

## **BRIDGING CLINICAL PRACTICE AND RESEARCH: THE LIVED EXPERIENCES OF CLINICAL RESEARCH NURSES IN ACADEMIC MEDICAL CENTERS**

### **Abstract**

This qualitative phenomenological study explored the lived experiences of clinical research nurses (CRNs) in academic medical centers, emphasizing their dual roles in delivering patient-centered care and upholding research integrity. CRNs operate at the convergence of clinical practice and scientific investigation, yet their voices remain underrepresented in scholarly discourse. Through semi-structured interviews with twelve purposively sampled participants, this study illuminated the complex realities CRNs face as they navigate ethical dilemmas, identity ambiguity, and professional growth within research-intensive environments. Thematic analysis yielded three major themes: (1) Navigating Dual Roles in Clinical and Research Domains, highlighting the tensions between patient advocacy and strict protocol compliance; (2) Building Competency and Confidence in Research Practice, capturing how nurses developed regulatory knowledge, refined documentation skills, and applied clinical judgment through experiential learning; and (3) Professional Fulfillment and Career Advancement, illustrating the meaningful contributions CRNs make to science and the satisfaction they derive from recognition and leadership opportunities. Findings underscore the importance of formal training, institutional support, and recognition frameworks to empower CRNs in their hybrid roles. Addressing ethical, educational, and structural challenges is critical to ensuring both research quality and nurse well-being. This study contributes new insights into the evolving identity of CRNs and calls for more inclusive policies and professional development strategies that position them as integral members of the research enterprise.

*Keywords:* Clinical research nurses, Lived experiences, Dual roles, Phenomenology, Research ethics, Academic medical centers

## Introduction

In recent decades, the clinical research landscape has evolved rapidly, driven by advances in biomedical science, regulatory frameworks, and the rising complexity of clinical trials. Within this dynamic environment, clinical research nurses (CRNs) have emerged as pivotal figures who navigate the intricate intersection of patient-centered care and rigorous research protocols. Positioned at the confluence of science and caregiving, these professionals are uniquely tasked with ensuring participant safety while maintaining data integrity roles that often demand a delicate balancing act of ethical, emotional, and procedural considerations (Lal, 2021).

Despite their growing visibility in clinical trials and academic medical centers, CRNs continue to occupy an ambiguous space in healthcare systems. Their dual identity as both compassionate caregivers and precise data stewards raises profound questions about professional boundaries, role clarity, and identity negotiation (Nowlin et al., 2021; Paterson et al., 2024). While literature has explored research nursing through administrative and procedural lenses, there remains a significant gap in understanding the lived experiences of CRNs how they make meaning of their work, adapt to ethical tensions, and find fulfillment in an increasingly complex field (Ives Erickson & Pappas, 2020; Saunders & Vehviläinen-Julkunen, 2016).

Moreover, with the expansion of clinical trials into diverse and vulnerable populations, CRNs are expected to uphold the highest standards of ethical conduct and cultural competence. This often places them at the frontline of dilemmas involving informed consent, patient advocacy, and protocol compliance. Yet, their voices are frequently underrepresented in academic discourse and policymaking related to clinical research operations (Brewer et al., 2009; Mazzella Ebstein et al., 2020).

This study, therefore, aimed to explore the lived experiences of clinical research nurses in academic medical centers using a phenomenological approach. It sought to answer how CRNs perceive and experience their multifaceted responsibilities, the challenges they face, and the sources of meaning and motivation in their work. These findings not only enrich the scholarly understanding of clinical research nursing but also have important implications for workforce development, protocol design, and institutional support systems.

Despite the expanding presence of clinical research nurses (CRNs) in academic medical centers and their pivotal role in bridging patient care with scientific inquiry, there remains a significant research gap in understanding the lived experiences that define their professional identity, ethical decision-making, and role negotiation. Much of the existing literature has focused on the operational, regulatory, or administrative aspects of research nursing, with limited exploration of the emotional, ethical, and cognitive complexities that CRNs navigate daily. The challenges they face such as balancing protocol adherence with patient advocacy, negotiating ambiguous professional identities, and developing research competencies without formal training are underrepresented in academic discourse. Additionally, the psychological burden, intrinsic motivators, and pathways to professional fulfillment within this hybrid role are poorly understood, leaving critical questions about workforce retention, role satisfaction, and institutional support unanswered. Addressing this gap through qualitative inquiry is essential to inform policy, education, and practice frameworks that adequately support and empower CRNs as both caregivers and contributors to scientific advancement.

