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Recruitment of Minorities into Nursing, Best Practices: A Scoping Review

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Abstract

The recruitment and retention of minorities into nursing is a pressing need given the evolving racial makeup of the U.S. A scoping review of the literature was conducted to identify and map evidence of the best practices and timing for recruitment and retention of minorities in nursing. This review utilized methods described by Asksey and O'Malley. PubMed, CINAHL, SCOPUS, Cochrane, Web of Science, and ProQuest were searched from 2000 to 2022. Data were extracted from 20 full text papers published in English in the U.S. Recruitment usually begins in middle or high school, but several authors recommended beginning as early as elementary school to establish positive views of nursing. Retention methods included multi-pronged approaches tailored by the academic institutions. Most received federal funding. Financial aid is key to the success for many minority nursing students, but must be aligned with other supports (e.g., academic, social, mentoring) in recruitment and retention efforts. Partnerships with local elementary, middle, and high schools, hospitals, community agencies and centers, businesses, and minority groups are necessary. Future research that measures outcomes of early recruitment of minorities and their choice of nursing as a career is needed. Recruitment and retention efforts should include information on potential sources of funding prior to student enrollment. More information is needed on recruitment and retention programs that are successful without funding and those that remain robust after funding ends.

Keywords

Recruitment and Retention, African American, Nursing

1. Introduction

Recruitment of minority populations into nursing is a key area of interest to

nursing leaders, the healthcare industry, and other stakeholders. In 2010, the landmark report by the Institute of Medicine noted that a nursing workforce reflecting the racial makeup of the country was essential to provide quality patient care [1]. Projections by the federal government indicate that more than 50% of the U.S. population will consist of ethnically and racially diverse individuals over the next three decades [2]. The demand for registered nurses (RNs), projected to be 2,806,100 in 2014 will increase to 3,601,800 in 2030, based on current health care utilization and staffing patterns [3]. National estimates indicate that the number of RNs by 2030 will be adequate to meet the demand for services and overall demand [4] [5]. However, the racial makeup of registered nurses is not expected to reflect the growing population diversity in the nation, a critical component in meeting patient care needs. The U.S. federal government annually provides millions of dollars in grant money to increase nursing workforce diversity through the Department of Health and Human Services, Health Resources and Services Administration (HRSA) [3]. However, recruitment of minority populations into the nursing profession remains a pressing need.

Currently, most U.S. residents identify as White alone (not Hispanic/Latino (59.3%). Those who identify as Black or African American (AA) alone account for 13.6%, while Hispanic/Latino (18.9%), American Indian and Alaska Natives (1.3%), Asian alone (6.1%), Native Hawaiian and other Pacific Islander (0.3%) account for the remainder [6]. Multiple reports emphasize that diverse and skilled RNs who reflect the patients and communities they serve will improve access and quality of care [5] [7] [8]. The evidence indicates that recruitment of minorities into nursing is essential to ensure positive patient outcomes. As the U.S. becomes more diverse, it is less likely that minority patients will be cared for by RNs with the same racial identify [8] [9]. Recent publications note that the COVID pandemic has enhanced the need for a more diverse healthcare workforce, including nursing [10] [11].

2. The Question

Given the percent of AA in Delaware (23.6%) and percent of AA RN's (7.5%) the question arose as to which methods were most effective in recruiting AA, and by implication, other minorities into registered RN programs in Delaware and nationally [6]. To address this question, a scoping review of the literature was conducted. This method was selected to identify and map available evidence on the best practices and timing for recruitment of minorities, including AA into RN programs. The purposes were two-fold: 1) conduct a review of effective methods to recruit AA populations (and by extension other minorities) into nursing programs and 2) provide guidance on which recruitment measures were most effective.

3. Selection of Relevant Articles

This scoping review was guided by methods described by Arksey and O'Malley

[12]. PubMed, CINAHL, SCOPUS, Cochrane, Web of Science (WOS), and ProQuest databases were searched to locate publications related to recruitment of AA into nursing. The following search terms were utilized in the following order: African American, nursing, recruitment and retention. *Inclusion criteria:* Only relevant English language U.S based studies published between 2000 to 2022 were included. The year 2000 was chosen as a starting point to provide background discussion and comparison of changes in recruitment of AAs in the past two decades and to ascertain relevant data and up-to-date societal trends. *Exclusion criteria*: Doctoral dissertations, books, editorial commentaries, and publications focused on nursing recruitment outside the U.S. were excluded. Articles were limited to those that included mention of Bachelor of Science in Nursing (BSN) degrees. The decision to include only BSN programs was guided by an AACN White paper recommending that the BSN be the entry level into nursing [13]. According to the AACN recommendations, "Research has shown that lower mortality rates, fewer medication errors, and positive patient outcomes are all linked to nurses prepared at the baccalaureate and higher degree levels" (para 3).

4. Charting the Data

The selection process yielded 866 potentially relevant citations. The original intent of this scoping review was to collect, compile and review articles that focused on the recruitment and retention of AA students into nursing. However, the search terms yielded only two articles which focused exclusively on the recruitment of AA students [14] [15]. The literature primarily discussed AA in the context of minority recruitment and usually reported them as aggregates when compared to other minority groups. Therefore, all articles in the original search that focused on "minorities" were included in the review. An expanded search identified 102 additional articles, and these were included in the review to ensure that all relevant publications were explored.

