Review Article

Adapting to Change: The Rise of Online MPH Programs and Remote Work in Women's Health Post COVID-19 Pandemic

Carolyn Rodgers[1*], Markisha Woodson[1], Cynthia Armand[1] and Beverly Antonio[1]

Department of Public Health, College of Health Sciences and Pharmacy, Chicago State University, USA

Abstract

The purpose of this critical review is two-fold. Firstly, it examines the changes in Master in Public Health (MPH) programs after the COVID-19 pandemic and highlights the best practices for online MPH programs that cater to learners across different age groups. Secondly, it discusses the impact of the COVID-19 pandemic on women's health and work-life balance issues. To conduct this review, the methodology involved a literature search of universities' current approaches to the COVID-19 pandemic. It also included a systematic review that evaluated the best practices for online MPH programs before the COVID-19 pandemic using the Joanna-Briggs Institute quality assessment and grading system for systematic reviews. The second part was a review of the latest literature on women's health issues, perceptions, and outcomes in education post-COVID-19. Based on the review, 14 out of the 90 articles retrieved met the study criteria. The study found that more MPH programs are shifting online and using various modalities. It also discovered that women, particularly African American women, are leaving leadership positions in education to focus on work-life balance and self-care.

Keywords: Public health, Online learning, COVID-19, Best practices

Introduction

The Council on Education for Public Health (CEPH) assesses the MPH Programs on 22 competencies across 8 domains. Those 8 domains include: Evidenced based approaches to public health, public health systems, planning and management to promote health, policy in public health, leadership, communication, interprofessional practice, and systems thinking. Efforts have been made at higher education institutions all across the nation to properly implement these competencies set forth by CEPH uniquely and effectively in public health curriculum. Institutions have been implementing these competencies to the best of their abilities while also being tasked to ensure effective student engagement throughout their programs. The COVID-19 pandemic added some unique challenges for many institutions highlighting what works well, what requires improvement and what does not work at all or once worked and now needs to be reviewed for changes [1]. Furthermore, schools that were already operating under evidence-based approaches and that were utilizing online pedagogical approaches in some capacities were better prepared than other intuitions that were not at least utilizing some online pedagogical approaches in some capacity at all. In fact, some institutions are still feeling the impact of the COVID-19 pandemic which has created an paradigm shift in the way Public Health programs and education as a whole should be implemented [1].

A second look this systematic review was conducted to identify if any of the practices that were identified pre-COVID-19 pandemic are still effective approaches to online education in light of the COVID-19 pandemic, and as it relates to the domains of CEPH for learners across life courses. Additionally, we examined the current state of women in leadership positions in higher education and their work-life balance due to increasing exits from these roles. This article discusses the influence of technology and accessibility on the e-learning process, with a focus on the shift from conventional to online teaching methods in online MPH programs. Additionally, it examines the impact of this change on women in leadership who are leaving higher education, as well as their search for work-life balance and health [2].

Background

The COVID-19 pandemic has resulted in a paradigm shift in education worldwide, making online learning more important than ever. Universities have been forced to explore different teaching methods and techniques to meet the changing needs of students, faculty, and staff. This shift has also been prompted by the rise in mental health issues among those involved in education. According to [3], this change is ongoing and requires continued adaptation. The pandemic has brought about significant changes in the way employers and employees interact and perceive each other. As a result, employers have had to restructure their services to allow for hybrid, remote, and in-person options (4). The COVID-19 outbreak has led to an increase in unemployment rates, which has made it necessary to realign the workforce and develop new skills in order to create more opportunities [5,6]. Researchers have concluded that a diverse group of practitioners and adults seeking career advancement in healthcare and public health are among those seeking new opportunities. Therefore, it is crucial for universities to develop strong online public health programs [7].

Traditional teaching methods have been redesigned to accommodate the various ambiguities presented by the pandemic for learners of all ages. Moreover, educators had to revisit online pedagogy and identify best practices to conform to students' needs, as well as the shift to online education. Some universities incorporated the issues arising from the COVID-19 pandemic into their MPH coursework. For instance, the University of Michigan School of Public Health's online master's students enrolled in the population and health sciences course, population health, participated in a project that utilized a simulation focused on controlling the pandemic. A professor of epidemiology guided the students in addressing the crisis, considering the many aspects of public health. The pandemic was approached from various perspectives, such as that of a healthcare provider, as well as from epidemiological, policy, and economic viewpoints. Students were assigned a wide variety of individual projects, including the efficacy of serological testing, population-level mitigation, viral containment, antivirals, reopening the economy, and college football's adaptation to the virus and policies protecting student-athletes [8].

