



African-American Women's Perspectives on Career Advancement in the U.S. Commercial Nuclear Power Industry

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Abstract

Despite ongoing hiring in the commercial nuclear industry in the United States, African American women continue to face fewer opportunities for advancement to leadership positions than white men and women in the industry. There is a lack of empirical research in terms of African American women's views on advancing to leadership positions. This deficiency indicates the need for additional research into the ways in which African American women are afforded leadership opportunities. The theoretic foundations of Adams' equity theory, intersectionality, and Black feminist thought and theory are used to examine the experiences of nine African American women who have experience being the "first" or "only" to hold their positions in the commercial U.S. nuclear power industry. African American women's perceptions of leadership opportunities in the commercial U.S. nuclear power industry were investigated through qualitative research. I utilized a phenomenological research design and triangulated data from analysis and interviews to validate the data collected from nine participants. The research questions are intended to elicit information regarding the lived experiences of these women to reveal the underlying phenomena. The nine participants responded to semi-structured interview questions. The study revealed that respondents perceived poor leadership behaviors, poor talent development models, and weak diversity initiatives as impediments to upward mobility and attainment of leadership positions within their organization. Recommendations for enhancing the upward mobility of African American women focus on organizations developing and implementing fair policies and practices that foster inclusive work environments and restructuring talent development models to eliminate racial and gender biases. The results concluded that there are significant connections between all three theories and the

observed behaviors. The findings of this study can be utilized by all organizations to acknowledge the experiences of African American women and develop strategies to increase their upward mobility within the organization. This research has implications for practitioners desiring a more inclusive leadership development program, for organizations seeking to understand how their practices intentionally or unintentionally affect African American women in the workplace, and for African American women seeking assistance in making sense of their experiences.

Keywords: Adams' equity theory of motivation, intersectionality, Black feminist thought and theory, inclusion, diversity, leadership behavior, nuclear, talent development

Introduction/Background

As an African American woman with over 20 years of experience in the U.S. nuclear industry, I have encountered several situations that I felt were unjust or misunderstood, creating a lingering question, "If I were White, would the same thing be occurring?" Although the United States struggles to meet the rising demand for STEM (science, technology, engineering, and mathematics) degreed workers (Lancaster & Xu, 2017), African American women may continue to be overlooked and underrepresented in the commercial U.S. nuclear power industry if leadership programs are not developed to provide opportunities to bridge the gap and meet the rising demand for jobs. In 2019, the commercial nuclear power industry in the United States employed approximately 100,000 individuals in permanent, high-quality positions. This number increased to 475,000 when secondary occupations were considered (Office of Nuclear Energy, n.d.). According to the Nuclear Energy Institute (NEI), between 2020 and 2025 the commercial nuclear power industry is expected to add 23,000 jobs (NEI, 2019). According to research conducted by Catalyst (2020), in 2017, only 2.9% of African American women in the United States hold STEM degrees. Simultaneously, 11.5% of science and engineering jobs were held by women of color, but only 2.5% of science and engineering jobs were held by African American women. For organizations to advance their diversity initiatives, I contend that combining multiple theories (Adams Equity Theory, Intersectionality, and Black Feminist Thought Theory) will enhance understanding of the experiences of African American women working in the nuclear industry and other White-dominated organizations.

This study uses a phenomenological research design and triangulates data from formal and informal interviews to examine the unique experiences, challenges, and perceptions of leadership faced by nine African American women as "firsts" or "only's" in a specific role, while working in the U.S. commercial nuclear power industry. This study used a social constructionist framework (Mercadal, 2020), the epistemological lens of the Adams Theory of Equity (Eketu, 2018), an intersectionality framework (Crenshaw, 2017), and Black feminist thought (Hein, 2017; Collins 1990) to document the experiences of the nine African American women as they sought to climb the corporate leadership ladder.

This qualitative study helps bridge current theories, methods, and research to advance business knowledge. Overall, understanding African American women's experiences could help advance research, literature, and organizational leadership programs. Using this study's findings, more inclusive leadership opportunities and processes should be developed to improve diversity, equity, inclusion, and belonging procedures, practices, and processes. Improving diversity initiatives is essential to human resources practices, and promoting African American women can improve organizational resilience, culture, and communication for understudied populations (Corrington et al., 2020). When all members of an organization are invested in its success, it thrives, and everyone benefits.