The primary investigator is a PhD prepared RN with experience in recruitment and retention of minority populations into nursing. The co-investigator is a Bachelor of Science in Nursing (BSN) graduate and member of a minority population. The authors met weekly to review the title and abstract of each article and determine whether it satisfied the inclusion criteria. Of the 968 articles identified, 934 were excluded, leaving 34 for a more in-depth analysis. The full text of each of the 34 articles was downloaded and read in its' entirety by the primary investigator. Fourteen were removed from consideration (and confirmed by the co-investigator) leaving 20 articles that met the inclusion criteria. A PRISMA flow diagram illustrating the process and outcomes of each stage is seen in **Figure 1** [16] [17].

The purpose, design, level of evidence, sample, and key findings of the final 20 articles were reviewed and summarized in a table of evidence guided by the work of Dang and Dearholt [18]. Level 1 is the highest level of evidence consisting of experimental studies or systematic reviews of randomized controlled trials, while
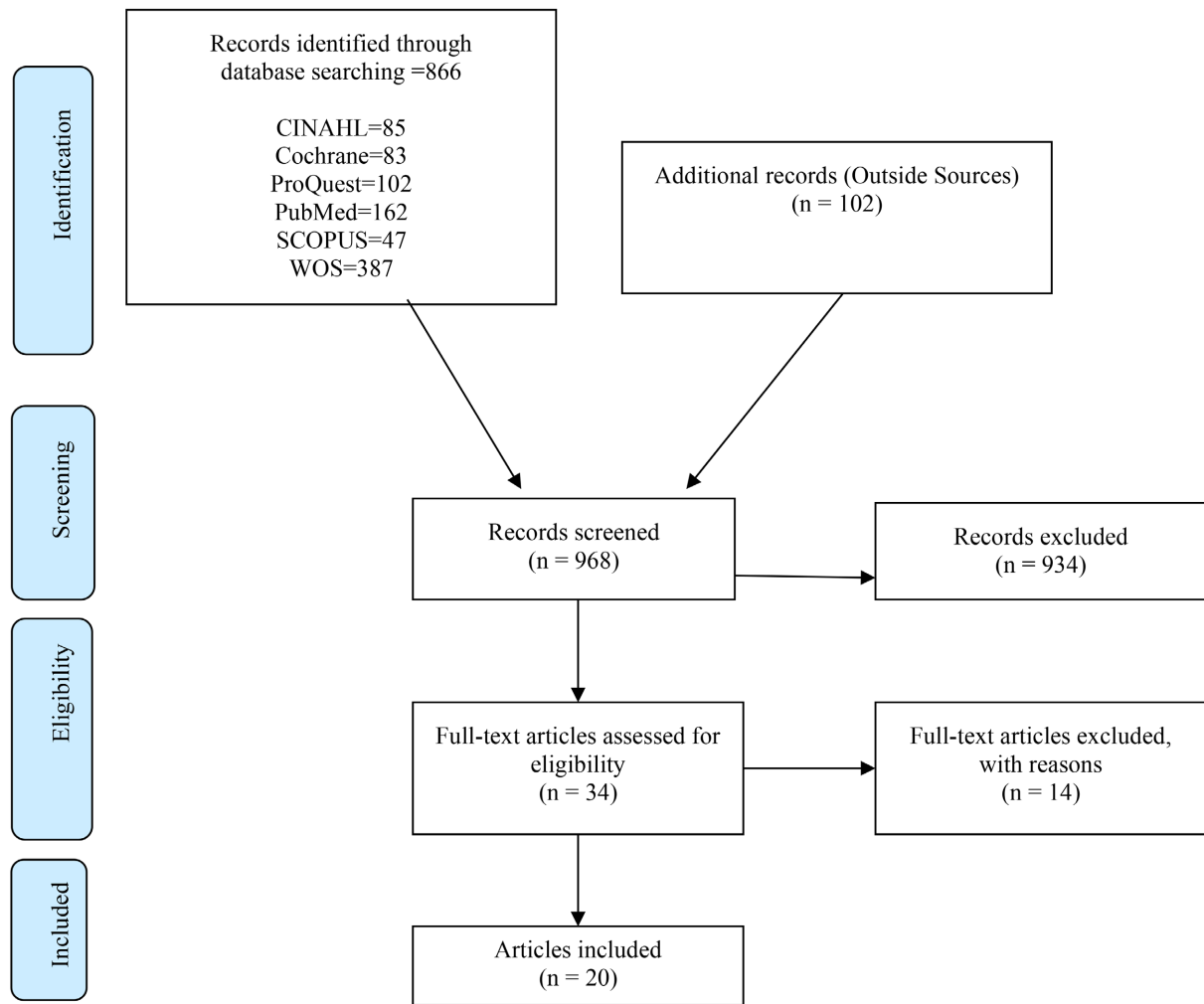
Figure 1. PRISMA flow diagram for search and selection process.

level five is the lowest level of evidence and includes literature reviews, quality improvement, case reports, and expert opinion (Table 1).