This research elevates the lived voices of CRNs and advocates for their deeper integration into the research enterprise not merely as implementers of protocol, but as ethical stewards, educators, collaborators, and leaders in evidence-based practice. In doing so, it aims to reframe the narrative around clinical research nursing as a pathway for professional empowerment, scientific contribution, and meaningful patient care.

## Methodology

**Research Design.** This study employed a qualitative phenomenological research design to explore and interpret the lived experiences of clinical research nurses working in academic medical centers. Phenomenology was selected to gain deeper insight into the participants' perceptions, emotions, and

meanings they ascribed to their dual roles in clinical care and research. The approach enabled a rich, contextual understanding of their challenges, growth, and contributions from their own perspectives (Jowsey et al., 2021; Melnyk & Fineout-Overholt, 2023; Oliveira Silva et al., 2023).

**Participants.** The participants included 12 clinical research nurses currently employed or previously involved in research operations at academic medical centers. They were selected through purposive sampling, ensuring representation from diverse research specialties and years of experience. All participants met the inclusion criteria of having at least one year of experience in a clinical research role and expressed willingness to share their professional narratives.

**Instrumentation.** Data were collected through semi-structured in-depth interviews, guided by an interview protocol developed specifically for this study. The interview guide contained open-ended questions such as:

1. "Can you describe a moment that challenged your dual role as a clinician and researcher?"
2. "How do you balance patient-centered care with research protocols?"
3. "What have been the most fulfilling aspects of your role in research nursing?"

The interviews were audio-recorded, transcribed verbatim, and anonymized to protect participant confidentiality.

**Data Analysis.** The collected data were analyzed using thematic analysis, consistent with Braun and Clarke (2022) six-phase framework. The researcher first familiarized themselves with the transcripts, then generated initial codes, and subsequently searched for emerging themes. These themes were then reviewed, defined, and named to reflect the essence of the participants' experiences. Constant comparison and memo-writing supported the analytical process to ensure thematic coherence and rigor. Triangulation and peer debriefing enhanced the credibility and trustworthiness of the findings (Braun & Clarke, 2022; Saldaña, 2021; Towsey, 2024).

## RESULT

### Results Major Theme 1: Navigating Dual Roles in Clinical and Research Domains

This theme encapsulates the complex interplay clinical research nurses experience as they balance their dual responsibilities of providing patient-centered care while adhering to stringent research protocols. Participants described the emotional and ethical challenges of managing patient needs alongside the rigid demands of scientific data collection, often feeling caught between their caregiving instincts and the procedural requirements of research. This duality frequently led to internal conflicts and role ambiguity, as nurses oscillated between identities as compassionate clinicians and meticulous data stewards. The tension was further heightened by ethical dilemmas, especially when patient welfare appeared to be compromised by research imperatives, placing nurses in morally distressing situations. Overall, this theme reveals the intricate negotiation required to uphold the integrity of both roles, underscoring the need for institutional support and clearer role delineation to empower nurses operating at the intersection of care and science.

**Subtheme 1.1: Balancing Patient Care and Protocol Compliance.** Clinical research nurses often described the challenge of providing holistic patient care while adhering strictly to research protocols and timelines.

The participants shared:

*"There were times when I wanted to provide additional comfort interventions to a patient, but the protocol didn't allow any deviation from the standard care outlined. It's difficult when your instincts as a nurse are telling you one thing, but the research guidelines say another. You're constantly walking a tightrope." [P04]*

*"One of my patients was visibly anxious during a procedure, and I wanted to slow things down to reassure her. But the study timeline was tight, and any delay could affect data integrity. It's moments like those that make this role emotionally and ethically challenging." [P07]*

*"We're trained to prioritize patient-centered care, but in research, you sometimes have to prioritize data collection and compliance. That conflict can feel very uncomfortable, especially when you're the patient's main advocate in the room. I've learned to negotiate and communicate with the team to find a middle ground." [P10]*

**Subtheme 1.2: Role Ambiguity and Identity Negotiation.** Participants experienced confusion or tension regarding their professional identity oscillating between being clinicians and researchers.