Methods

The purpose of this qualitative phenomenology study was to investigate the perceptions and strategies of nine African American women who were pursuing leadership positions in the nuclear power industry. The study utilized thematic analysis and the iterative process of inquiry to accomplish this goal. To

extract meaningful information from massive datasets, qualitative research is a vast field that makes use of a vast array of analytical techniques. Thematic analysis, which identifies recurrent patterns and presents them as overarching statements or themes, is one of the most widely used qualitative research methods (Lochmiller, 2021). The iterative inquiry process (Gharajedaghi, 2011, p. 93) was used as a framework for understanding reality to generate the initial set of hypotheses regarding the lived experiences of nine African American women who shared their stories and insights about working in the commercial U.S. nuclear power industry. These African American women had worked in the industry for anywhere from 14 to 41 years. The iterative process, which consisted of verifying, validating, and modifying the initial hypotheses to expand and develop the emerging ideas until a satisfactory vision of the whole was reached. This process was repeated until a satisfactory vision of the whole was achieved.

Research Question and Sub questions

RQ1 – In their experience, how have African American women working in the commercial U.S. nuclear power industry perceived leadership opportunities?

SQ1 – How do African American women interpret perceived inequities that impeded their advance to senior leadership positions in the commercial U.S. nuclear power industry?

SQ2 – What beliefs do African American women have about the intersection of race and gender and their impact on leadership opportunities in the commercial U.S. nuclear power industry?

SQ3 – How do African American women contextualize their feminist experiences while working in the commercial U.S. nuclear power industry?

Data Collection

The primary source of data collected for this phenomenological study was semi-structured interview questions administered to nine African American women with 14 to 41 years of experience in the commercial U.S. nuclear power industry's technical and nontechnical sectors. According to Neubauer et al. (2019), phenomenology is a research method that seeks to understand a phenomenon through the eyes of those who have experienced it. The goal of phenomenology is to explain what happened and how it happened in terms of what happened and how it happened. According to Tomaszewski et al. (2020), there are two types of phenomenology. The first type of focus is on describing the phenomenon and creating categories that describe the real world as seen through the eyes of participants' stories. The second type of emphasis is on explaining how something happened.

Before taking part in face-to-face virtual semi-structured interviews that were recorded using Zoom, each of the nine participants in this study responded to open-ended questions using Survey Monkey. This enabled for a more in-depth look at the narratives, experiences, and opinions of each individual participant. The responses were saved in a workbook created in Microsoft Excel, which contained spreadsheets that were arranged in accordance with each of the following categories: all data, individual

responses, combined responses to individual questions, combined responses to the research questions, and combined responses to the subset questions.