5. Collating, Summarizing, and Reporting Results

The twenty articles in the final review fell into three categories. Category 1 included three articles which described programs designed to increase interest or measure attitudes toward nursing in middle and high school students [19] [20] [21]. Category 2 was composed of eleven publications with information on recruitment or preparation of minorities into nursing pipeline and non-pipeline programs [22]-[32]. Category 3 consisted of six reviews of literature (ROL) with recommendations for best practices in recruitment and retention of minorities into nursing [14] [15] [33] [34] [35] [36].

6. Results and Discussion

Attitudes toward nursing

Three articles reported efforts to measure perceptions of nursing as a career

Table 1. Table of Evidence: Author, purpose, design, level of evidence (LOE), sample, key findings.

Citation	Purpose	Design & LOE	Sample	Key Findings
Attitudes Toward Nursing				
Gomez & Brostoff (2018)	Engage HS students in a summer internship	V	84 students surveyed	Programs that engage & expose students to nursing were successful in creating interest by 15%; Summer internship. 6-week program for HS students. Paid experience.
Katz, et al. (2016)	Knowledge & opinions of nursing	Qualitative III	115 Tribal & rural HS students	HS students had an inaccurate view of nursing & college & underestimated the support they might need. Intent to go to college increased with pipeline programs.
McGee, et al. (2019)	Attitudes about nursing among minority adolescents	Qualitative III	33 participants b aged of 13 to 19	Nursing is a caring profession but perceived to have little autonomy & many demands. Formation of ideas about nursing come from personal experience, family, friends & media. Students more interested in positions of fame, power, & income.
Recruitment and Retention of Minorities: Pipeline and Non-Pipeline Programs				
Condon, et al. (2013)	Program to retain & graduate ethnically diverse students.	Program III	77 students with entry scores below required	90.9% graduated from a nursing program. NCLEX overall pass rate: 98.6%; 91.0% passed NCLEX within one year of graduation. Pre-entrance prep program rated as very important. Ethnic diversity in the school of nursing increased with the program.
Gordon & Copes (2010)	Pre-entry program in HS to foster interest in nursing	Program V	Unknown	Program exceeded expectation. Retention rates were above the university. First cohort passed NCLEX on the first try. 50 students graduated.
Metcalfe & Neubrander (2016)	Describe a diversity mentoring pipeline program	Program V	22 participants involved in pre-nursing track	Importance of mentors, financial aid, monthly stipends, structured tutoring. Pipelines build trust. Have diverse students enter nursing school as a cohort with peer mentors & tutors. Address familial & geographical barriers to help them succeed.
Murray, et al. (2016)	Recruit & retain students from underrepresented minorities	Program V	21 HS students recruited into nursing	Early recruitment & a multipronged retention program helped students graduate and pass the NCLEX exam. Preparation & retention strategies should begin in freshman year of HS & continue through college. Retention specialist, new position. Met with students weekly.
Diefenbeck & Klemm (2020)	Multi-pronged program of recruitment & retention	Program III	29 minority or underrepresented BSN nursing students	Four pillars of support: Financial, Academic, Social/emotional, Leadership. Holistic approach needed for success. Satisfaction 4.85 of 5 1=dissatisfied; 5 highly satisfied; 25 of 29 enrolled or graduated. Sustaining the program was a challenge after funding ended; Retention Coordinator essential.
Woods-Giscombe, et al. (2020)	Student perspectives on the influence of others on nursing	Qualitative III	22 under-represented nursing students	Misperception of nursing by family, friends, and media. Contact with nurses modified perceptions of nursing to more positive. Market males as nurses in K-12 & middle schools and HS. Include families in recruitment.
Swinney & Dobal (2008)	Explanation of the SAFER model.	Program III	460 disadvantaged; 22 graduated	14 nursing clubs. Tutoring in math, science, and language skills; Stipends for CNA. Summer health internships. Scholarships to students accepted into nursing programs. Minority advisor was important to student success.

Continued

Brooks Carthon, *et al.* (2014)	Components of pipeline programs, enrollment & graduation rates.	Descriptive III	164 SONs; 33 pipelines; 131 non pipeline	20% of SON's had diversity pipelines. Asian & Hispanic students had better graduation. AA enrollment was static & graduation rates dropped. Pipelines better at enrolling Asian & AA students. Non-pipelines decreased enrollment for different groups.
Brooks Carthon, *et al.* (2015)	Enrollment patterns in different diversity programs	Secondary analysis III	25 pipeline programs	Wide range of pipeline programs. Minority students have complex needs. Students from lower incomes expressed more frustration with the nursing school requirements due to limitation of parent's finances & knowledge.
Bond, *et al.* (2015)	Hispanic & AA students & faculty perception of institutional support	Exploratory Descriptive III	90 students, 80 faculty & 31 administrators in nursing	AA students viewed limited scholarship as more problematic. Hispanic students reported that seeking information about financial support was a greater challenge than AA students. Faculty & student perceptions about institutional support were different.
Diefenbeck, *et al.* (2016).	Experiences of AA & Latina nursing students in nursing	Qualitative III	12 minority BSN students in white university	Three categories: Family-oriented factors, School-based factors, Sustaining factors. Harder for Black students to be recognized. Important to understand the lived experiences of underrepresented students in predominately white universities.