The participants mentioned that:

*"Sometimes I wonder—am I a nurse or a researcher first? When I'm collecting samples and documenting data, I feel like a scientist. But when I'm holding a patient's hand during a tough moment, I feel like a nurse again. It's like living in two professional worlds at the same time." [P01]*

*"My colleagues in the clinical units often see me as someone who left bedside nursing, while the research team expects me to prioritize data above all else. It's hard to feel fully part of either group. There's a constant tension in proving your credibility in both domains." [P06]*

*"There's this invisible line I keep crossing every day. One minute I'm explaining the consent form in research terms, the next I'm answering the patient's questions as their nurse. It can be confusing even for the patients—who often ask, 'So are you my nurse or the research person?'" [P08]*

**Subtheme 1.3: Ethical Dilemmas in Practice.** Ethical concerns emerged, particularly when patients' clinical needs appeared to conflict with research procedures or inclusion criteria.

The participants shared:

*"One of my patients was borderline in terms of eligibility, and while the principal investigator pushed for enrollment, I wasn't convinced it was in the patient's best interest. I felt torn between following orders and advocating for what I believed was ethically sound. It still bothers me." [P01]*

*"There was a case where a participant was deteriorating, and continuing with the protocol might have delayed clinical treatment. I had to escalate the issue quickly, but it made me question how research priorities are sometimes placed above immediate patient care. It felt like my nursing ethics were being tested." [P05]*

*"We had a situation where a patient didn't fully understand the risks despite signing the consent. I could tell they were just agreeing because they trusted the doctors. It raised a red flag for me, and I ended up reexplaining everything to ensure informed consent was truly given. It was uncomfortable, but necessary." [P09]*

## **Major Theme 2: Building Competency and Confidence in Research Practice**

This theme highlights the developmental journey of clinical research nurses as they adapt to the specialized demands of the research environment. Participants described the steep learning curve they faced, particularly due to the lack of formal training in research protocols, regulatory compliance, and data management. Many relied heavily on experiential learning, peer mentorship, and trial-and-error to acquire

essential skills, which initially led to feelings of uncertainty and overwhelm. Over time, however, they developed mastery in areas such as Institutional Review Board (IRB) procedures, informed consent, and meticulous documentation elements critical to ensuring ethical standards and data integrity. Furthermore, participants emphasized the refinement of their clinical judgment, which evolved to encompass both patient safety and scientific validity. This theme underscores the importance of structured education, mentorship programs, and ongoing professional development in fostering research readiness and confidence among nurses transitioning into clinical research roles.

**Subtheme 2.1: Learning on the Job.** Many nurses shared that formal training in clinical research was minimal, leading them to rely on experiential learning and mentorship.

The participants shared:

*"When I started, I had no background in research—just bedside nursing. I was handed a protocol and expected to understand things like adverse event reporting and case report forms. It was overwhelming at first, but I picked things up as I went along, mostly by shadowing more experienced research nurses." [P04]*

*"There wasn't any structured orientation into the research role. I learned how to navigate the systems, the IRB submissions, and the data platforms through trial and error. Thankfully, a senior nurse took me under her wing and helped me make sense of everything." [P06]*

*"Most of what I know about clinical research now, I learned by doing. Reading protocols, sitting in site meetings, and making mistakes—those were my teachers. I often wished there had been a formal training program when I started, but mentorship filled that gap for me." [P10]*

**Subtheme 2.2: Mastery of Regulatory and Documentation Processes.** Participants highlighted the importance of understanding IRB protocols, informed consent, and meticulous documentation for trial integrity.

