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The Perceived Roots of (Dis)satisfaction: A Qualitative Study of Clinical Research Associates Job Satisfaction and Attrition in South Africa

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Abstract

Background: The retention of Clinical Research Associates (CRAs) is critical for the integrity and sustainability of clinical trials in South Africa, an emerging hub for global clinical research. High CRA turnover threatens trial quality, data continuity, and site relationships, yet the context-specific drivers of turnover within the South African clinical research landscape remain poorly understood. This study explores the factors influencing job satisfaction and turnover intentions among CRAs to inform targeted retention strategies. **Methods:** A qualitative, interpretivist study was conducted using semi-structured interviews. Twelve CRAs with experience in South African Contract Research Organizations (CROs) were sampled on LinkedIn using purposive sampling. Data were analyzed iteratively using thematic analysis within Atlas.ti 26.0.1.33961 software, guided by Herzberg's Two-Factor Theory and Mobley's Turnover Model. **Results:** The analysis revealed a complex model of turnover drivers. Compensation was the most salient factor, operating not only as a hygiene factor but also as a direct motivator for job mobility in a competitive market. Unsustainable workload and a culture stigmatizing discussions of overload were key push factors. Intrinsic motivators were equally decisive: misalignment with therapeutic area preferences caused profound dissatisfaction, while alignment fostered engagement. Career growth manifested dual pathways: ambition for vertical progression and a redefined search for horizontal growth into roles offering greater work-life flexibility. **Conclusions:** CRA turnover is driven by an interplay of extrinsic pressures and intrinsic motivational deficits. To enhance retention, managers must adopt a multi-pronged strategy: implement market-competitive, well-being-oriented compensation; foster a culture that supports open workload dialogue; create transparent career architectures with dual progression tracks; and facilitate internal mobility across therapeutic areas. This study provides a foundational framework for developing context-sensitive retention policies, thereby contributing to the stability and quality of clinical research in South Africa.

Keywords: clinical research associates (CRAs); job satisfaction; turnover intentions; employee retention; healthcare workforce sustainability; clinical trials; contract research organizations (CROs); therapeutic area preference; career growth



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1. Introduction

Clinical research serves as the fundamental engine for pharmaceutical innovation and is pivotal to Africa's response to its high burden of infectious diseases, such as Ebola, Tuberculosis, and Malaria, through the critical pathway of vaccine development (Park et al.,

2021). Concurrently, the growing middle class in low and middle-income countries (LMICs) is confronting a rising prevalence of non-communicable diseases, further amplifying the region's healthcare challenges (Glickman et al., 2009). According to Belbaraka et al. (2024) less than 4% of Africans are included in global clinical trials sponsored by pharmaceutical companies, despite Africa making up 17% of the world population. Sub-Saharan Africa (SSA) presents a strategic advantage for global clinical development, offering faster patient recruitment that can significantly reduce product registration timelines and associated costs (Strüver & Ibeneme, 2021). This expansion of the clinical trial landscape in LMICs necessitates robust ethical and regulatory safeguards to ensure participant safety and data integrity (Adobor, 2012). Consequently, the quality of trial monitoring, executed by Clinical Research Associates (CRAs), becomes a cornerstone of overall data assurance, particularly within the complex, resource-limited settings characteristic of SSA (Wandile, 2023).

The pivotal role of the CRA is underscored by the global trend of outsourcing clinical development functions to Contract Research Organizations (CROs), a strategy aimed at enhancing efficiency and compliance (Jones & Minor, 2010). CRAs hired and trained by these CROs possess specialized therapeutic knowledge and are central to ensuring protocol adherence and regulatory compliance, directly safeguarding participant rights and the veracity of trial data per the International Conference on Harmonization and Good Clinical Practice (ICH-GCP) guidelines (Adobor, 2012; Fu et al., 2020; Wandile & Ghooi, 2017). South Africa has emerged as a key destination for this outsourced research due to regulatory alignment with high-income countries and cost efficiencies, generating significant employment for health science graduates (Nicholas, 2012; Strüver & Ibeneme, 2021). However, this growth brings ethical and operational concerns, including the risk of exploiting vulnerable populations and overcommitting a limited number of capable research sites, which threatens both data quality and access to novel therapies (Terblanche & Burgess, 2011).

Within this context, the stability and expertise of the clinical trial workforce are paramount. Investigators express significant concern that high CRA turnover leads to the allocation of trials to inexperienced personnel, compromising site support and destabilizing research teams—a factor critical to clinical trial data quality (Farrell et al., 2010; Roberts et al., 2016; Wandile, 2023). The tangible repercussions of this turnover are visible in recurring regulatory inspection findings from South Africa, which cite deficiencies in monitoring and investigational product accountability often linked to insufficiently qualified and experienced staff (Bhatt, 2011). These challenges are exacerbated by South Africa's dual healthcare system, where broader systemic resource constraints and workforce shortages further intensify retention difficulties.

To address this retention crisis, we must examine its roots in job satisfaction. While extensively researched in analogous healthcare professions like nursing, the unique drivers for CRAs in South Africa remain poorly understood (Atefi et al., 2014, 2016; Jura et al., 2022). Job satisfaction, defined as the extent to which individuals like their jobs (Spector, 2022), is influenced by intrinsic and extrinsic factors as per Herzberg's two-factor theory (Zheng et al., 2017). Qualitative studies across professions highlight universal influencers such as supportive leadership, manageable workloads, professional autonomy, and recognition (Hayward et al., 2016; Hesselink et al., 2023; Wong, 2024). Given that a significant proportion of CRAs originate from nursing (Owens Pickle et al., 2017), insights may be transferable, yet context-specific factors within the South African clinical research ecosystem likely modify these dynamics.

Therefore, this study aims to explore how the work environment shapes job satisfaction and, consequently, turnover intentions among CRAs in South Africa. It seeks to bridge a clear

gap in the literature by moving beyond generic models to uncover the context-specific factors that affect CRA sustainability in a resource-constrained, high-growth research market.

The practical implications of this research are direct and multi-stakeholder. For CRO operations managers, findings will inform the development of targeted initiatives to enhance CRA job satisfaction and retention. Pharmaceutical sponsors will gain critical insights into the South African clinical research landscape, aiding in the design of incentives to retain core teams for priority studies. The South African Health Products Regulatory Authority (SAHPRA) may utilize the insights to develop frameworks for sustainable research capacity and potentially refine inspection strategies based on workforce stability indicators. Finally, recruitment agencies can apply this knowledge to better match candidates with suitable work environments, improving long-term job fit. Ultimately, by elucidating the nexus between work environment, satisfaction, and retention, this study provides a foundational blueprint for enhancing clinical trial quality and sustainability in South Africa.

This study explores the impact of job satisfaction and work conditions on Clinical Research Associate (CRA) turnover in South Africa and its subsequent effects on clinical trial quality and outcomes. Within this context, investigators are often concerned about high CRA turnover, as it results in the allocation of trials to inexperienced staff who cannot adequately support research sites, thereby undermining the stability of clinical trial teams; a factor critical to success, as noted by (Lamberti et al., 2022). This concern is substantiated by (Wandile, 2023), who specifically highlight the detrimental impact of high CRA turnover in South Africa on trial integrity. These issues are further intensified within the South African dual healthcare system, where systemic resource constraints and workforce shortages exacerbate challenges in CRA retention. The practical consequence of this turnover is evident in recurring regulatory findings, such as inadequate monitoring and investigational product accountability linked to unqualified monitors, as frequently cited in inspection reports (Bhatt, 2011). Therefore, understanding this turnover phenomenon has direct practical implications: it underscores the urgent need for targeted retention policies and improved work conditions to enhance CRA retention, thereby strengthening monitoring quality and safeguarding clinical trial standards. This study is an extended version of work initially presented by Ayeni and Matemane (2026) at the International Conference on Green and Sustainable Development.

2. Literature Review

Job Satisfaction and Theoretical Framework: Job satisfaction, fundamentally defined as a positive emotional state stemming from one's job appraisal (Locke, 1969) or the degree to which one likes their work (Spector, 2022), is a multifaceted construct central to workforce stability. This study is anchored in Herzberg's Two-Factor Theory, which provides a robust framework for dissecting the drivers of satisfaction and dissatisfaction among professionals. The theory posits a dichotomy: motivational factors (intrinsic to the work itself, such as achievement, recognition, responsibility, advancement, and the nature of the work) lead to satisfaction, while hygiene factors (extrinsic to the work, including company policies, supervision, salary, work conditions, and job security) primarily prevent dissatisfaction when adequate but can actively cause it when poor (Herzberg et al., 2017).