Reviews of Literature: Best Practices to Recruit and Retain Minority Nursing Students

Dawkins (2021)	Identify challenges, recommend solutions: recruit & retain minorities	ROL V	N/A	Barriers to recruitment of HS students & retention impacted by social determinants of health, financial instability, education inequality, access, bias. Shortage of "glamorous" role models. Need for evidence-based solutions to improve recruitment. Recruit males.
DeWitty & Byrd (2021)	Strategies to aid recruitment	ROL V	N/A	Evaluate recruitment efforts & tailor them to meet goals. Audit the nursing website. Highlight student involvement in community. Address needs of first-generation college students. Holistic admissions.
Childs, *et al.* (2004)	Retention of minority students to reflect that of U.S.	ROL V	N/A	Obstacles to retention: Being an AA in primarily white SON's. Inadequate academic & social adjustment accounts for high attrition rates of AA students. Lack of academic preparation, financial support. Limited number of AA faculty. Outcome measures needed for retention strategies.
Gilchrist & Rector (2007)	Best practices for nursing schools to recruit and retain nursing students.	ROL V	N/A	Educational pipeline important to recruit students. Recruitment should take place in MS, HS, and elementary school. Special consideration of 1st gen college students. Importance of parental support for nursing as a career. Assistance for students with ESL. Recruit men.
Lofton, *et al.* (2013).	Interventions to increase success of underrepresented minority students	ROL III	11 Studies included in the review	Few intervention studies on facilitating diversity in nursing. No specific combination of interventions was most beneficial or effective. Future studies need evidence on interventions that bring change in recruitment, retention, and graduation of underrepresented minority students.
Mitchell, *et al.* (2020).	Synthesis of strategies to support retention in nursing programs.	ROL III	48 papers included in focused analysis.	Retention strategies most often reported by BSN schools. Mentors, tutoring, literacy, psychological support. Whole program strategies. Admit some students with academic deficits & support them. Pre-admission testing for reading. Adequate funding. Recruit males.

Key: LOE = Level of evidence; LOE based on Dang & Dearholt (2018). ESL = English as a second language.

choice in middle school (MS) and high school (HS) students. One described the SCOOP program, designed to help HS students explore careers in nursing [19]. Those accepted into SCOOP were enrolled in a 6-week paid summer internship and worked 24 hours each week with a nurse mentor on a clinical unit. Activities completed by the students included gathering supplies, answering telephones, reading to patients, shadowing nurses, and completing a final oral presentation. One hundred sixty students completed the program and were sent a 17-item survey about their experiences with SCOOP (e.g., career choice before and after the program, current employment). Surveys were received from 84 participants. Results indicated that most students who were interested in nursing prior to SCOOP, retained that interest after completing the program. The authors reported 45 participants expressed an interest in nursing before the program. This number increased by 15% to 52 after the program. Eleven SCOOP participants later worked as nurses at the institution where they completed their internship. However, some students were still in college when the surveys were sent, and information was not available on their nursing career.

Katz and colleagues described a 2-week summer program which enrolled American Indian and Hispanic HS students who worked with health professionals from racial and ethnic backgrounds similar to their own [20]. Student selections were based on grade point average and an essay. Results of a survey completed by participants after the program, showed increased interest in attending college and in nursing. After finishing the program, students perceived nurses as having more respect and power, and as being frequent role models than prior to the program. Participants also realized that a nurse's income was higher than they previously believed and might enable them to buy a car or a house.

The third article in this category explored perceptions and attitudes about nursing in AA and Latinx adolescents using a qualitative study format [21]. Teens between the ages of 13 and 19 years, from an urban community were recruited to participate in focus groups to explore attitudes about nursing. Nursing was described by the participants as a caring profession, but one which lacked power and authority and had many work-related demands. In addition, participants were concerned about the cost of attending nursing school and admission requirements. Several participants were focused on pursuing professions that offered more money and prestige.

One take-away message from these three articles was that adolescents considered nursing to be a caring profession, but one that lacked authority, prestige, influence, and sufficient income. However, the findings also indicated that attitudes and perceptions of nursing can changed when individuals are provided with education about nursing and the opportunities associated with this profession.

Recruitment and Retention: Pipeline and Non-Pipeline Programs

The second grouping of eleven articles described nursing programs designed to increase recruitment, enrollment, retention, graduation, and/or licensure. These are described as pipeline programs. Pipeline programs can target all levels of education, although they often focus on minority or underrepresented stu-

dents in HS to increase their interest in, and entry into, nursing [20]. Condon and associates described a Health Resources and Services Administration (HRSA) funded program focused on potential minority nursing applicants who did not meet the criteria for admission [24]. Disadvantaged and ethnically diverse participants were recruited into the Success in Learning: Individualized Pathways Program (SLIPP) and entered a pre-entrance quarter designed to improve study skills, confidence, and other knowledge necessary to be successful in nursing. The classes in which students were enrolled included math, medical terminology, writing skills, and informatics. An academic advisor was assigned to develop individualized plans with the students to enhance success. Once participants completed the pre-entrance quarter, they were admitted to the nursing program. Of the 77 students enrolled in SLIPP, 70 graduated w (58 with a BSN and 12 an Associate Degree). The overall pass rate on the NCLEX exam was 98.6%, although not all passed on the first attempt. At the time of the report, 86% were practicing in medically underserved areas. Of note, participants stated that financial support was one of the primary factors in their success in nursing school [24].