*"At first, I didn't realize how critical accurate documentation was until a monitor flagged a minor discrepancy in a source file. It was a wakeup call. I now double-check every entry because even small errors can compromise the integrity of the entire study." [P01]*

*"Understanding the IRB protocols was one of the steepest learning curves for me. The informed consent process isn't just about getting a signature, it's about ensuring true comprehension and documenting that process clearly. Now, I take extra time to ensure every step is followed to the letter." [P07]*

*"I used to underestimate how detailed the documentation had to be. But in research, if it's not written down, it's like it never happened. I've learned to treat every note, form, and timestamp with precision because those records are the backbone of trial integrity." [P10]*

**Subtheme 2.3: Developing Clinical Judgment in Research Settings.** Nurses reported refining their decision-making skills to ensure both patient safety and scientific validity throughout the study lifecycle.

The participants shared:

*"There was a time when a participant reported mild symptoms that weren't listed as side effects, but my gut told me to flag it anyway. Later, it turned out to be a new adverse event pattern. That experience taught me how crucial it is to use clinical judgment even when the protocol doesn't spell things out." [P03]*

*"Sometimes the decision isn't black and white. I had to weigh whether a participant could continue safely in the study while managing an unrelated medical condition. Balancing protocol adherence with individualized care is where my nursing judgment really comes into play." [P08]*

*"I've learned to trust my instincts more. There are moments when you have to pause and ask: is this safe for the patient, and is it scientifically sound? That dual lens—clinical and research—is what makes our role so unique and demanding." [P09]*

### **Major Theme 3: Professional Fulfillment and Career Advancement**

This theme captures the deep sense of purpose and growth that clinical research nurses derive from their roles within academic medical centers. Participants expressed profound satisfaction in knowing that their work contributes to scientific progress and improves patient outcomes, especially for those with limited treatment options. Recognition by peers, investigators, and institutions—through authorship, acknowledgments, and inclusion in multidisciplinary discussions—fostered a heightened sense of professional identity and validation. This acknowledgment helped dismantle misconceptions of research nursing as purely administrative, reinforcing its clinical and intellectual contributions. Additionally, many nurses experienced expanded career pathways, such as obtaining research certifications, mentoring junior staff, and taking on leadership roles in protocol development and conference presentations. These opportunities not only enhanced their competencies but also redefined their long-term career trajectories beyond traditional bedside roles.

**Subtheme 3.1: Making Meaningful Contributions to Science and Care.** Participants found satisfaction in knowing that their work directly contributes to advancing medical knowledge and improving patient outcomes.

The participants shared the following:

*"It's incredibly rewarding to know that the data I help collect might lead to a new drug that saves lives. I may not be wearing a lab coat, but I'm still part of the discovery process, and that gives real meaning to my role." [P02]*

*"When I see patients benefitting from treatments we're studying—especially those with limited options—I feel proud. It's like I'm doing something that goes beyond the bedside, something that could help thousands more in the future." [P05]*

*"Being a clinical research nurse means I'm part of something bigger than myself. Each day I contribute to science while still caring for real people. That dual impact—on patients and progress—is what keeps me motivated." [P06]*

**Subtheme 3.2: Recognition and Validation in the Research Community.** Experiences of being acknowledged as key contributors in multidisciplinary teams positively influenced their sense of professional value.

Participants shared:

*"During one of our investigator meetings, the principal investigator specifically thanked me for identifying a protocol deviation early. That recognition meant a lot—it reminded me that my role isn't just administrative; it's critical to the integrity of the study." [P01]*

*"Being listed as a co-author on a published paper was a huge milestone for me. It validated all the behind-the-scenes work we do as research nurses. For once, I felt like a real part of the academic and scientific community." [P05]*

*"In multidisciplinary team discussions, I've seen a shift over time. Initially, my input wasn't always considered, but now the team actively seeks my perspective—especially when it comes to patient care within the research context. That acknowledgment has strengthened my sense of professional identity." [P08]*

**Subtheme 3.3: Pathways for Growth and Leadership.** Engagement in clinical research opened new opportunities for specialization, certification, and leadership roles in academia and industry. The participants have mentioned that:

*"Before entering clinical research, I didn't even know there were certifications like CCRC or ACRP. Now, I'm pursuing one and have been asked to lead protocol training sessions for new hires. It's opened doors I never imagined back in bedside nursing." [P02]*

*"Being in research helped me discover a passion for data management and trial coordination. I recently transitioned into a lead nurse coordinator role, and I'm now mentoring junior staff. It's exciting to grow professionally while staying connected to patient care." [P03]*