MPH students in Virginia Tech's public health program incorporated the COVID-19 pandemic into their education. Some students worked with the Virginia Department of Health Medical Reserve Corps as case investigators and contact tracers. Other students performed community outreach, including vaccine scheduling and providing COVID-19 education and resources, such as presenting a podcast addressing the local perspective of the pandemic. Students created and distributed educational materials in English and Spanish to address COVID misinformation and improve communication with the community, while others worked with residents of long-term care facilities to provide testing and education [9].

During the pandemic, several universities had to shift their practicums, internships, and field work to online platforms. For instance, the University of Pennsylvania conducted all their fieldwork online, including capstone presentations and graduations [10]. Similarly, the University of Illinois College of Applied Health Sciences moved their MPH students' Applied Practice Experience from in-person to online [11]. The pandemic has resulted in many MPH courses, which were traditionally offered on-campus or off-campus through partnerships with government or private organizations, to be delivered online. This shift has challenged the ingenuity and adaptability of MPH faculty, administrative staff, and students.

[5] research in 2019 found that there has been a significant increase in alternative education options for working adults seeking flexible learning opportunities. As a result, there is a higher demand for online education, especially in MPH programs. Many of these students are essential workers who need accommodation to balance their studies and employment. MPH program students and instructors want to understand how the pandemic affects public health, but completing the required practicum has been challenging. However, this challenge has also created unique opportunities and successful remote options, as noted by [12]. in 2022. While many universities have responded to this need, some institutions are struggling to implement best practices in online MPH programs, resulting in deficiencies in education.

Methodology

MPH programs have had to consider the need to offer online MPH programs since the emergence of the COVID-19 pandemic, with more non-traditional students, older and experienced students, many MPH programs have to take into consideration more technology infused courses and including the transition from traditional face-to-face classes to fully online courses [13]. To examine best practices for online MPH programs. The researcher's focus was to identify public health articles dealing with best practices for online pedagogy in MPH programs. Additionally, the researchers wanted to identify the need for the growing population of traditional and non-traditional public health students currently working in the field with other obligations such as those who are essential workers, parents, head of households, etc., during the COVID-19 pandemic [14].

This systematic review consisted of a collection of articles describing best practices for online pedagogy in public health that would not only enhance the online learning experience, but also meet the needs of learners across life course [15]. Many of the articles collected included randomized controlled trials, case studies, quantitative, and qualitative studies accessing best practices specifically for an MPH online education.

Search strategy

The search strategy included a collaboration between two researchers who agreed to review and synthesize research articles independently. The researchers together identified common public health databases used to search for articles with best practices Online pedagogy for a fully online MPH program. The electronic databases used for this systematic review included the following electronic databases: Academic Search Complete, CINAHAL, Psych Info, Health Source, Nursing Academic Edition, and Psych Article [16].

Inclusion and exclusion criteria

The researchers decided that using the keyword search criteria such as "public health" and "online learning" limited to full text and scholarly peer reviewed publications would be the best option since there were several articles discussing online pedagogy [17]. The criteria for the publication were as follows:

- Public health pedagogy for online MPH Program studies with dates set between January 1, 2017 to September 9, 2019 pre-COVID-19 pandemic to include most current and up to date articles around the subject not biased to the ongoing pandemic.

- Studies contained randomized controlled trials, case studies, quantitative, and qualitative studies [18].

The search criteria results included (n = 104) full-text peer reviewed articles, of which (n = 24) duplicates were removed for a total of (n = 80) to be explored between two independent researchers. Stratified search results included (n = 57) articles from Academic Search Complete, (n = 16) articles from CINAHL, (n = 16) from Psych Info, (n = 13) from Health Source. Nursing Academic Edition, and (n = 2) from Psych Article [19].

The exclusion criteria were as follows:

- Duplicated studies,

- Studies that were not MPH programs,

- Studies that were not completed in English,

- and, or adult learning, studies not in online learning and education,

- Lastly, studies that did not identify best practices and/ or strategies for online learning.

