RESEARCH

Baseline Assessment of Systemic Racism Education in Pharmacy Curricula

Kris Denzel Tupas, PharmD,a Hope E. Campbell, PharmD,b Troy Lynn Lewis, PharmD,c Katie F. Leslie, PhD, MS,d Edo-abasi U. McGee, PharmD,e Michelle L. Blakely, PhD, MEd,f,g Marina Kawaguchi-Suzuki, PharmD, PhDg,h

a Roosevelt University, College of Science, Health and Pharmacy, Schaumburg, Illinois
b Belmont University, College of Pharmacy, Nashville, Tennessee
c Wilkes University, Nesbitt School of Pharmacy, Wilkes-Barre, Pennsylvania
d Sullivan University, College of Pharmacy and Health Sciences, Louisville, Kentucky
e Philadelphia College of Osteopathic Medicine (PCOM), School of Pharmacy, Suwanee, Georgia
f University of Wyoming, School of Pharmacy, Laramie, Wyoming
g Editorial Board Member, American Journal of Pharmaceutical Education, Arlington, Virginia
h Pacific University, School of Pharmacy, Hillsboro, Oregon

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Objective. To determine, by survey, the inclusion of systemic racism education in US Doctor of Pharmacy (PharmD) curricula and identify barriers and facilitators to addressing this content.

Methods. A survey was developed and distributed to curricular representatives at US colleges and schools of pharmacy. The survey assessed inclusion of systemic racism education in curricula, faculty involvement in teaching systemic racism content, barriers to adding systemic racism content in curricula, and future curricular plans. Data were analyzed using descriptive statistics for institutional background information, curricular content, and barriers to inclusion. Relationships between the inclusion of systemic racism content at public versus private programs were examined, and associations between traditional and accelerated programs were assessed.

Results. Fifty-eight colleges and schools of pharmacy provided usable responses. Of the respondents, 84% indicated that teaching systemic racism content and its impact on health and health care was a low priority. For 24% of respondents, systemic racism content was not currently included in their curriculum, while 34% indicated that systemic racism content was included in one or more courses or modules but was not a focus. Despite systemic racism content being offered in any didactic year, it was rarely included in experiential curricula. Top barriers to inclusion were lack of faculty knowledge and comfort with content and limited curricular space. No significant differences were found between program types.

Conclusion. Based on the current level of systemic racism education and barriers to inclusion, faculty need training and resources to teach systemic racism concepts within pharmacy curricula. The inclusion of systemic racism concepts and guidance in the Accreditation Council for Pharmacy Education’s Accreditation Standards could help to drive meaningful change and promote health equity.

Keywords: systemic racism, curricular integration, pharmacy education, social determinants of health, health equity

INTRODUCTION

The World Health Organization defines the social determinants of health as, “… the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.”1 These factors have been identified as the root causes of health disparities, the potentially avoidable differences in health between groups of people who are more and less advantaged socially.2,3 In the past two decades, there has been a marked increase in initiatives to address social determinants of health in the United States. Education related to social determinants of
health is needed to prepare the future health care work-
force to meet the health care needs of individual patients
and address disparities in the communities that they
serve.4 In 2016, the National Academies of Sciences,
Engineering, and Medicine called for and developed a
framework to educate health professionals regarding
social determinants of health to provide more effective
strategies for improving health and health care for under-
served populations.5 Specific to pharmacy education, the
Accreditation Standards and guidelines put forth by the
Accreditation Council for Pharmacy Education (ACPE)
recognize the need for social determinants of health edu-
cation and require that Doctor of Pharmacy (PharmD)
grads are able to describe how population-based care
influences patient care (Standard 2.4) and recognize social
determinants of health to diminish inequities in access to
quality care for patients (Standard 3.5).6