Data Analysis

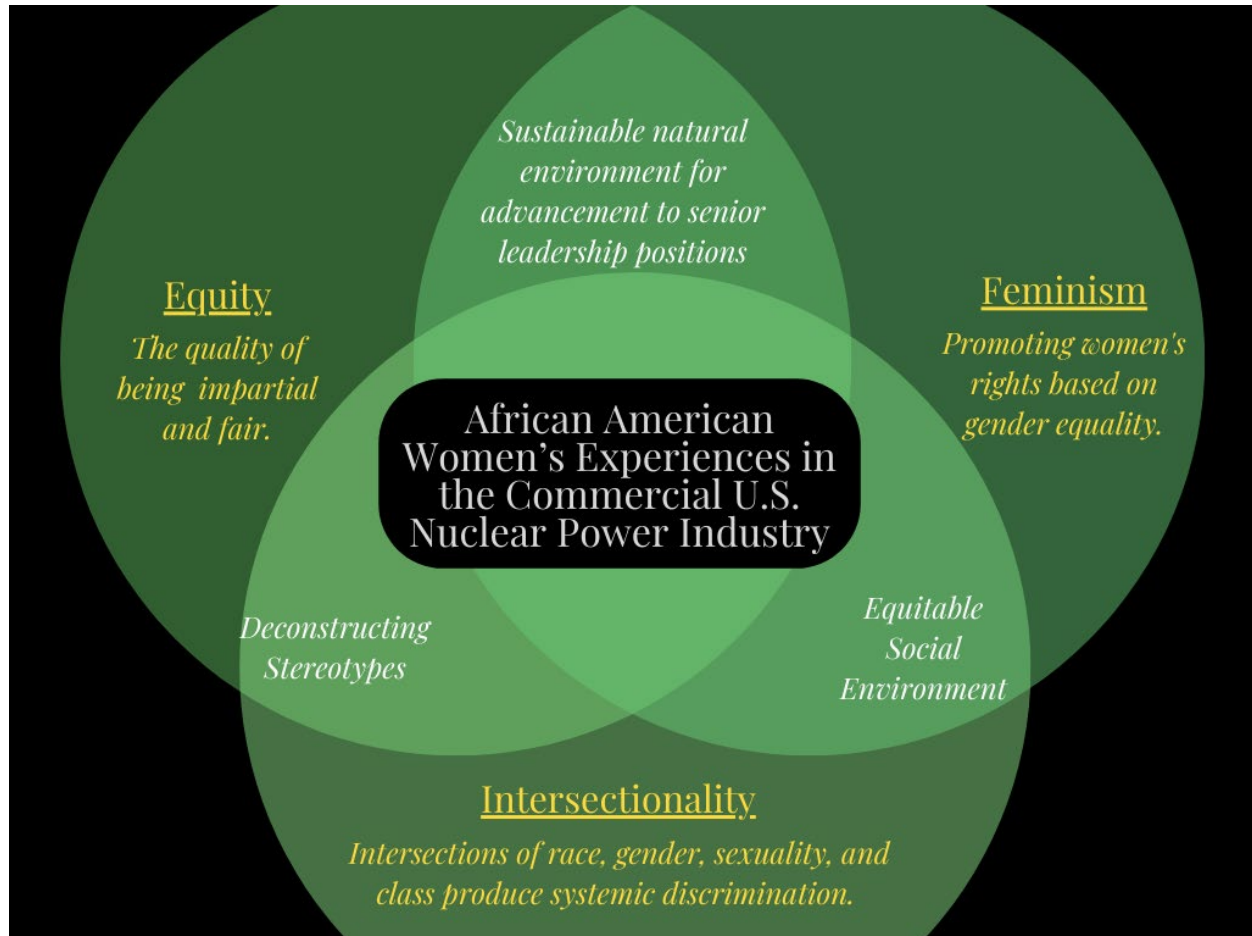
The analysis of the data was carried out by going back and looking at the responses that had been keyed into a spreadsheet made in Microsoft Excel, with each participant's real name being replaced by a pseudonym. Every single response was sorted into categories and given a unique code. Utilizing thematic analysis and iterative inquiry allowed for the identification of recurring themes that addressed issues of equity, intersectionality, and feminism. The following is an outline of these recurring themes: 1. initiatives aimed at increasing diversity; 2. behaviors associated with leadership; and 3. the cultivation of talent.

Emergent themes are based on the theoretical and conceptual frameworks as listed in Table 1 and Figure 1.

Table 1
Emergent Themes and Conceptual Frameworks

Emergent themes	Corresponding research questions	Corresponding theory
1. Diversity initiatives	Rq1, S1, S2, S3	Adams' equity theory, intersectionality, Black feminism
2. Leadership behaviors	Rq1, S1	Adams' equity theory, intersectionality
3. Talent development	Rq1, S3	Black feminism

Figure 1
Theoretical Framework



The emergent themes centered on the qualities and actions of leaders. The narratives of study participants revealed several issues unique to African American female workers. These issues included the denial of promotions; it was a common occurrence for participants to be told they were in line for a certain position, only for someone else to receive it; and another common occurrence was being placed in a senseless competition with others for the position. The nine African American women expressed a desire to collaborate and work with people who resembled them, as well as have access to opportunities that led to promotions into management and senior leadership positions. When African American women realized they were being treated unfairly, a significant number of them became disinterested, ceased looking for new opportunities, or quit the organization.