*"I've been invited to present at conferences and collaborate on protocol development with sponsors. It's a completely new level of visibility and leadership that I wouldn't have reached if I had stayed in a traditional clinical role. Research nursing has really expanded my career trajectory." [P06]*

## DISCUSSION

### Discussion Major Theme 1: Navigating Dual Roles in Clinical and Research Domains

**Subtheme 1.1: Balancing Patient Care and Protocol Compliance.** The tension between delivering compassionate, patient-centered care and adhering to rigid research protocols was a recurring concern among clinical research nurses. The participants' reflections underscore a constant internal negotiation between their nursing instincts and the demands of scientific accuracy. The emotional labor involved in choosing between comforting a distressed patient and ensuring procedural fidelity reflects the ethical complexity of the role. This dual responsibility often places nurses in morally distressing situations, where the need to uphold research integrity can conflict with the holistic ethos of nursing care. These findings mirror those of Cardiff et al. (2024), who noted that nurses in research roles frequently experience role strain when research timelines limit personalized care interventions.

This subtheme reveals the need for improved integration of nursing values within clinical trial designs, especially in patient-facing protocols. Institutions must consider developing training programs that reinforce strategies for ethical flexibility without compromising research validity. Moreover, interdisciplinary research teams should foster open communication channels where clinical research nurses can voice concerns without fear of compromising study outcomes (Balay-odao et al., 2024). Research sponsors and regulatory bodies might also consider revising rigid protocol structures that limit patient-centered adaptations (Hagan & Walden, 2017). Empowering nurses to act both as clinical advocates and protocol stewards can enhance patient safety, trial efficiency, and nurse satisfaction (Van Houwelingen et al., 2024).

**Subtheme 1.2: Role Ambiguity and Identity Negotiation.** The participants expressed a recurring identity tension—oscillating between their professional obligations as bedside caregivers and their

responsibilities as data-collecting research professionals. This duality led to confusion, not only for themselves but also for their colleagues and patients. The statement, “Am I a nurse or a researcher first?” captures this internal struggle and reflects a broader systemic issue of role clarity within academic medical centers. According to Young et al. (2020), this ambiguity can lead to decreased job satisfaction and professional identity dilution, particularly when nurses feel neither fully embraced by clinical teams nor entirely integrated into research units.

The implications of this role ambiguity are far-reaching. Healthcare institutions should establish clearer role definitions and support structures that validate the hybrid identity of clinical research nurses. Interprofessional education and collaborative research cultures can ease the integration process and enhance mutual respect among teams (Cordrey et al., 2022; Drury et al., 2024). Additionally, formal recognition of clinical research nursing as a distinct specialty, with defined competencies and scopes of practice, could help mitigate identity confusion (Ferguson et al., 2021; Tomotaki et al., 2020). Creating mentorship programs that highlight the value of research nursing may also reinforce professional belonging and reduce identity conflict (Naef et al., 2021).

***Subtheme 1.3: Ethical Dilemmas in Practice.*** Ethical tensions were prominently noted when research goals appeared to overshadow individualized patient care. Participants shared emotionally charged experiences of being pressured to enroll patients whose eligibility was questionable or witnessing compromised consent processes. These narratives reveal a broader ethical concern about the power imbalance between investigators and research nurses, as well as the potential exploitation of patient trust. Such dilemmas often provoke moral distress, especially when nurses are expected to prioritize research metrics over patient autonomy and clinical judgment. This aligns with the findings of Hult and TerkamoMoisio (2023), who emphasized the ethical vulnerability of nurses navigating dual loyalties.

The implications of these ethical dilemmas call for enhanced institutional safeguards. Ethics training specific to clinical research roles should emphasize nurses' responsibilities in protecting participant rights and promoting informed consent clarity. Additionally, creating ethics liaison roles or committees within research settings could provide immediate support during morally ambiguous situations (Cuyvers et al., 2024). Policies should also empower nurses to raise ethical concerns without retribution, reinforcing their advocacy role within the research framework (Cameron-Tucker et al., 2022). Research environments must adopt a culture where clinical judgment and ethical reasoning are as valued as scientific rigor (Duffy et al., 2015; Scarsini et al., 2022).