Another pipeline program for inner city HS students in grades 8 - 12 was the focus of a report by Gordon and Copes [26]. This HRSA funded program had goals which included increasing interest in nursing in HS students, pinpointing areas of deficiency, and preparing them for admission to the Coppin State nursing program. The school of nursing (SON) worked with the Upward Bound program, offered clinical exposure, mentoring in the workplace, academic, and financial aid to prepare students for the rigor of college. Students in the program enjoyed a higher retention rate than the university overall. The first cohort of nursing students (n = 20) all passed the NCLEX exam on the first try. Information on subsequent cohorts is not known [26].

A pipeline program for college students was described by Metcalf and Neubrander [27]. The Nursing Network and Careers and Technology (NN-CAT) Diversity Mentoring Program focused on students already enrolled in the pre-nursing program or enrolled in two plus two (2 + 2) programs at a community college. Academic and community RNs were hired to provide personalized mentoring for minority and rural students in good academic standing. Students were given intensive support (e.g., academic, testing support, group tutoring, social events). In addition, they received scholarships and stipends for tuition and living expenses funded by a HRSA grant. Although students were described as progressing in the program, there was no information on graduation rates. Five students were lost to attrition, while 22 remained.

Murray and associates described a program funded by HRSA to attract HS students into nursing as a career [28]. Minority and underserved students at five urban HS were recruited. The program featured collaboration between the university and HS faculty and guidance counselors. Students who showed interest in nursing after joining health care clubs (HCC) received additional help that fo-

cused on academic, life, and career skills. During the three years of grant funding, 392 HS students attended HCCs, 310 expressed an interest in a healthcare career, and 45 enrolled in a nursing program. The project directors noted that the three-year HRSA grant would not support participants through four years of college [28]. Thus, grant money was utilized to establish sustainable programs and strategies that would continue when funding ended. This included the hire of a full-time retention specialist (RS) who worked with minority and underrepresented nursing students. The RS met frequently with students who struggled academically and tracked their progress in the nursing program. After the hire of the RS, cumulative GPA for the participants increased, as did retention rates. Students were paired with a peer nursing student mentor who provided additional academic and social support.

One university developed a multi-pronged program to recruit and retain minority and underrepresented students in nursing supported by HRSA funding [25]. The program offered four "pillars" of support. The financial pillar provided students with scholarships for tuition, fees, books, and a monthly stipend. Stipends were provided so that students in financial need might be able to work fewer hours and concentrate more on classwork. The second pillar was academic and allowed for the hire of a full-time minority retention coordinator (RC) who met with students regularly to assess academic progression and provide social/emotional support. The RC coordinated free tutoring sessions for participants, while the university provided classes on test-taking, time management, writing, and organizational skills though the Academic Enrichment Center.

Social, emotional, and cultural support constituted the third pillar of the program. This included group events arranged by the RC to enhance social interactions between students, and participation in community events. The fourth pillar focused on leadership and professional development. Students were enrolled in a peer-mentoring program and met with their mentor at least once a month during each semester. In addition, the participants themselves became mentors to local HS students via multiple recruiting events. Students were required to engage in at least one service-learning activity each semester as well. Annual surveys revealed that participants were very satisfied with the program. Grade point averages were similar (3.18 out of 4) to the cumulative for all nursing students (3.22). Every student in the first two cohorts passed the NCLEX exam and only one needed to take the exam a second time. Twenty-two of the 29 participants graduated from nursing. Several transferred to other disciplines and graduated. When funding ended, elements of the program continued, including an expanded nursing tutoring program and assignment of a faculty advisor for the cohorts of students remaining in the program. Monthly stipends were provided by the College of Health Sciences. It was not financially possible to retain the full-time RC, who the researchers believed was a critical component of the program's success.

Perspectives of minority nursing students on recruitment to nursing were the

focus of a study undertaken by Woods-Giscombe and colleagues [32]. This report was a part of a larger project funded by HRSA. The purposes were to obtain insights about the influence of friends, family, and others on a career in nursing and to understand which recruitment strategies were most useful to enhance diversity in the profession. Twenty-two nursing students participated in two focus groups. Students who had friends or family members who were nurses were more likely to have a more positive outlook about nursing and the career possibilities associated with it [32]. Conversely, students who were not associated directly with nurses, were more likely to have an inaccurate view of the profession. One issue discussed by the students was a desire to close the knowledge gap about nursing and the misperceptions about this career choice. Students suggested that the media could provide more positive images of nurses and the key role they play in healthcare. Participants proposed marketing strategies to help reach potential nursing students in rural areas and recommended that children in elementary and MS be exposed to nursing as a career. Focus group participants noted the importance of affirming nursing as a career choice for males with an emphasis on the science involved in nursing.