Explicit Relevance to the CRA Context in South Africa: Herzberg's theory is particularly salient for investigating job satisfaction among CRAs in South Africa's unique clinical trial ecosystem. For CRAs, intrinsic motivational factors directly map onto core professional elements: the sense of achievement in ensuring trial integrity and patient safety; recognition for expertise in complex monitoring; responsibility for site quality and compliance; and advancement opportunities within a growing but competitive CRO landscape. Conversely, extrinsic hygiene factors are acutely relevant given the challenging operational

environment. These include the work conditions inherent in frequent travel to remote or under-resourced sites; supervisory support for geographically dispersed staff; and company policies regarding workload, risk, and compensation in a high-stakes, outsourced industry. The South African context, characterized by a dual healthcare system, resource constraints, and a concentrated clinical trials market, intensifies the potential impact of both hygiene deficits (e.g., safety concerns, logistical burdens) and motivational fulfilments (e.g., professional growth, contribution to public health).

Consequently, this study operationalizes job satisfaction as the perceptions of CRAs regarding how both intrinsic motivators and extrinsic hygiene factors within their specific work environment influence their propensity to remain with their organization. Supporting this, research across industries confirms that opportunities for promotion and career pathing significantly enhance satisfaction, as they signal organizational fairness and investment in employees (Sajuyigbe et al., 2023). This relationship between systemic fairness, growth opportunities, and satisfaction may also extend to, and interact with, perceptions of compensation and welfare.

Theoretical Synthesis: Herzberg and Mobley: The theoretical framework for this study integrates Herzberg's Two-Factor Theory with Mobley's Intermediate Linkages Model of Turnover to form a coherent lens for analysis. Herzberg's Two-Factor Theory guides the investigation into the specific antecedents of CRA satisfaction and dissatisfaction. It allows for the categorization of emergent themes from the data as either motivational (e.g., professional autonomy, task significance) or hygienic (e.g., travel logistics, safety protocols), providing a structured understanding of what energizes or depletes CRAs in South Africa. Mobley's Turnover Model logically extends this foundation. It posits that job dissatisfaction (often stemming from poor hygiene factors and/or absent motivators, per Herzberg) initiates a cognitive process of evaluating one's job, searching for alternatives, and ultimately forming an intention to quit. Mobley's model is crucial for exploring how the satisfaction/dissatisfaction dynamics identified through Herzberg's lens translate into turnover intentions, a key outcome variable in this study.

Strengths and Contextual Application of the Integrated Framework: The strength of this integrated framework lies in its sequential logic. Herzberg's factors help diagnose the root causes of affective responses to the job, which Mobley's model then connects to behavioural intentions. This is critically applicable to the CRO environment in South Africa, where high demand for CRAs creates readily available alternative opportunities, thus making the progression from dissatisfaction to turnover intention, as outlined by Mobley, highly probable. An acknowledged limitation is that the link between intention and actual turnover can be moderated by external market factors and individual circumstances. However, as turnover intention is the strongest direct predictor of voluntary turnover (Michaels & Spector, 1982; Mobley et al., 1978), it remains a vital and reliable construct for study. Furthermore, this qualitative inquiry, rooted in these theories, does not seek to statistically test their universality but to employ them as sensitizing constructs to explore the perceptions of CRAs, thereby generating context-specific insights that may refine the application of these theories in the global clinical research setting.

Gap in Literature

A substantial body of research on nursing populations, primarily using qualitative methodologies like focus groups and interviews, has established a consistent framework for understanding healthcare worker satisfaction. These studies, conducted in settings from Iran to the Netherlands, consistently identify high workload, inadequate managerial support, and insufficient rewards as primary drivers of job dissatisfaction. Conversely, the core satisfiers are professional autonomy, the meaningful nature of patient care, and positive

interpersonal relationships (Atefi et al., 2014; Hesselink et al., 2023). This pattern strongly aligns with Herzberg's Two-Factor Theory, distinguishing between extrinsic hygiene factors and intrinsic motivators.

Focusing specifically on the Clinical Research Associate (CRA) role, quantitative surveys in global hubs like China and the United States confirm that work-related factors, not demographics are paramount. Key findings from these large-scale surveys identify compensation, opportunities for professional growth and training, alignment with an organization's mission, and the quality of leadership as fundamental to CRA job satisfaction and retention (Owens Pickle et al., 2017; Zheng et al., 2017). A pivotal quantitative study within South African Contract Research Organizations (CROs) adds a crucial local insight, demonstrating that supportive supervisory relationships enhance self-determination among CRAs, which in turn fosters work engagement and reduces both emotional exhaustion and turnover intentions (Heyns et al., 2022). This positions leadership not merely as a hygiene factor but as a direct enabler of intrinsic motivation in this specific context.

The logical consequence of eroded job satisfaction is the development of turnover intentions (Park et al., 2021). Empirical evidence, largely quantitative and often utilizing instruments like the Maslach Burnout Inventory, confirms this pathway. Job stress directly undermines engagement and increases quit intentions across professions. For CRAs specifically, occupational burnout is a prevalent and critical mediator, though perceived organizational support can mitigate its negative effects (Fu et al., 2020). Industry analyses explicitly name compensation, lack of development, poor leadership, external job opportunities, and misalignment with organizational mission as the key drivers of CRA turnover, with tangible consequences for clinical trial timelines and site stability (Lamberti et al., 2022; Owens Pickle et al., 2017).

The stability of this workforce is inextricably linked to the broader sustainability of clinical research, a concern amplified in resource-variable settings. Scholarly work emphasizes that sustainable research in low- and middle-income countries requires integrating local knowledge and building equitable partnerships, with a stable and satisfied CRA workforce being a foundational component (Addo-Atuah et al., 2020). While innovations like remote monitoring and Artificial Intelligence (AI) are proposed to enhance operational sustainability, their success is contingent upon a competent and retained workforce, underscoring the ongoing importance of managing foundational hygiene factors like workload and clear policies (Muchtadin & Sundary, 2023; Wong, 2024).

Despite this growing body of knowledge, a significant and contextually critical gap persists. While quantitative links are established and studies on nurses are plentiful, there is a stark absence of in-depth, qualitative investigation into the subjective experiences of South African CRAs themselves. The unique local conditions, including the dual healthcare system, cultural dynamics, economic pressures, and the specific structure of the CRO landscape are likely to modulate the dynamics of Herzberg's and Mobley's models in ways that global studies cannot capture. No existing research qualitatively explores the interconnected perceptions of job satisfaction, turnover intentions, and research sustainability from the vantage point of those on the front lines of South Africa's clinical trial sites. It is this specific gap that the present study is designed to address, seeking to generate the nuanced, context-rich understanding necessary to develop effective, localized strategies for improving CRA retention and safeguarding the future of clinical research in the country.

The relationship between job satisfaction and dissatisfaction among Clinical Research Associates (CRAs) in South Africa can be understood through the interplay of motivational and hygiene factors, as per Herzberg's two factor theory, Figure 1. Motivational factors, such as the work itself and positive workplace experiences, help reduce dissatisfaction, while hygiene factors, including fair compensation and supportive management, enhance

satisfaction. When these elements are absent or poorly managed, dissatisfaction grows, and the Mobley turnover model comes into play. This process begins with CRAs critically evaluating the value of remaining with their current Contract Research Organization (CRO). If the perceived utility of staying is low, they progress to actively searching for alternative opportunities, ultimately leading to an intention to resign.

