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Description of a student success program to increase support, coping, and self-efficacy among under-represented minority nursing students in the wake of the dual pandemics of COVID-19 and racial violence

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ABSTRACT

Background: Increasing the size and diversity of the nursing workforce is an important priority. Here, we describe a student success program to increase students' perceived support, coping, and self-efficacy for completing the nursing program among underrepresented racial/ethnic minority students in nursing education following the dual pandemics of COVID-19 and racial injustice.

Methods: In collaboration with the Urban Health Program at the University of Illinois Chicago, we conducted a 15-week online student success pilot program with a volunteer sample of upper-level undergraduate nursing students. The curriculum for the program included topics centered on traditional student success topics and psychological, emotional, and contextual issues associated with student success. The sessions were conducted weekly throughout the Spring and Fall semesters of 2021, lasting 90-min. Quality improvement evaluations included weekly process variables and a post-test assessment.

Results: Participants (N = 35) were primarily female and Hispanic. The program was acceptable, with participants very satisfied with the weekly sessions (83 %). Post-evaluations revealed self-reported improvements in peer support (69 %), confidence in reaching educational goals (94 %), handling microaggressions (77 %), coping with adversity (80 %), stress levels (63 %), and thoughts about leaving the program (86 %).

Conclusions: This student success program shows promise for improving general and minority-specific factors associated with student success. Additional development and evaluation are needed to determine the program's benefits for a larger group of nursing students.

Introduction

The number of adults in the United Stated aged 65 and older has increased by more than a third (34.2 % or 13,787,044) over the past decade (US Census Bureau, 2020). As the nation has continued to age, it has grown more racially and ethnically diverse (US Census Bureau, 2020). The national nursing workforce shortage remains a significant challenge to meeting the current and projected health care needs of an increasingly diverse and aging population (Buerhaus et al., 2017; Haddad et al., 2021). Indeed, a recent study projected that by 2030, there would be an estimated shortage of a half-million Registered Nurse (R.N.) jobs in the United States (Zhang, Tai, et al., 2018). The nursing shortage is felt across the United States, with the South and West regions representing the geographical reasons with the most extensive need (Zhang, Tai, et al., 2018). However, larger urban and metropolitan areas tend to experience a high negative impact of the nursing shortage due to the proportion of medically underserved communities in urban regions (Dussault & Franceschini, 2006). Urban areas are also home to large racial/ethnic minority groups with known barriers to high-quality and culturally safe health care services (Agency for Healthcare Research and Quality, 2020). To address the nursing shortage, the American Association of Colleges of Nursing has called for an increase in baccalaureate-prepared nurses (AACN, 2010). In recognition of the increased diversity of patients and the persistence of health inequalities among underserved population groups, diversification has also been deemed essential to national efforts to increase the nursing workforce (AACN, 2019; Breslin et al., 2018). This article describes a student success program to increase support for underrepresented minority students attending a four-year

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baccalaureate nursing program.

Review of the literature

The four-year Bachelor of Science in Nursing (BSN) degree provides the educational and experiential cornerstone for addressing the national workforce shortage (National Academies of Sciences, Engineering, and Medicine, 2021). Currently, there are more than 996 baccalaureate programs in the United States. Graduating from an accredited program is a launching pad for many nursing-related career activities. According to AACN's report on 2018–2019 *Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing*, nursing students from minority backgrounds represented 34.2 % of students in entry-level baccalaureate programs (Fang et al., 2019). However, 79.4% of nurse educators nationally identify as non-Hispanic White (National League for Nursing Faculty Census Survey, 2022). Research suggests that students from historically excluded racial/ethnic backgrounds face unique challenges in completing educational programs in predominately White institutions (PWI) (Alexander & Hermann, 2016; Miller & Orsillo, 2020; Winkle-Wagner & Mccoy, 2018). Research also suggests that even the students who complete nursing education remain vulnerable to leaving the nursing profession due to many of the same institutional barriers encountered in their nursing education. For example, qualitative research with underrepresented minority (URM) students at predominately White institutions points to a range of non-academic factors impacting their nursing education experiences (White & Fulton, 2015). White and Fulton (2015) reviewed the literature describing the experiences of African American nursing students in predominately White institutions (PWI). The integrative review of 17 studies yielded three common experiences of Black/African American nursing students attending PWIs: the struggle with isolation and the need to belong; the impact of faculty on student success; and the significance of academic and interpersonal support.

Against this larger backdrop, current nursing students of color have experienced the most significant social challenges in more than two generations. The COVID-19 pandemic has derailed the expected educational experiences of all students. However, the pandemic has disproportionately impacted the lives of students of color, with Black and Brown communities experiencing higher rates of hospitalizations and deaths associated with the coronavirus (Garcia et al., 2021). Further, there were months of national protests against the systemic racism experienced by Blacks that followed the murder of George Floyd. This act was followed by increasing levels of threat against marchers and protesters, resulting in further loss of life. In addition, violence toward Asian American communities has skyrocketed due to xenophobic attitudes and misdirected blame for the COVID-19 pandemic. National surveys suggest a significant proportion of college students report elevated rates of moderate to severe depression, anxiety, suicidal ideation, and perceived inability to cope with the stress associated with pandemic-related activities (Zhai & Du, 2020). Further, students of color reported disruptive changes in finances (54 %), living situation (35 %), academic performance (46 %), educational plans (49 %), and career goals (36 %) (Molock & Parchem, 2020).