Research question 1: In their experience, how have African American women working in the commercial U.S. nuclear power industry perceived leadership opportunities?

The majority of female respondents identified that they identify as servant leaders. The findings suggest that a lack of mentoring, racial and gender discrimination, and stereotypes affect African American women working in the commercial nuclear power industry in the United States. Even though underrepresentation became a leadership priority and diversity goals aided in promotion, the participants noticed, as attitudes of senior executives toward diversity remained unchanged, the majority of African American women were hired for administrative positions at lower levels of the industry. Each of the nine participants shared similar experiences and beliefs when describing their personal history and stories - the lack of support from managers and decision-makers created additional obstacles and unique challenges for eight of the nine women.

Sub question 1: How do African American women interpret perceived inequities to advance to senior leadership positions in the commercial U.S. nuclear power industry?

According to the findings, being a team player, encouraging and uplifting others, building relationships, and respecting others were crucial for selection into leadership positions. Participants also identified the ability to make decisions and communicate effectively and with confidence as desirable leadership qualities. The participants identified models of talent management that lacked rigor and appeared to be applied inconsistently as inequities that impede forward progress. According to participants, working in the nuclear industry is arduous. One concern raised by participants is that opportunities are granted to those who make senior leaders feel at ease or have a rapport with them. Not communicating opportunities equally to all employees led to inequalities, irrational competition, and the belief that advancement to the desired position was unlikely, all of which discouraged African American women from ascending the corporate ladder. Participants confirmed that inequities prompted them to decline leadership opportunities, retire early, or, in one case, leave the organization.

Sub question 2: What beliefs do African American women have about the intersection of race and gender and their impact on leadership opportunities in the commercial U.S. nuclear power industry?

The results indicate that additional research is required to determine why the nine participants' responses varied regarding gender, race, and ageism, sexism, or racism. A majority of study participants agreed that race and gender are improving. The underrepresentation of African American women was attributed to structural and systemic racism and bias. Even though race and gender appear to be improving, White men may continue to feel threatened by African American women who do not resemble them; therefore, they may continue to look for reasons to promote people who resemble them. When White men were required to select a candidate from a diverse background, their decisions and counsel were frequently questioned. White men may believe that White women who champion their passions and interests are more likely to work with them and not challenge the status quo. When African American women speak up, however, their decisions and advice are questioned, and they must prove themselves more than their White counterparts.

Sub question 3: How do African American women contextualize their feminist experiences while working in the commercial U.S. nuclear power industry?

The participants were aware that various types of bias, including conscious, unconscious, and affinity-based bias, still exist. Due to these biases, it is challenging for them to advance in their personal development, and they have fewer opportunities to assume leadership roles, making it more challenging for them to ascend the leadership ladder. One participant cited overcoming the fear of being challenged and speaking up as one of her existing personal obstacles that may make it more difficult for her to ascend the leadership ladder. Participants believed that, as African Americans and members of other minority groups, they had to work harder to achieve the same level of recognition as male and White female counterparts. Even though African American men had been employed in the field longer than women, it appeared that women had more opportunities now that diversity was a top priority in the industry.

Participants identified that the lack of support impacted their leadership opportunities and their leadership beliefs and strategies helped guide them through obstacles. The study found that discrimination caused African American women to decline opportunities, stop striving for management positions, or leave the company. It was possible for decision-makers to undo systemic oppression by recognizing inequitable patterns and by taking deliberate action to disrupt inequities in the workplace. Eketu's (2018) argument was predicated upon the idea that prudent decision-making and clarity were necessary for inquiries to bear fruit. Participants in the study agreed that navigating talent development and career paths while employed in the commercial U.S. nuclear power industry was difficult.

In the case of African American women, for instance, leadership opportunities are not given to those who are qualified and deserving, but rather to those who make senior leaders feel comfortable in their own skin. In spite of their numerous qualifications and experiences, African American women have received fewer promotions and advancement opportunities. Participants identified a reliance on traditional career paths by decision-makers and a lack of intrusive mentoring as factors that influence leader behaviors. Organizations with a focus on improving diversity initiatives must find ways to alter the organization's traditional culture and begin focusing on treating all employees fairly, recognizing that demeaning an employee leads to decreased motivation and "quiet quitting."