Systemic racism is the culmination of policies, laws,
rules, norms, and customs enacted by organizations and
societal institutions that advantage White people as a
group and disadvantage groups of color.7 Systemic racism
is a key but often underemphasized concept under the
social determinants of health umbrella.8 Healthy People
2030 divides social determinants of health into five inter-
related domains: economic stability, education access and
quality, health care access and quality, neighborhood and
built environment, and social and community context.8 In
the United States, each of these domains is deeply rooted
in systemic racism.8 It is imperative for health care provid-
ers to understand how the health of communities of color
and individuals has been impacted by years of redlining,
segregation, exclusion from wealth-building programs
such as the GI Bill, disparate educational institutions and
health care access, unequal medical treatment, discrimina-
tion, bias, mass incarceration, police violence, and housing
and income inequalities.9,10 Furthermore, on an individual
level, the experiences of racism have been found to lead to
physiological and cardiovascular stress responses and are
associated with multiple indicators of poorer physical and
mental health status.11-14

However, within the health sciences curricula, differ-
ences in disease state morbidity and mortality indicators
among racial and ethnic groups are often taught without
context, and race may be pathologized.15 The social con-
struct of race is also conflated with biology, as seen in the
algorithms of various disease states that are presented.16,17
While there are no characteristics that adequately explain
these differences, learners may falsely conclude that
health disparities are the result of genetic predisposition,
cultural norms, and personal health behaviors. Recogniz-
ing the role systemic racism plays in perpetuating these
statistics is critical. Treating only the outcome and not the
root cause of the crisis leaves patients vulnerable to sus-
tained or repeated exposure to disease and even death.
While academic pharmacy has adopted curricular integra-
tion of more sweeping topics such as social determinants
of health, cultural competency/humility, and implicit bias
in recent years, little is known about the explicit inclusion
of systemic racism as a key determinant of health in phar-
macy education.18-21

In the spring of 2020, the deaths of George Floyd,
Ahmaud Arbery, Breonna Taylor, and so many others
served as an inflection point in social justice and racial
equality movements in the United States. Coupled with signif-
ificant racial and ethnic health disparities in the COVID-19
pandemic, organizations, educational institutions, and indi-
viduals have sought to evaluate their role and their response
in addressing systemic racism. Numerous institutions,
including the Centers for Disease Control and Prevention,
the American Medical Association, and a conglomerate of
14 national pharmacy organizations have released state-
ments that declare racism as a serious threat to public
health.22-25 Across the country, three states and over 90 local
municipalities have also declared racism a public health cri-
sis or emergency.26 In July 2020, the House of Delegates for
the American Association of Colleges of Pharmacy (AACP)
released statements affirming a commitment to diversity,
equity, inclusion, and anti-racism and affirmed the organiza-
tion’s support of integrating systemic racism content within
the core curriculum.27

With recent publications and organizations recognizing
racism as a public health crisis and systemic racism as a
root cause of racial health inequities in the United States, it
is incumbent upon colleges of pharmacy to include or
expand their curricula to include education on systemic rac-
ism.28,29 However, the extent to which this content is cur-
tenly taught within the pharmacy curriculum is unknown, as
teaching racism as a determinant of health is not included
in the current ACPE Standards. The purpose of this study
was to provide a multi-institutional assessment of systemic
racism education within PharmD curricula. Specifically,
this study assessed the extent to which systemic racism
education is included in PharmD curricula, how and where
it occurs, and barriers and facilitators to addressing this
content.

METHODS

The research team comprised seven members of the
AACP Health Disparities and Cultural Competency
(HDCC) Special Interest Group (SIG). Belmont Univer-
sity’s institutional review board granted exempt status for
this study. Collaborating faculty filed the study with their
respective institutional review boards. A survey was
created by consensus of team members but patterned, with permission, after the survey used by Chen and colleagues to evaluate the inclusion of health disparities in the pharmacy curriculum. The resulting instrument was piloted in the seven schools represented among the research team members. Based on the pilot, the working definition of systemic racism was included for reference at the start of each section of the survey, and the survey instrument was further refined. The 28-question finalized electronic survey was built using Qualtrics online survey software (Qualtrics International Inc).