Nursing educational settings require innovative approaches to increasing all students' safety, sense of belonging, and success. Most existing programs focus on academic readiness, professional development, and mentorship. However, evidence suggests that non-academic factors such as a sense of belonging are essential to student success yet are rarely addressed as part of student success initiatives (Matthews et al., 2021). Pipeline development programs and other student success initiatives aim to increase student success by increasing resources and support for students has not successfully diversified the nursing workforce (National League for Nursing Faculty Census Survey, 2022). Mentorship programs have known benefits for improving student outcomes (Akinla et al., 2018). However, to enhance effectiveness, mentorship and other pipeline development programs must be tailored to the unique needs of URM students in predominately white institutions and delivered using a racial justice lens (Matthews et al., 2021).

Specific aims

To date, pipeline development programs aim to increase student retention by primarily addressing academic factors and excluding non-academic factors that hinder URM students' success. In collaboration with the Urban Health Program at the University of Illinois Chicago, we conducted a 15-week online student success pilot program with a volunteer sample of upper-level undergraduate nursing students. The specific goals of the student success program were to increase student's perceived support, coping, and self-efficacy for completing nursing education. Further objectives of the program were to improve skills associated with managing specific challenges URM students face in predominately White institutions. Here we describe the content of the program, program outcomes, and recommendations for addressing the needs of racial/ethnic minority students in nursing education.

Methods

Design

We evaluated a pilot project to determine the acceptability and student outcomes associated with a student success program for undergraduate nursing students. The student success program was offered for 15-week sessions in the Spring semesters of 2021 (n = 21) and 2022 (n = 14). The outcomes of both semesters were combined and the results presented below.

Setting

The study success program was conducted as part of student support services offered by the Urban Health Program (UHP) in the College of Nursing at the University of Illinois Chicago. The goal of the UHP is to provide programming, resources, and support for pre-health and health professional students who are dedicated to addressing health inequalities and improving the quality and availability of healthcare in underserved urban areas. Further, the UHP seeks to expand educational and research opportunities for underrepresented students at all academic levels (including pre-college). Activities sponsored by the UHP include assistance with applications to the health sciences colleges and mock interviews. In addition, students are offered support services in academic advising, professional development, summer educational enrichment opportunities, financial sponsorship to attend conferences, assistance applying for scholarships, and social support from other UHP peers. The current program represents an extension of the educational mission of the UHP. Anonymous post-test measures were collected as part of quality improvement efforts. The Institutional Review Board (IRB) has determined that activities directed toward the enhancement of the educational mission of the university are exempt from IRB approval.

Recruitment

Participants in the student success program were a volunteer sample of undergraduate nursing students in the College of Nursing's UHP. The Assistant Director of the UHP sent an email to all UHP students on the three college campuses that offer undergraduate degrees, including the Chicago, Urbana-Champaign, and Springfield campuses. The email invitation provided details about the objectives of the 15-week program, the expected time commitment, and that a stipend ($100.00) and certificate of completion would be provided to participants who attended 80 % of the sessions (n = 12 of 15). Eligibility criteria included being a current student at one of the three campuses, being able to commit to the entire 15-week program, and willing to provide evaluation feedback. Interested students completed an online registration form and were

provided a zoom link for the first orientation session.

Facilitators

Instructors for the program were selected based on training and experience in group facilitation and knowledge of URM-specific barriers and facilitators to student success. One of four Black-identified individuals facilitated all sessions with multi-disciplinary training, including nursing, psychology, and public health. A clinical psychologist (AKM) provided training to facilitators on issues associated with rapport building, group management, and facilitating discussions related to potentially emotionally laden topics such as reports of microaggressions. A standardized curriculum was developed for all facilitators and delivered via PowerPoint presentations to ensure fidelity to the program. A ninety-minute debriefing and supervision session took place weekly to review post-session feedback from participants, address emerging problems, share best practices, and review the curriculum for the following week. The total time commitment for each facilitator was 3 h per week.

Description of the program development

A literature review was conducted to identify relevant target areas for content development. The curriculum included common elements of student success, including lectures dedicated to describing the benefits and strategies for obtaining mentorship, improving one's study skills, and strategies for enhancing professional development (e.g., attending conferences) (see Table 1). A constructivist pedagogical approach informed the development of the program based on problem-based learning (PBL). Problem-based learning is a student-centered teaching style that focuses on solving real-world problems by applying new knowledge (Donnelly & Fitzmaurice, 2005). Problem-based learning incorporates Kolb's "doing, feeling, and thinking" learning styles (Kolb, 1984). Instruction focuses on contextually defined knowledge within a collaborative group-centered environment, supported by faculty coaching (Baker et al., 2007). This contextual aspect results in a deeper understanding of and application of learned concepts that supports developing critical thinking skills and promotes a rewarding and energizing learning environment (Shreeve, 2008).