## **Major Theme 2: Building Competency and Confidence in Research Practice**

***Subtheme 2.1: Learning on the Job.*** Participants consistently emphasized the steep learning curve associated with transitioning from bedside nursing to research roles. The absence of formal training left many feeling overwhelmed, relying heavily on experiential learning and peer mentorship. This mode of learning, while resourceful, may result in inconsistencies in protocol adherence and study quality, especially in early phases. It also places additional pressure on seasoned staff to fill training gaps informally. This mirrors findings by Mulaudzi and Gundo (2024), who observed that many clinical research nurses enter the field with limited research knowledge and develop competencies only through on-the-job experiences.

The implications call for the institutionalization of structured onboarding programs tailored specifically for novice clinical research nurses. The creation of standardized orientation toolkits, simulations, and continuing education modules could reduce early-stage anxiety and improve retention (Flocke et al., 2017). Furthermore, formal mentorship programs, such as those advocated by Luo et al. (2024), have been shown to enhance confidence, performance, and job satisfaction. Integrating experiential learning with structured guidance, healthcare institutions can foster professional growth while maintaining research quality (Berthelsen et al., 2019; Gawlinski, 2008). A clear developmental framework for research competency is essential in reducing variability and promoting nurse preparedness in academic medical settings.

***Subtheme 2.2: Mastery of Regulatory and Documentation Processes.*** The narrations reveal that developing proficiency in regulatory procedures and meticulous documentation is central to the role of clinical research nurses. Initial unfamiliarity with Institutional Review Board (IRB) protocols and informed consent processes often led to errors that impacted data integrity. However, over time, participants grew to appreciate the critical role of detailed recordkeeping in ensuring compliance and protecting patient rights. This evolution reflects the necessity of precision in clinical trials, as even minor documentation discrepancies can lead to protocol deviations or regulatory audits (Huang et al., 2024; Negrea, 2024).

These findings suggest the need for research-specific competency training that emphasizes regulatory literacy and documentation excellence. Curricula must include modules on Good Clinical Practice (GCP), ethical consent, and source data verification. Regular audits and refresher courses can also reinforce best practices and reduce protocol deviations (Alsarawi, 2024; Shang et al., 2022). Moreover, digital literacy is increasingly vital, given the use of electronic data capture (EDC) systems and remote monitoring platforms in modern trials (Pattison-Meek, 2024). Institutions that prioritize regulatory education empower research nurses to safeguard both scientific integrity and patient welfare, thereby reinforcing the dual accountability embedded in their roles (Lachebo et al., 2024; Reister, 2023; Wang & Shibayama, 2022).

***Subtheme 2.3: Developing Clinical Judgment in Research Settings.*** The participants' reflections highlighted how clinical research nurses must refine their judgment to make nuanced decisions that balance protocol adherence with individualized patient care. Recognizing and reporting adverse events, deciding when to escalate concerns, and determining patient eligibility amidst co-morbidities are all examples where clinical intuition intersects with research rigor. This dual lens of patient-centered care and scientific accountability is central to the identity of research nurses. Studies like those by Pleshkan and Boykins (2022) affirm that this hybrid judgment develops over time and distinguishes proficient research nurses from novice ones.

The development of such judgment has implications for research nurse training and role recognition. Institutions should consider integrating case-based discussions and decision-making frameworks into professional development programs to enhance reflective practice (Suzuki et al., 2024). Encouraging collaborative decision-making with investigators and ethics boards also validates the critical thinking contributions of research nurses. As clinical trials grow increasingly complex, the demand for research professionals with strong ethical and clinical reasoning skills becomes more urgent (Stoet & Geary, 2022). Empowering nurses to use informed clinical judgment in gray areas can mitigate risks to both data quality and patient safety, ultimately elevating the standard of research practice (Carugno et al., 2022; Wallace et al., 2021).

### **Major Theme 3: Professional Fulfillment and Career Advancement**

***Subtheme 3.1: Making Meaningful Contributions to Science and Care.*** The participants expressed a strong sense of purpose derived from contributing to both patient well-being and scientific discovery. Clinical research nurses occupy a unique position at the intersection of bedside care and data generation, and this dual impact fuels their professional fulfillment. Their narratives demonstrate that witnessing patient improvements through investigational treatments and understanding the broader implications of their data collection efforts enhances intrinsic motivation. This aligns with Mathebula et al. (2022), who emphasized that research nurses perceive their work as meaningful when their contributions directly influence therapeutic advancements and patient outcomes.

