “pipeline programs have been shown to be effective in enhancing academic performance in URM and disadvantaged students, and increasing the likelihood that students enroll in a health professions school”.10The components that make pipelines more successful for increasing URMs in health professions are “longitudinal math and science skills development, mentoring, admission workshops, financial support, standardized test preparation, and exposure to professional options”.6These types of programs require more effort, time, and funding than other strategies but are more effective than “one and done” programs with little to no follow up.7 Haskins et al, utilized a Minority Equity Score to evaluate effectiveness of strategies for physical therapy programs.7 The score illustrates the association of recruitment strategies and number of minority groups within in a PT program compared to proportion of minority groups in the home state.7 The scale is zero to 200, with 100 indicating the student body of that program reflects that of the state perfectly, great than 100 indicates the student body has more minorities than the state average, and less than 100 indicates the program’s student body has less minorities than the state average.7 None of the strategies listed received a score above 100, which supports the date that many DPT programs do not reflect the number of minorities compared to each state.7 Haskins et al’s MES score demonstrates that Black and African American students benefits from pre-professional enrichment courses with a median MES score of 55 out of 100.7Although a low number in comparison to the state population, this strategy corresponded with one of the largest MES score.7 DiBiase et al, also found enrichment programs to be one of the most effective strategies with 75% of PA programs reporting it being an “effective” strategy and 25% reporting it as a “very effective” strategy, however this strategy is only found in 9% of PA schools.6 Limited participation is likely due to the increased burden associated with long-term efforts of pipeline and enrichment programs. Therefore, collaboration with other health profession programs allows decreased burden with these types of programs.6 Despite increased efforts, pipelines and enrichment programs have high effectiveness and should be incorporated in more programs for URM recruitment within PT. The U.S. Department of Health and Human Services found, after evaluation of literature, with 24 studies, that pipelines are associated with “positive outcomes for racial/ethnic minority and disadvantaged students on several meaningful metrics, including academic performance and the likelihood of enrolling in a health professions school”.11 Effective components of pipeline programs should include academic support, professional opportunities, financial support (stipends or scholarships or fee waivers), education on applying for financial aid, mentoring.11 Many of these programs were able to receive funding from the Department of Health and Human services, under different programs and Acts.11 No data is available on optimal duration or frequency for pipeline programs but did support pipeline programs from K-12 and college.11

*Mentorship*

Mentorship both within outreach programs and by itself can be a major influencer for URMs to pursue healthcare careers. With most PT school requiring shadowing hours and letters of recommendations for the application, student applicants must have opportunities to accomplish these hours and develop a relationship with a PT to have a strong letter of recommendation to enhance their application.  However, lack of mentorship programs and individual mentorship efforts are a major barrier seen in 46% of PA programs.6 Efforts to have students shadow therapist to learn about the field and understand the profession, are incredibly valuable. Ongoing mentorship can also lead to better retention of URM within PT programs. Haskins et al’s, Minority Equity Score, determined that providing or serving as a mentor for potential minority student applicants, demonstrated one of the higher MES scores, 53.7 Although this score is low, it is likely due to the minimal amount of mentorship that can reach potential students but is still one of the higher ranked strategies. This strategy may be more effective on a smaller scale to those specific students who receive mentorship and therefore, although highly effective for the specific students, not reflected larger scale within study bodies. Mentorship for first generation students is particularly important to assist with steps to applying and application assistance.3 When mentoring Generation Z students, it is important to focus on personalization.12 Generation Z students are accustomed to personalization from the technology world, including ads, and single sign on features, so they prefer personalized interactions rather than generalized.12 When considering the next generation of applicants, it is important to adjust strategies for the specific targeted population. Generation Z students want more personal engagement with 54% ranking “outreach from admissions” as a top factor when deciding on where to attend.12

Mentoring is best individually but PT programs can play a role in establishing these mentorship opportunities by focusing on training students and faculty on mentoring, developing mentorship programs, collecting data that support mentorship models for URM outcomes, and rewarding URM graduate for going into underserved communities.3 Resources can be found through the APTA Learning Center course on mentoring.

*Minority specific outreach*

When the goal of recruitment is to increase the number of URMs, outreach that targets minorities specifically may be more effective than general recruitment strategies. Minority specific outreach programs are especially effective if volunteers and mentors are URMs themselves.3 Mentorships with similar ethnic and racial composition encourage more comfortable and meaningful connections that reinforce coping and professional development.3 Minority student-targeted presentations have been found to be “effective” in 47.1% of PA programs and “very effective” in 35.3% of PA programs.6 Use of URM student recruiters was an “effective” strategy in 57.1% of PA programs and “very effective” strategy in 28.6% of PA programs.6 Outreach to Historically Black Colleges and Universities (HBCUs) and other minority groups, may be an effective tactic to targeting URMs specifically. URMs, especially Hispanic and Latinx applicants, are more likely to apply to a PT program with URM faculty members.2,3,7 Programs should create an environment where they encourage URM faculty to participate in recruitment.2,3,7 Having a diverse staff not only benefits URM students, diverse staff members increase the focus on minority populations and promote cultural competence throughout the program.3

Community involvement is also an important aspect for URM specific recruitment. The earlier and more often children and adolescents are exposed to the field, the more likely they are to consider it a career option.1 Involvement in local health fairs, street fairs, and races, especially minority specific events, where kids can learn about physical therapy can be a motivating factor for careers choice.1 Not only does community involvement expose potential URMs to careers in PT, it can also promote seeking physical therapy services.