Interventions that leverage social connections, validate URM experiences, and describe setbacks as an expected part of the educational journey have resulted in improved academic outcomes, a sense of belonging, and well-being (Brady et al., 2020). Current evidence suggests that fortifying pipeline development programs with strategies to cultivate psychological well-being is also needed (Matthews et al., 2021). Kolb's model was used to design culturally appropriate interactive educational techniques in a semi-structured learning format, including open-ended group-based discussions, facilitated guidance through topical concepts, speak-aloud affirmations (e.g., "Hard work will lead to success.", "If I struggle with a class, that does not mean I do not belong in this program." "We are all in this together."), and reflective journal writing ("Describe an experience with micro-aggressions and how you would handle it differently in the future"). Additionally, each mentorship session included a personal story from the group mentor or other illustrative examples (e.g., TED Talk videos) to reinforce concepts, normalize challenges within the educational environment, and illustrate strategies for overcoming challenges. Further, we incorporated important psychological (e.g., stereotype threat, imposter syndrome, growth mindset), emotional (e.g., managing stress and anxiety, creating a sense of belonging), and contextual factors (e.g., dealing with micro-aggressions, the absence of minority faculty) unique to URM and other historically excluded students. The program's format allowed students to connect and share their experiences with success and challenges in the undergraduate nursing program, thereby building community and increasing a sense of belonging and overall satisfaction.

Developed initially to target health promotion interventions culturally, Kreuter's approaches were adopted to increase the saliency and perceived relevance of the student success program. The strategies outlined by Kreuter et al. (1999) were used to target the student success curriculum to address the needs and experiences of diverse students. We targeted the curriculum by including (1) peripheral strategies (e.g., culturally appropriate packaging, including diverse images of students of color, motivating proverbs from differing cultural groups), (2) evidential strategies (e.g., enhancing perceived relevance by presenting information specific to students of color, including percentage in the nursing workforce, barriers to educational success, the impact of microaggressions on well-being), (3) linguistic strategies (e.g., using language and terminology relevant to students from diverse groups), (4) constituent-involving strategies (e.g., including facilitators who were near-peers (postdoctoral fellows) and of color), and (5) sociocultural strategies (e.g., discussing URM student success within the context of the broader diversity, equity, and inclusion values of the university; emphasizing the importance of a diverse workforce for reducing health inequities and increasing the quality of care for all patients).

Description of student success program

The Urban Health Program (UHP) Pilot Student Success Program is a 15-week program developed to support and increase retention among underrepresented minority students. The initial session (Week 1: Struggle is a part of the journey to success) included an orientation to the program, establishing safety and community norms for the group, and a discussion of the rationale for the importance of diversification of the nursing workforce by ensuring the current success of students of color. We also emphasized persistence and overcoming barriers to success as critical to meeting their goals of completing their nursing education and succeeding in the nursing workforce. Subsequent sessions provided a combination of topics related to foundational skills to succeed in higher education (Weeks 2–4, 11, 13), increasing coping and resiliency (Weeks 5–7, 15), and issues that are unique to the experiences of underrepresented students in higher education (Weeks 8, 9, 11, 12, 14). Table 1 provides an overview of the weekly topics, learning objectives, specific activities conducted during the session, and recommended reading or online video.

Group-centered or team-based approaches have been found to increase students' learning of core concepts and levels of engagement and improve attitudes about teamwork in formal classroom settings and online (Alberti et al., 2021). As such, we opted to deliver the program to smaller groups of students instead of a single large group. The program included 35 students led by three facilitators. Students were divided into three groups, and facilitators led 90-minute mentoring sessions for all 15 weeks. Each session started with a review of the agenda, a quick check-in with the students, and updates on any successes or challenges from the prior week, the weekly didactic component delivered via PowerPoint, and a personal story or experience shared by the group mentor that was related to the weekly topic. The sharing of a personal story by the mentor was meant to demonstrate that challenges during nursing education are normative, that challenges can be overcome, and to model persistence in the face of adversity. Next, there was a group discussion on the topic area and brief journal writing, which was meant to solidify the information and asked students to describe how the data could increase their success in the nursing program, and then establish individual goals for the upcoming week that were related to the content area. While each facilitator met with their respective groups separately, three of the 15 sessions were held jointly and delivered by the faculty member on the team with in-depth research and clinical expertise on the topic covered for those weeks. Each session ended with students completing a brief satisfaction survey that included feedback on the usefulness of the session. All participants were awarded certificates of completion and a $100 gift card at the very end of the program.

Table 1
Overview of student success curriculum.