A few participants suggested that nursing be listed as a STEM (science, technology, engineering, mathematics) program to increase interest. The researchers suggested that recruitment efforts include education about nursing to families, because parents often influence their children on career choices [32]. They also recommended that recruitment to nursing begin as early as elementary school and continue through HS.

Swinney and Dobal utilized nursing clubs that targeted MS and HS students to increase their interest in the profession [29]. Although the authors did not state the source of funding, the description of the program (e.g., 3-year program to recruit students, stipends) suggested a federal grant. The project, named Embracing the Challenge (ETC) focused on diverse students and their families. Participants attended presentations by nurses and nursing students, visited the simulation lab, and attended an annual conference which brought together members of the different nursing clubs. Additionally, students received tutoring in math, science, and language classes. Another feature of the program was access to a full-time minority student advisor who was fluent in Spanish and English. The minority advisor provided academic advice, referral to tutoring services, internships, and other social support. One interesting feature of this program was that it offered stipends to students to become certified nursing assistants (CNA). If students were admitted into community or college nursing programs, they were eligible to receive financial assistance via Martin Luther King scholarships, funded by the grant [29]. An NCLEX review course was offered to help students prepare for the licensing exam. The authors reported that more than 450 diverse and disadvantaged students participated in the nursing clubs and ETC activities. Twenty-five students were provided with stipends to complete a CNA program and 15 took part in a summer health internship program. Nine HS students were

admitted to the nursing program at the university or nearby community college [29].

Institutional support for diverse populations was the focus of a report by Bond, Cason, and Baxley [30]. Ninety minority students, 80 faculty and 31 administrators responded to a survey on institutional support for diverse nursing students. Perceptions of institutional support varied between students, faculty, and administrators and between different minority groups. For example, about 50% of faculty believed that they showed interest in their students as people and potential colleagues. By comparison, only 25% of students perceived this to be the case. Students and faculty both agreed that only 25% of students were assigned an academic advisor. Faculty perceived themselves to be more welcoming than did students (58% vs. 27%). Fifty percent of faculty reported that they had an open-door policy for students, compared with 16% of students.

Differences between Hispanic and AA student responses were noted. A small percent (11%) of African American students reported that they had to actively seek financial support as compared to 40% of Hispanic students. Although faculty (34%) and students (31%) reported that students were encouraged to seek financial support only 7% of students reported receiving information and help in completing the applications. The researchers suggested that minority student academic success was tied to an organizational climate that supports them. Faculty may need to be more transparent in their support for students. Information about financial support should be clearly conveyed to students and a system put in place to help with the application process [30].

Brooks Carthon and colleagues surveyed academic and administrative staff at 164 nursing schools in the U.S. and Puerto Rico that had BSN programs [22]. The research was funded by the Robert Wood Johnson Foundation (RWJF). The goal of the research was to find out what characteristics of pipeline programs were most effective in recruiting minorities into BSN nursing programs, supporting them through graduation, and passing the NCLEX exam. Thirty-three (20%) programs had structured nursing pipeline programs that offered academic support, mentorship, and psychological support. Enrollment of underrepresented minorities in pipeline programs increased especially among Hispanic/Latino, Asian, and Native Hawaiians/Pacific Islanders. Graduation rates decreased for AA and Native Hawaiians/Pacific Island students while they increased for Hispanic/Latino students.

Schools without pipeline programs reported decreased enrollment of AA, Asian, and non-U.S. residents, but increases among Native Hawaiian/Pacific Islanders. In addition, graduation rates increased for Hispanic/Latino students, but decreased for Whites. The focus of this report was on pipeline programs and an explanation for the changes in enrollment and graduation rates in the non-pipeline programs was not elaborated on by the authors. In short, pipeline programs increased enrollment of AA and Asian students, but Hispanic/Latino and Native Hawaiian/Pacific Island students have higher graduation rates [22].

In a follow-up study, Brooks Carthon and colleagues surveyed 25 BSN nursing

programs that had diversity pipelines in place [23]. The primary purpose of this secondary analysis, also funded by the RWJF was to investigate enrollment patterns in various college diversity program services. A survey of the 25 nursing programs explored 14 program measures to recruit minorities that were gleaned from the literature. Academic, financial, and psychosocial support and mentoring were most often mentioned as important in the survey. However, these differed by racial characteristics. Financial support, mentoring, and community partnerships were associated with enrollment of Black/AA students. However, enrollment of Hispanic/Latino students was more closely tied to academic support, mentoring, diversity workshops, and community service. White, non-Hispanic students' enrollment was tied to financial aid in addition to internships or externships, and research opportunities.

Diefenbeck, Michalec, and Alexander conducted a case study to explore issues related to minority recruitment in nursing in a predominately white university [31]. Twelve minority nursing students (AA = 7; Latina = 5) participated in a qualitative, semi-structured, e-questionnaire focused on recruitment and retention. The most important hurdles reported by the students were financial issues, family support (or lack thereof), and interactions (positive and negative) with faculty, and peers. Two factors that helped the students continue in nursing were their own desires to be a nurse to help others and an internal motivation/determination to succeed. Half of the participants noted that they had a family member who worked in healthcare that helped inform their decision to enter nursing school. The participants expressed disappointment that both faculty and peers were not culturally competent. These findings underscore the need to understand the lived experiences of minority students and address issues in recruitment and retention efforts.