Eligible studies reviewed included (n = 14) which met the criteria established. Each reviewer independently created a literature review matrix and extracted and synthesized contextual evidence. Of the 24 studies (n = 10) were excluded from the study after consensus from both reviewers. The final accepted articles in the study included (n = 14)

which were accepted for final full-text review. Each reviewer read over the matrix section to summarize important findings for reporting best practices for online MPH programs with which results were analyzed (Figure 1).
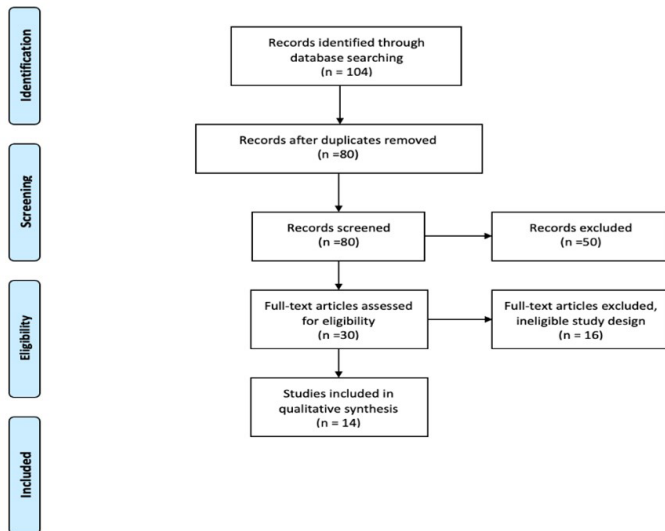

Figure 1: PRISMA 2009 flow diagram.

Eligible studies

All eligible studies were screened independently by the two researchers by reviewing abstracts by title for the identified key words. Once the article was scanned for keywords in the title, the article was either included or excluded by title for lack of key words. Next, articles that were included were scanned for contextual evidence for best strategies for online learning approaches and pedagogy. As a result of the abstract review 50 articles were removed and eliminated and 24 were initially identified for potential eligibility [20].

Screening and synthesis of articles

Using the Joanna-Briggs Institute quality assessment and grading system for systematic reviews, articles were graded with the recommendation using the identified range from 1-high, 2-moderate, 3-low, and 4-very low grade the level of each article for strength and quality [21]. Additionally, each article is then graded as A for strong recommendation and only those with a grade between 1 and 2 for high quality and recommendation were used as noted in table 1.

Results

The systematic review results identified several best practices for an online MPH program. The results included the following findings:

- Reflexivity for student engagement was identified as a best practice to include things like having a discussion board that will invite technological support for online learners including providing an initial orientation of learner support for resources to local and distant students demonstrating what and how to navigate the online platform.

- Providing a survey during pre, mid and post course for technological support for available services was identify for accessibility to engage student technological needs.

- Also, results revealed an emphasis during course beginnings, middle, and end to reflect that connectivity, access and interactivity

should be emphasized.

- Other results revealed providing unlimited course access to students to improve course completion rates, and collaboration efforts.

- [22] retention model was identified as a great model for retention of students in online programs.

- Additionally, providing online tutors to students, and pairing students with volunteer mentors was identified as a best practice to maximize autonomy and student interaction in the classroom.

- Other supports services identified as best practices for an MPH online program include having mandatory on-sight and off-sight orientation options of faculty with an expectation for all students to participate.

- Offering a public health law and ethics class while utilizing the public health law academy as a resource is a best practice to expose public health professionals to public health law.

- Offering more specialized courses to current professionals to attract these professionals to the field of public health are all best practices.

- Additionally, collaborative learning with appropriate technical support must be available to all students with a teacher presence representing cognitive and social presence as a best practice.

- Moreover, cultural competencies and health disparities courses should be added to promote cultural diversity. More practitioner led mentorship and training opportunities and international leadership partnerships were identified to create broader experiential opportunities.