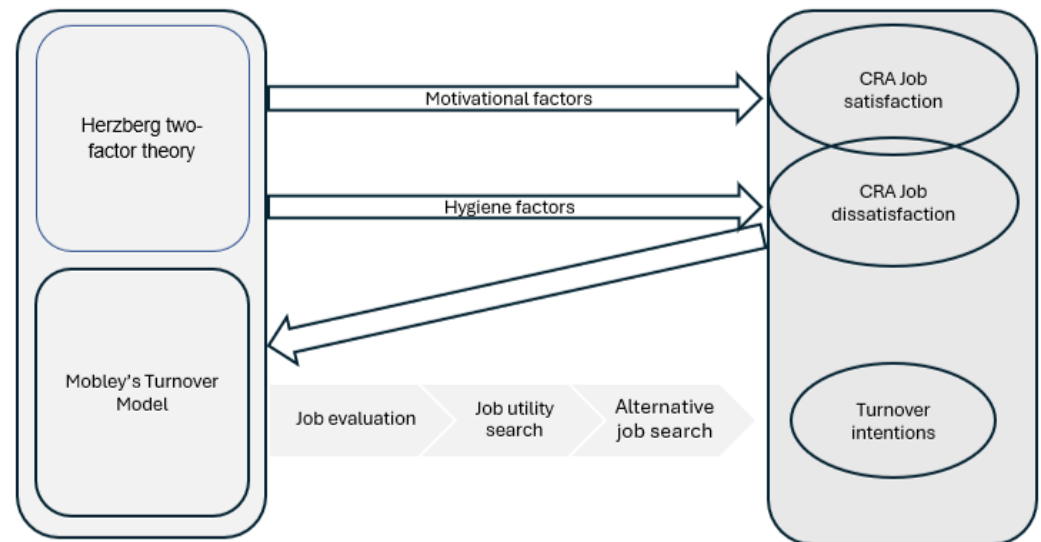


Figure 1. Conceptual framework depicting relationship between job satisfaction and turnover intentions of CRA's (Source: Author's own work).

3. Methodology

The epistemological position of the study concerning how knowledge can be acquired is an interpretivist research paradigm. This paradigm provides the fundamental framework of assumptions guiding this inquiry (Saunders et al., 2023). Interpretivism is predicated on the understanding that the social world is distinct from the natural world, as human actors construct meaning through their subjective experiences and interactions. The purpose of interpretivism is to create a new and richer understanding of social contexts as it looks at organisations through the perspective of the participants (Saunders et al., 2023).

This paradigm is particularly apt for investigating the complex, socially situated work of Clinical Research Associates (CRAs). Their experiences of job satisfaction are not objective facts to be discovered, but rather nuanced realities shaped by personal, cultural, and organizational contexts. The researcher enters the social world of the participants not as a detached observer, but as an interpreter seeking to understand their constructed realities (Wilson, 2014). This stance affirms that valid knowledge is generated through empathetic engagement and the co-construction of meaning during the research process, a crucial foundation for establishing the legitimacy of the findings (Turki & Triki, 2023).

Ontologically, the study adopts a constructionist perspective. This perspective determines how the researcher sees the world and how it influences the way in which research objects are studied. As the research focuses on uncovering the underlying stories and interpretations CRAs hold (Saunders et al., 2023; Wilson, 2014). This position holds that there is no single, objective reality of the CRA work experience. Instead, multiple realities are constructed through the interplay of individual background, organizational culture, and social discourse (Saunders et al., 2023; Gergen, 2015). This is especially relevant in South Africa, where CRAs come from diverse personal, educational, and institutional backgrounds, including historically advantaged and disadvantaged contexts. This inevitably shapes their perceptions of their work environment. Constructionism emphasizes how knowledge and understanding are actively built within specific cultural and social settings

(Parmaxi & Zaphiris, 2014), a process mirrored in the continuous learning and adaptation required of CRAs. Guided by this philosophical foundation, the study employed a deductive qualitative approach. While deduction is often associated with quantitative hypothesis testing, in qualitative research it involves using existing theory to inform the research focus and analytical lens. This study was explicitly framed by Herzberg's Two-Factor Theory and Mobley's Turnover Model. Propositions derived from these theories guided the exploration of whether and how the experiences of South African CRAs reflected these established constructs (Saunders et al., 2023).

The target population was defined as CRAs with a minimum of two years of monitoring experience who had worked for a Clinical Research Organization (CRO) operating in South Africa. This criterion ensured participants had substantive exposure to the organizational dynamics and professional pressures under investigation. A non-probability, heterogeneous purposive sampling strategy was implemented. This technique was selected to capture a wide spectrum of perspectives from a strategically identified, small sample (Saunders et al., 2023; Golzar et al., 2022). Participants were recruited via LinkedIn, using targeted searches for the job title "Clinical Research Associate" within South Africa. Profiles were screened for relevant CRO experience, and a standardized invitation was dispatched. The industry body, the South African Clinical Research Association (SACRA), was informed of the study in a ceremonial gatekeeping capacity. A sample size of 12 participants was determined sufficient to achieve data saturation, the point where new interviews cease to yield novel coding and thematic insights (Boddy, 2016; Fusch & Ness, 2015; Kumar et al., 2020).

The primary mode of data collection was semi-structured interviews, conducted in October 2025. This method provides an optimal balance of focus and flexibility, allowing for the systematic exploration of pre-defined themes related to the theoretical framework while granting space for participants' unique narratives and emergent issues to arise (Alharahsheh & Pius, 2020; Galletta & Cross, 2013). The interview guide was meticulously developed through a five-phase process: establishing prerequisites, grounding questions in the literature review, drafting, pilot testing with field experts, and finalization (Naz et al., 2022). It contained introductory remarks, key questions, planned probes, and concluding comments to ensure a consistent yet adaptable structure (Al Balushi, 2016). The interviews were recorded and transcribed on Microsoft teams platform after the participants gave consent to be recorded. The recordings and transcription were downloaded and saved. The raw transcript was reviewed during data cleaning process. The data cleaning process involved reading the transcript and correcting words that were not clearly transcribed by listening to the recording again. This step was followed by removing identifiers, name of participants and names of companies where mentioned. The last step was to clean the grammar by using Microsoft Co-Pilot Artificial Intelligence platform by using the prompt, "Please help with grammar on the attached transcript". This was done to ensure correct punctuation and full sentences to aid with coding. The cleaned transcript was read again to ensure important information, tone and context from the interviews was not omitted. Furthermore, during the coding process, the researcher listened to the recorded interview where necessary to ensure tone and meaning is captured correctly. The transcripts were then analysed using Atlas.ti. 26.0.1.33961. The data was coded based on the research questions, bringing up job satisfaction, turnover intentions and the sustainability of clinical research in Africa. The codes were identified based on important data and repeating data.

Data analysis employed thematic narrative analysis. This method is particularly suited to identifying common themes across individual, contextual stories, maintaining the richness of each narrative while allowing for cross-case synthesis (Saunders et al., 2023; Braun & Clarke, 2006). The analysis followed Braun and Clarke's (2006) six-phase framework: Immersion in the data via transcription and repeated reading; Generating

initial codes; Searching for and collating codes into potential themes; Reviewing and refining themes; Defining and naming themes, and finally producing the final analytical report, see Table 1.

Table 1. Coding and theme development process.

Full Quotation	Initial Code	Final Theme
CRA02: “Financial benefits, number one, I think because of the high demand, especially when you are a Senior CRA. I mean even though the job market is currently slow, over the past couple of years, it’s easier to get a 10 to 20% increase if I jump ship to the next sponsor than to wait for this 5%, 4% percent yearly, so I think that is number one”	Financial benefits, number one.	Compensation
CRA04: “if you are not compensated well enough, does it make sense for you to keep on deteriorating? you understand? So if I’m going to be sitting there and going through the pain and knowing that I am a mental being as well, I need to at least to be able to afford a session with the, with the psychologist, you see.”	Compensated well enough	Compensation
CRA12: “I think a lot of people are aware that there’s a lot of money in the industry and you can go far with regards to how much you earn and so a lot of people come in and leave within a short space of time and they are not afraid to go start again at another company because it’s the same thing.”	How much you earn	Compensation
CRA06: “. . .for those who are established as mostly established and maybe have certain life commitments, it’s mostly workload. Demands of the job traveling because it is demanding and perhaps you want to go to. You’re looking for a place where it is, you know, manageable and you can still have. Personal time and work time and separate the two because it can over cross the line at some point.”	1. It’s mostly workload 2 Travelling because it is demanding	1. Workload 2. Travel requirements
CRA07: “. . .You don’t really get much support, so it’s more like when you raise your voice to say you’re overwhelmed. It is seen as incompetence and now you are overwhelmed and you can’t raise it because you’re going to be seen as being incompetent. So it’s usually, being a case that I’ve seen it and, you know, being a thing”	You are overwhelmed	Workload
CRA11: “I moved to the company because I wanted to work on, I wanted to be exposed to different therapeutic field, for example, because I’ve been working a lot of HIV and TB, so I wanted to be exposed to others like oncology, diabetes, you know, like different type of diseases. But when I got there, to the company because they saw I have experience of HIV, they put me on HIV study again and they told me to wait. So, you know I wasn’t feeling satisfied when I was there, so I left after.”	Exposed to different therapeutic field	Therapeutic Area Preference
CRA08: “Also therapeutic area for me is very important. If you’re going to throw me into a certain therapeutic area that I don’t like, that I don’t enjoy, it’s unlikely that I will want to stay. So usually I will voice, I know sometimes you have to do things you’re uncomfortable with, but if there’s a chance that you can do what you really enjoy doing and they give you that for me, I’ll stay.”	Therapeutic area that I don’t like	Therapeutic Area Preference
CRA10: “. . .I’ve had an opportunity beginning of the year to, where I interviewed for a line manager position. . .time to maybe go into clinical lead or project management or line management, things like that.”	Go into clinical lead or project management or line management	Career Growth
CRA06: “Personally, none. It doesn’t affect. I think my desire to leave is solely on my own ambitions and not necessarily job satisfaction, because if I didn’t have any ambitions, I think I would be very satisfied with my job.”	Desire to leave is solely on my own ambitions	Career Growth
CRA12: “I’m actively looking for roles, but it is not CRA roles like I mentioned, it’s a bit difficult for me currently to be a CRA, maybe later on in life. I’ll come back to this, but currently I need something that is. More flexible mentally and also time wise I mean being home is good, it’s good enough, it’s excellent, but the day is full. It’s packed from the time you start the day.”	Actively looking for roles	Career Growth