The electronic survey, titled Systemic Racism Education in Pharmacy Curriculum, included questions in four areas: background information about the organizational structure of the institution and current role of the responding faculty; curricular content (if, when, what, where, and how systemic racism was included in the didactic and experiential curriculum); faculty involvement and future curricular plans for teaching systemic racism; and barriers to the inclusion of systemic racism content in the curriculum.

Potential US colleges and schools of pharmacy contacts for survey distribution were identified via an AACP-provided list of 141 faculty contacts involved in curricular matters. The list consisted primarily of deans of academic affairs or chairs of curriculum or assessment committees. Any missing data were completed by the team using the institution’s website to identify the dean of academic affairs or its equivalent. Any noted inaccuracies or changes in role or employment were corrected by the researchers using either their personal contacts at the college or school of pharmacy or the institution’s website.

After finalizing the distribution list, emails were sent to contacts that included the survey link, survey purpose, consent preamble, and notice that completion of the survey was voluntary. Three additional emails were sent to nonresponders only, at two- to three-week intervals. After the third reminder, members of the research team communicated via email or phone with listed faculty or personal contacts at nonresponding colleges and schools of pharmacy to encourage participation. The reminder email provided the faculty member with the letter of invitation, survey link, and a request to forward or complete the survey if they were not the person with knowledge of the curriculum. The data were collected from June through August 2021.

Data were analyzed using SPSS version 26 (IBM Corp). Descriptive statistics assessed institutional background information, curricular content, and barriers. The Spearman correlation was used to measure the strength and direction of association between potential barriers that prevent institutions from prioritizing systemic racism in their curriculum and whether systemic racism is incorporated in the curriculum. The chi-square test was used to examine relationships between teaching systemic racism concepts and public versus private programs. The Fisher exact test was used to assess associations between traditional and accelerated programs.

RESULTS

Sixty out of 141 (42.5%) unique colleges and schools of pharmacy submitted responses to the survey; however, due to the nature of the survey, respondents were not forced to give a response for every question. In terms of baseline demographics, respondents represented by the data reflect various curricula present in the United States: nine three-year accelerated schools, 43 four-year schools, three 0 + 6-year schools, and one 2 + 4-year school. Demographic data are further presented in Table 1.

In regard to the inclusion of systemic racism content in required didactic curricula, a total of 55 responses were received to the question, “Please rate the level at which teaching about the impact that systemic racism has on health care is integrated into the curriculum at your institution.” Thirteen (23.6%) respondents stated that...
systemic racism content was not offered at all, while 11 (20%) stated that systemic racism content was offered in one course or module. Nineteen (34.5%) respondents stated that systemic racism content was offered in more than one course or module but was not a theme across courses or modules, while four (7.3%) stated that systemic racism was a theme across multiple courses and modules. Five (9.1%) respondents stated that systemic racism was an overall theme across the curriculum and tied in with the mission of the school, while three (5.5%) stated that systemic racism was to be offered in the near future. A chi-square test revealed that the level of integration of systemic racism was to be offered in the near future. Among the 42 schools indicating that systemic racism is taught within any period during the didactic year, 24 respondents said it is taught in the first year of pharmacy school, 22 in the second year, and 20 in the third year; this was a “select all that apply” question. Some respondents specifically noted that systemic racism is taught in a longitudinal course, elective course, advanced pharmacy practice experience (APPE), orientation, or elsewhere. Table 2 describes the systemic racism-related topics that are covered and the strategies used to teach these topics. The hours dedicated to teaching systemic racism concepts were as follows: one to five hours (15 colleges/schools of pharmacy), five to 10 hours (10 colleges/schools of pharmacy), and more than 10 hours (four colleges/schools of pharmacy), with the range being one to 25 hours.