*Single day outreach efforts*

Although long-term outreach efforts are more effective, single day events can still be beneficial for URM recruitment. Single day events are especially important for early exposure to healthcare careers with shown increased benefit for exposure to healthcare careers early and often.7 Site visits to undergraduate and K-12 schools, also known as “diversity days” or “career days” have been found to be “effective” in 36% of PA programs and “very effective” in 32% of PA programs.7 When compared to aggregate minorities, Black and African American students demonstrated most benefit from visits to elementary schools, with a MES of 74, and visits to minority institutions with a MES of 50.7 Single effort outreach, “career days” efforts, should focus on educating students about careers in PT and enriching curriculum.1 Single day outreach efforts can be effective introductions to other recruitment efforts, such as mentorship and enrichment programs.

**RESOURCE STRATEGIES**

Many prospective URM applicants are unfamiliar with the field of physical therapy, requirements for application, and how to apply. Many applicants first learn about physical therapy through personal experience. However, this limits many individuals who have not been exposed to PT. Even if an individual is exposed to PT personally, they may not know the steps to becoming a PT or what it means to be a PT. In order for potential future applicants to have this information, resources need to be more readily available. High school and college counselors can be great resources for students, therefore it is important for counselors to be educated on the health professions, like PT, and appropriate academic preparation required.1 Data shows Black and African Americans, American Indians, and Latino students are more likely to attend a two-year community college due to decreased cost and accessibility.13 Therefore focusing resources for community college counselors may be a strategy to specifically target URM.13 Community college counselors may be able to assist with preparation for prerequisites and advice for steps toward the DPT if appropriately equipped.13 Resources such as brochures, fliers, and pamphlets have been found to have a 51 MES in aggregate minorities.1,7 Resources should also include connections to current PT programs, PTs, PT students, possible internships and opportunities for exposure to PT, and links to PTCAS, APTA, and other information on how to apply and what PTs do.1 Many of these resources can be found through the APTA for prospective students. Programs and individual PTs should make conscious efforts to spread this information.

**FINANCIAL STRATEGIES**

Financial and economic barriers are perceived to be the “most important barrier” of URM PA students when compared to other recruitment strategies.6 Financial recruitment strategies were also ranked as “very effective” in recruiting URMs in PA programs.6 With the increased cost of the DPT degree and associated cost to qualify for PT school admission, many URM and disadvantaged students are not able to compete against other applicants.14,15 Cost of application, supplemental fees, cost of the GRE, and deposits themselves can be a limiting factor for disadvantaged URMs.14,15 Once admitted to PT school the cost of tuition and living expenses during the three-year program may be huge barriers, especially with the known increase in student loan debt many current PTs have.14,15 Strategies that assist with financial barriers may lead to increased URMs in PT programs.7 When compared to other minority potential applicants, Hispanic and Latinx students were most responsive to disseminate financial aid information.7 URM student awards were see as a “very effective” strategy in 100% of PA programs however only 3% of programs participate in this strategy.6 Academic scholarships, grants, and nonacademic scholarships were found to be “very effective” recruitment strategies in 30%, 50%, and 55.6% of PA programs respectively and “effective” strategies in 50%, 41.7%, and 22% respectively.6 Financial support may be difficult for PT programs to implement but scholarships specific for minorities can be helpful in targeting URM students.6 PT programs with diversity as a major value and relationships with URM PTs may be an outlet to received funding for these scholarships. Promoting a focus on diversity and recruitment of URMs, may be a marketing strategy for donations from URM alum and donators.

**GENERATION Z SPECIFIC STRATEGIES**

With the majority of applicants coming from Generation Z, recruitment of URM Generation Z students may need to focus on specific characteristic this of generation. Although, the literature on Generation Z is underdeveloped due to the oldest of the generation being ~18 years old.16 With the next generation of applicants growing up with social media, it is important to target and reach them through this preferred method. More than 90 percent of Generation Z is on social media, and therefore would be a great method to attract and interact with these potential applicants.16 Social media allows the opportunity to reach more potential applicants, especially rural and low socioeconomically disadvantaged students who may not be exposed to PT through personal exposure or above strategies.17 Historically marginalized groups now have the opportunity to get access to information online.17 Therefore online presence, especially on mediums that are more attractive to URM Generation Z students, like Instagram, could be a beneficial strategy for reaching these students.16, 17 PTs have already begun to make a presence on social media through Facebook, Twitter, and Instagram. Continuing to grow this presence, especially targeting URM, by providing practical information about the profession and showcasing potential URM role models could attract URMs to consider PT as a career option. However, further evaluation of the impact of social media recruitment is necessary; therefore, it may be a valid strategy to focus on within this population but should be in adjunct with evidence supported strategies listed above. Although, the evidence is still developing for social media campaigning, social media is a low cost or free strategy compared to other strategies, and therefore would be a low risk strategy to participate in.

**DISCUSSION:**

A major limitation from the literature is the limitations of the focus on URMs in many articles, being racial and ethnic rather than a holistic representation of URM as defined by the APTA. There is also a lack of literature of PT specific strategies. Further research is needed in this area, therefore, consider the limitations when utilizing the above information.

Diversity within the physical therapy field should be a core value of each DPT program with a focus on efforts to diversify the profession. Although, not all strategies discussed are specific to PT, they have shown improvements in recruitment of URMs within healthcare. Barriers associated with URMs may be larger than any one DPT program or the field of PT itself is able to overcome. However, just shifting a program’s values and mission toward diversity has shown improvements in recruitment of URMs and overall improvement in all graduates from these programs. The above strategies have greater impact if used in combination to increase the modes of recruitment for targeted students. Many strategies will not show immediate results and will take consistent time, effort, and investment to maintain in order to see continued increases in URM students. Many of these strategies may take years to achieve major changes, but greater efforts, even without immediate benefit, are necessary to reach the desired goals of a diverse physical therapy profession.

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