Step 1: Immersion in the data via transcription and repeated reading—transcripts were read and the recording was listened to again to understand tone and meaning.

Step 2: Generating initial codes—Code containers were created based on the research question. e.g., RQ1: Motivational factors, RQ2: Hygiene Factors.

Information relevant to the research questions was highlighted within the transcripts, initial quotes that were highlighted were 3 to 5 or 6 words. Each highlighted quote was applied to the relevant code container (Adu, 2019).

Step 3: Searching for and collating codes into potential themes—The quotes applied to the code containers were grouped into one to three word potential themes based on their relatedness in meaning, for example quotes that included words like salary, payment, money were grouped into the potential theme of compensation.

Step 4: The potential themes were reviewed and refined into motivational factors or hygiene factors based on participant narratives. For example quotes where participant talked about searching for alternate jobs were grouped into a potential theme named actively looking for opportunities.

In Step 5, themes were defined and named according to what participant narratives represented.

To ensure rigor and trustworthiness, multiple validation strategies were employed as per Lincoln and Guba’s (1985) criteria. These included prolonged engagement with the data, peer debriefing with academic colleagues, negative case analysis to challenge developing

themes, and member checks where participants validated the accuracy of interpreted accounts. Reflexivity was maintained through a research journal to monitor potential bias, and the principle of dependability was upheld by documenting a clear, auditable decision trail throughout the analytical process (Kirk & Miller, 1986; Saunders et al., 2023). Bracketing was done by intentionally avoiding probing statements respondents made that the author does not agree with or see differently based on professional experience in the clinical research field, this was done to discourage dialogue (Adu, 2019). Furthermore, as the interviewer's video was on during the process, the researcher was conscious of maintaining a consistent facial expression and gently nodding to encourage participants to freely share their accounts.

Ethical Considerations

The study received full ethical approval from the North-West University Economics and Management Sciences Research Ethics Committee (EMS-REC)—Ethics number: NWU-000781-25-A4. All procedures adhered to the highest ethical standards (O’Gorman & Macintosh, 2015). Prior to interviews, participants received a detailed information sheet and provided informed digital consent. Consent was also confirmed at the beginning of each interview. Anonymity and confidentiality were guaranteed in line with South African legislation; all identifying details were removed from transcripts, and data were stored on password-protected systems. Participants were reminded of their right to withdraw at any time without consequence, and the principle of “do no harm” was paramount throughout all interactions.

4. Results

More than 25 CRAs were approached to participate in the study, there were 12 respondents who are working as CRAs from different levels of experience in South Africa. The demographics of the respondents are presented in Table 2 below. Seven of the respondents were female and 6 respondents were male. 11 of the CRAs were of African ancestry and one CRA of European ancestry. The demographics of the participants are presented in terms of gender, ethnicity, job role and years of experience as a CRA. Data saturation in this was achieved from when there were no new coding relating to factors affecting job satisfaction or turnover intentions of CRAs, see Tables 3 and 4.

Table 2. Demographics of the 12 CRAs working in South Africa who participated in the study.

Participant ID	Gender	Age	Ethnicity	Job Role	Years of CRA Experience
CRA01	Female	30–35	African	Senior CRA 1	6 years
CRA02	Male	35–40	African	Senior CRA 1	5 years
CRA03	Female	40–45	African	CRA 2	4 years
CRA04	Female	35–40	African	Senior CRA 2	5 years
CRA05	Male	40–45	African	CRA 2	3 years
CRA06	Male	30–35	African	Senior CRA1	5 years
CRA07	Female	25–30	African	CRA 2	3 years
CRA08	Female	35–40	African	Senior CRA1	6 years
CRA09	Female	25–30	African	Senior CRA 1	4 years
CRA10	Male	40–45	Caucasian	Senior CRA 3	9 years
CRA11	Male	40–45	African	Senior CRA 3	9 years
CRA12	Female	40–45	African	Senior CRA 1	6 years

Table 3. Codes for Motivational factors of CRA job satisfaction in South Africa.

Themes	Career Growth (MF)	Workload (MF)	Therapeutic Area Preference (MF)	Meaningful Contribution to Society (MF)	Work-Life Balance (MF)
Codes	CRA06: “Job satisfaction doesn’t affect my desire to leave”	CRA05: “The main reasons are work overload, poor work-life balance, and compensation.”	CRA11: “I once joined a company hoping to work on new therapeutic areas like oncology or diabetes. But because I had HIV experience, they assigned me another HIV study and asked me to wait. I wasn’t satisfied, so I left.”	CRA04: “Knowing that we’re all united for a greater purpose is deeply fulfilling. I’ve been involved in several studies that, once closed, showed successful outcomes. Despite the challenges and pressures along the way, you go to sleep with a smile. That’s what makes it satisfying.”	CRA01: “CROs, on the other hand, offer higher monthly salaries, but the work-life balance is poor” “Even though I don’t love my job, remote work makes it bearable.” “CROs should offer fully remote roles, especially given the travel demands.”
	CRA02: “Sometimes people stay because there aren’t other opportunities, or they don’t qualify for a new role.”	CRA07: “The workload feels disproportionate. There’s little appreciation for the work being done.”		CRA11: “I also feel proud when the medication I worked on reaches the market. In Senegal, for example, we had to renovate a hospital for a trial. It started with just two rooms—a pharmacy and one consultation room. The study led to capacity building and infrastructure improvements. That’s a powerful feeling—knowing you’re contributing to a community.”	CRA04: “I’m more productive working from home because the time saved from traveling goes directly into completing tasks. However, the downside is maintaining work-life balance.”
	CRA10: “I’ve been wanting to grow in my career, but opportunities are limited”	CRA02: “Workload is another reason. Some people want less travel or more flexibility, so they move to a different sponsor or CRO.”	CRA08: “Good management and therapeutic area are key for me. If I’m assigned to a therapeutic area I don’t enjoy, I’m unlikely to stay. I know sometimes we have to do things we’re uncomfortable with, but if I’m given the chance to work in an area I love, I’ll stay.”	CRA11: “In Africa, many people don’t have access to proper healthcare. But through clinical trials, participants receive screenings, blood tests, and exams. We’re helping in a meaningful way. That’s what I love about my job”	CRA05: “Adjusting to being fully home-based was tricky at first. My previous role was hybrid, so I felt isolated—especially not knowing my new colleagues or their roles.”
	CRA010: “I’m still open to roles like clinical lead, project management, or line management.”	CRA07: “Studies in the startup phase are more demanding than those already ongoing. It’s a stretch at the moment, but I’m trying to make it work.”	CRA08: “When I joined the company, I was supposed to work on oncology. But I’m not an oncology person—it’s not something I enjoy. The CRO saw my experience in infectious diseases and reassigned me to an RSV study. The CRO wasn’t thrilled, but I got what I wanted. That’s why I’m still here four years later.	CR08: “It’s a challenging role. We talk often about how hectic it is—the travel, the workload, the site demands. But it’s also satisfying. When I started four years ago, I was assigned to an RSV study. We just got the drug registered. That’s incredibly fulfilling.	CRA05: “The main reasons are work overload, poor work-life balance, and compensation.”