In summary, the pipeline programs in the eleven articles described above targeted minority and underrepresented populations from MS, HS, and colleges and utilized multipronged approaches to recruitment and retention. Although the approaches differed by institution, minority students received multiple means of support including financial, academic, social, and other assistance. Seven of the reports identified or suggested federal funding (*i.e.*, HRSA) [24]-[29] [32]. Two programs were funded by the RWJF [22] [23]. One study whose funding sources were not reported, surveyed perceptions of students, faculty and administrator focused on barriers and supports to minority recruitment [30]. The authors of one qualitative study on lived experiences of underrepresented minority BSN students did not report a funding source [31]. Finally, the level of evidence in these reports ranged from III to V indicating that there was no means to compare the effectiveness of different recruitment and retention strategies to controls.

Reviews of the literature

The final category in this scoping review included six reviews of literature (ROL) which focused on best practices to recruit and retain minority and un-

derrepresented students (Table 2).

Each of these publications was evaluated and major recommendations grouped together. Several groupings were determined to be associated and were combined, resulting in 10 distinct categories. Two articles focused on recruitment alone [14] [36] and four on recruitment and retention [15] [33] [34] [35]. As shown in Table 2, recommendations for recruitment and retention were similar in each of the ROL. Financial support was emphasized and included tuition support and stipends (weekly, monthly, or by semester) to help with living expenses, books, transportation, and financial aid counseling [15] [34]. Minority students may often need to work to support themselves and/or family members while they are in nursing programs. Financial support can help them reduce the number of work hours and concentrate of their academic responsibilities [14] [34].

Financial support was not enough in itself to assure the success of minority students, but must be tied to other supports (e.g., tutoring, advisement, mentoring) [14] [15] [33] [34] [35] [36]. Pre-admission testing of potential applicants and those admitted to nursing was an essential factor in three articles [15] [35] [36]. Pre-admission testing identifies applicants who might need remediation prior to or after admission to a nursing program, thus increasing the chance of success.

The three categories of academic support, educational preparation, and technology support are similar in Table 2, but each is important individually, therefore

Table 2. Summary table of findings from the review of literature.

Primary Author	Primary Focus	Financial Support	Pre-admission testing (reading, comprehension)	Academic Support (tutors, advisor, test-taking)	Educational preparation, help with courses	Tech Support (computer software, helpline)
Dawkins	Recruit Retain	X	X	X	X	X
Dewitty	Recruit	X	0	X	X	X
Gilchrist	Recruit Retain	X	0	X	X	0
Loftin	Recruit Retain	X	X	X	X	X
Childs	Retain	X	0	X	0	X
Mitchell	Retain	X	X	X	X	X
	Primary Focus	Mentors (peer)	Mentors (faculty, RNs)	Partnerships, pipelines (MS, HS, community)	Family	Strategies to sustain program after funding
Dawkins	Recruit Retain	X	X	X	X	X
Dewitty	Recruit	X	X	X	X	X
Gilchrist	Recruit Retain	X	X	X	X	X
Loftin	Recruit Retain	X	0	X	X	X
Childs	Retain	X	X	0	X	X
Mitchell	Retain	X	X	0	X	X

Key: X = included in ROL article; 0 = Not included; MS = middle school; HS = high school.

they were listed separately. Academic support can include tutoring in course work and test-taking skills but should be coupled with academic advising to ensure that students receive individualized attention in their studies. Minority and underrepresented populations often lack the academic preparation necessary for college nursing programs and can benefit from courses on test-taking, time management, writing, and NCLEX preparation. Technology support may be overlooked when planning retention strategies but is an important aspect of success in nursing. To be successful, students must have access to computers and associated software and be competent in their use. Therefore, technology support services must be available to them.

Mentoring was a significant factor in each of the ROL articles and categorized separately as peer or workplace related in this review [14] [15] [33] [34] [35] [36] (Table 2). Peer mentoring usually included upper-level nursing students acting as guides. Peers were a source of socialization and role modeling for new students. Peers could offer advice on specific courses and help with study skills The second source of mentoring might be provided by nursing faculty, registered nurses in clinical facilities, minority RN's and others. These mentors function as professional role models providing guidance in understanding the professional role of the RN.

The importance of partnerships was noted all four ROL articles that focused on recruitment [15] [33] [34] [35]. Partnerships could include those with local schools (elementary, MS, HS) hospitals, healthcare agencies, local businesses, community organizations, and minority groups. DeWitty and colleagues stressed the importance of a schools' website as another avenue for recruitment of minorities [33]. Audits of the SON website should be done to assure that it is current, easy to navigate, had comprehensive admission information, faculty contacts, and snapshots of diverse students with compelling quotes [33]. Recruitment efforts targeting family members was featured in several ROL articles [15] [33] [34] [35]. Students may lack family or other role models who are nurses. Family members, including parents may have limited knowledge of the academic requirements and costs associated with nursing school or negative views on opportunities open to nurses. Therefore, parents and family should be included in information sessions as part of recruitment activities [14] [15] [33] [34] [35] [36].