Because it gives these women a voice, it is important to tell the story of African American women who work in the commercial nuclear power industry in the United States and their one-of-a-kind experiences. This includes telling the story of their work in the industry, their homes, and their communities. By listening and understanding the stories of African American women, organizational leaders will begin to understand and develop methods that deconstruct stereotypes when equity, feminism, and inclusion are combined and viewed through a single lens. This will result in the creation of a sustainable natural environment for advancement to senior leadership positions and a social environment that is equitable.

Results

Equity

One of the themes that emerged centered on the characteristics and behaviors of leaders. The narratives shared by study participants revealed several issues unique to African American female workers. These issues included being denied promotion, being told someone else would get a certain position, only for someone else to get it in one instance and being placed in a senseless competition with others to get the position. African American women wanted to collaborate with people who looked like them and have opportunities that led to management and leadership roles. When African American women realized they were being treated unfairly, many of them decided they were no longer interested and stopped seeking new opportunities or left the organization.

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For instance, when it comes to African American women, leadership opportunities do not go to the qualified and deserving; rather, they go to those that make senior leaders feel comfortable in their own skin. Despite their qualifications, African American women have experienced fewer opportunities for advancement. Decision-makers' over-reliance on traditional career paths and a lack of intrusive mentorship were all factors identified by participants. Organizations focused on improving diversity initiatives are successful in changing the culture of the company. Despite being treated fairly, a person may still feel insulted, resulting in decreased motivation.

Intersectionality

Intersectionality may convince organizational leaders to accept African American women more readily. Robinson (2017) argues that the situation of women of color is significantly different from that of white women. McKinsey & Company (Burns et al., date unknown): White women and men of color gain ground on women of color. To close the gap, organizations should provide professional development programs that assist leaders in recognizing racism and gendered bias. Adopting this recommendation could promote moral hiring practices and the unbiased selection of African American female leaders.

To determine why the responses of the nine participants varied, more research is required. Responses were diverse, and the majority of responses varied when responding to questions regarding the way that gender, race, ageism, sexism, or racism, discouraged them from pursuing leadership opportunities.

Black feminism

For hundreds of years, African American women had served as the backbone of American society, tasked with addressing the numerous demands associated with the intersections of their roles. This study researched their perspectives and experiences. African American women face societal challenges and

inequities because of racism and sexism, according to black feminism. The goal of this research was to elicit each individual's perspective on contextualizing their feminist experiences through the lens of Black feminism. Black feminism strives to empower African American women by encouraging new and critical ways of thinking about how racism and sexism contribute to the social problems that African American women face to gain a better understanding of why African American women were frequently underrepresented in the commercial U.S. nuclear power industry.

Summary

The findings indicate that a lack of mentoring, racial and gender discrimination, and stereotypes are factors affecting African American women working in the commercial nuclear power industry. Participants in the study stated that being a team player, encouraging and uplifting others, building relationships, and respecting others were essential for selection into leadership positions. Unclear talent management models that lacked rigor and appeared to be applied inconsistently were identified as inequities impeding progress. The results indicate that additional research is required to determine why the nine participants' responses varied based on gender, race, and ageism, sexism, or racism. Most study participants concurred that, albeit slowly, racial and gender disparities are improving. The study participants were aware that various types of prejudice, including conscious, unconscious, and affinity-based prejudice, still exist.

Recommendations for future research and practice

Future research

Working in the nuclear industry presents specific opportunities and challenges for African American women. A case needs to be made for inclusion due to the dearth of women in senior leadership roles, especially women of color (Barnes, 2017). Future research should investigate the reasons why responses regarding race and gender were so significantly different.

The first suggestion is to conduct a similar study with organizational leaders in the American commercial nuclear sector. Organizational leaders and African American women's perspectives could be compared to find areas of agreement and disagreement that could then be filled in to improve communication, diversity initiatives, leadership behaviors, and talent development models.

The second suggestion is to carry out research to find out why the responses to racial and gender questions were so noticeably different. It would be possible to find out if their experiences differ from those of the nine women in this study by gathering more information from a different group of African American women. The study may also gather new information due to the development of social roles and norms over time. Through the data gathered, this kind of study could show how African American women have changed over time.