Week	Title	Objectives and content	Activities	Recommended reading or video
1	The struggle is a part of the journey to success	• Provide an orientation to the program, including overview and introductions • Identify barriers to a sense of belonging in nursing school • Normalize struggle as a part of educational growth • Describe the importance of and strategies to increase persistence in higher education	• Powerpoint presentation of content • Mentor's story • Group discussion • Reflective Journal writing on the idea of "belonging." • Complete weekly survey	U-World (NCLEX)
2	The unwritten "rule book" of success in higher education does exist, and here is what it says!	• Describe the importance of individual markers of success • Describe the "unwritten" rule book of success in higher education which is based on White middle-class values • Inform participants about available resources at the college of nursing	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Powerpoint presentation of content • Mentor's story • Group discussion • Reflective Journal writing on the idea of "success." • Complete weekly survey	https://www.youtube.com/watch?v=5ntkP0cCJrY
3	Study strategies 2.0: Yesterday's skills may not meet today's requirements	• Describe the differences between learning and studying • Defining different learning styles • Share information about the "Review Study Cycle" • Review time management skills • Increasing knowledge about one's personal motivation for academic success	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on learning strategies • Complete weekly survey	Mindfulness exercises: https://studylink.com/articles/3-simple-mindfulness-exercises-help-maximise-studies/ Learning Styles online quiz: https://vark-learn.com/the-vark-questionnaire/ UIC Nursing Student Success Program: https://nursing.uic.edu/about/college-insider/student-resources/student-success-program/
4	Mentorship: Finding a mentor and being a good mentee	• Describe the role of a mentors and mentees in higher education. • Revise the qualities that make for a good mentor/mentee • Discuss life goals and relationship to mentoring • Discuss how mentorship helps overcome life challenges	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on being a good mentee • Complete weekly survey	How to be a good mentee: https://youtu.be/lmYNfoaixNY How to find and keep a good mentor: https://youtu.be/Orh4LScmAmI
5	Building a growth mindset	• Define Growth Mindset • Understand the differences between growth and fixed mindset • Understand how a growth mindset impacts nursing education • Learn tips on acquiring a growth mindset	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on 'growth versus fixed mindset.' • Complete weekly survey	Video: The Power of believing that you can improve by Carol Dweck. TED https://www.ted.com/talks/carol_dweck_the_power_of_believing_that_you_can_improve Video: The Power of belief—mindset and success by Eduardo Briceno. TED https://youtu.be/pN34FNbOKXc
6	Help-seeking: What does this mean in an academic setting?	• Define help-seeking • Discuss positive and negative beliefs related to help-seeking • Discuss coping styles and their impact on help-seeking • Learn what help-seeking means for academic success • Discuss resources and develop a personal directory of resources	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on the idea of help-seeking. • Complete weekly survey	The importance of help-seeking: https://youtu.be/DceQvhlyuOo Help-seeking as a sign of strength: https://youtu.be/nBzo7ZfuLEc How to ask for help: https://youtu.be/9FbBwehUp5Q
7	So, you struggled in a class: What it does and does not mean about you as a student.	• Increase awareness of the normalcy of academic challenges in pursuing a nursing degree • Discuss healthy and unhealthy coping styles • Understanding why the struggle is important • Understand the concept of the 'flow' state • Identify strategies to get from struggle to flow state • Discuss the importance of personal affirmations	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Affirmations Activity • Discussion • Reflective Journal writing on the idea of "struggling" in nursing school • Complete weekly survey	Identifying and overcoming common challenges for college students: https://youtu.be/j588ID7PvsU https://youtu.be/Mt6i0i8bkR4

(*continued on next page*)

Table 1 (*continued*)

Week	Title	Objectives and content	Activities	Recommended reading or video
8	Stereotype threat: What it is and how it impacts your educational performance	• Define 'stereotype threat' (ST) and its impact on educational performance • Discuss stereotypes related to the nursing profession • Understand how ST works and how to mitigate • Review strategies of having a growth mindset and affirmations	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on core personal values outside of nursing • Complete weekly survey	Video: Racial Stereotypes by Kira Sincock. TED https://youtu.be/gvcLbRxC8w0
9	Belonging uncertainty: "Can people like me succeed?" (emphasizing overcoming 'imposter syndrome')	• Define belonging uncertainty • Define 'sense of belonging' and its importance in education • Identify triggers that cause one to doubt their potential for success • Discuss strategies to build one's sense of belonging • Develop affirmations that align with a sense of belonging	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on what is needed to increase a sense of belonging • Complete weekly survey	Belonging and belonging uncertainty: https://youtu.be/c0mVa7d08tg https://youtu.be/-r-ci4iybt8 https://youtu.be/mDGOZWp5iGk
10	A hidden key to success: Emotional literacy and intelligence	• Identify five types of intelligence • Define emotional intelligence • Understand that emotional intelligence is key to success • Discuss five elements of emotional intelligence and its characteristics	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on emotional intelligence • Complete weekly survey	Video: Emotional Intelligence by Daniel Goleman-Animated book summary: https://youtu.be/n6MRsGwyMuQ
11	Radical Leadership Skills 101	• Discuss their definition of leadership • Discuss why leadership is essential in the nursing profession • Define 'radical' leadership • Discuss leadership types and examples • Discuss links between leadership and emotional intelligence • Define and discuss practical steps to radical leadership	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Zoom polls • Reflective Journal writing on radical leadership • Complete weekly survey	Women of Color as Leads: https://youtu.be/WyQp7iJZ1uc Radical self-leadership: https://youtu.be/ZtFUoA_0fwE https://youtu.be/vlpKyLklDDY
12	Microaggressions: Their influences on stress and academic performance	• Define and discuss experiences with microaggressions • Define implicit bias • Define microinsult • Define micro assault • Define micro invalidation • Discuss the impact that microaggressions have • Discuss tips on how to handle microaggressions outside of the classroom	• Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Reflective Journal writing on microaggressions • Complete weekly survey	Video: Microaggressions in the classroom https://www.youtube.com/watch?v=ZahtlxW2CIQ&t=133s
13	Persistence in the face of adversity: One step forward and two steps backward to the finish line	• Define persistence and adversity • Discuss types of adversities • Discuss strategies for persisting for each type of adversity	• Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on persistence in the face of adversity • Complete weekly survey	Persistence in the face of adversity: https://youtu.be/VxW5D5VPg_0 https://youtu.be/Rq6CL0nYQnk https://youtu.be/XMLQYEvcGuM
14	How you say it matters: Principles of communication across difference	• Discuss four types of communication • Define styles of communication • Discuss which styles can impact communication success • Understand how to acknowledge difference and develop genuine respect across difference • Discuss common barriers and principles of effective communication • Develop strategies to practice effective communication across difference	• Ice Breaker • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Roleplay with scenarios (breakout session) • Reflective Journal writing on communicating across differences	The danger of a single story: https://youtu.be/D9Ihs241zeg Communicating across difference: https://youtu.be/QjEDxlzZnIo