Women's representation in higher education leadership

It has been well documented that women have been expected to work harder and do more in what has been a male dominated space in terms of leadership in Higher Education [23] More importantly, leadership positions should not be dominated by men, who are often white. Instead, white women often assume leadership positions, which can lead to making life sacrifices and reinforcing these norms in those under their tutelage [24]. According to scholarly observations, certain minority women who hold leadership positions perpetuate certain norms in a manner that could be deemed as a rite of passage [25]. This behavior manifests as a form of academic scrutiny and hazing of those who come after them. It is pertinent to mention that these biases are not exclusive to race and ethnicity but can also be related to age factors. It is crucial to recognize and address negative attitudes in the workplace in order to promote inclusivity and support, and reduce hostile environments [26].

A study conducted by [27] in 2021 found that women in leadership positions in higher education are often expected to take on more responsibilities, including a "wife-like" role such as caretaking and organizing meetings and events. According to [28] (2023), African American female employees in higher education are often expected to perform menial tasks and take notes for their male colleagues. More so, minority women, and often African American women are asked to pick up food or order food and plan these events that are often passed down from their White women counterparts to the "African American woman in leadership" [29].

It has been observed through research that there are differences in

Table 1: Study design and quality of evidence.

Publication year	Author(s)	Title	Study design	Quality of evidence/ Recommendation
2017	Khan P, Everingtion L, Kelm K, Reid I, and Watkins F	Understanding student engagement in online learning environments: the role of reflexivity.	Qualitative	Moderate/A
2017	Gemmell I and Harrison R	A comparison between national and transnational students' access of online learning support materials and experience of technical difficulties on a fully online distance learning MPH program.	Qualitative	Moderate/A
2017	Erasmus B, Naidoo L, and Joubert P	Talent management implementation at an open distance e-learning higher educational institution: The views of senior line managers.	Qualitative	Moderate/A
2017	Telford M and Senior E	Healthcare students' experiences when integrating e-learning and flipped classroom instructional approaches.	Mixed method/ Evaluation study	Moderate/A
2017	Rachman-Elbaum S, Stark AH, Kachal J, Johnson T, et al.	Online training introduces a novel approach to the dietetic care process documentation.	Quantitative	High/ A
2018	Fraser J, Willy D, Arscott J, and Guillot I	Pilot testing for feasibility in a study of student retentions and attrition in online undergraduate programs.	Qualitative/ Feasibility study	Moderate/A
2017	De Jong N, Verstegen DML, and Konings KD	The role of the e-tutor in synchronous online problem-based learning: A study in a MPH program	Mixed method/ Practice-based study	Moderate/A
2018	Yoshioka-Maeda K, Katayama T, Shiomi M and Hosoya N	Educational program for middle-level public health nurses to develop new health services regarding community health needs: Protocol for randomized controlled trial.	Community Trial	High/A
2018	Koskei P, Ruto-Korir R, Carrier C and Sales G	Toward an online MPH degree in Kenya: Moi University's path.	Qualitative/Descriptive research	Moderate/A
2018	Hoedebecke K, Mahmoud M, Yakubu K, Kendir C, D'Addosio R, Maria B, and Vega IV	Collaborative global health e-learning: A massive open online course experience of young family doctor.	Community intervention	High/A
2018	Njoku A	Teaching health disparities awareness in undergraduate public health courses.	Community intervention	High/A
2018	Sridharan S, Bondy M, Nakaima A, and Heller RR	The potential of an online educational platform to contribute to achieving sustainable development goals: A mixed-methods evaluation of the peoples-uni online platform.	Mixed methods/Survey and telephone interviews	High/A
2018	Ribeiro HA, Cavalcante RB, Oliveira PP, Gontijo TL, Oliveira VC, and Guimarães EA	Transitional distance in the long-distance training of health managers.	Qualitative/ Content analysis	Moderate/A
2017	Kahn P, Everington L, Kelm K, Reid I, and Watkins F	Student engagement in online learning environments: The role of reflexivity.	Qualitative/ Content analysis/ Interviews	Moderate/A

how African American women in leadership roles are treated in terms of sick days, vacations, and religious holidays as compared to their White female counterparts (30). They often feel scrutinized or made to feel guilty in order to receive what is rightfully theirs as per their contracted entitlements for vacation, sick time, etc. [30]. This is most recently noted in the letter Dr. Candida-Baily wrote and documented in her experience at Lincoln University before her untimely departure from this earth [31]. Women, especially African women, are facing various challenges, and to prioritize their health, they are taking significant steps to decrease workplace stress. Unfortunately, there has been a noticeable increase in the number of women, particularly African American women, leaving academia after the COVID-19 pandemic. This trend has now caught the attention of many people [32].