Table 3. Cont.

Themes	Career Growth (MF)	Workload (MF)	Therapeutic Area Preference (MF)	Meaningful Contribution to Society (MF)	Work-Life Balance (MF)
Codes	CRA03: “The second reason is growth. No one wants to be a CRA forever. We want to learn and explore other roles.”	CRA10: “Another reason is workload. When things get tough at site or on a study, some CRAs leave before they have to answer for issues.”		CRA02: “I’m very satisfied. Seeing the results of your work—especially when a study ends, results are published, or the IP is FDA-approved—is incredibly rewarding. It’s satisfying to know you’ve contributed to science.”	CRA06: “As a CRA, most of your time is spent on-site. When not at site, you have the flexibility to choose between working from home or the office.”
	CRA09: “I’m considering leaving my company—mainly due to limited career opportunities. In our department, the only roles are CRA, Project Manager, and Line Manager.”	CRA03: “We work long hours—sometimes until midnight—and feel underpaid for the workload.”		CRA03: “Coming from a nursing background, I’ve seen firsthand what it’s like when patients don’t have effective medication. So for me, helping even one patient is deeply satisfying. What we do is bigger than us—it gives people hope and better health. Our role contributes to drug registration and ultimately helps patients. That’s my number one motivation.”	CRA07: “CRAs aren’t required to work from the sponsor’s office, but we can choose to. The main requirement is traveling to site or working from home.”
	CRA05: “I’m ambitious and driven by progress. I understand that others may be prioritized due to tenure, but it still feels stagnant and has made me consider moving on.”	CRA09: “But at my previous company, turnover was frequent—likely due to workload and lack of support.”			CRA08: “I’m fully home-based—and I wouldn’t have it any other way. I’m employed by a CRO but based at the sponsor. Because I’m not directly employed by the sponsor, I don’t always feel like part of their team. Being home-based gives me peace of mind.”
	CRA12: “Yes, I’m actively looking for roles—but not CRA roles. Right now, CRA work doesn’t suit my life. Maybe I’ll return to it later, but for now I need something more flexible—mentally and time-wise. Being home-based is great, but the days are packed. Even after hours, there’s still work to do.”			CRA09: “when a drug goes to market, the company celebrates and refers back to the trial. That gives you a sense of purpose and job satisfaction.”	CRA02: “I started off hybrid and now I’m home-based. Hybrid was great—you get to see your team, interact face-to-face, and build relationships. It’s easier to ask for support when you know who you’re talking to.” “With remote work, team dynamics become more difficult. There are people I’ve worked with for two years whom I’ve never met. We don’t switch on cameras, so there’s no personal relationship. That makes it tricky to get work done on time.”

Table 4. Codes for Hygiene factors of CRA job satisfaction in South Africa.

Themes	Compensation (HF)	Administrative Tasks (HF)	Supervisor Support (HF)	Travel Requirements (HF)	Interacting with Site Staff (HF)
	CRA01: “salary increases should match inflation”	CRA01: “What I do enjoy is the relationships I build on site—I’m a people person. But the administrative tasks and the travel? No.”	CRA01: “Line management affects job satisfaction. A line manager controls your workload. If they’re empathetic, they’ll help prevent burnout by adjusting your responsibilities. But if they’re results-driven and lack empathy, burnout is inevitable.”	CRA01: “My perspective has changed with age and family responsibilities. When I was younger and didn’t have a child, I loved traveling”	CRA03: “What do I enjoy most? Interacting with site staff—building relationships, training, and learning from them. As Clinical Research Associates, we may think we know everything, but we learn so much from those on site who live the protocol every day. Being on site—not the travel itself, but the actual site work—is fulfilling. Reviewing patient files and ensuring we meet objectives one data point at a time is deeply rewarding.”
	CRA03: “The number one reason people leave is money.”	CRA011: “My least favorite task is responding to unnecessary emails from project managers—requests that could’ve been resolved if they simply reviewed the project plan or made a quick call. That kind of admin work is the worst part of my day, every day.”	CRA04: “One common mistake line managers make is assuming someone can handle everything without considering their mental health. I’ve felt unsupported when working in such diverse teams, especially when sponsors are demanding and expect miracles based on your experience.”	CRA01: “I’ve applied to a few CRA roles with less travel, but I’ve stopped for now. The industry is scary—lots of retrenchments.”	CRA05: “I enjoy interacting with sites, which was missing in the government setup. That’s one reason I requested to move to site management.”
Codes	CRA02: “CRA02: “Even though the job market is currently slow, in previous years it was easy to get a 10–20% increase by switching companies—compared to the standard 5% annual raise.”	CRA08: “The only part I don’t enjoy is site payments. It’s complicated and stressful.”	CRA06: “We have an open-door policy and regular one-on-one check-ins to discuss workload. There’s ongoing engagement around capacity—whether you’re overworked—and development. We’re encouraged to identify gaps and raise our hands if we need support. But it’s also emphasized that development is our own responsibility.”	CRA06: “If working conditions are manageable—less travel, fewer sites—CRAs can thrive. But if you have a family and you’re flying every Sunday and returning every Friday, it puts a strain on your personal life. That’s when people start looking elsewhere.”	CRA06: “I enjoy problem-solving. When there’s a tricky issue—especially technical ones involving protocol interpretation—I enjoy engaging with others to resolve it. That challenge is my favourite part. What I don’t enjoy is working with people. I’m very objective, and I find that many people are emotional and focus on feelings rather than facts.”
	CRA05: “When I joined, I learned that for the first 12–18 months, I wouldn’t be eligible for promotion, salary increase, or bonus”		CRA07: “My experience with my direct line manager has been positive. However, the support from the sponsor under the FSP model hasn’t been great.”	CRA08: “I travel a lot—about 75% of the time. It’s tiring, but you get used to it. It comes with the job.”	CRA07: “I enjoy project management and problem-solving. I like working with sites to resolve issues and find solutions. Site management is the part I enjoy most.”
	CRA06: “For junior CRAs entering the market, salary is often the main motivator.”		CRA11: “If I anticipate a heavy workload, I inform my manager and explain how it might affect timelines. They’re usually very supportive.”	CRA02: “Some people want less travel or more flexibility, so they move to a different sponsor or CRO.”	CRA11: “I love seeing the impact—helping sites improve, guiding new investigators, and watching them grow. By the end of a study, they understand GCP, and protocol deviations are minimal. It’s rewarding.”

Table 4. Cont.

Themes	Compensation (HF)	Administrative Tasks (HF)	Supervisor Support (HF)	Travel Requirements (HF)	Interacting with Site Staff (HF)
Codes	CRA07: “take CRA grievances seriously. Compensation also matters”		CRA03: “Another factor is the people we work with—especially project managers and clinical leads. Many lack people skills and leadership training. Even though they don’t directly manage CRAs, their behavior affects our job satisfaction.”	CRA12: “For those in the middle—raising young kids—it’s a tough decision. So yes, it can be age-related, but it’s more about life stage.”	
	CRA08: “Most people chase money”		CRA08: “My manager is supportive, and I know I can ask for help when I need it.”	CRA09: “The parts I don’t enjoy are traveling, working overtime, and juggling multiple site needs.”	
	CRA12: “Money—people want to increase their salary, not necessarily climb the career ladder.” “People know there’s money in this industry, and they’re not afraid to switch companies.”		CRA12: “Right now, I know the CRO cares about me. But the Sponsor doesn’t—they just want results. Whether I stay or leave doesn’t matter to them.” . . . “We need to treat CRAs as part of the whole, not just a resource.”	CRA09: “Since I dislike traveling, I’m actively looking for a non-travel or less-travel role outside of Pharma”	
			CRA02: “Stress, conflict, or poor relationships with Clinical Leads can drive people away—even if the salary is good.”		