(*continued on next page*)

Table 1 (*continued*)

Week	Title	Objectives and content	Activities	Recommended reading or video
15	Resiliency comes in many different colors: Recognizing your superpowers	• Define true resilience and what it means for the individual • Discuss six domains of resilience • Understand how one gets to the point of being resilient • Discuss and define seven 'superpowers of resilience.'	• Complete weekly survey • Weekly Check-In of applying the lessons from the previous session • Presentation of content • Mentor's story • Discussion • Reflective Journal writing on the idea of 'SuperPowers.' • Complete weekly survey • Program acknowledgments and distribution of certificates of completion	Resiliency as a superpower: https://youtu.be/tP4qKqvB8pc

Data collection

UIC's Qualtrics is a web-based survey platform for collecting survey data to support teaching and academic research. Students completed a brief demographic survey before engaging in the first UHP mentorship session. The UHP program director created a listserv with all students enrolled and sent an email containing a Qualtrics link to all participants. In addition to the brief baseline survey completed as part of the enrollment process, students completed an anonymous weekly feedback survey and a program evaluation survey after the last session.

Measurements

Demographic characteristics

Participant demographic characteristics included age, race/ethnicity, gender identity, year in the nursing program, and regional location.

Program evaluation: acceptability

Acceptability was determined based on weekly process evaluations that consisted of the following items: "*Overall, how informative was the information presented?*"; "*How personally helpful was the information presented?*"; and "*Overall, how satisfied were you with today's mentoring session?*" Responses were rated on a four-point scale ranging from 1 (poor) to 4 (excellent). The student success program included multiple strategies aimed at achieving program goals. Six questions were asked to assess the importance of each session component, including 1) *Weekly check-in/review of goals from the prior week*, 2) *informational lectures*, 3) *mentor's story*, 4) *time to talk*, 5) *journal exercise*, and 6) *refection and goal settings*. Response items ranged from 1 (not at all important) to 3 (very important). An additional question was asked to evaluate the student's perceptions of their mentor's preparation, "*How prepared was your mentor for each weekly session?*" Response items ranged from 1 (not at all prepared) to 3 (very well prepared). Students were asked to rate "*How well did the program meet your expectations?*" on a scale ranging from 1 (not at all) to 3 (very well). Following the last session, students were asked, "*Would you recommend the program to other College of Nursing students?*" (Yes/No).

Program evaluation: benefits of the program

A series of questions were asked that focused on the benefits of the program, including: "Level of support from peers," "Confidence in their ability to reach educational goals in nursing," "Confidence in their ability to reach career goals," "Ability to handle microaggressions at school or work," "Ability to cope with adversity as part of your educational journey," "Level of stress" and "Thoughts about leaving the program," "Sense of belonging," Responses were rated on a three-point scale: 1 (worse than before the program), 2 (about the same as before), or 3 (Better than before). Preparedness to reach their individual nursing goals was assessed using the following question: "*After completing this program, how prepared do you feel to reach your education or career goals in nursing?*" Response options included: 1 (not at all prepared) to 4 (very prepared). Students were also asked to rate the program's impact on their future goals, including "*their ability to complete the semester*" and "*the program's impact on their future nursing careers*." Response options ranged from 1 (no impact) to 4 (high impact). Finally, participants were asked two open-ended questions, "*What was your favorite thing about the program and why?*"; and "*Please describe three ways you benefitted from the program*."

Analysis plan

This study employed quantitative and qualitative analyses and was conducted by team members with relevant expertise (AKM, AS, AH). Frequencies and descriptive statistics of the pretest, weekly session evaluations, and post-test survey data were used to analyze quantitative data and to evaluate acceptability and student outcomes. Weekly evaluation data was merged via SPSS version 27. We use a deductive coding scheme based on study questions (McKibben et al., 2020). Qualitative data were transcribed and analyzed based on study questions, and additional sub-themes were identified. These design and analytic approaches are used to obtain information about a topic (i.e., opinions about the most important program components) and are appropriate for applied research and program evaluation activities (Krueger & Casey, 2000; Srivastava & Thomson, 2009).

Results

Participants

Table 2 displays the demographic characteristics of the student participants. The mean age of participants was 21.5 years. Participants were primarily female (94 %), with more than half of the sample (51 %)

Table 2
Characteristics of participants.

	N = 35	%
Mean age	21.5	–
Race		
Hispanic/Latina	n = 18	51 %
Black	n = 10	29 %
Asian	n = 4	11 %
White	n = 2	6 %
Other	n = 1	3 %
Gender identity		
Male-identified	n = 2	6 %
Female-identified	n = 33	94 %
Program		
Pre-nursing	n = 2	6 %
Junior	n = 22	63 %
Senor	n = 11	31 %
Location		
Chicago	n = 15	44 %
Urbana	n = 8	23 %
Springfield	n = 12	34 %

identifying as Hispanic/Latinx. Students participated from all three University of Illinois Chicago (UIC) campuses with undergraduate nursing programs – Chicago (44 %), Springfield (34 %), and Urbana (23 %), with juniors accounting for the largest percentage of the sample (62 %).