A principal issue reported in all, but one ROL pertained to strategies to fund recruitment and retention programs [14] [15] [33] [35] [36]. This was especially important because nine other articles in this review described recruitment or retention programs that were supported through HRSA or the RWJF funding [22]-[29] [32]. Condon reported that grant funds were not budgeted for an NCLEX review course but was added later [24]. The program described by Gordon and Copes was supported by two HRSA funding cycles and they had applied for continuation [26]. It is not known if additional funding was acquired. Metcalf, reported on the first two years of funding by HRSA and the success of the program for participants [27]. No information was available on the program af-

ter funding ended. Murray and colleagues reported that a retention specialist was hired as part of their grant [28]. This position was retained by making it a line item in the SON budget after funding ended. Funding for the students in HCC ceased, but the tracking system to monitor at-risk students, designed during the grant period, was maintained.

Deifenbeck and Klemm reported on the success of their grant funded program, especially the importance of hiring of a retention coordinator [25]. After funding ended, the RC position could not be retained. However, the college did provide funding for stipends for students remaining in the program. Other elements of the grant (*i.e.*, tutoring) were integrated into existing university programs and students in the minority cohort were assigned to one advisor with expertise working with minority students. Two articles described funded programs but provided limited information on whether they continued after funding ended [29] [32]. Two reports noted funding by RWJF and included surveys about pipeline and non-pipeline programs [22] [23].

In brief, the ROL articles noted the multifaceted and tailored approaches used by SONs to recruit and retain minority students. Financial support was critical to the success of many minority students, but alone, was not enough to ensure success in nursing programs. In addition, partnerships with local elementary, MS, and HS, hospitals, community agencies, businesses, and minority groups can improve recruitment and retention activities.

7. Implications for Nursing

Recruitment and retention of minority students into nursing was the common theme of the articles in this review, with most efforts focused on HS students. The evidence suggests that attitudes toward nursing as a career are formed early in life. Without an introduction to nursing, or exposure to family members who are nurses, students in MS and HS perceived nurses as lacking power and authority, having limited income, and enjoying little respect or prestige [19] [20] [21]. However, attitudes toward nursing can change when young people are provided with accurate information about the profession and interact with nurses.

Several authors in this review suggested that recruitment should begin as early as elementary school to positively influence perceptions of nursing [32] [33] [34]. Future research that focuses on outcomes of early recruitment of minorities and their choice of nursing as a career needs to be done. Multiple programs were supported by HRSA funding to initiate or continue recruitment and retention efforts. Currently there are close to 3,000 nursing schools in the U.S. and only a tiny percent receive federal grant funding for recruitment and retention of minorities in any given year [37]. Attention should focus on recruitment and retention efforts of minority students that are successful without funding or those that remain robust after grant funding ends.

Financial aid was reported to be a key factor in recruitment and retention of minorities [14] [24] [25] [27] [28] [34] [36]. Minority students are often the first

members of their family to attend college. Subsequently, they may not be aware of the costs of a nursing education or how to fund it. Federal loans from FASFA (*i.e.*, Application for Federal Student Aid Programs) are a common source of funding. Stipends and grants from other sources should be investigated (e.g., Federal Pell grants, AACN, National Association for the Advancement of Colored People [NAACP], National Black Nurses Association). Local community groups, minority sororities/fraternities, or state governments often offer limited monetary aid as well. Some funding may have service requirements for recipients (e.g., U.S. Military, the National Institutes of Health Loan Repayment Program (LRP), Nurse Corps). Students should visit the school's financial pages or the website and contact the financial aid office to find out more. Recruitment and retention efforts should include potential sources of funding prior to enrollment.

The programs cited in this review tailored recruitment and retention of minority students to the institution in which they took place. The level of evidence ranged from III to V and comparison data on the different recruitment and retention efforts were lacking (Table 2). However, multiple similarities between programs were noted. Multi-pronged approaches were foremost in attracting and retaining minority students. These included, but were not limited to, financial, academic, social, and technical supports as well as pre-admission testing, mentoring, role modeling, and NCLEX preparation. Community partnerships with schools, guidance counselors, minority organizations and businesses, and healthcare facilities should be a part of recruitment and retention efforts. Three reports emphasized the importance of full-time retention coordinators/specialists or minority advisors [25] [28] [29]. Family involvement is important for minority students, who may not perceive the benefits and opportunities available to nurses. Therefore, family members should be included in recruitment and retention efforts.

8. Conclusion

Increasing diversity in the nursing workforce is fundamental to providing patient care for the evolving population in the U.S. This requires a systematic approach to recruitment and retention efforts as early as elementary school and partnerships with community groups. Comparison data is needed to support best methods in recruitment and retention of minorities to nursing. Information about sources of financial aid should be included in recruitment and retention efforts. In addition, more information is necessary regarding the accomplishments of schools of nursing where recruitment and retention efforts were not federally funded. There may be important lessons from these institutions on creative funding that support successful recruitment and retention programs.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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