The themes that emerged from the data analysis are career growth, workload, therapeutic area preference, meaningful contribution to society and work life balance as motivational factors presented in Table 2. The meaningful contribution to science and society at large emerged as the foremost driver of CRA job satisfaction in South Africa. Consistent with the Herzberg two factor theory, therapeutic area preference represents responsibility, meaningful contribution to society represents a sense of achievement and work life balance represents the work itself. These motivational factors operate to increase satisfaction are inherent to the work itself (Alshmemri et al., 2017). The results further show that career growth or advancement is limited within CROs suggesting that this motivational factor links Herzberg two factor theory to Mobley turnover model as CRAs tend to look for opportunities for advancement elsewhere when they do not foresee career advancement with the CRO. Zoromba et al. (2025) found that health professionals who view work as important are likely to leverage professional growth Workload and work life balance has shown to be closely related themes and can trigger turnover intentions if perceived to not be managed adequately by the CRA line managers. The finding on work life balance is consistent with (Shikusinde & Shimaneni, 2025) who found that balancing professional responsibilities during remote work has a positive relationship with employee motivation as employees have greater control of their schedule. Furthermore, the data suggests that even when there is dissatisfaction, remote work is a significant motivational factor for CRAs in South Africa.

In the context of Herzberg's two-factor theory, interactions with site staff emerge as a stable hygiene factor, reflecting the importance of interpersonal relationships in the workplace. Among Clinical Research Associates (CRAs) in South Africa, compensation, supervisor support, and travel requirements are identified as key hygiene factors that contribute to dissatisfaction. Travel requirements, which represent organizational policies, gradually become a source of discontent as CRAs advance in their careers—this trend is particularly pronounced among female CRAs. Interestingly, this finding diverges from the Chinese perspective reported by Zheng et al. (2017), who observed that CRA job satisfaction in China is more strongly influenced by work-related factors than by demographic characteristics. In South Africa, however, demographics such as gender play a significant role in shaping perceptions of travel demands over time. Compensation, functioning as a hygiene factor in the form of salary or remuneration, stands out as the primary driver of dissatisfaction. This directly links Herzberg's framework to Mobley's turnover model, underscoring the connection between inadequate compensation and employee attrition. Consistent with global studies, CRAs often express aspirations to transition into pharmaceutical industry roles, where better benefits and remuneration packages are available (Roberts et al., 2016; Zheng et al., 2017). The findings related to hygiene factors are summarized in Table 3.

The Matemane-Ayeni CRA retention model (Figure 2) suggests that job satisfaction is largely shaped by positive interactions with site staff, the ability to maintain a healthy work-life balance, and the sense of making a meaningful contribution to science and society. These elements align closely with the intrinsic motivators described in Herzberg's two-factor theory. However, the model also highlights extrinsic factors that can undermine satisfaction and drive turnover intentions, linking Herzberg's two-factor theory to Mobley's turnover model. The extrinsic factors contributing to dissatisfaction among CRAs include compensation, career growth opportunities, workload, therapeutic area preferences, travel demands, and supervisor support. Supervisor support reflects deeper organizational culture issues such as the over-allocation of CRAs to multiple projects and poor workload management in a metrics driven environment. The disregard for their lived experiences erodes trust in their Line Manager and ultimately, morale. Additionally, the behaviour of Project Managers intensifies dissatisfaction. The constant urgency attached to nearly

every request, coupled with tasks assigned without proper review of project instructions or responsibilities, makes CRAs question the utility of their role. This often leads them to explore alternative opportunities. In South Africa, these pressures validate Mobley's turnover model, as CRAs weigh the value of their current positions against the prospect of better opportunities elsewhere. The high demand for experienced CRAs, combined with the potential for significant salary increases, further amplifies turnover intentions. While intrinsic motivators sustain engagement, the persistent weight of extrinsic challenges drives many CRAs to consider leaving their roles in pursuit of more supportive and rewarding environments.

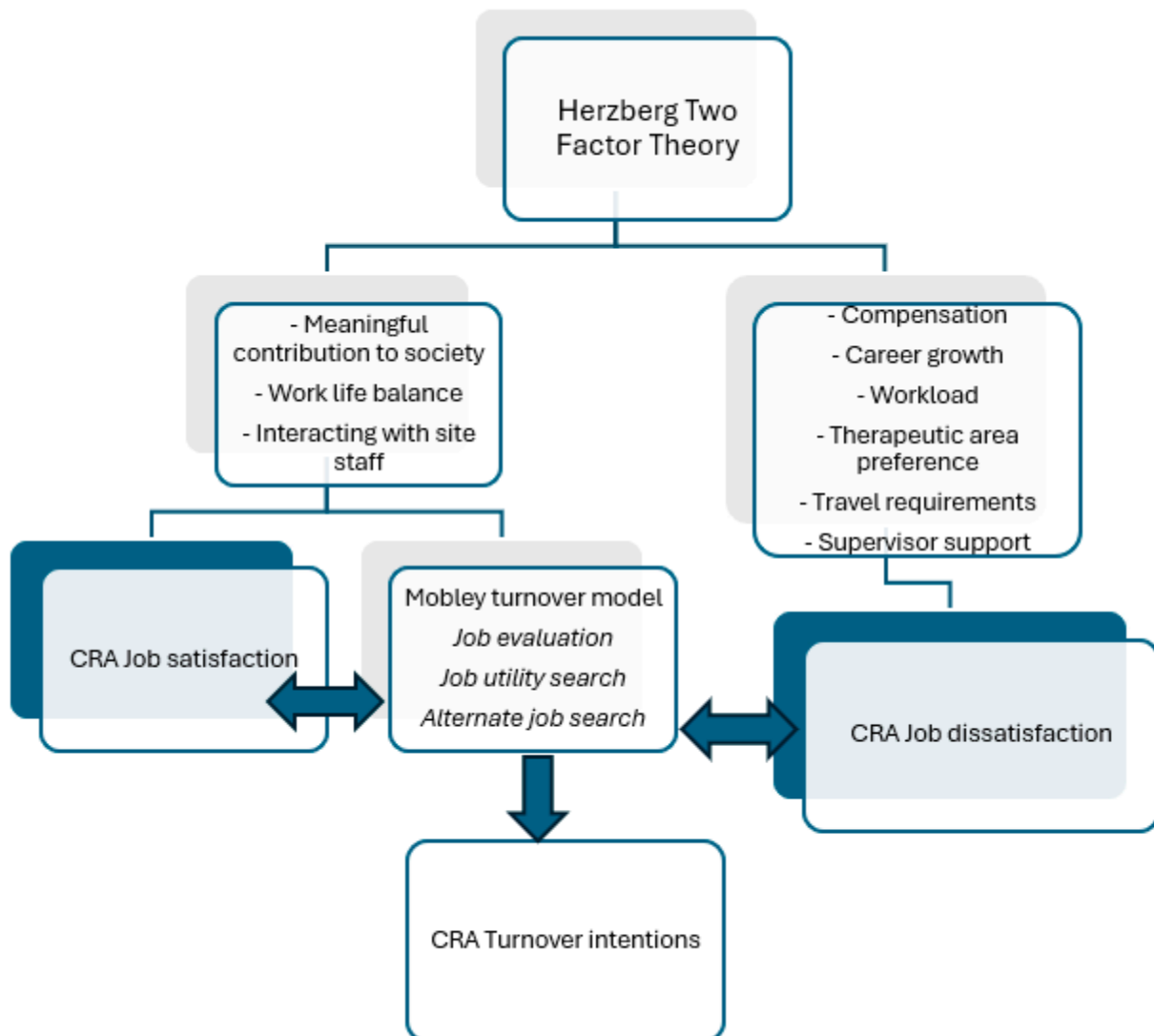


Figure 2. Matemane-Ayeni CRA retention model illustrating factors that cause CRA dissatisfaction leading to turnover intentions, the solid blocks represent the outcome of Herzberg's factors, and the solid arrows represent the link between Herzberg factors and Mobley turnover model (Source: Author's own work).

5. Discussion

The analysis of interview data reveals that compensation is not merely a peripheral concern but the predominant and most acutely articulated driver of turnover intentions among Clinical Research Associates (CRAs) in South Africa. This finding robustly affirms the quantitative conclusions of prior global studies, such as those by Zheng et al. (2017) and Owens Pickle et al. (2017), while providing rich, contextual depth to the *why* and *how*

of this relationship. The data positions compensation as a complex, dual-natured factor acting simultaneously as a potent source of dissatisfaction and a powerful motivational lure, deeply intertwined with the specific pressures of the CRA role and the dynamics of the South African clinical trials market.