For the question, “Please rate the priority at which methods to explicitly teach about systemic racism’s impact on health and health care is prioritized in the overall curriculum at your institution,” of the 57 respondents for this question, 51% indicated that this is a low priority and 32% indicated it to be an extremely low priority. Less than a quarter (17%) indicated that this is a high priority in that it receives attention at multiple levels.

According to respondents, student feedback regarding the education they receive as related to systemic racism’s impact on health and health care has been mixed. For example, some students felt that it is too much information, while others expressed that the current content is insufficient. One respondent’s institution took a novel approach to address student feedback by adding a diversity, equity, and inclusion question on all course evaluations.

Respondents were asked to rate the level at which teaching about the impact that systemic racism has on health care is integrated into the curriculum at their institution, and 54 completed this question. The Fisher exact test was performed to compare traditional versus accelerated programs. The analysis indicated that there is no evidence of an association between program type (accelerated vs traditional) and whether teaching on systemic racism is offered (p = .67). Respondents were also asked whether they requested feedback from students about incorporating systematic racism content in their curriculum. This analysis indicated that there was little evidence for an association between program type and whether feedback from students is requested.

Regarding systemic racism content that is available outside of the didactic curriculum, of the 49 respondents that completed a question on whether learning opportunities are offered during introductory pharmacy practice experiences (IPPEs), four mentioned they are offered while 45 indicated they are not. Of the 50 respondents of a similar question on whether learning opportunities are offered during APPEs, five mentioned they are offered while 45 indicated they are not. Of the 50 respondents that completed a question on learning opportunities in cocurricular activities, 25 mentioned they offer cocurricular learning opportunities while 25 mentioned they do not.

Shifting focus to faculty involvement in teaching systemic racism, respondents were asked, “What is the level of faculty involvement in teaching or facilitating systemic racism concepts at your school?” This question was completed by 50 respondents. Most respondents (48%) reported that a few key faculty members (<5%) are involved in teaching or facilitating systemic racism concepts in

Table 2. Didactic Systemic Racism Curricular Topics and Course Activities

<table>
<thead>
<tr>
<th>Didactic activities (N=41)</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curricular topics</td>
<td></td>
</tr>
<tr>
<td>Implicit bias</td>
<td>33 (56.9)</td>
</tr>
<tr>
<td>Racism as a social determinant of health</td>
<td>31 (53.4)</td>
</tr>
<tr>
<td>Racism in health care</td>
<td>21 (36.2)</td>
</tr>
<tr>
<td>Microaggressions</td>
<td>14 (24.1)</td>
</tr>
<tr>
<td>Minority stress</td>
<td>11 (19.0)</td>
</tr>
<tr>
<td>Diversity, equity, and inclusion</td>
<td>29 (50.0)</td>
</tr>
<tr>
<td>Course activities (strategies used) (n=17)</td>
<td></td>
</tr>
<tr>
<td>Cultural simulation game or activity</td>
<td>7 (12.1)</td>
</tr>
<tr>
<td>Case studies or video case studies</td>
<td>15 (25.9)</td>
</tr>
<tr>
<td>Seminar series, forum, or panel discussion</td>
<td>7 (12.1)</td>
</tr>
<tr>
<td>Research paper or presentation</td>
<td>3 (5.2)</td>
</tr>
<tr>
<td>OSCE or virtual/standardized patients</td>
<td>7 (12.1)</td>
</tr>
<tr>
<td>Community interview of a different cultural group</td>
<td>3 (5.2)</td>
</tr>
<tr>
<td>Reflective writing</td>
<td>11 (19.0)</td>
</tr>
<tr>
<td>Role play or role-reversal exercise</td>
<td>7 (12.1)</td>
</tr>
<tr>
<td>Global experience</td>
<td>7 (12.1)</td>
</tr>
<tr>
<td>Poverty simulation</td>
<td>1 (1.7)</td>
</tr>
</tbody>
</table>

Abbreviations: OSCE = objective structured clinical examination.
their curriculum. About one-third (38%) reported that a small core group of the faculty (5%-25%) is involved in teaching systemic racism concepts, 8% of respondents reported that a moderately sized group of faculty (26%-50%) is involved in teaching systemic racism concepts, and less than 6% of respondents reported that one faculty member is involved in teaching systemic racism concepts at their institutions.

