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Poster: Life After Sports: Black Males Pursuing Engineering and Related STEM Fields

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Life After Sports: Black Males Pursuing Engineering and Related STEM Fields

BACKGROUND

- Limited research, if any, exists on Black male student-athletes in engineering and related science, technology, engineering and math (STEM) fields
- Black men are underrepresented in engineering and related STEM fields but overrepresented in sports like track, football and basketball (Hodge, Kozub, Dixon, Moore, & Kambon, 2008; Long III, L., Henderson, T. S., & Williams, 2018)
- Inaccurate stereotypes suggest Black men are athletically superior but intellectually inferior to their White and Asian counterparts (Hodge, Harrison, Burden, & Dixon, 2008)

PURPOSE

- The purpose of this particular study is to critically examine the athletic, educational and professional experiences of current/former Black male student athletes in engineering and related STEM fields
- The broader study examines how women and underrepresented racial/ethnic minoritized (URM) student-athletes in STEM perceive their career aspirations, readiness and estimated
- Findings from this study will help colleges and universities better expose youth and young adults to both sports and STEM

PARTICIPANTS

Four Black males who majored in engineering or a related STEM field and played a collegiate sport

- Two of the four participants are multi-racial but identify as Black
- Two of the four participants ran track and the other two played football in college
- Two of the four participants attended Division 2 (D2) predominantly White institutions (PWIs) in the Southeast and the other two attended an historically Black college or university (HBCU) in the Southeast
- Two of the four participants are current engineering students and the other two have engineering degrees
- Four participants' ages ranged from 21 to 62 years old



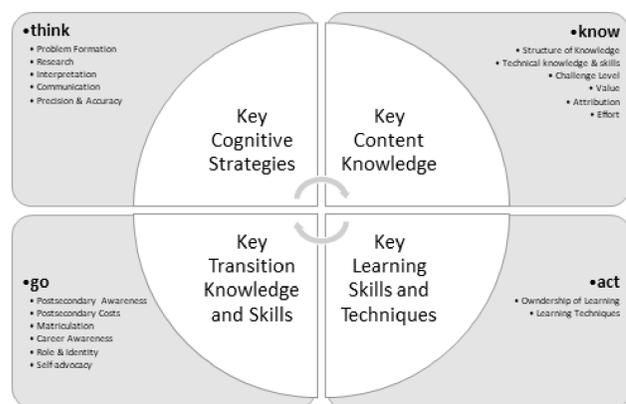
FRAMEWORK & METHODS

FRAMEWORK:

- Ladson-Billings & Tate's (1995) critical race theoretical (CRT) framework
- Conley's (2012) college and career readiness framework

Critical Race Theory

- Race continues to be significant in the United States
- U.S. Society is based on property rights rather than human rights
- The intersection of race and property creates an analytical tool for understanding inequity



METHODS:

- Research Design**
 - Narrative inquiry; Constructivist epistemological approach
- Data Collection**
 - One-on-one semi-structured interviews lasting approximately 30-60 minutes
- Data Analysis**
 - Constant comparison method
 - Credibility (member checking, triangulation of data sources, peer debriefing)

FINDINGS

Finding 1: Had "real-world" hands-on experience in STEM

A Black male with an engineering degree named MJ who is a former student-athlete from a mid-sized HBCU in the Southeast said, "I knew I wanted to go into electrical engineering ... the interest was there...when I was in high school...people would bring me TVs, to fix their TVs. That type of thing. And, I just had an interest there...My counselors had mentioned to me that it would be a good field for me based on my testing and the classes that I had and that type of thing. So, I just always had an interest in TVs ... I always liked NASA. That was back during the time of the first space shuttle and that type of thing. So, you know I got a chance to work at NASA when I went to college ...The interest was there. And, I knew my sophomore year what I wanted to do."