Theme 1. *Compensation as a Primary Driver of Attrition*

Participant narratives consistently framed compensation as the primary calculus in their employment decisions. The discourse moved beyond abstract satisfaction to reveal a pragmatic, market-aware evaluation of personal worth and opportunity cost. As CRA02 succinctly stated,

“Financial benefits, number one, I think because of the high demand, especially when you are a Senior CRA. I mean even though the job market is currently slow, over the past couple of years, it’s easier to get a 10 to 20% increase if I jump ship to the next sponsor than to wait for this 5%, 4% percent yearly, so I think that is number one.”

This statement captures a critical sub-theme, the perceived failure of internal equity and reward structures. It highlights a market where external mobility is incentivized over internal loyalty, a phenomenon exacerbated in South Africa’s growing yet concentrated CRO sector where high demand for experienced CRAs creates a volatile job market (Lamberti et al., 2022). The sentiment reflects a direct enactment of Mobley et al.’s (1978) turnover model, where the evaluation of alternatives is heavily weighted by tangible, immediate financial gain.

Furthermore, compensation was directly linked to the psychological toll of the role, framing it as a necessary quid pro quo for stress and burnout. CRA04 powerfully articulated this:

“if you are not compensated well enough, does it make sense for you to keep on deteriorating? you understand? So if I’m going to be sitting there and going through the pain and knowing that I am a mental being as well, I need to at least to be able to afford a session with the, with the psychologist, you see.”

Here, salary is not viewed in isolation but as the essential resource enabling coping and well-being amidst a “high stressful job.” This aligns with Fu et al.’s (2020) findings on CRA burnout and re-frames compensation within Herzberg et al.’s (2017) framework. While traditionally considered a ‘hygiene factor,’ for these CRAs, inadequate compensation actively *causes* profound dissatisfaction by failing to provide the means to mitigate job-related distress, thereby accelerating the progression toward turnover intentions.

Theme 2. *Compensation and the Normalization of Turnover*

A particularly significant finding was how compensation perceptions have fostered a normalized culture of strategic job-hopping. CRA12 observed:

“I think a lot of people are aware that there’s a lot of money in the industry and you can go far with regards to how much you earn and so a lot of people come in and leave within a short space of time and they are not afraid to go start again at another company because it’s the same thing (CRA work).”

This reveals a paradigm where the role is commoditized, and the employer brand holds less value than the salary figure. Turnover is not perceived as a disruptive career risk but as a standard, rational strategy for career advancement. This cultural norm directly undermines organizational retention efforts and institutional knowledge building. It suggests that generic retention strategies may be ineffective unless they directly counter this economically rational calculus with superior total value propositions that transcend base salary.

Theme 3. Workload as a Catalyst for Attrition

The data unequivocally identifies excessive and unsustainable workload as a critical push factor, particularly for experienced CRAs. This extends beyond a general complaint about busyness to a specific conflict between professional demands and personal life stages. As CRA06 noted:

“...for those who are established as mostly established and maybe have certain life commitments, it's mostly work load. Demands of the job traveling because it is demanding and perhaps you want to go to. You're looking for a place where it is, you know, manageable and you can still have personal time and work time and separate the two because it it can over cross the line at some point.”

This highlights a life-cycle dimension to retention, where the demands of the role become incompatible with evolving personal responsibilities, a factor often overlooked in generic retention strategies. Furthermore, the data uncovers a toxic linkage between workload and professional stigma. CRA07 revealed,

“...You don't really get much support, so it's more like when you raise your voice to say you're overwhelmed. It is seen as incompetency and now you are overwhelmed and you can't raise it because you're going to be seen as being incompetent. So it's usually, being a case that I've seen it and, you know, being a thing”

This statement is profound, indicating a culture where speaking up about unsustainable pressures is misinterpreted as a lack of capability rather than a systemic resourcing issue. This perception creates a silencing effect, forcing CRAs to choose between silently enduring burnout or being labelled as poor performers. A dilemma that directly fuels the desire to leave. This finding adds a critical cultural layer to the quantitative evidence on workload and burnout established by [Fu et al. \(2020\)](#), showing how organizational culture can exacerbate the stressor itself.

Theme 4. Therapeutic Area Preference as a Motivational Fulcrum

The analysis reveals that the specific therapeutic area of assignment is not a minor detail but a significant factor influencing job satisfaction and retention. This theme speaks directly to Herzberg's intrinsic motivators: the work itself and the opportunity for growth. For specialized professionals like CRAs, intellectual engagement and skill diversification are key satisfiers.

The frustration of being pigeon-holed is clear. CRA11 expressed discontent after being consistently assigned to infectious diseases:

“I moved to the company because I wanted to work on, I wanted to be exposed to different therapeutic field, for example, because I've been working a lot of HIV and TB, so I wanted to be exposed to others like oncology, diabetes, you know, like different type of diseases. But when I got there, to the company because they saw I have experience of HIV, they put me on HIV study again and they told me to wait. So you know I wasn't feeling satisfied when I was there, so I left after.”

This demonstrates that a lack of variety and forced specialization can lead to professional stagnation and dissatisfaction. CRA08 reinforced this, stating directly that being placed in an unenjoyable therapeutic area makes it

“Also therapeutic area for me is very important. If you're going to throw me into a certain therapeutic area that I don't like, that I don't enjoy, it's unlikely that I will want to stay. So usually I will voice, I know sometimes you have to do things you're uncomfortable with, but if there's a chance that you can do what you really enjoy doing and they give you that for me, I'll stay.”

This preference is tied to personal interest, intellectual challenge, and career development goals. The failure of management to align project assignments with professional aspirations or to provide a clear pathway to desired therapeutic areas emerges as a significant, yet manageable, driver of preventable turnover.

Theme 5. The Dual Pathways of Career Growth

Career growth emerged as a complex theme, bifurcating into two distinct narratives: ambition-driven advancement and growth toward better work-life integration. The first pathway is the classic desire for vertical progression. CRA10 typifies this, seeking to

“...I’ve had an opportunity beginning of the year to, where I interviewed for a line manager position...time to maybe go into clinical lead or project management or line management, things like that.”

This aligns with global findings on the importance of clear career ladders (Owens Pickle et al., 2017; Lamberti et al., 2022). Notably, CRA06 framed this ambition as separate from job dissatisfaction:

“Personally, none. It doesn’t affect. I think my desire to leave is solely on my own ambitions and not necessarily job satisfaction, because if I didn’t have any ambitions, I think I would be very satisfied with my job.”

This indicates that even satisfied CRAs are at risk of attrition if they perceive a ceiling on their growth within their current organisation.

The second, more nuanced pathway redefines “growth” not as promotion, but as a transition to a role offering greater autonomy and flexibility. CRA12 made it known that:

“I’m actively looking for roles, but it is not CRA roles like I mentioned, it’s a bit difficult for me currently to be a CRA, maybe later on in life. I’ll come back to this, but currently I need something that is. More flexible mentally and also time wise I mean being’s home is good, it’s good enough, it’s excellent, but the day is full. It’s packed from the time you start the day.”

This participant values the outcome (flexibility, control, mental well-being) over the title. This represents a form of career crafting, where growth is measured in quality of life and personal agency rather than hierarchical rank. It is a direct response to the relentless, packed days described (“the day is full... there’s still work to be done”), suggesting that for some, the CRA role structure itself is incompatible with their long-term well-being, regardless of the seniority level.

Theoretical and Practical Synthesis

The findings on workload, therapeutic area preference, and career growth collectively provide a nuanced application and extension of Herzberg’s and Mobley’s theoretical frameworks within the South African context. This synthesis demonstrates how abstract concepts manifest in the lived experience of CRAs and, critically, translates this understanding into targeted managerial action.

Workload operates precisely as Herzberg posited a potent hygiene factor. Its excess does not motivate but causes profound dissatisfaction, directly triggering the evaluation phase in Mobley’s turnover process. The cultural stigma associated with voicing overload concerns intensifies this effect, accelerating the path to quitting. Therefore, practical strategy must transcend simple headcount metrics. Organizations require intelligent capacity management tools and must actively cultivate a culture where discussing workload is viewed as professional risk management, not incompetence. For veteran CRAs with life commitments, creating specialized senior or advisory tracks with modified travel duties can address this hygiene need directly, preventing the loss of critical experience.