The third recommendation is to include a cultural study in this investigation. An important aspect of organizational behavior is culture studies. The culture of an organization was determined by its norms,

values, and worldview. According to Schein (2010), organizational culture is a collection of fundamental beliefs that all members of an organization share and that affect how they think, feel, and act. If you want to know how organizational culture and individual success are related, you must expand your research to include cultural differences.

Whether candidates with college degrees should be given preference for higher-level positions could be determined by research on the effects of educational experience on organizations. The distribution of wealth is unequal when White men and women favor relatives and people who resemble them and do not promote African American women to higher positions in organizations. Higher education, groupthink, and generational wealth are unresolved issues in the study.

Future Practice

The implications of this study, seen through the lens of equity, intersectionality, and feminism, will enable organizations to create sustainable natural environments, capable of deconstructing stereotypes, and developing and equitable social environment (see figure 1). Organizations with diversity initiatives aimed at the advancement of African American women should 1. foster a welcoming, inclusive environment that creates a sense of belonging, unites individuals, and enhances their sense of connection, identity, and interpersonal and communication skills. 2. Leaders must be cognizant of inequities within their organizations and foster a culture in which all employees feel valued. Organizations should conduct an analysis to assess the level of a leader's commitment and alignment with the core values of the organization. 3. Develop mentoring, sponsorship, and coaching programs that promote candid, open communication with African American women.

Conclusion

The lived experiences of African American women working in the nuclear industry are comparable to those working in education, other STEM fields, and institutions dominated by Whites. This research suggests that there were theoretical implications and implications for practitioners in this field, as well as other academic and corporate institutions that benefited from understanding the experiences of these women.

African American women's lived experiences in the commercial U.S. nuclear power industry face some challenges when viewed through the lenses of Adams' equity theory, intersectionality, and Black feminist theory and thought. Overcoming these barriers would assist organizations in deconstructing stereotypes, creating a more equitable social environment, and establishing a natural progression path for advancement to senior leadership positions. Stigmatization was a social process rooted in society's negative perception of individual or group traits or identities. Organizations should offer professional development programs to help leaders recognize gendered racism. Providing education on stigmatizing could promote policy changes that lead to ethical hiring practices. Black feminism in the United States had historically developed because of African American women's antagonistic engagement with White women. As women remained at the forefront of activism against the current division and oppression in the United States.

Theoretical Implications

African American women's lived experiences in the commercial U.S. nuclear power industry face some difficulties when viewed through the lenses of Adams' equity theory, intersectionality, and Black feminist theory and thought. This is especially true when looking at their experiences in the commercial nuclear power industry. The removal of these barriers would make it possible to deconstruct stereotypes, foster a social environment that is more equitable, and establish a natural progression path for advancement to senior leadership positions. All of these things would be made possible by the elimination of these barriers. The unfavorable perception that people have of certain personality traits or group identities was the seed that grew into the social phenomenon known as stigmatization. It is imperative that organizations give their leaders access to professional development opportunities where they can learn about gendered racism. By disseminating information regarding stigmatization, one can hopefully inspire legislative reforms that will lead to more moral hiring practices. The historical rise of black feminism in the United States can be attributed, in large part, to the antagonistic interactions that have historically taken place between African American women and White women. While women continued to take the lead in activism against the oppression and division that continue to exist in the United States today.

Recommendations for practice

The implications of this study, seen through the lens of equity, intersectionality, and feminism, will enable organizations to create inclusive environments. Organizations with diversity initiatives aimed at the advancement of African American women should develop processes that foster a welcoming, inclusive environment. Developing a sense of belonging unites individuals and enhances their sense of connection, identity, and interpersonal and communication skills. Leaders must be cognizant of inequities within their organizations and foster a culture in which all employees feel valued. Organizations should conduct an analysis to assess the level of a leader's commitment and alignment with the core values of the organization. Develop mentoring, sponsorship, and coaching programs that encourage candid, open communication with African American women in order to comprehend their unique characteristics that could be utilized to advance the culture of the organization.

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