Finding 2: Professional engineer, not a professional athlete

AB, a Black male with an engineering degree and a former student-athlete at a mid-sized HBCU in the Southeast said, "I always had a knack for electronics. In the neighborhood, I was the guy who installed stereo systems in people's cars and stuff like that...I remember many a days in my parent's garage, you know hooking up stuff until the wee hours of the morning. So, that came pretty natural, the electronics part...It's ironic ... I remember seeing the movie *The Program*. Where a guy couldn't read...his knee got blown out. And, just constant reminders of that ... Then, also seeing the guys that were above me in high school who were, far more talented than me. I mean far more talented than me ... they weren't successful. I'm like, 'woah, woah.' ... But, I don't know if that's a good thing you know if that hindered me from giving it you know 100% to pursue it. But, also it provided me with an education and something to fall back on. In that pursuit, versus chasing the athletic dream."

Finding 3: Used sports, instead of getting used by sports

A Black male and fourth-year engineering student named Collins who is a current student-athlete from a mid-sized private PWI in the Southeast said, "The reason I compete in track is because...it's just something that's stuck with me, something that makes me happy...makes my family happy. And, then it's something that would keep me fit and I don't think it interferes with my daily activities or my schedule, work load too heavily and so it's something that just worked out. It was the right choice... I was set on pretty much joining the track team whether or not I got a scholarship...The [athletic] scholarship was just icing on the cake...I got most of my money from academic scholarships and so I was pretty much set depending on where I wanted to go."

Finding 4: Had an exit strategy for life after sports

Enlightenment, a Black male and fifth-year engineering student who is a former student-athlete from a large public PWI in the Southeast said, "When I finished out my spring semester [of my first year], I decided that I wanted to get out of track...And, also band...I got a band scholarship, on top of my sports scholarship. And, then I was doing engineering. And, engineering started picking up...So, I had said, 'okay, if I've made this decision now, I need to cut other things that are taking so much of my time because I'm not going to be able to perform as well as I can.' Now, granted track and field ... was great because they allowed study sessions and all that. I just had no sleep...And, so I was like, 'You know what, I'm not going to do this anymore.' So, when I quit all of that. I quit band. I quit track. I quit all the extra-curricular. I said, 'I cannot afford tuition here anymore.' ...So, I'm like, 'wow.' Even though I was doing so well at the university. My grades were, I had a 3.9 GPA at the end of my first year as a freshman...And, I was like, 'I beat the statistic' but unfortunately ... I have to leave because I can't afford it."

RECOMMENDATIONS

Finding 1: Had "real-world" hands-on experience in STEM

- Use "real-world" projects, co-ops, research and other hands-on activities to increase student interest in STEM
- Connect Black male students with academic counsellors, faculty and staff, along with industry representatives for career placement

Finding 2: Professional engineer, not a professional athlete

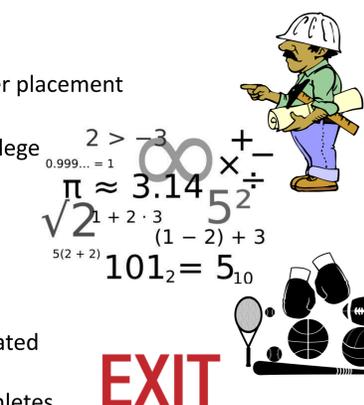
- Consider offering personality tests (e.g., Meyers-Briggs) to student-athletes in high school and first-year students in college
- Provide student-athletes with mentors who can help them identify careers outside of a professional athlete

Finding 3: Used sports, instead of getting used by sports

- Provide student-athletes with information about academic scholarships and assist them with the application process
- When promoting intercollegiate athletics, highlight the benefits relating to mental well-being and physical fitness

Finding 4: Had an exit strategy for life after sports

- Provide financial alternatives to retain student-athletes who stop playing due to academics, or sports performance related issues (i.e., injury, playing time)
- Create partnerships between engineering faculty and athletic staff members to best support STEM-focused student-athletes



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