Acceptability of the program

Evaluations of the overall program were positive, with most students (95 %) stating the program met their expectations "very well," and all students (100 %) reported that they would recommend the program to a friend. Weekly evaluations support the program's acceptability, with a high percentage of students rating the information presented, the helpfulness of the information, and their overall satisfaction with the sessions as "Excellent" (78 %, 77 %, and 83 %, respectively). Student ratings of the program and session components are shown in Tables 3 and 4, respectively.

Benefits of the program

Table 5 displays post-program data on the perceived benefits of the student success program on key outcomes. As a result of the program, students reported "a lot better" in terms of their: sense of belonging in the college (86 %), level of perceived support from peers (69 %), confidence in reaching their educational goals (94 %) and career goals (96 %), ability to handle microaggressions (77 %), ability to cope with adversity (80 %), level of stress (63 %), and their thoughts about leaving the program (86 %).

In terms of impact, most participants reported that the program had a high impact on [their] ability to complete the semester (80 %) and anticipated that the program would have a high impact on the rest of their nursing careers (86 %). Additionally, 94 % of participants reported feeling either somewhat or very prepared to reach their career goals in nursing due to the program (Table 6).

Post-intervention qualitative feedback

Participants were asked to describe their favorite program component in the post-evaluation survey, with several themes emerging. The first was the appreciation of a safe space. Students highlighted how this program provided them a venue to share their experiences and perspectives freely without judgment. They stressed that this program enabled them to connect with others enduring the same journey. One participant stated:

> *I really enjoyed the overall welcomeness of the program – it was a safe place to talk about a given week's main topic but also just to voice our thoughts/emotions. I enjoyed how close my group became and how comfortable we all were with one another. Support is something that I lack, so to know that I have others that have my back and can relate to me is something very special to me.*

The student success program was designed to expand students' capacity to sustain and endure the burdens of the nursing journey, so sessions focused on personal and character development. Participants also discussed the generalizability of weekly topics to their personal life.

Table 3
Overall assessment of the student success program.

Program component	Excellent		Good		Fair	
	N = 35	%	N = 35	%	N = 35	%
Overall experience	n = 31	91 %	n = 3	9 %	n = 0	0 %
Facilitation of sessions	n = 30	88 %	n = 3	9 %	n = 1	3 %
Relevance of lectures	n = 31	862 %	n = 4	11 %	n = 0	0 %
Weekly lectures	n = 31	86 %	n = 4	14 %	n = 0	0 %
Program organization	n = 27	75 %	n = 8	22 %	n = 0	0 %

Table 4
Importance of session components.

Components	Very important		Somewhat important		Not at all important	
	N = 35	%	N = 35	%	N = 35	%
Reflection and goal setting	n = 34	97 %	n = 1	3 %	n = 0	0 %
Journal exercise	n = 29	83 %	n = 5	14 %	n = 1	3 %
Time to talk	n = 33	94 %	n = 2	6 %	n = 0	0 %
Mentor story	n = 35	100 %	n = 0	0 %	n = 0	0 %
Informational lectures	n = 35	100 %	n = 0	0 %	n = 0	0 %
Weekly check-in/goal review	n = 31	89 %	n = 4	11 %	n = 0	0 %

Table 5
Benefits of the student success program on socio-emotional factors (N = 35).

Your sense of belonging in the College of Nursing		
Better	n = 30	86 %
About the same	n = 5	14 %
Level of support from peers/classmates		
Better	n = 24	69 %
About the same	n = 11	31 %
Confidence in their ability to reach educational goals in nursing		
Better	n = 33	94 %
About the same	n = 2	6 %
Confidence in their ability to reach career goals in nursing		
Better	n = 33	96 %
About the same	n = 2	10 %
Ability to handle microaggressions at school or work		
Better	n = 27	77 %
About the same	n = 2	6
Ability to cope with adversity as part of your educational or career journey		
Better	n = 28	80 %
About the same	n = 6	17 %
Your level of stress		
Better	n = 22	63 %
About the same	n = 12	34 %
Your thoughts about leaving the program		
Better	n = 30	86 %
About the same	n = 4	11 %
Worse	n = 1	4 %

One student stated:

> *My favorite thing about the program is that we are learning things that can be related to nursing and overall goals and personal growth. I was able to take what I learned and incorporate it into my schoolwork and personal life.*

Students also highlighted the benefit of learning through personal narratives. This program consisted of a didactic component followed by interactive discussions, and hearing their peers' narratives enabled them to realize that (1) they are not the only ones enduring a specific struggle; (2) it is possible to have victory even while passing through a challenging situation; (3) their peers may have experienced challenging situations in the past, but they were able to endure and succeed

Table 6
Program impact on educational and career goals.