Therapeutic Area Preference functions as a quintessential intrinsic motivator from Herzberg's framework. The work itself must be engaging. When CRAs are denied exposure to therapeutic areas that align with their interests or career goals, a key source of potential satisfaction is blocked, stifling motivation. Consequently, retention strategy must incorporate deliberate career pathing. Implementing transparent internal talent platforms or mentorship programs that facilitate movement across therapeutic areas is not an operational luxury but an investment in versatile expertise and sustained engagement. This turns a potential dissatisfier into a powerful tool for professional development and retention.

Therefore, while compensation initiates the turnover calculus, the ultimate decision is refined through the filters of manageable work, meaningful project engagement, and a credible future. Addressing these multifaceted drivers requires CROs to view CRAs not as interchangeable resources, but as individual professionals with distinct aspirations, life stages, and definitions of career success. A retention strategy that acknowledges and adapts to this complexity is essential for building a sustainable clinical research workforce in South Africa.

6. Conclusions, Implications, and Future Research Directions

6.1. Conclusions

This qualitative study explored the perceptions of Clinical Research Associates (CRAs) in South Africa to understand the factors influencing their job satisfaction and turnover intentions. The findings reveal a complex, context-driven model of retention, where global theoretical frameworks are modulated by local socio-economic and professional realities. The primary intrinsic driver of job satisfaction is the meaningful, intellectually challenging nature of the work itself and its contribution to public health. However, this satisfaction is profoundly vulnerable to erosion by extrinsic factors. Compensation, workload, misalignment of therapeutic area preference, and constrained career growth pathways emerged as the dominant, interconnected drivers of turnover intentions. The study confirms that CRA turnover is not merely a human resources issue but a critical risk to clinical trial quality, data integrity, and the sustainability of South Africa's research enterprise, echoing concerns raised by Roberts et al. (2016) regarding the impact of high turnover on trial outcomes.

6.2. Theoretical and Contextual Implications

The findings provide robust empirical validation and a significant contextual extension of Herzberg's Two-Factor Theory. Intrinsic factors, specifically, the *work itself* (therapeutic area engagement) and *growth opportunities* were confirmed as central to satisfaction. Extrinsic hygiene factors, particularly *compensation* and *work conditions* (excessive workload), were primary sources of dissatisfaction, directly catalyzing the decision-making process outlined in Mobley et al.'s (1978) turnover model. Critically, the study complicates these theories within the South African context. First, compensation displayed a dual nature: while its inadequacy was a definitive hygiene-based dissatisfier, the prospect of a significant increase also functioned as a powerful positive motivator for job mobility. This reflects a labor market where external salary leaps are normalized. Second, the data revealed how organizational culture can intensify a hygiene factor's negative power; a culture that stigmatizes discussions of workload transforms a resourcing issue into a profound professional and personal dissatisfaction. These nuances underscore that theoretical models are contingent upon specific labor market dynamics and cultural environments, such as those found in South Africa's dual healthcare system and competitive CRO landscape.

The results of the study suggests that it is not only hygiene factors that cause dissatisfaction among CRAs in South Africa, motivational factors such as career growth and

workload and career influence turnover intentions, furthermore the research uncovered that even CRAs who are satisfied can have turnover intentions, directly linking the Herzberg two factor theory to Mobley's turnover model. These findings are consistent with earlier conference-level observations (Ayeni & Matemane, 2026).

6.3. Practical Recommendations and Managerial Implications

To mitigate turnover and its deleterious effects on clinical trials, a strategic, multi-faceted approach is required:

1. **Strategic Compensation and Well-being Management:** Organizations must conduct regular, aggressive market benchmarking to align salaries with external realities. Compensation should be reframed and structured as a core component of a well-being strategy, incorporating wellness allowances and bonuses tied to retention and quality metrics, not just activity.
2. **Intelligent Workload and Culture Redesign:** Move beyond headcount metrics to implement sophisticated capacity forecasting. Leadership must actively cultivate a psychologically safe culture where discussing workload is seen as proactive risk management. Introducing role variants (e.g., senior clinical advisor tracks) can retain experienced talent whose life commitments conflict with a traditional travel-heavy model.
3. **Personalized Career Architecture and Talent Mobility:** Develop dual-track career ladders that validate both managerial and expert clinical pathways. Implement transparent internal talent platforms to facilitate movement across therapeutic areas, aligning project assignments with professional aspirations. Legitimize horizontal moves into adjacent specializations (e.g., quality assurance, training) as valued career progression.
4. **Industry-wide Policy Advocacy:** Professional bodies like the South African Clinical Research Association (SACRA) should leverage these findings to advocate for standardized policies that enhance profession-wide sustainability, such as guidelines for equitable travel remuneration and reasonable site-to-CRA ratios.

7. Contribution of the Study

This study contributes to the limited body of research on Clinical Research Associate (CRA) retention within emerging market contexts, specifically addressing the empirical gap concerning how global turnover theories operate within South Africa's clinical research environment. While prior studies have largely examined turnover using quantitative and generalised models, this study provides context-rich, qualitative insights into the lived experiences of CRAs, thereby filling a critical gap in understanding the *mechanisms* through which job satisfaction and turnover intentions are formed in practice. The findings reveal that CRA retention in South Africa cannot be fully explained by existing theoretical models in their original form. Although Herzberg's Two-Factor Theory and Mobley's Turnover Model remain relevant, this study demonstrates that their application is contextually contingent. Specifically, the results show that compensation operates beyond a traditional hygiene factor, functioning simultaneously as a dissatisfier and a proactive mobility driver within a highly competitive labour market.

This duality extends existing theoretical assumptions and highlights a gap in the literature regarding how economic context reshapes motivational structures.

Furthermore, the study identifies a previously underexplored interaction between organisational culture and workload management. The results demonstrate that it is not workload alone, but the organisational framing of workload, particularly cultures that discourage open discussion—that intensifies dissatisfaction and accelerates turnover intentions. This finding adds nuance to existing models by introducing organisational culture as

a critical moderating variable in the satisfaction–turnover relationship. Importantly, the study also uncovers that job satisfaction does not necessarily preclude turnover intentions among CRAs. Even highly satisfied professionals expressed intent to leave due to external opportunities, career stagnation, or structural industry conditions. This challenges the linear assumptions embedded in traditional turnover models and provides empirical support for a more dynamic, non-linear understanding of employee retention.

Taken together, these findings contribute to existing knowledge in three key ways:

- (i) extending classical motivation and turnover theories within an emerging market context;
- (ii) revealing the dual and context-sensitive role of compensation and organisational culture; and
- (iii) demonstrating that satisfaction and turnover intention can coexist, thereby complicating conventional theoretical assumptions.

7.1. Limitations of the Study

1. This qualitative study examined job satisfaction among CRAs in South Africa using a sample size of 12 respondents. Even though data saturation was achieved for this qualitative research, the sample size can still be regarded as a small sample size to allow for the generalization of the results. Quantitative validation may help address this limitation.
2. Although there is a good balance of male and female respondents, there was a high representation of Black South Africans in the sample size, which may limit cross cultural context and limited accounts transferrable to other ethnic groups within the South African CRA community.

7.2. Considerations for Future Research

This foundational study opens several avenues for further inquiry:

1. **Quantitative Validation:** A large-scale, longitudinal survey is needed to statistically validate the relationships and relative weights of the factors identified here, enabling generalizable predictions about turnover risk.
2. **Multi-Stakeholder Perspectives:** Future research should incorporate the views of CRO managers, sponsors, and principal investigators to develop a holistic, systemic understanding of the turnover phenomenon and its impact on site performance.
3. **Longitudinal and Intervention Studies:** Research tracking cohorts of CRAs over time could better establish causal links between satisfaction, intention, and actual turnover. Furthermore, studies assessing the efficacy of specific retention interventions (e.g., piloting a new career ladder or workload management tool) are crucial for evidence-based practice.
4. **Regional and Continental Expansion:** To build a robust understanding of clinical research workforce sustainability in Africa, this research should be expanded to other key regional hubs in Sub-Saharan Africa, allowing for comparative analysis across different regulatory and economic environments.

Ultimately, this research directly addresses the social pillar of sustainability within South Africa's scientific ecosystem. By diagnosing the human capital challenges that threaten workforce stability, it provides a roadmap for building more resilient and effective clinical research institutions. Investing in CRA retention is an indispensable investment in the quality, integrity, and long-term viability of clinical research on the continent.

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