Molding Melanin Magic Mentorship Program

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BACKGROUND

- Historically women and minorities in the STEM field are underrepresented.[1]
- Underrepresented minority women who pursue STEM careers may face additional barriers than their majority counterparts including limited access to the field, isolation and alienation, and college accessibility.[2]
- Mentorship opportunities can aid minority women in achieving success in the STEM field.[3]
- Research shows that students who receive quality mentoring have a higher level of academic success because mentoring relationships provide academic, social, and career guidance that is invaluable during their adolescent years.[4]
- To address these challenges, the primary investigator developed Molding Melanin Magic (MMM), a mentoring program designed to serve minority females in their sophomore or junior year of high school that wish to pursue a career in the STEM field.
- The purpose of this current study was to understand the relationship between Molding Melanin Magic (MMM), an in-person mentoring program, and participant's understanding and pursuance of attending and being admitted to college after high school graduation.

METHODS

- **Recruitment:** Recruitment occurred at Texas Academy of Biomedical Sciences High School in homeroom classes that have sophomore and/or junior students (6 classes). The primary investigator visited the school, explained the program to current sophomore and junior students, and provided students with a form to complete if interested. The interest form was also sent out via email from the school counselor to sophomore and junior female students. A total of 12 students enrolled in MMM.
- **Application**: The application was used to confirm whether students identify as underrepresented minorities in STEM, their current grade level, career interests, motivation for program participation, how they became interested in the STEM field, if they planned on committing to the program and attending all eight afterschool meetings, and whether they had a means of transportation home after each meeting.
- **Mentor program meetings:** One mentor was assigned to every two mentees. Meeting topics included: resume building, vision boards, headshots, STEM field overview, college student panel, college applications, financial aid, financial literacy, physical and mental health, and a STEM field trip to TCU. Mentees were encouraged to journal throughout the program and share their entries at each meeting. Goals were set at the beginning of the school year and mentors checked in bi-weekly with mentees to make sure they were on track to meet their goals and to see if they needed any further mentoring or advice.
- **Surveys:** Surveys were distributed via Qualtrics at the beginning, middle, and end of the program to assess mentees' attitudes and feelings toward college, college applications, mental health, and the mentoring program overall.

RESULTS

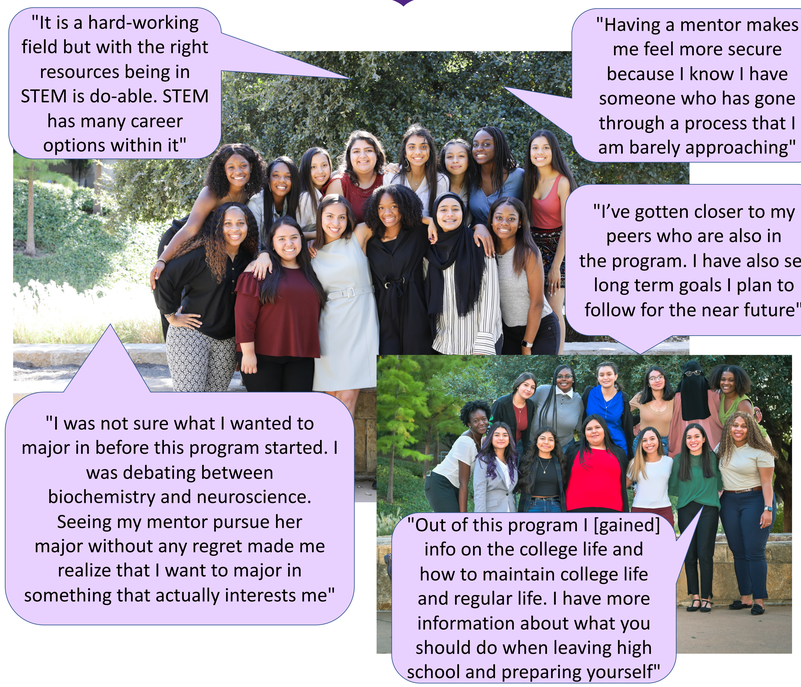

Table 1: Quantitative responses across three surveys assessing mentor relationship, plans for college, feelings toward college, and knowledge on resumes

Question	Response before MMM	Response during MMM	Response after MMM
Have you ever had a mentor?	Yes: 8% No: 92%	*	*
I feel prepared for college.	Strongly Agree: 8.33% Agree: 41.67% Neither Agree or Disagree: 33.33% Disagree: 16.67%	Strongly Agree: 16.67% Agree: 50% Neither: 16.7% Disagree: 8.33% Strongly Disagree: 8.33%	Strongly Agree: 25% Agree: 66.67% Disagree: 8.33%
I feel confident about attending college after high school.	Strongly Agree: 33.33% Agree: 41.67% Neither Agree or Disagree: 8.33% Disagree: 16.67%	Strongly Agree:58.33% Agree: 16.67% Neither:16.67% Strongly Disagree: 8.33%	Strongly Agree: 66.67% Agree: 33.33%
If you decide to attend college will you be a first-generation college student?	Yes: 75% No: 25%	*	*
Do you know how to construct a resume?	Yes: 16.67% Kind of: 8.33% No: 75%	Yes: 75% Kind of but would like to learn more: 25%	Yes: 66.67% Kind of but would like to learn more: 33.33%
Are you aware of what is needed to complete a college application?	Yes: 33.33% Kind of: 50% No: 16.67%	Yes: 58.33% Kind of but would like to learn more: 33.34% No: 8.33%	Yes: 83.33% Kind of but would like to learn more: 16.67%
Do you know what FAFSA is?	Yes: 16.67% Kind of: 58.33% No: 25%	Yes: 58.33% Kind of but would like to learn more: 33.34% No: 8.33%	Yes: 92% No: 8%

DISCUSSION

- Following conclusion of the program, all students reported that they felt more confident about attending college, compared to their feelings at the beginning of the program.
- Majority of students learned how to construct a resume, know what is needed for the completion of a college application, and know what Free Application for Federal Student Aid (FASFA) is.
- Additionally, the all students said they learned and implemented mental health strategies that they intend to continue using following conclusion of the program.
- All of the students reported that their mentor was beneficial to them and stated that they plan to stay in contact with their mentor after the program concludes.

IMPLICATIONS

- The MMM program proved successful and beneficial to the students that participated in it.
- The MMM program was feasible and could easily be implemented at other high schools within Fort Worth ISD using the same program model.
- Sustainability for the program in the future includes continuing it through the EPIC grant in the pre-health office, and passing it off to a freshman STEM scholar, and former MMM mentee.
- In conclusion, MMM could help bridge the gap between wanting to go to college and being prepared to go to college as an underrepresented minority pursuing a STEM degree.

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