	N = 35	%
Impact program on your ability to complete the Spring 2021 semester		
No impact	n = 1	3 %
Moderate impact	n = 6	17 %
High impact	n = 28	80 %
Impact of mentorship on the rest of your nursing education or career		
Moderate impact	n = 5	14 %
High impact	n = 30	86 %
How prepared do you feel to reach your education of career goals in nursing		
A little prepared	n = 2	6 %
Somewhat prepared	n = 13	37 %
Very prepared	n = 20	57 %
Would you recommend the program to other College of Nursing students		
Yes	n = 35	100 %
How well did the program meet expectations		
Very well	n = 34	97 %
Well	n = 1	3 %

providing hope to others. Related to this theme, one student stated:

> *My favorite part of the program was hearing other people's stories while feeling validated about my frustrations during the program. It was nice to hear everyone's perspectives and ways of persevering through certain situations.*

Several students described the benefits of reflecting on their educational journey, including challenges. Students appreciated that the program incorporated weekly guided journal questions to reflect on the content discussed in the lecture.

> *I really enjoyed the journal exercises at the end because I was able to be extremely open with myself with no pressure of saying something wrong or right.*

Lastly, students also appreciated the sense of community and the feeling that they were not alone. Over the 15-week program, students learned to be accountable to their mentors, peers, and themselves. They understood that it is common to have fears or doubts and that developing appropriate means of overcoming negative thoughts and emotions is possible. We discussed the power of our words and the benefits of positive affirmations on one's overall physical and mental well-being. If desired, students developed an affirmation list and shared it with their group. One student stated:

> *My favorite thing about this mentor program was hearing different peers' affirmations, goals, and fears. It made me feel like I wasn't the only one having the same thoughts. I also feel it helped bring us closer together.*

Discussion

The dual pandemics of COVID-19 and racial violence have disproportionately impacted students of color (Jones, 2021). Reaching the AACN goals of increasing the size and diversity of the nursing workforce will require innovative strategies that meet the general and unique needs of underrepresented students, including responding to emergent social crises. This article aimed to describe the acceptability and benefits of a student success program among URM nursing students. The program's acceptability was satisfactory, with students reporting the weekly sessions to be very informative and helpful. In addition, students were very satisfied with the program, with all participants indicating that they would recommend it to their peers. The program was viewed as beneficial to students in areas of need experienced by most students (i.e., support) and those more commonly encountered by underrepresented minority students (i.e., microaggressions). The student findings are consistent with the extant literature on the benefits of mentorship and other forms of student success programs for URM students (Chen et al., 2021; Holloway et al., 2019; Murray et al., 2022).

The outcomes of this student success program are promising. They warrant a more formal evaluation to replicate the program's short-term benefits and examine its impact on longer-term outcomes such as graduation rates. Further, our findings add to the existing literature by demonstrating the positive benefits of addressing unique barriers to academic success among URM students (Brady et al., 2020; Carter & McMillian-Bohler, 2021; Holtschneider & Park, 2021).

Implications for the development of student success programs

The outcomes associated with our student success pilot program have implications for developing student success initiatives. For example, research on the success of underrepresented students in higher education typically focuses on preparation, access, retention, and persistence (Palmer et al., 2013; Palmer et al., 2014). However, many underrepresented minority students also need practical, emotional, and social support that exceeds student success activities offered by predominately White institutions. Expressly, social issues such as discrimination, microaggressions, and social isolation represent barriers to underrepresented students outside of the commonly considered educational challenges. However, these “extra-academic” factors are highly predictive of student well-being, achievement, and persistence in higher education (White & Fulton, 2015). Addressing the detrimental impact of these factors on student success is necessary to enhance existing student success initiatives. As such, the curriculum for the mentorship program was developed with the explicit goal of addressing these known barriers to academic success.

Based on the outcomes of this project and a growing literature, we recommend that existing student support programs, including mentorship and other pipeline development programs, be expanded to address these known student success barriers. Numerous resources are available to help guide the development of specific modules related to these issues (Hernandez et al., 2020; Matthews et al., 2021; Thakral et al., 2016). To help support these efforts, nursing faculty focused on the college's educational mission should consider writing small grants to support the development and evaluation of a new student success curriculum that can be applied to advisory and tutoring activities, mentorship programs, pipeline development programs, and summer enrichment activities that are already taking place.

Creating a sense of belonging has emerged as an essential aspect of student success initiatives in higher education (Strayhorn, 2012). A compelling body of evidence from social-belonging interventions informed our student success program (Brooms, 2018; Zhang, Mou, et al., 2018). Using a group-based approach, our facilitators first prioritized the creation of a sense of safety and belonging among students. Simultaneously, a shared identity of “future nurse” was cultivated among participants. As has been previously reported (Katz, 2005), the students of color in our program reported wanting to become nurses to give back to their communities. This intrinsically motivating sense of purpose was reinforced by emphasizing the critical role nurses of color have in eliminating health inequalities in underserved communities. This foundation of expected future success (graduation), safety, belonging, and purpose provided the scaffolding for students' emotional risk-taking, skill-building, self-growth, and persistence.

Providing students with social support was also a program objective. Facilitation of the sessions by individuals of color who had received in-depth training on issues related to diversity, equity, inclusion, and belonging was deemed essential to meeting the program goals. Studies involving peers or culturally trained facilitators have shown a positive impact on emotional outcomes suggesting that cultural familiarity plays a significant role in interventional delivery (Zhang & Zhou, 2019). To be

sure, and as was the case in the current program, it is not an absolute requirement that facilitators be from the same cultural groups as participants. However, extensive training and comfort with diversity, equity, and inclusion are prerequisites for this role's effectiveness. Indeed, an effective social-emotional component of the student success program included sharing "real-life" experiences with the group facilitators. Each week, the program facilitators shared a personal experience associated with the curriculum content for that day. During the "Mentors story" segment of the program, facilitators briefly shared a personal experience that helped set the tone of self-disclosure, normalized struggle as a part of achieving goals, and modeled success in overcoming challenges. The evaluation of this program component revealed that 100 % of students rated the mentor's story as a *very important* element of the program.