In terms of barriers to inclusion of systemic racism content in the curriculum, respondents were asked to rate each of 10 potential barriers that prevent their institutions from prioritizing systemic racism in their curriculum; 49 respondents completed this question. For each barrier, respondents used a five-point Likert scale (1=not a barrier, 2=minor barrier, 3=moderate barrier, 4=major barrier, and 5=extreme barrier) to indicate the extent that each is a barrier for their institutions. More than a quarter of respondents (29%) indicated that faculty comfort level in teaching systemic racism is an extreme barrier. Nearly 20% of respondents indicated that an extreme barrier for their institutions is that there is not enough space in the curriculum, whereas 16% reported faculty knowledge and skills regarding systemic racism as an extreme barrier for their institutions. Significant correlations were identified between most barriers and whether systemic racism was incorporated into the curriculum (Table 3). Those that are significant are moderately strong correlations. Correlations that are negative indicate that the higher the barrier was rated by the respondent, the more likely the respondent selected the "not offered at all" response.

Lastly, when respondents were asked about their school of pharmacy’s plans for curricular changes around systemic racism’s impact on health and health care, 52 respondents completed this question. A majority of respondents (40%) indicated that they anticipate increasing learning opportunities within the next academic year, while 27% indicated plans to increase learning opportunities within the next five years. Ten respondents (19%) indicated that no changes are planned, while two respondents (4%) planned increased learning opportunities within the next 10 years.

**DISCUSSION**

To the authors’ knowledge, this is the first evaluation of the inclusion of systemic racism concepts within PharmD curricula in the United States. Similar evaluations of PharmD programs focusing on health disparities, cultural competence, and health literacy have noted substantial progress in integrating these topics over the last decade.18-20 Reviews of other health professional curricula, such as medical education, have shown variability in timing, methods, and priority of teaching social determinants of health depending on the school.30-31 Similarly to pharmacy education, there have been calls to action and recommended frameworks to expand content beyond health disparities and cultural competence and specifically address systemic racism in medical and nursing education, but data regarding evaluation of current practices is limited.32-34 Based on the results of this study of pharmacy curricula, there is opportunity for growth in teaching pharmacy students explicitly about systemic racism and its impact.

For most institutions that participated in this survey, the priority of teaching systemic racism concepts in the current PharmD curricula was noted as being low or extremely low. Survey results also indicate that few institutions are teaching about systemic racism as a theme across multiple courses. When included in curricula, concepts were mostly taught in the didactic portion, with few institutions addressing systemic racism during experiential rotations. This demonstrates an opportunity to integrate and build on systemic racism concepts throughout the curriculum, building through APPE rotations.

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Spearman correlation, rho</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>General resistance to curricular change</td>
<td>-.02</td>
<td>.83</td>
</tr>
<tr>
<td>Not enough space for content in curriculum</td>
<td>-.30</td>
<td>.04</td>
</tr>
<tr>
<td>Faculty lack knowledge and skills regarding systemic racism</td>
<td>-.05</td>
<td>.79</td>
</tr>
<tr>
<td>Faculty perception of existence of systemic racism</td>
<td>-.33</td>
<td>.02</td>
</tr>
<tr>
<td>Faculty comfort level teaching systemic racism</td>
<td>-.13</td>
<td>.40</td>
</tr>
<tr>
<td>Experiential roles for students do not exist for this material</td>
<td>-.48</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Faculty concern for student acceptance of material related to systemic racism</td>
<td>-.40</td>
<td>.004</td>
</tr>
<tr>
<td>Systemic racism not relevant to licensing examinations</td>
<td>-.32</td>
<td>.03</td>
</tr>
<tr>
<td>Systemic racism not included in ACPE Standards</td>
<td>-.36</td>
<td>.01</td>
</tr>
</tbody>
</table>