Discussion

Universities that offer online MPH programs faced unique challenges during the COVID-19 pandemic. Women in leadership positions at academic institutions were disproportionately affected. Like other programs, public health programs had to adapt to restrictions required to slow the spread of the virus [33]. Many African American women in leadership positions began to have experiences that allowed time and space to examine their experiences. As of October 1, 2020, only 4% of colleges and universities were using fully in-person classes, 23% were primarily in-person, 21% were hybrid, 34% were primarily online, and 10% were completely online [34].

During this time, it became critical for programs to pivot quickly and efficiently. This created an unexpected element of surprise for women in leadership positions at these institutions (35). Each of the identified best practices provides current and future public health programs and online education in general with the guidance to accomplish this task. As of July 8, 2022, these best practices are still in effect and are being implemented at many institutions in an attempt to increase the staggering drop in enrollment at many institutions across the US [36,37].

With the rise in online education, many institutions have continued down the online education path and developed and grew in these areas as students are demanding more flexible online education. Similarly, educators are also feeling overwhelmed to incorporate the technological advances and applications that many online platforms require for new student populations [38].

Acknowledgements

Conflict of Interest

None.

References

1. Adedoyin OB, Soykan E (2023) Covid-19 pandemic and online learning: the challenges and opportunities. Interact Learn Environ 31(2): 863-875. https://doi.org/10.1080/10494820.2020.1813180

2. Alvarez Z (2017) Leaning In and Pushing Through: The Challenges and Strategies of African American Women Executives of Nonprofit Organizations in the New York Metropolitan Area.

3. Beaulieu J, Scutchfield FD (2002) Assessment of validity of the national public health performance standards: the local public health performance assessment

instrument. Public Health Rep 117(1): 28. https://doi.org/10.1016%2FS0033-3549(04)50105-X

4. Berry GR, Hughes H (2020) Integrating work–life balance with 24/7 information and communication technologies: The experience of adult students with online learning. Am J Distance Educ 34(2): 91-105. https://doi.org/10.1080/08923647.2020.1701301

5. Berg ZL, Huang YP (2004) A Model for Sustainable Student Retention: A Holistic Perspective on the Student Dropout Problem with Special Attention to e. Learning. 13(5): 97-108. https://doi.org/10.13016/M2EEDF-FWRM

6. Bower BL, Wolverton M (2023) Answering the call: African American women in higher education leadership.

7. Brabazon T, Schulz S (2020) Braving the bull: Women, mentoring and leadership in higher education. Gend Educ 32(7): 873-890. https://doi.org/10.1080/09540253.2018.1544362

8. Bush VB, Chambers CR, Walpole MB, editors (2023) From diplomas to doctorates: The success of Black women in higher education and its implications for equal educational opportunities for all.

9. https://ceph.org/constituents/schools/faqs/pres/

10. https://ceph.org/about/org-info/who-we-accredit/accredited/

11. https://ceph.org/about/org-info/who-we-accredit/accredited/

12. https://www.chronicle.com/article/heres-a-list-of-colleges-plans-for-reopening-in-thefall/?bc_nonce=x4lrzogls2ckzx1ngnl72&cid=reg_wall_signup

13. De Welde K, Stepnick A, editors (2023) Disrupting the culture of silence: Confronting gender inequality and making change in higher education.

14. Docka Filipek D, Stone LB (2021) Twice a "housewife": On academic precarity, "hysterical" women, faculty mental health, and service as gendered care work for the "university family" in pandemic times. Gender, Work & Organization 28(6): 2158-2179. https://doi.org/10.1111/gwao.12723

15. Domingo CR, Gerber NC, Harris D, Mamo L, Pasion SG, et al. (2022) More service or more advancement: Institutional barriers to academic success for women and women of color faculty at a large public comprehensive minority-serving state university. J Divers High Educ 15(3): 365. https://psycnet.apa.org/doi/10.1037/dhe0000292

16. https://ahs.illinois.edu/blog/mph-students-adapt-adjust-covid-changed-internships

17. Francis L (2021) The African American Woman's Pursuit of Higher-Level Leadership Roles: A Phenomenological Study.

18. Gaffney AW, Himmelstein DU, Woolhandler S (2021) Trends and disparities in teleworking during the COVID-19 pandemic in the USA: May 2020–February 2021. J Gen Intern Med 36(11):3647-3649. https://doi.org/10.1007/s11606-021-07078-9

19. Gatewood JD (2023) Why Not Me? A Qualitative Autoethnographic Inquiry into the Barriers of Entry to Executive Leadership Positions for African American Women.