In addition, students were guided through weekly goal setting and the review of barriers and facilitators to stated objectives. Students' willingness to have frank discussions of successes and failures (and the reasons for failures) associated with efforts to reach weekly goals increased accountability, provided an opportunity for peer input and problem-solving, and underscored the program's theme of "adversity is to be expected and can be overcome." The program also incorporated journaling and self-reflection, affirmations, learning modules on coping and support seeking, and emotional intelligence to address students' emotional needs.

Implications for improving the institutional climate

Beyond increasing the resiliency of individual students, addressing the systemic issues that create and perpetuate non-supportive learning environments for students of color is a moral imperative. Numerous articles have identified systemic racism in higher education as a barrier to diversifying the biomedical workforce (e.g., Lucey & Saguil, 2020). More recently, recommendations for addressing specific sources of bias during this tumultuous time have been provided (e.g., Crooks et al., 2021; Tilghman et al., 2021). When creating diversity, equity, and inclusion initiatives within nursing schools, several first-line approaches should be considered (Matthews et al., 2022). As noted by Matthews et al. (2022), all nursing schools should hire a diversity officer as an associate dean or equivalent who becomes a voting member of the college leadership team. This individual should first be tasked with convening a group of students, faculty, and staff to create a comprehensive and measurable diversity strategic plan for the college. Next, a climate survey should be conducted to identify the areas of strength and opportunities for growth related to equality, inclusion, and diversity within the institution. Careful attention should be placed on understanding which social-identity groups are most negatively affected across all stakeholder groups – students, faculty, and staff. Further, diversity, equity, and inclusion continuing education requirements (a minimum of three CEU units) should be required for all faculty and staff, and completion should be monitored as part of annual performance reviews. At least one of these continuing education requirements should focus on mentoring students from diverse backgrounds.

Mentorship is a skill that must be taught, and race is a salient factor in developing mentoring relationships (Lin, 2018; Vargas et al., 2020). Given the limited number of faculty of color in nursing educational settings, most students of color will be mentored by a White woman from a middle-class background. As such, current faculty will need to be educated to address the needs of students with whom they may share limited cultural, social, or historical experiences. This training is also required so that faculty of color are not disproportionately burdened by diversity-related mentorship needs (Rodríguez et al., 2015). Further, it is suggested that nursing programs offer a student-success initiative aimed at recruitment, retention, and success of historically underrepresented groups in nursing. Populations to support include students of color, members of the LGBTQ communities, first-generation students, immigrants, and gender diverse students (cisgender males, trans and non-binary individuals), to name just a few social identity groups historically excluded from nursing education. In addition, all faculty need to audit the textbooks and other educational materials used for classes to identify biased and exclusionary (Brennan et al., 2012). This audit should also include case examples for clinical simulations (Lamberson et al., 2021; Maruca et al., 2018). Finally, evidence-based approaches to increasing the diversity of the student body (holistic admissions) and faculty (cluster hiring) should be implemented and refined to ensure fidelity to the recommended practices and monitor for success (see Sgoutas-Emch et al., 2016 and Zerwic et al., 2018 for a more comprehensive discussion of these approaches). Although the above recommendations are not a complete list of possible initiatives, these suggested activities represent the cornerstones of a strong DEI foundation.

Limitations

The mentorship program had several strengths, including a comprehensive curriculum, training, and other measures to ensure fidelity and reasonable attendance rates from students from three regional locations. However, limitations should also be noted. First, participants were a volunteer sample. Students electing to participate in a semester-long program may be more motivated to improve skills to ensure their nursing education success. Next, although appropriate for a pilot test of a new approach (Hertzog, 2008), the sample size was relatively small. In addition, the participants were primarily female. Male-identified students account for approximately 15 % of the student body in the college of nursing. Additional evaluation is needed to determine the acceptability and benefits among non-female identified students. Further development and evaluation of the program are warranted to address these limitations.

Conclusion

Nursing programs across the country have increased their commitment to social justice, equity, and inclusion (Knopf et al., 2021; Kruse & Calderone, 2020). Diversification of the nursing workforce is essential for the advancement of health equity. Pipeline development programs hold promise for workforce diversification, but innovations to existing programs are needed to address the historical problem of the attrition of talented students. Mentorship programs are an essential adjuvant to more traditional pipeline programs. Both should include an intentional focus on the social, contextual, and environmental factors that serve as unacknowledged barriers to student success. The findings from the current study suggest the acceptability and benefits of addressing these issues with students from diverse backgrounds. Additional evaluation involving larger samples is needed to more fully establish the short and longer-term benefits of the program on student adjustment, well-being, and persistence in nursing. This pilot program shows promise for increasing support and intention to complete nursing education. Additional research is needed to evaluate further the benefits of this feasible and acceptable mentorship program.

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Declaration of competing interest

None of the authors have any conflicts of interest to declare.

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