**Table 3. Relationship Between Identified Barriers and Incorporation of Systemic Racism Concepts into Curricula at COP/SOP**

Abbreviations: COP/SOP=colleges of pharmacy/schools of pharmacy; ACPE=Accreditation Council for Pharmacy Education.
A variety of teaching strategies were employed, including case studies, reflective writing, game simulations, role play exercises, standardized patients, global experiences, and seminar series/panel discussions. In the use of these strategies, it is imperative that assignments are viewed as essential components of student learning. There is a need to emphasize the importance of this content through prioritized assignments that hold weight within the curriculum. Recently, several active frameworks and pedagogical approaches have been proposed that recommend ways to interweave health equity and anti-racism education across the curriculum.35-37 Many of these models show that curricular mapping and longitudinal integration must be instituted to ensure proper addition and sufficient education on anti-racism and health disparities in the curriculum. One proposed framework suggests an innovative five-level strategy consisting of curricular, interprofessional, institutional, community, and accreditation interventions. More specific proposed approaches include curricular integration of structural racism as a root cause of health disparities, collaboration with community policy makers and lawmakers, adoption of institutional missions directed toward social injustice, and revision of the Accreditation Standards for pharmacy education to include structural racism.35 Another model suggests a stepwise five-phase approach by first assessing awareness through inventory measures (Phase 1), followed by elective course offerings (Phase 2), and then mandatory coursework (Phase 3). After students are exposed to initial anti-racism education, the next phase consists of curricular integration in a longitudinal manner with repeated exposure (Phase 4). Finally, active reflection to identify opportunities and gaps is recommended (Phase 5).36 These frameworks may serve as a starting point for institutions to begin incorporating these concepts in an intentional and systematic manner. The addition and integration of these concepts into the curriculum should complement existing content. These concepts should be directly and longitudinally interwoven into current course offerings to prevent constraints on existing curricula.36 There is opportunity for researchers to continue providing evidence and adding to the literature regarding practical methods and outcomes for addressing systemic racism during experiential rotations. Potential strategies include preceptor training and experiential site offerings that allow students to deepen their understanding of racial health disparities through direct patient care.

According to our survey, current topics covered by institutions primarily include implicit bias, racism as a social determinant, and diversity, equity, and inclusion. While topics such as implicit bias may provide more understanding of personal prejudices, they may not address the overall impact of racism on health.38 While an understanding of implicit bias and cultural competency is important for personal and professional development, institutions must go beyond these concepts and provide more coverage of racism as a social determinant, racism in health care, and anti-racism concepts in PharmD curricula.

Respondents noted some of the major barriers to teaching systemic racism concepts were lack of faculty knowledge, skills, or comfort level, which shows there is a need for additional literature, education, and training opportunities for researchers to continue providing evidence and adding to the literature regarding practical methods and outcomes for addressing systemic racism during experiential rotations. Potential strategies include preceptor training and experiential site offerings that allow students to deepen their understanding of racial health disparities through direct patient care.
staff encountered during rotations. Future studies could advance the literature by triangulating data from multiple stakeholders such as students and preceptors.

**CONCLUSION**

Pharmacy programs in the United States appear to have integrated systemic racism education to varying degrees. Most institutions have limited coverage of these concepts, and various barriers exist to incorporating this material, namely a perceived lack of faculty knowledge, skill, and comfort level with addressing systemic racism concepts. As most institutions hope to increase learning opportunities related to systemic racism in the near future, opportunities remain to expand access to training and literature to support faculty in these endeavors. Including systemic racism in clearly defined terms within the ACPE Standards could also drive meaningful change across all pharmacy curricula.

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