20. Ribeiro HA, Bezerra Cavalcante R, Peres de Oliveira P, Laerte Gontijo T, Conceição de Oliveira V, et al. (2018) Transitional distance in the long-distance training of health managers. J Nurs UFPE 12(4). https://doi.org/10.5205/1981-8963-v12i4a230388p872-879-2018

21. Hoedebecke K, Mahmoud M, Yakubu K, Kendir C, D'Addosio R, et al. (2018) Collaborative global health E-learning: A massive open online course experience of young family doctors. J Family Med Prim Care 7(5): 884-887. https://doi.org/10.4103/jfmpc.jfmpc_186_18

22. Hruska AM, Cawood A, Pagenkopp Lohan KM, Ogburn MB, Komatsu KJ. (2022) Going remote: Recommendations for normalizing virtual internships. Ecosphere 13(3): e3961. https://doi.org/10.1002/ecs2.3961

23. Gemmell I, Harrison R (2017) A comparison between national and transnational students' access of online learning support materials and experience of technical difficulties on a fully online distance learning master of public health programme. Open Learning 32(1): 66-80. https://doi.org/10.1080/02680513.2016.1253463

24. Kahn P, Everington L, Kelm K, Reid I, Watkins F (2017) Understanding student engagement in online learning environments: The role of reflexivity. Educational Technology Research and Development 65:203-218. https://doi.org/10.1007/s11423-016-9484-z

25. https://www.insidehighered.com/news/2022/06/14/report-state-higher-ed-funding-45-2021

26. Neely T. The Perceived Absence of African American Women in Leadership Positions in Public Four-Year Predominantly White Institutions of Higher Education in Mississippi.

27. Nelson (2020) Updates from mph program leadership | master of public health | center for public health initiatives | perelman school of medicine at the university of pennsylvania. University of Pennsylvania.

28. https://www.publichealth.med.upenn.edu/Updates-from-MPH-Program-Leadership.html

29. Njoku A (2018) Teaching Health Disparities Awareness in Undergraduate Public Health Courses. Int J Scholarsh Teach Learn 12(2): 15. https://doi.org/10.20429/ijsotl.2018.120215

30. Rodríguez-Modroño P, López-Igual P (2021) Job quality and work—life balance of teleworkers. Int J Environ Res Public Health 18(6): 3239. https://doi.org/10.3390/ijerph18063239

31. Sánchez B, Salazar C, Guerra J (2021) "I feel like I have to be the whitest version of myself": Experiences of early career Latina higher education administrators. J Divers High Educ 14(4): 592. https://doi.org/10.1037/dhe0000267

32. https://www.nbcnews.com/news/nbcblk/antoinette-bonnie-candida-bailey-lincoln-university-dissertation-rcna134380

33. Telford M, Senior E (2017) Healthcare students' experiences when integrating e-learning and flipped classroom instructional approaches. Br J Nurs 26(11): 617-622. https://doi.org/10.12968/bjon.2017.26.11.617

34. https://sph.umich.edu/pursuit/2020posts/online-mph-students-tackle-real-covid-19-issues-in-the-virtual-classroom.html

35. https://publichealth.vt.edu/research-engagement/covid19.html

36. White TS (2023) Examining Leadership Experiences and Practices of African American Women in Higher Education Settings to Overcome Barriers.

37. Woodhouse LD, Auld ME, Livingood WC, Mulligan LA (2006) Survey of accredited master of public health (MPH) programs with health education concentrations: A resource for strengthening the public health workforce. Health Promot Pract 7(2): 258-265. https://doi.org/10.1177/1524839905284574

38. Zapata-Garibay R, González-Fagoaga JE, Asadi-González AA, Martínez-Alvarado JR, Chavez-Baray SM, et al. (2021) Mental health stressors in higher education instructors and students in Mexico during the emergency remote teaching implementation due to COVID-19. Front Educ 6: 670400. https://doi.org/10.3389/feduc.2021.670400