These findings suggest that institutions should explicitly recognize the scientific value of nursing roles in clinical trials to foster retention and morale. By incorporating research nurses into the broader narrative of discovery—through authorship, data interpretation discussions, and protocol development organizations can strengthen professional identity and reduce burnout (Tadzong-Awasum et al., 2022). Additionally, promoting the visibility of nursing contributions within research publications and public health advancements may encourage more clinical nurses to explore research careers (Shannon et al., 2024).

The meaningfulness derived from these roles has also been shown to correlate with higher job satisfaction and long-term commitment to the research field (Tosun et al., 2021; Zhou et al., 2024).

***Subtheme 3.2: Recognition and Validation in the Research Community.*** Participants highlighted that being acknowledged as essential team members significantly enhanced their sense of value and professional identity. Whether through verbal recognition during meetings, co-authorship on publications, or increased inclusion in protocol discussions, these forms of validation helped dismantle the misconception that research nurses serve purely administrative or support functions. The quotes reveal how such recognition elevates confidence and reinforces a sense of belonging within the research ecosystem. These observations reflect findings by Arnold et al. (2021), who reported that recognition positively impacts nurses' engagement and retention in complex, multidisciplinary environments.

From an organizational standpoint, fostering a culture of recognition for research nurses is both ethically and strategically essential. Leaders and principal investigators should actively involve research nurses in scholarly outputs and ensure that their insights are valued in multidisciplinary decision-making processes (Chen et al., 2023; Ottosen et al., 2023). Institutions should also develop recognition frameworks that go beyond job descriptions such as awards, promotion tracks, and professional development incentives specifically tailored for research-focused nursing roles (Castonguay et al., 2023). Empowering nurses in this way not only strengthens professional identity but also improves study outcomes through higher engagement and accountability (İlaslan et al., 2023; Lee & Jun, 2022).

***Subtheme 3.3: Pathways for Growth and Leadership.*** Engagement in clinical research was described as a gateway to expanded professional roles, including certification, coordination, mentorship, and academic leadership. Participants' testimonies reflect career trajectories that evolved from bedside care into specialized domains such as trial management, protocol design, and data analysis. This transition marks a shift from traditional nursing roles to more autonomous and strategic positions. These opportunities contribute to increased job satisfaction, empowerment, and a broader understanding of healthcare systems, aligning with findings from Harvey et al. (2024), who emphasized the transformative potential of research nursing as a career path.

To sustain and accelerate these pathways, academic institutions and healthcare organizations must invest in structured career ladders for research nurses. Certifications such as CCRC and ACRP should be promoted and financially supported as part of professional development programs. Moreover, research nurses should be offered roles in leadership committees, ethics boards, and academic collaborations to fully leverage their clinical insight and research expertise (Molise et al., 2023; Nahm et al., 2023). This intentional career cultivation not only boosts workforce morale but also ensures that research units are staffed with highly competent professionals capable of driving innovation (Semerci & Savaş, 2023; Weaver et al., 2023; Whitt et al., 2024). As the demand for research-literate nurses grows, cultivating leadership from within this workforce is both timely and essential.

## **Conclusions**

In conclusion, the lived experiences of clinical research nurses in academic medical centers underscore the dynamic and multifaceted nature of their roles, marked by constant negotiation between clinical compassion and research precision. Navigating dual responsibilities often places them in ethically complex and emotionally taxing situations, yet these challenges are accompanied by opportunities for significant personal and professional growth. The findings highlight the urgent need for formal training structures, regulatory competence-building, and institutional recognition of nurses' critical contributions to research integrity and patient care. As these professionals develop clinical judgment, regulatory expertise, and interdisciplinary leadership, they emerge not only as key players in advancing science but also as empowered change agents within the healthcare and research continuum. Institutions must respond by implementing supportive policies, structured mentorship, and career development pathways that nurture both the technical competencies and intrinsic motivations of clinical research nurses.

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